

# OXNARD SCHOOL DISTRICT

1051 South "A" Street • Oxnard, California 93030 • 805/385-1501



## **BOARD OF TRUSTEES**

**Mrs. Veronica Robles-Solis**, President  
**Mrs. Debra M. Cordes**, Clerk  
**Mr. Ernest "Mo" Morrison**, Member  
**Mr. Denis O'Leary**, Member  
**Mr. Albert "Al" Duff Sr.**, Member

## **ADMINISTRATION**

**Dr. Cesar Morales**  
Superintendent  
**Ms. Lisa Cline**  
Deputy Superintendent,  
Business & Fiscal Services  
**Dr. Jesus Vaca**  
Assistant Superintendent,  
Human Resources & Support Services  
**Ms. Robin I. Freeman**  
Assistant Superintendent,  
Educational Services

## **AGENDA #16 REGULAR BOARD MEETING**

**Wednesday, May 18, 2016**

**5:00 p.m. Study Session**

**Closed Session To Follow**

**7:00 PM - Regular Board Meeting**

Call to Order: \_\_\_\_\_

Members Present: \_\_\_\_\_

Members Absent: \_\_\_\_\_

**\*NOTE:** In accordance with requirements of the Americans with Disabilities Act and related federal regulations, individuals who require special accommodation, including but not limited to an American Sign Language interpreter, accessible seating or documentation in accessible formats, should contact the Superintendent's office at least two days before the meeting date.

**Persons wishing to address the Board of Trustees** on any agenda item may do so by completing a "**Speaker Request Form**" and **submitting the form to the Asst. Supt. of Human Resources**. The Speaker should indicate on the card whether they wish to speak during Public Comment or when a specific agenda item is considered.

**Note: No new items will be considered after 10:00 p.m. in accordance with Board Bylaws, BB 9323 – Meeting Conduct**

[www.oxnardsd.org](http://www.oxnardsd.org)

OPIE TV – Channel 20 &  
Verizon FIOS - Channel 37



**Vision:**

Empowering All Children to Achieve Excellence

**Mission:**

Ensure a culturally diverse education for each student in a safe, healthy and supportive environment that prepares students for college and career opportunities.



**Visión:**

Capacitar a cada alumno para que logre la excelencia académica

**Misión:**

Asegurar una educación culturalmente diversa para todo el alumnado en un ambiente seguro, saludable y propicio que les prepare para la Universidad y el acceso a oportunidades para desarrollar una carrera profesional.



**Section A  
PRELIMINARY**

***A.1 Call to Order and Roll Call***

**5:00 PM**

The President of the Board will call the meeting to order. A roll call of the Board will be conducted.

***A.2 Pledge of Allegiance to the Flag***

Mr. Pablo Ordaz, Co-Principal of Rose Avenue School, will introduce Juliette Orejel, 5th grader in Mr. Paul Ramirez’ class, who will lead the audience in the Pledge of Allegiance.

***A.3 District’s Vision and Mission Statements***

The District’s Vision and Mission Statements will be read by Yahir Marquez, 5th grader in Ms. Heather Drucker’s class in English and Monica Daniela Ramirez, 5<sup>th</sup> grader in Mr. Paul Ramirez’ class will read them in Spanish.

***A.4 Presentation by Rose Avenue School***

Mr. Ordaz will provide a short presentation to the Board regarding Rose Avenue School. Following the presentation President Robles-Solis will present a token of appreciation to the students that participated in the Board Meeting.

***A.5 Adoption of Agenda (Superintendent)***

Moved:  
Seconded:  
Vote:

**ROLL CALL VOTE:**

**Duff \_\_, O’Leary \_\_, Morrison \_\_, Cordes \_\_, Robles-Solis \_\_**

***A.6 Study Session – English Learner Services (Freeman/Arellano)***

The Board of Trustees will receive a report on English Learner Services.

***A.7 Closed Session – Public Participation/Comment*** (Limit three minutes per person per topic)

Persons wishing to address the Board of Trustees on any agenda item identified in the Closed Session agenda may do so by completing a “Speaker Request Form” and submitting the form to the Assistant Superintendent of Human Resources and Support Services. Public Comment shall be limited to fifteen (15) minutes per subject with a maximum of three (3) minutes per speaker.

***A.8 Closed Session***

1. Pursuant to Section 54956.9 of *Government Code*:
  - Conference with Legal Counsel – Anticipated Litigation: 1 case
  
2. REMOVAL/SUSPENSION/EXPULSION OF A STUDENT (*Education Code 48912; 20 U.S.C. Section 1232g*)
  - Case No. 15-13 (Action Item)
  - Case No. 15-15 (Action Item)
  - Case No. 15-16 (Action Item)
  - Case No. 15-17 (Action Item)
  - Case No. 15-18 (Action Item)

**Note: No new items will be considered after 10:00 p.m. in accordance with Board Bylaws, BB 9323 – Meeting Conduct**

**Section A**  
**PRELIMINARY**  
(continued)

**A.8 Closed Session (continued)**

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3. Pursuant to Section 54956.8 of the *Government Code*:
  - Conference with Real Property Negotiators (for acquisition of new school site):
    - Property: Parcel located Teal Club Road, North of Teal Club Road, South of Doris Avenue
    - Agency
    - Negotiators: Superintendent/Deputy Superintendent, Business & Fiscal Services/ Garcia Hernandez & Sawhney, LLP/ Caldwell Flores Winters Inc.
    - Negotiating Parties: Dennis Hardgrave on behalf of the property owners
    - Under Negotiations: Instruction to agency negotiator on price and terms.
  
4. Pursuant to Sections 54957.6 and 3549.1 of the *Government Code*:
  - Conference with Labor Negotiator:
    - Agency Negotiators: OSD Assistant Superintendent, Human Resources & Support Services, and Garcia Hernández & Sawhney, LLP
    - Association(s): OEA, OSSA, CSEA; and All Unrepresented Personnel - Administrators, Classified Management, Confidential
  
5. Pursuant to Section 54957 of the *Government Code* and Section 44943 of the *Education Code* the Board will consider personnel matters, including:
  - Public Employee(s) Discipline/Dismissal/Release

**A.9 Reconvene to Open Session**

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**7:00 PM**

**A.10 Report Out of Closed Session**

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The Board will report on any action taken in closed session or take action on any item considered in closed session, including expulsion of students.

**REMOVAL/SUSPENSION/EXPULSION OF A STUDENT (*Education Code 48912; 20 U.S.C. Section 1232g*)**

- Case No. 15-13 (Action Item)
  - Motion: \_\_\_\_\_, Second: \_\_\_\_\_
  - Roll Call Vote:
  - Duff \_\_, O’Leary \_\_, Morrison \_\_ Cordes \_\_, Robles-Solis \_\_
  
- Case No. 15-15 (Action Item)
  - Motion: \_\_\_\_\_, Second: \_\_\_\_\_
  - Roll Call Vote:
  - Duff \_\_, O’Leary \_\_, Morrison \_\_ Cordes \_\_, Robles-Solis \_\_

**Note: No new items will be considered after 10:00 p.m. in accordance with Board Bylaws, BB 9323 – Meeting Conduct**

**Section A  
PRELIMINARY**  
(continued)

***A.10 Report Out of Closed Session (continued)***

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The Board will report on any action taken in closed session or take action on any item considered in closed session, including expulsion of students.

**REMOVAL/SUSPENSION/EXPULSION OF A STUDENT (*Education Code 48912; 20 U.S.C. Section 1232g*)**

- Case No. 15-16 (Action Item)  
 Motion: \_\_\_\_\_, Second: \_\_\_\_\_  
 Roll Call Vote:  
 Duff \_\_, O’Leary \_\_, Morrison \_\_ Cordes \_\_, Robles-Solis \_\_
  
- Case No. 15-17 (Action Item)  
 Motion: \_\_\_\_\_, Second: \_\_\_\_\_  
 Roll Call Vote:  
 Duff \_\_, O’Leary \_\_, Morrison \_\_ Cordes \_\_, Robles-Solis \_\_
  
- Case No. 15-18 (Action Item)  
 Motion: \_\_\_\_\_, Second: \_\_\_\_\_  
 Roll Call Vote:  
 Duff \_\_, O’Leary \_\_, Morrison \_\_ Cordes \_\_, Robles-Solis \_\_

***A.11 Approval of Minutes***

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It is recommended that the Board approve the minutes of regular and special board meetings, as submitted:

- April 20, 2016, regular board meeting

Moved:  
 Seconded:  
 Vote:

**ROLL CALL VOTE:**

**Duff \_\_, O’Leary \_\_, Morrison \_\_, Cordes \_\_, Robles-Solis \_\_**

**Note: No new items will be considered after 10:00 p.m. in accordance with Board Bylaws, BB 9323 – Meeting Conduct**

## Section B HEARINGS/PUBLIC COMMENT

### ***B.1 Public Comment/Opportunity for Members of the Public, Parents, PTA/PTO, to Address the Board*** (3 minutes each speaker)

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Members of the public may address the Board on any matter within the Board's jurisdiction and have three (3) minutes each to do so. The total time of each subject will be fifteen (15) minutes, unless additional time is requested by a Board Member and approved by the Board. The Board may not deliberate or take action on items that are not on the agenda. The President is in charge of the meeting and will maintain order, set the time limits for the speakers and the subject matter, and will have the prerogative to remove any person who is disruptive of the Board meeting. This meeting is being video-recorded and televised.

Persons addressing the board during the consideration of an agenda item will be called to address the board prior to any presentation or consideration of the item by the Board. At the conclusion of the public comment on the item, the Board will hear the District's presentation on the matter. Board deliberation and action, if any, will follow the District's presentation. Once the public comments are presented, the board will only take comments from the public at the discretion of the Board President.

The Board particularly invites comments from parents of students in the District.

We will now read the names of the individuals who have submitted Speaker Request Forms to address the Board.

### ***B.1 Comentarios Públicos/Oportunidad para que los Miembros de la Audiencia, los Padres, el PTA/PTO se dirija a la Mesa Directiva*** (3 minutos para cada ponente)

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Los miembros del público pueden dirigirse a la Mesa Directiva sobre cualquier asunto dentro de la jurisdicción de la Mesa Directiva y cada uno limitar sus comentarios a tres (3) minutos. El tiempo total de cada asunto será de quince (15) minutos, a menos que, un miembro de la Mesa Directiva determine extender el tiempo y que éste sea aprobado por la Mesa Directiva. La Mesa Directiva no podrá deliberar o tomar alguna acción sobre los asuntos que no aparezcan en la agenda. El presidente dirige la junta y mantendrá el orden, establece el tiempo límite para los presentadores, el tema del asunto y tendrá la facultad de retirar a cualquier persona que cause un desorden en la sesión de la junta. Esta junta está siendo grabada y televisada.

Las personas que quieran dirigirse a la Mesa Directiva durante la consideración de un asunto de la agenda serán llamadas para dirigirse a la Mesa Directiva antes de cualquier presentación o consideración de un asunto por la Mesa Directiva. Al concluir el período de los comentarios públicos sobre un asunto, la Mesa Directiva escuchará la presentación del Distrito con respecto al tema. La deliberación y la resolución determinada por la Mesa Directiva, si se presenta alguna, procederá después de la presentación del Distrito. Una vez que los comentarios públicos hayan sido presentados, la Mesa Directiva únicamente aceptará los comentarios por parte del público a discreción del presidente de la Mesa Directiva.

La Mesa Directiva invita en particular a los padres de los alumnos del Distrito para que expresen sus comentarios.

A continuación leeremos los nombres de las personas quienes han entregado las Formas de Petición para Dirigirse a la Mesa Directiva.

**Note: No new items will be considered after 10:00 p.m. in accordance with Board Bylaws, BB 9323 – Meeting Conduct**



**Section B**  
**HEARINGS/PUBLIC COMMENT**  
 (continued)

**B.2 Public Hearing for the Mitigated Negative Declaration as Prepared for the Marshall Elementary School New Classroom Building Project (Dr. Morales/Cline/CFW)**

This being the date noticed, the Board of Trustees will hold a public hearing to consider any and all comments received, whether written or oral, for the Mitigated Negative Declaration as prepared for the Marshall Elementary School New Classroom Building Project.

Public Comment:  
 Presentation:  
 Moved:  
 Seconded:  
 Board Discussion:  
 Vote:

Following this public hearing, it is the recommendation of the Superintendent and the Deputy Superintendent, Business & Fiscal Services, in conjunction with Caldwell Flores Winters, Inc. that the Board of Trustees consider any and all comments received, whether written or oral for the Mitigated Negative Declaration for the Marshall Elementary School New Classroom Building Project.

**ROLL CALL VOTE:**

**Duff \_\_, O’Leary \_\_, Morrison \_\_, Cordes \_\_, Robles-Solis \_\_**

**B.3 Public Hearing re: Sunshine of the Oxnard Educators Association’s (OEA) and the Oxnard School District’s (District) Initial Proposals for 2016-2017 Negotiations, Pursuant to Government Code Section 3547 (Vaca)**

This being the date noticed, the Board of Trustees will hold a public hearing to sunshine the Oxnard Educators Association’s (OEA) and the Oxnard School District’s Initial Proposals for 2016-2017 Negotiations. The parties plan to negotiate the following:

Public Comment:  
 Presentation:  
 Moved:  
 Seconded:  
 Board Discussion:  
 Vote:

- Article VI: Leave of Absence
- Article VII: Transfers & Reassignments
- Article IX: Evaluation
- Article XI: Working Hours
- Article XIII: Calendar
- Article XIV: Partial & School-Wide Contract Variance
- Article XVI: Safety Conditions
- Article XIX: Salaries
- Article XX: Employee Benefits
- Article XXVIII: Term of Agreement
- New Article: Special Education

Following this public hearing, it is the recommendation of the Assistant Superintendent, Human Resources & Support Services that the Board of Trustees authorize the District to enter into contract negotiations with OEA for the 2016-2017 school year and any additional years as may be mutually agreed upon by the parties.

**ROLL CALL VOTE:**

**Duff \_\_, O’Leary \_\_, Morrison \_\_, Cordes \_\_, Robles-Solis \_\_**

**Note: No new items will be considered after 10:00 p.m. in accordance with Board Bylaws, BB 9323 – Meeting Conduct**

**Section B**  
**HEARINGS/PUBLIC COMMENT**  
 (continued)

***B.4 Public Hearing: Educator Effectiveness Grant 2015-2018 (Freeman)***

This being the date noticed, the Board of Trustees will hold a public hearing to consider any and all comments received, whether written or oral, for the Educator Effectiveness Grant prior to its adoption at the June 1, 2016 board meeting.

Following this public hearing, it is the recommendation of the Assistant Superintendent, Educational Services that the Board of Trustees consider any and all comments received, whether written or oral, for the Educator Effectiveness Grant.

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Public Comment:  
 Presentation:  
 Moved:  
 Seconded:  
 Board Discussion:  
 Vote:

**ROLL CALL VOTE:**

Duff \_\_, O'Leary \_\_, Morrison \_\_, Cordes \_\_, Robles-Solis \_\_

**Note: No new items will be considered after 10:00 p.m. in accordance with  
 Board Bylaws, BB 9323 – Meeting Conduct**

**Section C  
CONSENT AGENDA**

(All Matters Specified as Consent Agenda are considered by the Board to be routine and will be acted upon in one motion. There will be no discussion of these items prior to the time the Board votes on the motion unless members of the Board request specific items be discussed and/or removed from the Consent Agenda.)

Notes:  
Moved:  
Seconded:

**ROLL CALL VOTE:**

**Duff \_\_, O’Leary \_\_, Morrison \_\_, Cordes \_\_, Robles-Solis \_\_**

***C.1 Agreements***

<p>It is recommended that the Board approve the following agreements:</p> <ul style="list-style-type: none"> <li>▪ #15-235 with Oxnard College, for use of facilities of the Performing Arts Theatre at Oxnard College, on Monday, June 13, 2016 at 9:00 a.m. for Lemonwood School’s 8<sup>th</sup> grade promotion ceremony; amount not to exceed \$595.00, to be paid with General Funds;</li> <li>▪ #15-236 with Mad Science of Los Angeles, to provide assemblies, class science workshops and summer camps during the period of June 7, 2016 through June 24, 2016 at Ramona School; amount not to exceed \$13,720.00, to be paid with Title I Funds;</li> <li>▪ #15-237 with Oxnard Performing Arts &amp; Convention Center, for the Haydock Spring Showcase 2016 on Wednesday, May 25, 2016 from 6:00-8:00 p.m.; amount not to exceed \$1,550.00, to be paid with School Site Funds – Targeted;</li> <li>▪ #15-238 with Malibu Foundation for Environmental Education, to provide three (3) 45 minute assemblies for McAuliffe School students on Friday, June 3, 2016; amount not to exceed \$900.00, to be paid with PTA Funds;</li> <li>▪ #16-06 with Tabbara Corporation, to conduct asbestos re-inspection of two (2) middle schools and eleven (11) elementary schools; amount not to exceed \$2,830.00, to be paid with Safety Credit Funds;</li> <li>▪ #16-07 with NAMI Ventura County, to provide the Parents and Teachers as Allies program, May 19, 2016 through June 30, 2017; at no cost to the District.</li> </ul>	<p>Dept/School Freeman/ Wennes  Freeman/ Elisondo  Freeman/ Bond  Freeman/ Duran  Vaca/ Magaña  Freeman/ Ridge</p>
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***C.2 Ratification of Agreements***

<p>It is recommended that the Board ratify the following agreements:</p> <ul style="list-style-type: none"> <li>▪ Amendment #1 to Agreement #14-88 with Mobile Modular Corporation for a twelve (12) month extension to lease one (1) 24’ x 60’ portable classroom building at Harrington Elementary School Interim Preschool Facility; amount not to exceed \$13,152.00, to be paid with Measure R Funds;</li> <li>▪ Amendment #1 to Agreement #15-123 with Ventura County Office of Education, to provide support from Special Circumstances Paraeducators (SCP’s) to special education student AD091102 for the 2015-16 school year, including Extended School Year; original contract was \$28,224.84, amendment #1 is for \$20,766.90 for a total contract of \$48,991.74; to be paid with Special Education Funds;</li> <li>▪ Amendment #1 to Agreement #15-128 with Ventura County Office of Education, to provide support from Special Circumstances Paraeducators (SCP’s) to special student MZ020305 for the 2015-16 school year, including Extended School Year, original contract was \$23,520.70, amendment #1 is for \$29,893.08 for a total contract of \$53,413.78; to be paid with Special Education Funds;</li> </ul>	<p>Dept/School Cline/ CFW, Inc.  Freeman/ Gern  Freeman/ Gern</p>
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**Note: No new items will be considered after 10:00 p.m. in accordance with Board Bylaws, BB 9323 – Meeting Conduct**

## Section C CONSENT AGENDA

(continued)

### ***C.2 Ratification of Agreements (continued)***

It is recommended that the Board ratify the following agreements:	Dept/School
<ul style="list-style-type: none"> <li>▪ #15-239 with Ventura County Office of Education, to provide support from Special Circumstances Paraeducators (SCP's) to seven (7) special education students for the 2015-16 school year, including Extended School Year; amount not to exceed \$148,655.65, to be paid with Special Education Funds.</li> </ul>	Freeman/ Gern

### ***C.3 Setting of Date for Public Hearing – Oxnard School District 2016-17 Adopted Budget***

It is the recommendation of the Deputy Superintendent, Business & Fiscal Services and the Director of Finance, that the Board of Trustees set the date of Wednesday, June 1, 2016 for a public hearing on the Oxnard School District 2016-17 Adopted Budget.	Dept/School Cline/ Penanhoat
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### ***C.4 Enrollment Report***

Attached for the Board's information is the district's enrollment report for the months of February, March and April 2016.	Dept/School Cline
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### ***C.5 Ratification of WAL #005 with ATC Group Services LLC for Preparation of An Addendum to the Preliminary Environmental Assessment for the Lemonwood School Reconstruction Project***

It is the recommendation of the Deputy Superintendent, Business & Fiscal Services, in conjunction with Caldwell Flores Winters, Inc., that the Board of Trustees ratify WAL #005 with ATC Group Services LLC for the preparation of an addendum to the Preliminary Environmental Assessment (PEA) for the Lemonwood School Reconstruction Project per Master Agreement #13-135; amount not to exceed \$44,950.00, to be paid with Measure "R" Bond Funds.	Dept/School Cline/ CFW, Inc.
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### ***C.6 Setting of Date for Public Hearing – Oxnard School District 2016-17 Local Control Accountability Plan***

It is the recommendation of the Assistant Superintendent, Educational Services and the Deputy Superintendent, Business & Fiscal Services that the Board of Trustees set the date of Wednesday, June 1, 2016 for a public hearing on the Oxnard School District 2016-17 Local Control Accountability Plan (LCAP).	Dept/School Freeman/ Cline
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### ***C.7 Request for Approval to Attend Out of State Training - Nevada***

It is the recommendation of the Assistant Superintendent, Educational Services, the MSAP Director and the Principal of Haydock Middle School that the Board of Trustees approve the request for Susan Ekwall, Haydock Middle School Music Teacher to attend a five (5) day Mariachi Workshop training sponsored by VanderCook College of Music in Las Vegas, Nevada, June 20-24, 2016; amount not to exceed \$1,000.00, to be paid with MSAP Grant Funds.	Dept/School Freeman/ West/ Bond
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### ***C.8 Consideration of Approval of New Job Description: Director of Dual Language Programs***

It is the recommendation of the Assistant Superintendent, Human Resources and Support Services that the Board of Trustees approve the new job description for the Director of Dual Language Programs, as presented.	Dept/School Vaca
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**Note: No new items will be considered after 10:00 p.m. in accordance with Board Bylaws, BB 9323 – Meeting Conduct**



**Section C**  
**CONSENT AGENDA**

(continued)

***C.9 Establish/Abolish/Reduce/Increase Hours of Positions***

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It is recommended that the Board approve the establishment, abolishment, reduction or increase in hours for classified positions, as submitted.

Dept/School  
Koch

***C.10 Personnel Actions***

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It is recommended that the Board approve personnel actions, as submitted.

Dept/School  
Vaca/Koch

**Note: No new items will be considered after 10:00 p.m. in accordance with Board Bylaws, BB 9323 – Meeting Conduct**

**Section D  
ACTION ITEMS**

*(Votes of Individual Board Members must be publicly reported.)*

***D.1 Approval of Agreement #16-08 – Latino Film Institute Youth Cinema Project  
(Dr. Morales/Cline)***

It is the recommendation of the District Superintendent and the Deputy Superintendent, Business & Fiscal Services that the Board of Trustees approve Agreement #16-08 with Latino Film Institute Youth Cinema Project to enhance and engage student learning through the use of filmmaking, July 1, 2016 through June 30, 2017; amount not to exceed \$75,666.00, to be paid out of the Unrestricted General Fund.

Public Comment:  
Presentation:  
Moved:  
Seconded:  
Board Discussion:  
Vote:

**ROLL CALL VOTE:**

**Duff \_\_, O’Leary \_\_, Morrison \_\_, Cordes \_\_, Robles-Solis \_\_**

***D.2 Approval on the Findings of the K-5 ELA/ELD Pilot Committee (Freeman/Thomas)***

It is the recommendation of the Assistant Superintendent, Educational Services and the Director of Curriculum, Instruction and Accountability that the Board of Trustees approve the selection and purchase of ELA/ELD materials for K-5<sup>th</sup> grade – McGraw-Hill: Wonders (English) and Maravillas (Spanish); estimated cost of material \$3,154,681.00, to be paid with Unrestricted General Funds.

Public Comment:  
Presentation:  
Moved:  
Seconded:  
Board Discussion:  
Vote:

**ROLL CALL VOTE:**

**Duff \_\_, O’Leary \_\_, Morrison \_\_, Cordes \_\_, Robles-Solis \_\_**

***D.3 Declaration of Need for Fully Qualified Educators for 2016-17 School Year (Vaca)***

It is the recommendation of the Assistant Superintendent, Human Resources and Support Services that the Board of Trustees approve the Declaration of Need for Fully Qualified Educators for the 2016-2017 school year and authorize its submission to the State of California Commission on Teacher Credentialing.

Public Comment:  
Presentation:  
Moved:  
Seconded:  
Board Discussion:  
Vote:

**ROLL CALL VOTE:**

**Duff \_\_, O’Leary \_\_, Morrison \_\_, Cordes \_\_, Robles-Solis \_\_**

***D.4 Approval of Agreement #15-222 – Gloria Centurion Arce (Freeman/West)***

It is the recommendation of the Assistant Superintendent, Educational Services and the Director, MSAP that the Board of Trustees approve Agreement #15-222 with Gloria Centurion Arce to design and paint a 200 foot mural at Haydock Middle School; amount not to exceed \$10,000.00, to be paid with MSAP Grant Funds.

Public Comment:  
Presentation:  
Moved:  
Seconded:  
Board Discussion:  
Vote:

**ROLL CALL VOTE:**

**Duff \_\_, O’Leary \_\_, Morrison \_\_, Cordes \_\_, Robles-Solis \_\_**

**Note: No new items will be considered after 10:00 p.m. in accordance with Board Bylaws, BB 9323 – Meeting Conduct**

**Section E**  
**REPORTS/DISCUSSION ITEMS**  
(These are presented for information or study only,  
no action will be taken.)

***E.1 Review of Simultaneous Translation Services for the Board Meetings (Dr. Morales)***

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The Board of Trustees will review the simultaneous translation services and consider if they would like to continue to provide the services to the public for the 2016-17 fiscal year, beginning with August 2016.

***E.2 Report on After School Education and Safety (ASES) Grant (Freeman/Thomas)***

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The Board of Trustees will receive an update on the After School Education and Safety Grant Program in the Oxnard School District.

**Note: No new items will be considered after 10:00 p.m. in accordance with  
Board Bylaws, BB 9323 – Meeting Conduct**

**Section F**  
**BOARD POLICIES**

(These are presented for discussion or study.  
Action may be taken at the discretion of the Board.)

***F.1 Second Reading of Board Policies, Regulations and Bylaws***

It is recommended that the Board review the following revised Board Policies, Administrative Regulations and Bylaws, as presented, and adopt for a second reading:

Moved:  
Seconded:  
Board Discussion:  
Vote:

Revision BP 0460 AR 0460	Philosophy, Goals, Objectives, and Comprehensive Plans LCAP	Freeman
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**ROLL CALL VOTE:**

**Duff \_\_, O'Leary \_\_, Morrison \_\_, Cordes \_\_, Robles-Solis \_\_**

**Note: No new items will be considered after 10:00 p.m. in accordance with  
Board Bylaws, BB 9323 – Meeting Conduct**



**Section G**  
**CONCLUSION**

***G.1 Superintendent's Announcements*** *(3 minutes)*

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A brief report will be presented concerning noteworthy activities of district staff, matters of general interest to the Board, and pertinent and timely state and federal legislation.

Notes:

***G.2 Trustees' Announcements*** *(3 minutes each speaker)*

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The trustees' report is provided for the purpose of making announcements, providing conference and visitation summaries, coordinating meeting dates, identifying board representation on committees, and providing other information of general interest.

Notes:

***ADJOURNMENT***

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Moved:  
Seconded:  
Vote:

**Note: No new items will be considered after 10:00 p.m. in accordance with Board Bylaws, BB 9323 – Meeting Conduct**

BOARD AGENDA ITEM

**Name of Contributor(s)** Robin I. Freeman

**Date of Meeting:** 5/18/16

- Study Session:                      X
- A. Preliminary:
- B. Hearing:
- C. Consent Item
- D. Action Items
- E. Reports/Discussion Items (no action)
- F. Board Policies                 1<sup>st</sup> Reading           2<sup>nd</sup> Reading

**English Learner Services (Freeman/Arellano)**

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The English Learner Services Department provides services and monitors the progress of all English Learners in the Oxnard School District. The department will provide updates on:

- DLI
- IPT
- Master Plan
- Reclassification
- Interventions for Long Term English Learners and “at risk” of becoming LTELs

**FISCAL IMPACT:**


N/A

**RECOMMENDATION:**

It is the recommendation of the Assistant Superintendent Educational Services and the Executive Director of English Learner Services that the Board of Trustees receive the report as presented.

**ADDITIONAL MATERIAL(S):**

Power Point



# English Learner Services Department Study Session

**Dr. Jairo Arellano**

Executive Director of English Learner Services

May 18, 2016

# Presentation Focus

Topic	Presenter
Dual Language Immersion (DLI)	Ivette Zendejas
Idea Proficiency Test (IPT)	Verónica L. Oros
Master Plan Update	Elva Gonzales-Nares
Reclassification	Dr. Jairo Arellano
Spring/Saturday Class Curriculum	Dr. Jairo Arellano
Spring/Saturday Class Attendance	Dr. Jairo Arellano
Summer Programs - Sierra Linda and Frank	Dr. Jairo Arellano
Kamala Spring/Saturday Classes	Mrs. Christine McDaniels

Culminating Activity



# Dual Language Master Plan Task Force

## Goal

Create Master Plan for OSD Dual Language Programs

## Meetings

Six meetings in school year 2015-2016

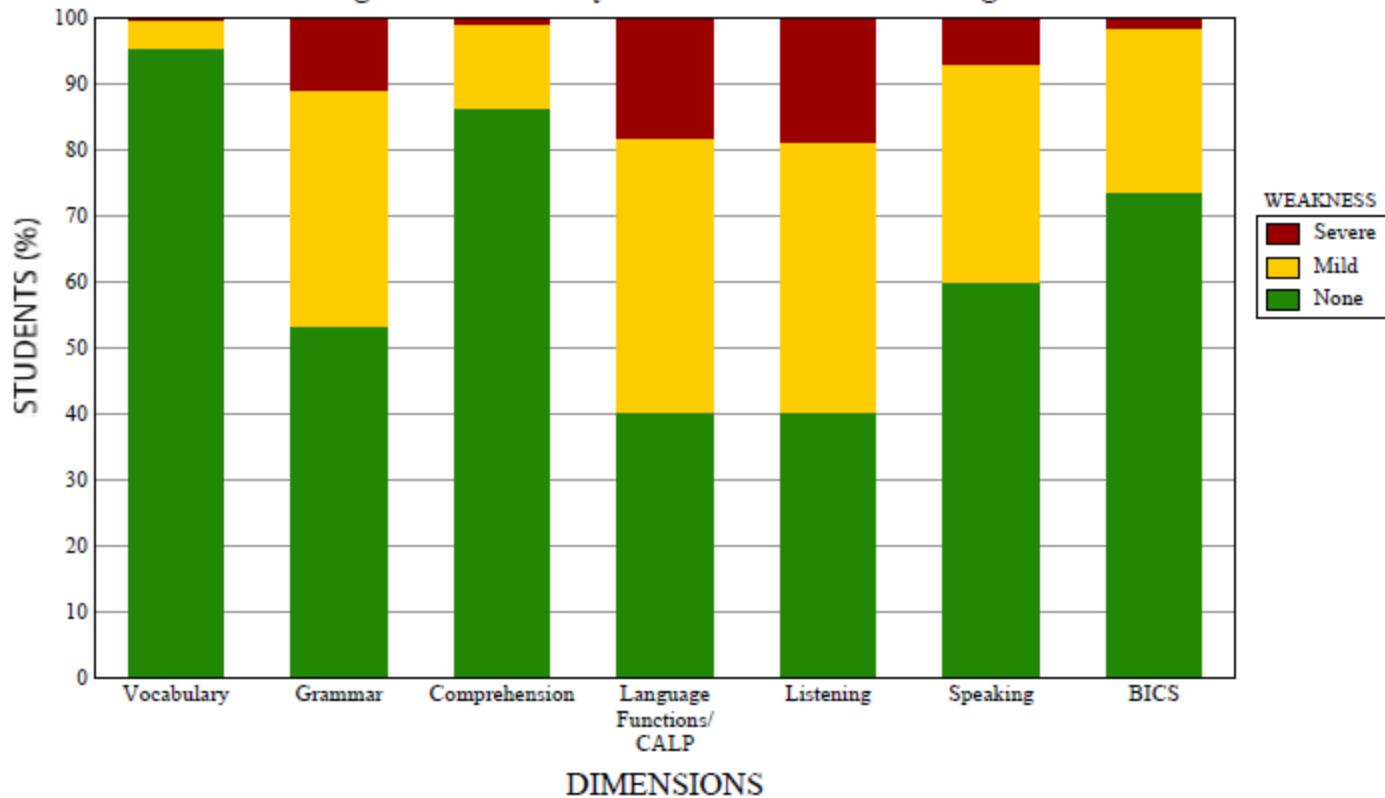
## Participants

OSD Administrators, Principals, Parents, Teachers

# Writing the DLI Master Plan

- Vision, Mission and Goals
- History
- DLI Site History
- Programmatic Elements
- Guiding Principles
- Program Pathways
- Enrollment Process
- Curriculum and daily schedules
- Handbook
- Estimated final draft completion date: June 6, 2016

### District Diagnostic Summary for IPT I and II-Oral English Tests



\* If multiple test records within the same test period are found for a student, only the most recent test record is counted.

### District Diagnostic Summary Table for IPT I and II-Oral English Tests

Total Students Tested: 7,763		Non Reportable <sup>†</sup>	Relative Weakness <sup>††</sup>						
			None		Mild		Severe		Total
		Student Count	Student Count	% of Student	Student Count	% of Student	Student Count	% of Student	Student Count
Diagnostic Dimension	Vocabulary	1,140	6,326	96%	282	4%	15	0%	6,623
	Grammar	3,231	2,418	53%	1,624	36%	490	11%	4,532
	Comprehension	2,856	4,240	86%	624	13%	43	1%	4,907
	Language Functions/CALP	2,879	1,964	40%	2,040	42%	880	18%	4,884
	Listening	1,896	2,368	40%	2,397	41%	1,102	19%	5,867
	Speaking	647	4,268	60%	2,356	33%	492	7%	7,116
	BICS	647	5,237	74%	1,789	25%	90	1%	7,116

<sup>†</sup> Insufficient items administered to provide diagnostic information.

<sup>††</sup> Based on number of students who had sufficient items administered to provide diagnostic information.

\* If multiple test records within the same test period are found for a student, only the most recent test record is counted.



The diagnostic dimensions of BICS, Speaking, and Listening are each made up of two other diagnostic dimensions. BICS is made up of vocabulary and grammar; speaking is made up of grammar and functions; and listening is made up of language functions and comprehension. The combination is based on a content analysis of the test items.

## District Oral Score Summary

DISTRICT SUMMARY										
Student Count	Designation			Proficiency Level*					Mean+	
	N	L	F	B	EI	I	EA	A	SS	NCE
7763	16%	67%	16%	16%	23%	21%	23%	16%	96	33

School	Student Count	Designation			Proficiency Level*					Mean+	
		N	L	F	B	EI	I	EA	A	SS	NCE
<b>Brekke</b>	203	5%	71%	24%	5%	13%	19%	39%	24%	105.37	40.84
Grade K	19	21%	79%	0%	21%	53%	0%	26%	0%	70.05	37.26
Grade 1	38	3%	89%	8%	3%	13%	37%	39%	8%	89.79	40.97
Grade 2	33	12%	79%	9%	12%	6%	30%	42%	9%	102.76	31.45
Grade 3	53	2%	62%	36%	2%	8%	15%	40%	36%	116.25	43.11
Grade 4	38	0%	71%	29%	0%	11%	18%	42%	29%	115.37	42.47
Grade 5	22	0%	45%	55%	0%	9%	0%	36%	55%	123.27	49.50
<b>Chavez</b>	603	14%	71%	15%	14%	21%	25%	25%	15%	98.07	32.58
Grade K	20	50%	45%	5%	50%	30%	5%	10%	5%	68.50	29.95
Grade 1	71	11%	82%	7%	11%	35%	27%	20%	7%	80.04	31.11
Grade 2	95	43%	54%	3%	43%	14%	16%	24%	3%	86.89	20.67
Grade 3	77	12%	69%	19%	12%	16%	21%	32%	19%	103.78	32.86
Grade 4	88	11%	68%	20%	11%	19%	24%	25%	20%	103.51	32.94
Grade 5	88	5%	57%	39%	5%	7%	25%	25%	39%	112.40	39.24
Grade 6	64	3%	89%	8%	3%	25%	39%	25%	8%	102.17	36.13

## District Reading Score Summary

DISTRICT SUMMARY										
Student Count	Designation			Proficiency Level*					Mean+	
	N	L	C	B	EI	I	EA	A	SS	NCE
5963	49%	41%	10%	49%	17%	15%	10%	10%	216	28

School	Student Count	Designation			Proficiency Level*					Mean+	
		N	L	C	B	EI	I	EA	A	SS	NCE
<b>Brekke</b>	145	24%	50%	26%	24%	14%	21%	14%	26%	220.06	40.46
Grade 2	33	33%	45%	21%	33%	21%	15%	9%	21%	207.33	33.42
Grade 3	53	11%	47%	42%	11%	9%	21%	17%	42%	226.19	48.74
Grade 4	38	29%	58%	13%	29%	8%	26%	24%	13%	221.45	39.66
Grade 5	21	33%	52%	14%	33%	29%	24%	0%	14%	222.10	32.05
<b>Chavez</b>	490	50%	41%	8%	50%	16%	16%	10%	8%	216.52	28.24
Grade 2	96	69%	28%	3%	69%	17%	9%	2%	3%	196.25	17.18
Grade 3	76	36%	42%	22%	36%	20%	8%	14%	22%	215.38	33.93
Grade 4	86	35%	55%	10%	35%	14%	29%	12%	10%	219.10	35.47
Grade 5	87	38%	53%	9%	38%	22%	21%	10%	9%	221.68	31.47
Grade 6	63	33%	60%	6%	33%	14%	24%	22%	6%	225.73	30.86
Grade 7	57	84%	16%	0%	84%	11%	4%	2%	0%	226.14	23.02
Grade 8	25	88%	12%	0%	88%	8%	4%	0%	0%	225.88	22.64
<b>Curren</b>	421	40%	49%	11%	40%	22%	17%	11%	11%	216.20	30.12
Grade 2	96	53%	42%	5%	53%	26%	7%	8%	5%	199.11	21.79

## District Writing Score Summary

DISTRICT SUMMARY										
Student Count	Designation			Proficiency Level*					Mean+	
	N	L	C	B	EI	I	EA	A	SS	NCE
5908	38%	52%	11%	38%	23%	16%	13%	11%	123	28

School	Student Count	Designation			Proficiency Level*					Mean+	
		N	L	C	B	EI	I	EA	A	SS	NCE
<b>Brekke</b>	<b>144</b>	<b>31%</b>	<b>63%</b>	<b>6%</b>	<b>31%</b>	<b>24%</b>	<b>20%</b>	<b>19%</b>	<b>6%</b>	<b>123.76</b>	<b>31.36</b>
Grade 2	33	42%	48%	9%	42%	6%	18%	24%	9%	120.67	34.88
Grade 3	53	43%	53%	4%	43%	25%	11%	17%	4%	121.11	27.49
Grade 4	38	13%	79%	8%	13%	29%	34%	16%	8%	128.42	34.84
Grade 5	20	10%	85%	5%	10%	45%	20%	20%	5%	127.00	29.20
<b>Chavez</b>	<b>489</b>	<b>36%</b>	<b>56%</b>	<b>9%</b>	<b>36%</b>	<b>23%</b>	<b>19%</b>	<b>14%</b>	<b>9%</b>	<b>123.44</b>	<b>27.08</b>
Grade 2	96	67%	31%	2%	67%	15%	7%	9%	2%	109.95	20.38
Grade 3	76	29%	57%	14%	29%	13%	29%	14%	14%	123.38	31.04
Grade 4	85	52%	46%	2%	52%	25%	13%	8%	2%	118.96	21.38
Grade 5	87	23%	69%	8%	23%	25%	31%	13%	8%	126.11	29.56
Grade 6	63	19%	63%	17%	19%	14%	19%	30%	17%	131.67	33.51
Grade 7	57	18%	67%	16%	18%	37%	18%	12%	16%	135.46	30.68
Grade 8	25	12%	88%	0%	12%	60%	12%	16%	0%	133.28	27.08
<b>Curren</b>	<b>421</b>	<b>38%</b>	<b>56%</b>	<b>6%</b>	<b>38%</b>	<b>28%</b>	<b>17%</b>	<b>11%</b>	<b>6%</b>	<b>121.97</b>	<b>25.82</b>
Grade 2	96	61%	36%	2%	61%	13%	17%	7%	2%	112.38	22.78

# English Learner Master Plan

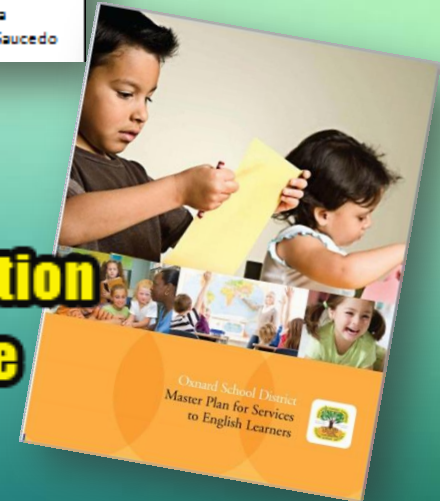
## • Subcommittees •

	Subcommittee	Members proposed 8-23-15
1	Mission/Vision Guiding Principles	Dr. Cesar Morales Dr. Jairo Arellano Veronica Oros Jabbar Wofford Robin Lefkovits
2	Identification, Assessment, Placement, RFEP Identification, Assessment, Placement (Chapter 1 in current Oxnard EL Master Plan)	Robin Freeman Cristina Huizar Leticia Ramos Robin Lefkovits Dr. Karen Scott-Hill
3	Instructional Program Options (Chapter 2 in current Oxnard EL Master Plan)	Chris Ridge Ivette Zendejas Liliana Giron
4	Monitoring of Student Progress and Reclassification (Chapter 3 in current Oxnard EL Master Plan)	Amelia Sugden Elva Gonzales-Nares Mirna Castro Bertha Zaragoza
5	English Language Development (not currently a stand-alone chapter in Oxnard EL Master Plan – recommended additional chapter)  *REVIEW CHAPTER 2 IN CURRENT OXNARD EL MASTER PLAN (ELD section)	Robin Freeman Cristina Huizar Patricia Zamora Cynthia Garcia Doane Beatriz Gomez
6	Access to the Curriculum (Not a stand-alone Chapter in current Oxnard EL Master Plan – recommended additional chapter)  *REVIEW CHAPTER 2 IN CURRENT OXNARD EL MASTER PLAN (Access to Grade Level Core Content section)	Anna Thomas Elva Gonzales-Nares Cynthia Garcia Doane Elsa Zavala

	Subcommittee	Members proposed 8-23-15
7	Staffing & Professional Development (Learning) (Chapter 4 in current Oxnard EL Master Plan)	Mary Curtis Teresa Guerra Robin Lefkovits Mary Arias Elisondo
8	Parent and Community Engagement (Chapter 5 in current Oxnard EL Master Plan)	Dr. Jairo Arellano Veronica Oros Alfredo Gutierrez Claudia Mercado Amber Whitney
9	Program Evaluation & Accountability (Chapter 6 in current Oxnard EL Master Plan)	Mary Curtis Teresa Guerra Andrea Pulido Guadalupe Reyes Jabbar Wofford Debra Cordes
10	Resource Allocation (Chapter 7 in current Oxnard EL Master Plan)	Jairo Arellano Veronica Oros Aracely Fox Maria Flores Ana Garcia Maria Christina Saucedo



**Construction  
Update**





# English Learner Master Plan

## • The Journey •

- ◆ Refine EL Master Plan goals with consideration for intersect with other district plans, infrastructure, initiatives, policy and procedures
- ◆ Update FPM monitoring items for all chapters
- ◆ Review all chapters for alignment to ELA/ELD Framework, ELD Standards
- ◆ Consider implications for central office organizational structure and distributed leadership and accountability for EL programs
- ◆ Consider implications of Professional Learning
- ◆ Review forms in EL Master Plan Procedures Manual to revise/update.



**Construction  
Update**



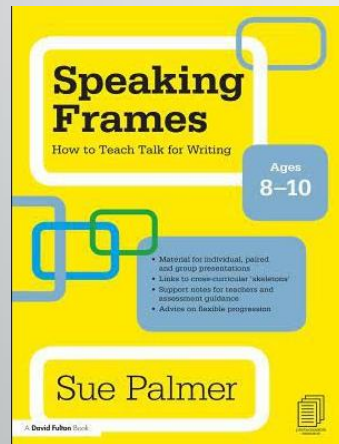
School	# Reclassified
Brekke	40
Chavez	14
Curren	46
Driffill	44
Elm	40
Frank	38
Fremont	9
Harrington	20
Haydock	25
Kamala	50
Lemonwood	55
Marina West	22
Marshall	24
McAuliffe	23
McKinna	32
Ramona	29
Ritchen	20
Rose Avenue	43
Sierra Linda	32
Soria	47
<b>Total</b>	<b>653</b>

# Spring and Saturday Classes Curriculum Used

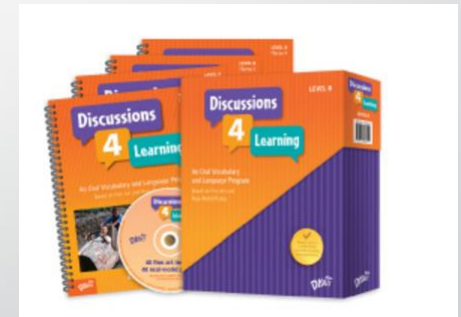
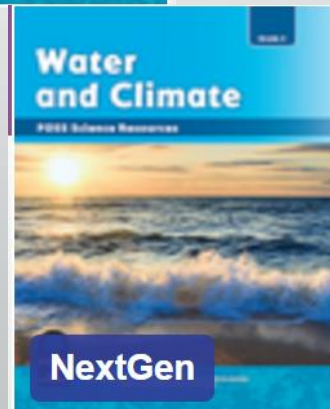
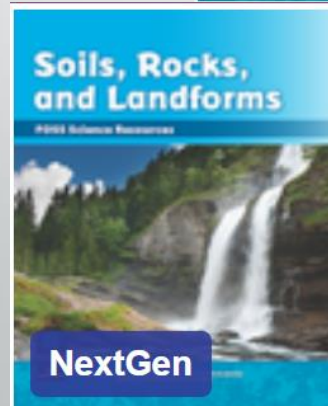
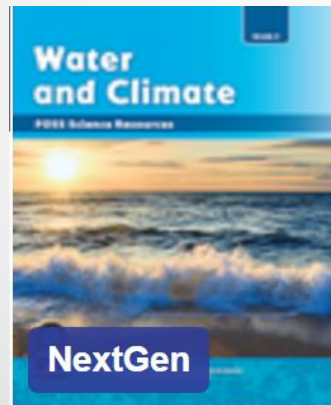


## FOSS Science Modules

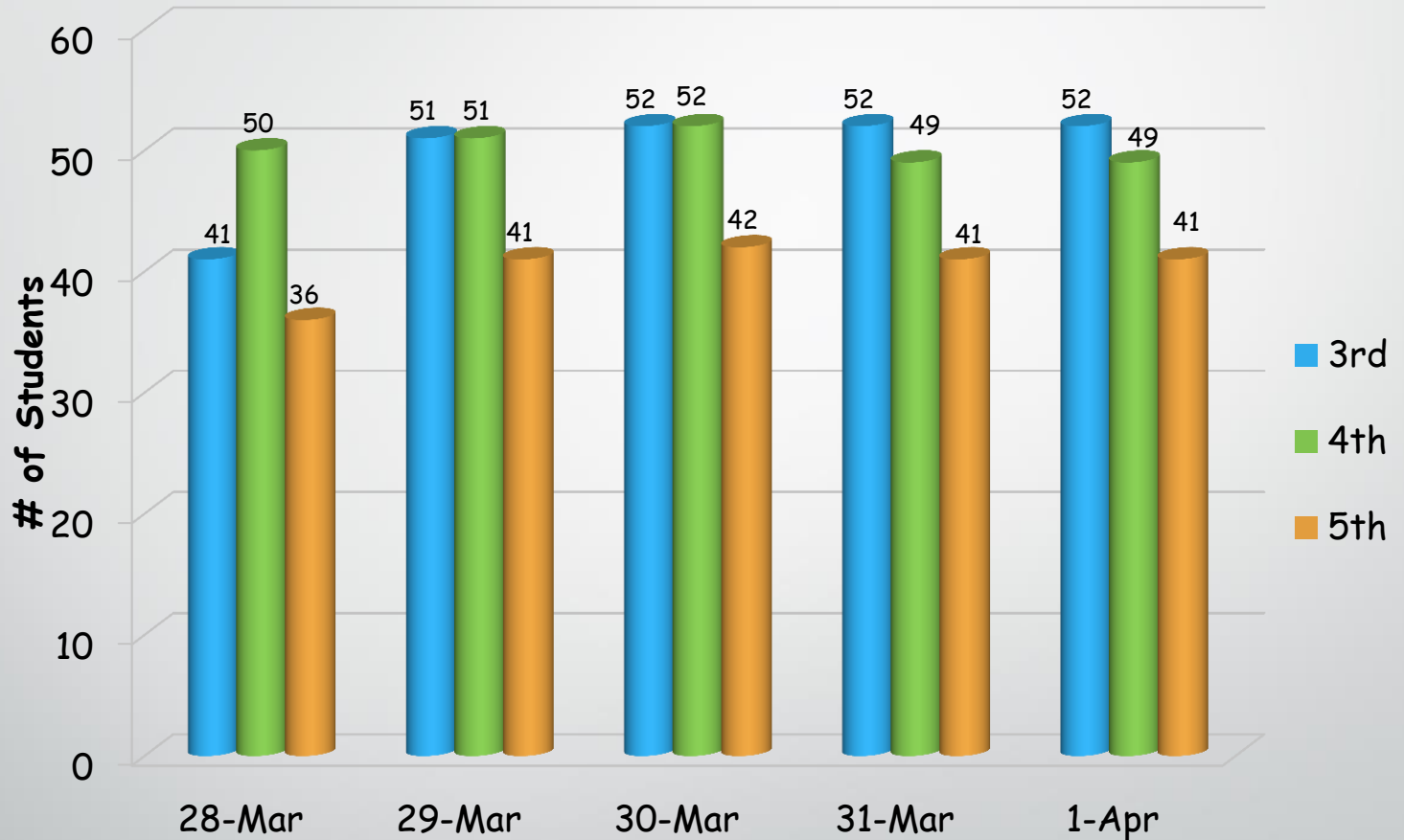
An Oral Vocabulary and Language Program



Language Arts

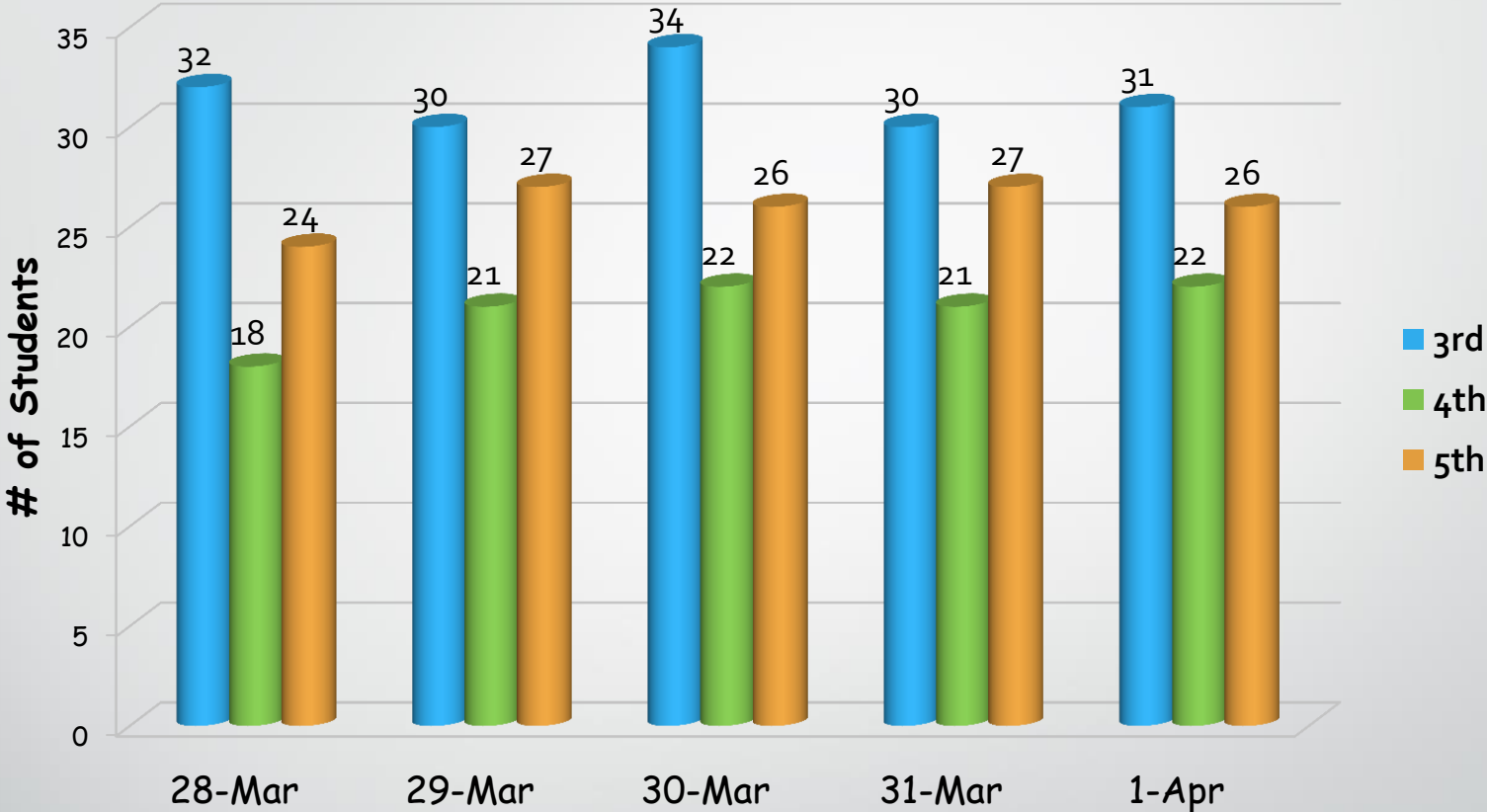


# Rose Avenue Spring Puma Camp Daily Attendance



Beginning attendance – **127 students**  
Ending attendance – **142 students**

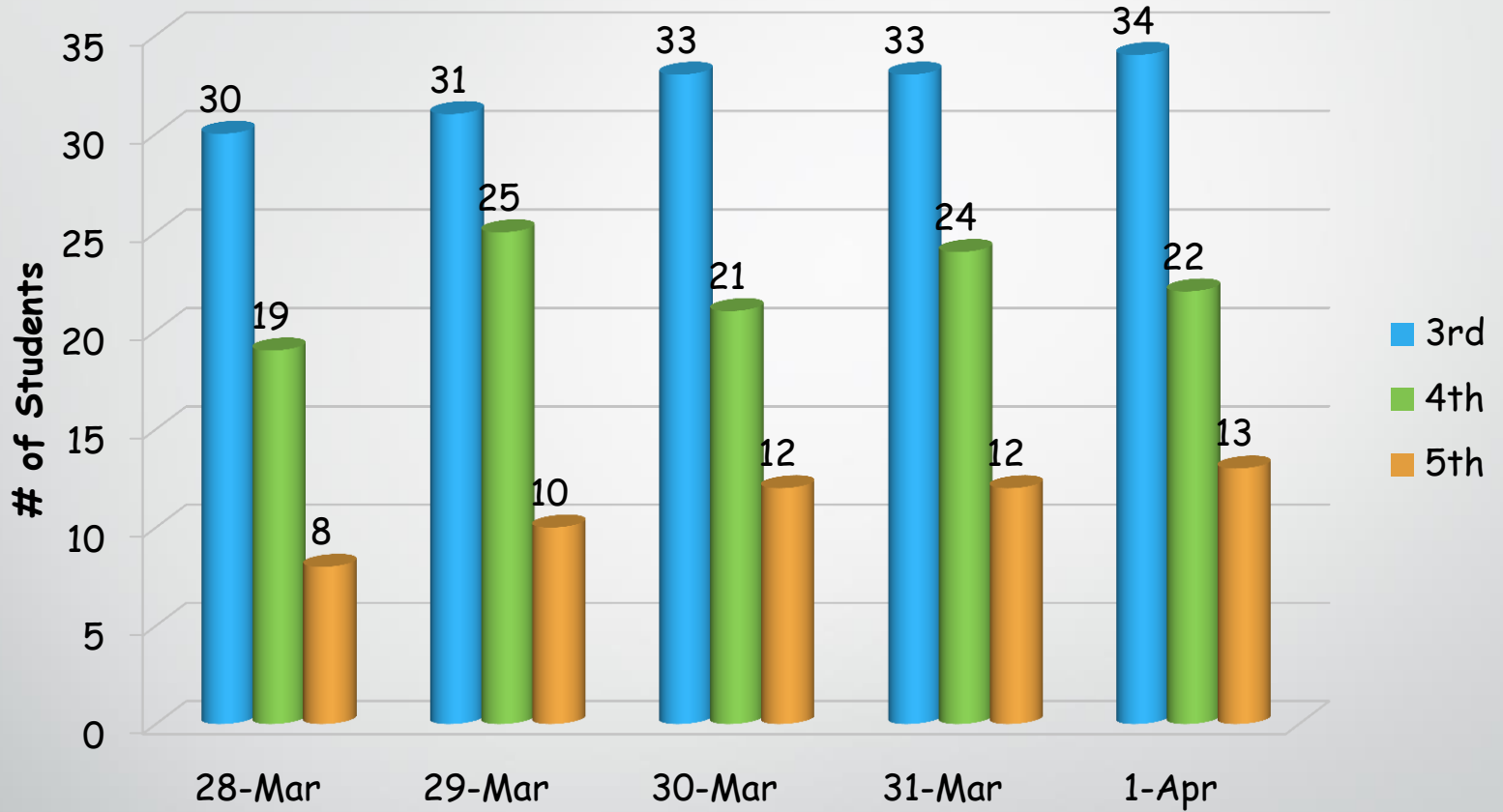
# Harrington Spring Bear Camp Daily Attendance



Beginning attendance- **74 students**

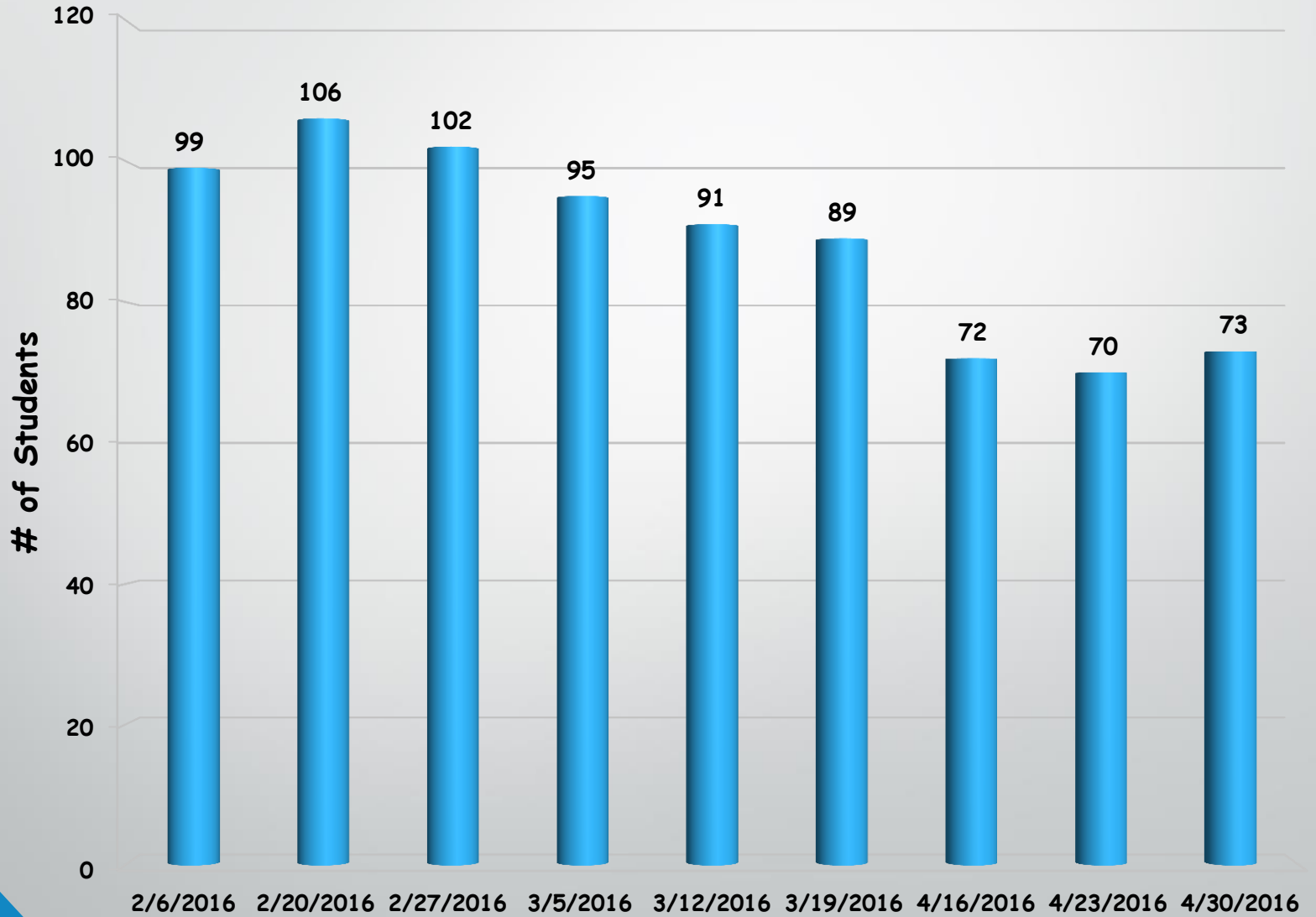
Ending attendance- **79 students**

# Lemonwood Spring Lions Camp Daily Attendance

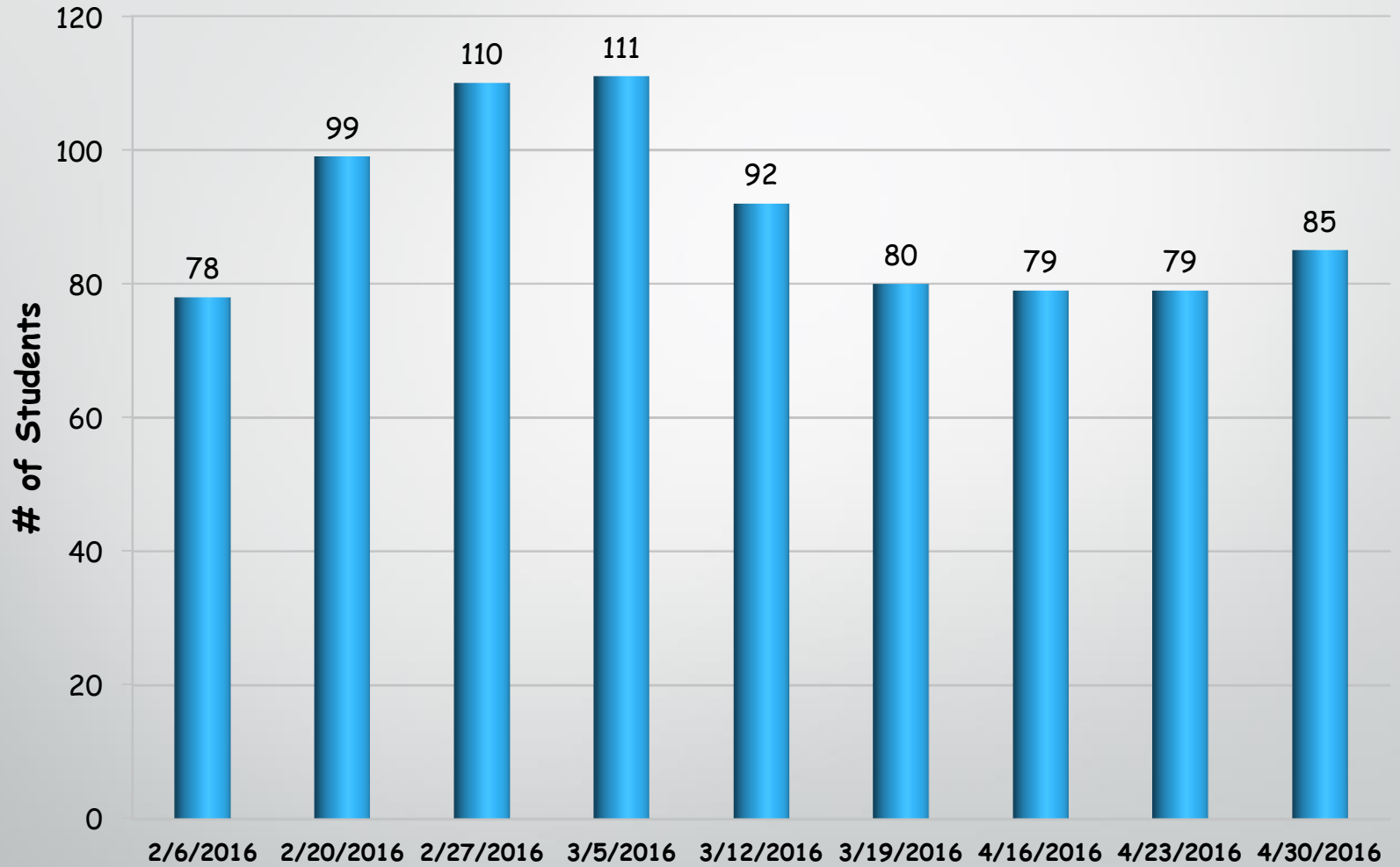


Beginning attendance- **66 students**  
Ending attendance- **69 students**

# Kamala Saturday School Attendance



# Chavez Saturday School Attendance





# Summer Writer's Camp



## Sierra Linda



<b>Proposed School Dates</b>	<b>June 20 - July 1 (Two weeks)</b>
<b>Time Frame</b>	8:30-12:00 noon; Monday - Friday
<b>Description</b>	Writing camps offer students in grades 3-8 many opportunities to explore the varied facets of writing, regardless of their skill levels, in a supportive and stimulating environment
<b>Curriculum</b>	UCSB's Young Writer's Camp (SCWriP) will provide a curriculum first developed in the Young Writers Camps and now tailored to meet the needs of English Learners in the academies.
<b>Goals</b>	The emphasis will be on increasing the volume and fluency of writing from students by providing rich opportunities for students to generate original text, analyze model/mentor text, respond to each other's writing, and publish writing.

# Summer Writer's Camp



## R.J. Frank



The Author builds up Suspense in the story. The way she does this is by making us think something bad is going to happen or by conversations that might get us nervous to find out what will happen. Such as when she said she was falling, we all wanted to find out would she continue the climb or stop and come down. Also when Sean said "Shes heading up" we were all wondering what was going to happen. Is she going to make it to the top?

Line 62 through 71 is important for building up the suspense. It is important because this is the part of the story it gets all of us nervous of what will happen. The author writes things such as "and the dramatic effect sent a chill down my spine" This gives us the chills and makes us wonder even more will she make it to the top?

## Narrative Writing

The purpose of narrative writing is to tell a story. You describe an experience, event, or sequence of events in the form of a story.

### Important Parts

- Beginning
- Middle (plot)
- End

- ★ Setting
- ★ Characters
- ★ Problem/goal
- ★ Resolution/outcome

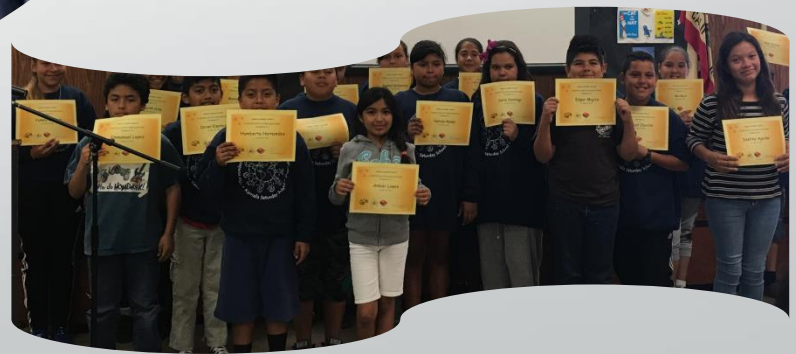
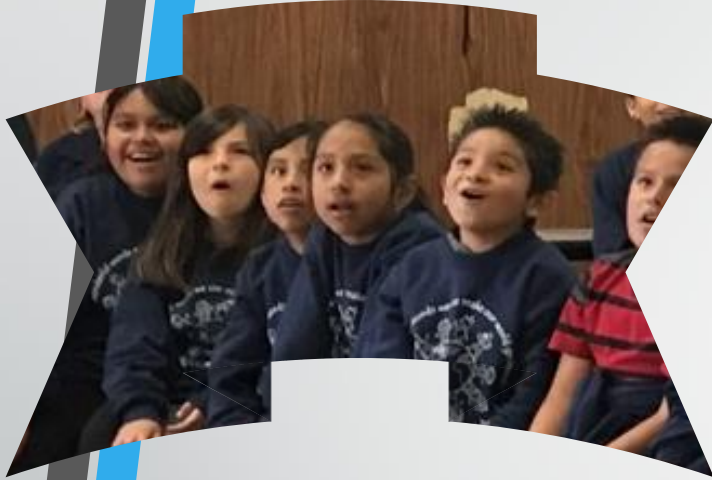
### Important Words

first, then, next, finally...

Your narrative should be a good story NOT a watermelon topic.

Proposed School Dates	June 20 - July 1 (Two weeks)
Time Frame	12:00 noon – 4:00 pm; Monday - Friday
Description	Writing camps offer students in grades 3-8 many opportunities to explore the varied facets of writing, regardless of their skill levels, in a supportive and stimulating environment
Curriculum	UCSB's Young Writer's Camp (SCWriP) will provide a curriculum first developed in the Young Writers Camps and now tailored to meet the needs of English Learners in the academies.
Goals	The emphasis will be on increasing the volume and fluency of writing from the students by providing rich opportunities for students to generate original text, analyze model/mentor text, respond to each other's writing, and publish writing.

# Kamala Highlights







Regular Board Meeting  
April 20, 2016

The Board of Trustees of the Oxnard School District met in regular session at 5:01 p.m. on Wednesday, April 20, 2016, at the Educational Service Center.

CALL TO ORDER

A roll call of the Board was conducted. Present were President Veronica Robles-Solis and Trustees Debra M. Cordes, Ernest “Mo” Morrison, Denis O’Leary and Albert Duff Sr. Staff members present were District Superintendent Dr. Cesar Morales, Deputy Superintendent Lisa Cline and Assistant Superintendents Robin Freeman and Dr. Jesus Vaca, and executive assistant Sylvia Carabajal.

ROLL CALL

Angel Onofre Vargas, 4th grader in Ms. Buenrostro’s class, lead the audience in the Pledge of Allegiance.

PLEDGE OF ALLEGIANCE

Ashley Trejo, 4th grader in Mr. Armstrong’s class read the District’s Vision and Mission Statements in English and Spanish.

DISTRICT’S VISION AND MISSION STATEMENTS

Ms. Anne Jenks, principal of McKinna Multimedia Academy where moving students from consumers to creators of digital content presented a brief summary of what is happening at their school. She reported McKinna is a renewed Apple Distinguished School (one of 200 schools in the world); Teacher Leticia Batista is Apple Distinguished Educator for 2015 (one of 143 in the world), and Robin Steffenauer is Gold Coast CUE Elementary Teacher of the Year. She reported on ELD Academy, community involvement, cultural awareness, strand focus, project based learning and in closing shared their McKinna Digital Brochure. McKinna students then showed Board Members and administrators how to code and control robots.

PRESENTATION BY MCKINNA SCHOOL

President Robles-Solis thanked the students and staff for participating in the board meeting. Dr. Morales thanked the students, parents, teachers and staff for being present at the board meeting.

A.5 On motion by Trustee Duff, seconded by Trustee Morrison and carried on a roll call vote of 4-1, Trustee O’Leary being the nay vote; the Board adopted the agenda, as presented.

ADOPTION OF THE AGENDA

Ms. Robin Freeman, Assistant Superintendent, Educational Services, provided a detailed report on STAR 360 an assessment tool that measures student performance in Reading and Mathematics Common Core State Standards. She presented district results for the Early Literacy Assessment used for Kindergarten and First Grade; and Reading and Mathematics for grades Second thru Eighth. She also presented results per school site, how much growth is enough and student growth percentile in Reading and Mathematics.

STUDY SESSION STAR 360 DATA

Following a lengthy discussion, the Board requested for the next report to include all schools by grade level to analyze the differences and possibly close in on the gap.

ANNOUNCEMENTS PRIOR TO CLOSED SESSION April 20, 2016:

After any public comments on the Closed Session agenda items, the Board will be recessing to Closed Session to consider the following:

No one addressed the Board of Trustees during closed session public comment.

PUBLIC COMMENT  
CLOSED SESSION

Firstly, for CONFERENCE WITH LEGAL COUNSEL under *Government Code*, Section 54956.9:

- ANTICIPATED LITIGATION – one (1) case

Secondly, REMOVAL/SUSPENSION/EXPULSION OF STUDENTS (Education Code 48912; 20 U.S.C. Section 1232g)

- Case No. 15-09 (Action Item)
- Case No. 15-11 (Action Item)

Thirdly, for CONFERENCE WITH REAL PROPERTY NEGOTIATORS under *Government Code*, Section 54956.8:

- Property: Parcel located Teal Club Road, North of Teal Club Road, South of Doris Avenue; Agency Negotiators: Superintendent/Deputy Superintendent, Business & Fiscal Services/Garcia Hernandez & Sawhney, LLP/Caldwell Flores Winters, Inc.

Fourthly, for CONFERENCE WITH LABOR NEGOTIATORS under *Government Code*, Sections 54957.6 and 3549.1.

The District negotiator is the Assistant Superintendent, Human Resources & Support Services and the employee organizations are OEA, OSSA, CSEA; and all unrepresented personnel – administrators, classified management, confidential.

Finally, under *Government Code*, Section 54957 and *Education Code*, Section 44943:

- PUBLIC EMPLOYEE(S) DISCIPLINE/DISMISSAL/RELEASE
- PUBLIC EMPLOYEE(S) REASSIGNMENT/APPOINTMENT

Trustees convened to closed session at 6:28 p.m. until approximately 7:09 p.m. to discuss items on the closed session agenda.

CLOSED SESSION

President Robles-Solis reported the Board deliberated on students matters in closed session and took take action in open session actions:

REPORT ON CLOSED  
SESSION

- On motion by Trustee Duff, seconded by Trustee Cordes and carried on a roll call vote of 5-0; on the matter of Case #15-09 the Board of Trustees approved administrations recommendation. (Motion #15-113)
- On motion by Trustee Cordes, seconded by Trustee Morrison and carried on a roll call vote of 5-0; on the matter of Case #15-11 the Board of Trustees approved administrations recommendation. (Motion #15-114)

President Robles Solis also reported the Board took the following action during closed session:

- On motion by Trustee Morrison, seconded by Trustee Duff and carried on a roll call vote of 5-0, the Board of Trustees approved the Settlement and Release Agreement with Employee #OSD-3145. (Motion #15-115)

A.11 On motion by Trustee Cordes, seconded by Trustee O’Leary, and carried on a roll call vote of 5-0, the Board of Trustees approved the minutes of regular board meetings February 3, 2016, February 17, 2016, March 2, 2016 and March 16, 2016 and special board meeting February 10, 2016.

Approval of Minutes

A.12 The Board of Trustees recognized Juan Soria School Students, Teachers, Staff, Mrs. Fox and Parents for receiving the California Department of Education 2016 Elementary School Gold Ribbon Award.

RECOGNITION FOR  
SCHOOL GOLD  
RIBBON AWARD –  
JUAN SORIA SCHOOL

B.1 President Robles-Solis read the Rules For Individual Presentations in English and Clerk Cordes read them in Spanish.

RULES FOR  
PRESENTATIONS

The following individuals addressed the Board of Trustees:

PUBLIC COMMENT

- Iliana Barron, Kamala Parent, requested assistance from staff regarding daughter being bullied, she also submitted a letter regarding the same;
- Francine Castanon, Elm Parent, questioned why Trustees and Administration did not attend the Science Event at Elm, requested the same recognition be given to schools in the south side of the district, requested oversight committees for the Lemonwood and Elm projects as was done with Soria School and questioned when Harrington fence would be completed;
- Angelica Preciado, DLI Soria Teacher, Read and Ride Program, thanked Principal Fox for allowing her to dream, thanked President Robles-Solis for the donation of 11 pedals and thanked Mr. Solis for putting them together. In appreciation she presented Dr. Morales and President Robles-Solis with a Read and Ride T-shirt;
- Auelia Ayala, Elm Parent, submitted a petition requesting crossing guards be made available for students going to and from school, very dangerous situation; she also thanked the Board for Harrington School and hoped it would be completed soon.

B.2 President Robles-Solis opened the public hearing on the adoption of the Preliminary Environmental Assessment in compliance with California Education Code Section 17213.1(a)(6)(A).

PUBLIC HEARING  
APPROVAL OF  
RESOLUTION #15-32  
ADOPTING THE  
PRELIMINARY  
ENVIRONMENTAL  
ASSESSMENT AND  
APPROVING THE  
MITIGATION  
MEASURES FOR THE  
LEMONWOOD  
ELEMENTARY SCHOOL  
RECONSTRUCTION  
PROJECT  
(Motion #15-116)

Ms. Lisa Cline, Deputy Superintendent, Business & Fiscal Services introduced Mr. Ben Chevlen with ATC Group Services, Inc. provided a brief report on the preliminary environmental assessment for Lemonwood School. There being no comments President Robles-Solis closed the public hearing.

Following discussion, on motion by President Robles-Solis, seconded by Trustee Cordes and carried on a 5-0 roll call vote; the Board of Trustees adopted Resolution #15-32 Adopting the Preliminary Environmental Assessment and approving the mitigation measures for the Lemonwood Elementary School Reconstruction Project in compliance with California Education Code Section 17213.1 (a)(6)(A).

B.3 President Robles-Solis opened the public hearing on the adoption of Level 2 School Fees in compliance with Government Code Sections 65995.5, 65995.6 & 65995.7 and Section 17620 of the Education Code.

Ms. Lisa Cline, Deputy Superintendent, Business & Fiscal Services introduced Mr. Larry Ferchaw with Dolinka Group provided a brief report on the District's School Facilities Needs Analysis Report. There being no comments President Robles-Solis closed the public hearing.

Following discussion, on motion by President Robles-Solis, seconded by Trustee Cordes and carried on a roll call vote of 5-0; the Board of Trustees adopted Resolution #15-33 Approving a School Facilities Needs Analysis, Adopting alternative School Facilities Fees in Compliance with Government Code Sections 65995.5, 65995.6, & 65995.7 and Section 17620 of the Education Code and Making Related Findings and Determinations.

B.4 President Robles-Solis opened the public hearing on the School Fee Justification Studies relative to the increase of statutory school facilities fees for new residential and commercial/industrial development pursuant to Section 17620 of the Education Code.

Ms. Lisa Cline, Deputy Superintendent, Business & Fiscal Services introduced Mr. Larry Ferchaw with Dolinka Group provided a brief report on the School Fee Justification Studies. There being no comments President Robles-Solis closed the public hearing.

Following discussion, on motion by President Robles-Solis, seconded by Trustee Morrison and carried on a roll call vote of 5-0; the Board of Trustees adopted Resolution #15-34 to Increase Statutory School Fees Imposed on New Residential and Commercial/Industrial Development Projects pursuant to Education Code Section 17620.

The following items on the consent agenda were approved on motion by Trustee Morrison, seconded by Trustee Duff, and carried on a roll call vote of 5-0, as presented.

C.1 Accepted the following gifts:

- From Teachers of the Oxnard Educators Association, to Marina West School Library, a donation of books in honor of Dr. Seuss's Birthday and Read Across America 2016;
- From Alice Ortega, to Soria School, a donation of \$150.00 which will be used to support students;
- From Target, to Soria School Library, a donation \$375.16 which will be used to support students.

C.2 Approved the following agreements:

- Addendum #1 to Agreement #14-05 with School Innovations & Achievement to establish additional data requirements for delivering enhanced reports from SI&A to the district according to new laws that went into effect January 2016 regarding data privacy; at no additional cost;

PUBLIC HEARING  
ADOPTION OF  
RESOLUTION #15-33  
APPROVING A SCHOOL  
FACILITIES NEEDS  
ANALYSIS, ADOPTING  
ALTERNATIVE SCHOOL  
FACILITIES FEES IN  
COMPLIANCE WITH  
GOVERNMENT CODE  
SECTIONS 65995.5,  
65995.6, & 65995.7 AND  
SECTION 17620 OF THE  
EDUCATION CODE AND  
MAKING RELATED  
FINDINGS AND  
DETERMINATIONS  
(Motion #15-117)

PUBLIC HEARING AND  
ADOPTION OF  
RESOLUTION #15-34 OF  
THE BOARD OF  
TRUSTEES OF THE  
OXNARD SCHOOL  
DISTRICT TO INCREASE  
STATUTORY SCHOOL  
FEES IMPOSED ON NEW  
RESIDENTIAL AND  
COMMERCIAL/  
INDUSTRIAL  
DEVELOPMENT  
PROJECTS PURSUANT  
TO EDUCATION CODE  
SECTION 17620  
(Motion #15-118)

CONSENT AGENDA  
(Motion #15-119)

(Acceptance of Gifts)

(Approval of  
Agreements)



- #15-207 with City Impact Inc., to provide a group facilitator (Bilingual if needed) to conduct a 10 week Student Prevention/Intervention group for R.J. Frank Middle School students; amount not to exceed \$650.00, to be paid with School Site Funds – Targeted;
- #15-208 with Bubblemania, to provide one (1) 40-45 minute assembly for Kamala School students; amount not to exceed \$280.00, to be paid with EL Intervention Funds;
- #15-209 with Ventura County Public Health, to provide free nutrition education and health promotion services on site to Oxnard School District children, youth and families; at no cost to the District;
- #15-213 with Oxnard School District Education Foundation, to implement a program for music instruction in TK-8<sup>th</sup> Grade at Soria School, April 25, 2016 through June 13, 2016; amount not to exceed \$4,920.00, to be paid with Donation Funds;
- #15-214 with Mad Science of Los Angeles, to provide two (2) classroom workshops at Drifill School; amount not to exceed \$480.00, to be paid with School Site Funds – Targeted;
- #15-216 with Terra Firma Enterprises (TFE), to provide technical assistance to OSD to update their Emergency Operations Plan and Operational Checklist for their Emergency Operations Center; amount not to exceed \$16,705.00, to be paid with Safety Credits;
- #15-217 with Shavonn Swain – KNS Rockstar, to provide three (3) motivational/anti-bullying assemblies to Curren School; amount not to exceed \$3,000.00 plus lunch, to be paid with Discretionary Funds;
- #15-218 with Shavonn Swain – KNS Rockstar, to provide one (1) motivational/anti-bullying assembly to Sierra Linda School; amount not to exceed \$1,000.00 plus lunch, to be paid with Discretionary Funds;
- #15-220 with CSDA Design Group, to provide architectural design services for the installation of three (3) new portable buildings, additional parking and replacement of existing play structure at San Miguel School; amount not to exceed \$79,958.00, to be paid with Deferred Maintenance – One Time Funds;
- #15-221 with Nolte Associates Inc., to provide structural, electrical, and mechanical professional DSA Inspection Services for the installation of an additional 75 ton chiller at Ritchen; amount not to exceed \$8,500.00, to be paid with Williams Reimbursement Funds;
- #15-223 with Marie Gregorio-Oviedo, to provide each of the three (3) Middle School Academies with professional photographs of students and academy related activities for promotional purposes; amount not to exceed \$7,500.00 (\$2,500.00 per school), to be paid with MSAP Grant Funds;
- #15-224 with Buck Institute for Education, to provide three (3) full days of training for to up to 35 OSD educators for the 2015-2016 school year; amount not to exceed \$10,500.00, to be paid with Title II Funds;
- #15-225 with Northern Rift Inc., to provide three (3) full days of student classroom presentations on career pathways for innovators and entrepreneurs, one day at each middle school; amount not to exceed \$3,000.00 (\$1,000.00 per school), to be paid with MSAP Grant Funds;
- #15-226 with Shavonn Swain – KNS Rockstar, to provide three (3) motivational/anti-bullying assemblies to Fremont Middle School; amount not to exceed \$3,000.00 plus lunch, to be paid with Title I Funds;

- #15-227 with Tutorific!, to provide kinesthetic Math Program and an enrichment critical thinking program at five (5) schools in the Oxnard School District during the after school program; amount not to exceed \$50,000.00, to be paid with ASES Grant Funds;
- #15-228 with Children’s Therapy Network Inc., to provide supplemental staffing to the OSD on an “as needed” basis in the field of Speech Language Therapy, Physical Therapy, Occupational Therapy and licensed assistants, April 21, 2016 through July 31, 2016; billed cost will be “as needed” based on attached Fee Schedule, to be paid with Special Education Funds;
- #15-229 with Lawrence Hall of Science, to deliver a full-day teacher workshop on the Ocean Science Sequence program for up to 23 Oxnard School District middle school teachers; amount not to exceed \$7,000.00 (includes accommodations & incidentals up to \$2,000.00), to be paid with MSAP Grant Funds.

C.3 Ratified the following agreements:

(Ratification of Agreements)

- #15-206 with UC Santa Barbara – MESA Program, to provide program at three (3) middle schools for the 2015-2016 school year; amount not to exceed \$700.00 per school, to be paid with Title 1 Funds;
- #15-210 with Fillmore Unified School District for Oxnard School District to provide Deaf and Hard of Hearing Services to student AL080507 for the 2015-2016 school year; Fillmore Unified School District will reimburse Oxnard School District \$10,487.00;
- #15-211 with Ventura County Office of Education, to provide exceptional services for special education student GG111603 that consist of support from Special Circumstances Paraeducators (SCP’s) for the 2015-2016 school year, including Extended School Year, if applicable; amount not to exceed \$33,984.30, to be paid with Special Education Funds;
- #15-212 with Pleasant Valley School District for Oxnard School District to provide Deaf and Hard of Hearing Services to student AYL082012 for the 2015-2016 school year, including extended school year; Pleasant Valley School District will reimburse Oxnard School District \$15,388.00;
- #15-215 with Ventura County Office of Education, to provide exceptional services for special education student AA120506 that consist of support from Special Circumstances Paraeducators (SCP’s) for the 2015-2016 school year, including Extended School Year, if applicable; amount not to exceed \$27,050.76, to be paid with Special Education Funds.

C.4 Approved the Quarterly Report on Williams Uniform Complaints, third quarter, as presented.

(Approval of the 2015-16 Quarterly Report on Williams Uniform Complaints, Third Quarter)

C.5 Set the date of May 18, 2016, for a public hearing during their regular meeting to receive public comment on the Mitigated Negative Declaration prepared for the Marshall Elementary School New Classroom Building Project.

(Setting of Date for Public Hearing for the Mitigated Negative Declaration as Prepared for the Marshall Elementary School New Classroom Building Project)

C.6 Approved request for Pavan Bhatia, Director of Facilities, to attend the Harvard Graduate School of Education’s “Learning Environments for Tomorrow: Next Practices for Educators and Architects” Conference, in Cambridge, MA, May 17-19, 2016; amount not to exceed \$4,500.00 for registration, travel and lodging, to be paid from the General Fund.

(Request for Approval of Out of State Conference Attendance – Pavan Bhatia)

C.7 Authorized the Superintendent to make certain changes to the construction documents including modifying the sublease payment schedule and certain non-substantive changes to the construction documents.

(Authorize Superintendent to Make Certain Non-Substantive Changes to the Construction Service Agreement and Sublease Agreement between Swinerton Builders, Inc., and the Oxnard School District for the Construction of the Lemonwood K-8 School)

C.8 Approved request for Evelyn Cacho, 6<sup>th</sup> grade student at Curren School, to attend the California Migrant Education Program Annual State Speech and Debate Tournament in Fresno, California, May 13 – 15, 2016; at no cost to the District, VCOE will cover the cost of meals, travel and lodging.

(Approval for Participant To Attend Migrant Speech and Debate Tournament Overnight – Fresno, CA – Student Evelyn Cacho)

C.9 Approved the establishment, abolishment, reduction or increase in hours for classified positions:

(Establish/Abolish/Reduce/Increase Hours of Positions)

Establish:

- A five hour and forty five minute, 183 day Paraeducator III, position number 7509, to be established in the Special Education department. This position will be established to provide additional support.

Abolish:

- An eight hour, 246 day Assistant Director of Facilities, position number 2456, to be abolished in the Facilities department. This position will be abolished due to the lack of work.
- A four hour, 203 day Office Assistant II, position number 2130, to be abolished at Curren School. This position will be abolished due to the lack of funds.
- A five hour, 192 day Site Technology Technician, position number 6738, to be abolished at Curren School. This position will be abolished due to the lack of funds.

Increase:

- A five hour, 183 day Paraeducator II, position number 321, to be increased to five hours and forty five minutes in the Pupil Services department. This position will be established to provide additional support.

Reduce:

- An eight hour, 180 day NfL Family Liaison, position number 2429, to be reduced to six hours in the Educational Services department. This position will be reduced due to lack of work.

**FISCAL IMPACT:**

Cost for Paraeducator III - \$26,754.00 Special Ed  
 Savings for Assistant Director of Facilities - \$130,764.00 General funds  
 Savings for Office Assistant II - \$20,985.00 Site funds  
 Savings for Site Technology Technician - \$25,567.00 Site funds  
 Cost for Paraeducator II - \$3,394.00 Special Ed  
 Savings for NfL Liaison - \$11,679.00 NfL funds

C.10 Personnel Action: (Personnel Actions)

The following certificated individuals to be employed in the capacities (CERTIFICATED)  
 and for the terms indicated, their salaries to be determined in accordance with  
 salary regulations of the District.

<u>Name</u>	<u>Position</u>	<u>Effective Date</u>
<u>NEW HIRES</u>		
<u>Intervention Services Provider (less than 20 hours per week not to exceed 75% or 135 days a year)</u>		
Rosalind Kasamis	McAuliffe	March 21, 2016
Karla Alvarez	Substitute Teacher	2015/2016 School Year
Katelyn Budroe	Substitute Teacher	2015/2016 School Year
Alicia Davis	Substitute Teacher	2015/2016 School Year
Natalie Garcia	Substitute Teacher	2015/2016 School Year
Yvonne Garcia	Substitute Teacher	2015/2016 School Year
Kristin Mack	Substitute Teacher	2015/2016 School Year
Latifa Nafi	Substitute Teacher	2015/2016 School Year
Della Perez	Substitute Teacher	2015/2016 School Year
Sabrina Ramirez	Substitute Teacher	2015/2016 School Year
Lauren Spence	Substitute Teacher	2015/2016 School Year
Christopher Tucker	Substitute Teacher	2015/2016 School Year

RETIREMENT

Deborah Weilbacher	Teacher, 5 SEI, Ramona	April 30, 2016
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DECEASED

Lynda Berk	Intervention Services Provider, Rose Avenue	February 27, 2016
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The following classified individuals to be employed in the capacities and (CLASSIFIED)  
 for the terms indicated, their salaries to be determined in accordance with salary  
 regulations of the district, it being understood that substitute classified personnel and  
 regular classified personnel performing substitute duties will be assigned by the  
 administration and paid in accordance with salary regulations governing the specific  
 assignment:

<u>Name</u>	<u>Position</u>	<u>Effective Date</u>
<u>New Hire</u>		
Arias, Ester A.	Paraeducator II (B), Position #6799 Pupil Services 5.75 hrs./183 days	03/07/2016

Arroyo, Martha	Child Nutrition Worker, Position #2139 Curren 4.5 hrs./185 days	03/21/2016
Farfan, Diana	Paraeducator II, Position #6783 Pupil Services 5.75 hrs./183 days	03/08/2016
Garcia Mancini, Leonor	Child Nutrition Worker, Position #2679 Soria 5.0 hrs./185 days	03/21/2016
Hull, Felipe	Paraeducator II, Position #6767 Pupil Services 5.75 hrs./183 days	03/17/2016
Mello, Tiffany	Secretary (B), Position #1357 Enrollment Center 8.0 hrs./246 days	03/07/2016
Mendez, Concepcion	IA CELDT (B), Position #2439 Ed. Services 5.5 hrs./183 days	04/11/2016
Rivera, Patricia	IA CELDT (B), Position #2435 Ed. Services 5.5 hrs./183 days	03/21/2016
Robles, Mayra P.	Paraeducator I (B), Position #7378 Frank 5.5 hrs./183 days	03/07/2016
Rodriguez Gaytan, Edmundo	Child Nutrition Worker, Position #2768 Fremont 5.0 hrs./185 days	03/21/2016
Smith, Kayla	Paraeducator III, Position #7396 Pupil Services 5.75 hrs./183 days	03/21/2016
<u>Exempt</u>		
Gutierrez, Veronica	Campus Assistant	03/07/2016
Juarez, Alfredo	Campus Assistant	03/08/2016
Lopez, Richard	Campus Assistant	03/02/2016
Marron, Rodrigo	Campus Assistant	03/01/2016
Villarreal, Estefania	Campus Assistant	03/07/2016
<u>Limited Term</u>		
Banuelos, Antonio	Paraeducator	02/23/2016
Barragan, Imelda L.	Paraeducator	03/14/2016
Basore, Sean	Paraeducator	03/07/2016
Chavez, Jose C.	Custodian	03/10/2016
Conley, Kathleen	Custodian	02/10/2016
Cruz, Pablo	Custodian	03/10/2016
Echenique, Moises	Custodian	03/10/2016
Garcia, Lucrecia M.	Child Nutrition Worker	03/14/2016
Gonzalez, Renata	Paraeducator	03/14/2016
Hecq, Felicity	Paraeducator	03/11/2016
Heidenrich, Julia	Paraeducator	03/01/2016
Hernandez, Eduardo	Paraeducator	03/07/2016
Jimenez, Janelle	Paraeducator	03/14/2016
Koressa, Marcel	Clerical	03/28/2016
Lopez, Veronica	Child Nutrition Worker	03/14/2016
Lozano, Maria Alicia	Child Nutrition Worker	03/28/2016

Magpayo, Petronila	Paraeducator	02/08/2016
Marinez, Martha	Child Nutrition Worker	03/28/2016
Martinez, Frida	Paraeducator	03/21/2016
Orejel, Judith	Clerical	03/14/2016
Pina, Bobby	Paraeducator	02/10/2016
Preciado, Christian	Child Nutrition Worker	03/28/2016
Rivera Garcia, Maria S.	Paraeducator	03/14/2016
Rodriguez, Adrian	Paraeducator	03/02/2016
Rodriguez, Casey S.	Paraeducator	03/14/2016

Promotion

Ambriz, Marie	School Office Manager (B), Position #2241 Haydock 8.0 hrs./210 days Attendance Accounting Technician (B), Position #2244 Haydock 8.0 hrs./210 days	03/14/2016
Cabrera, Karina	Intermediate School Secretary (B), Position #6244 Lemonwood 8.0 hrs./192 days Office Assistant II (B), Position #7266 Lemonwood 8.0 hrs./203 days	03/08/2016
Grande, Carmen	School Office Manager (B), Position #1820 Marshall 8.0 hrs./210 days Office Assistant II (B), Position #1818 Ramona 6.0 hrs./203	02/01/2016

Transfer

Basaldua, Georgina	Preschool Teacher (B), Position #544 Elm 4.0 hrs./183 days Preschool Teacher (B), Position #1111 Driffill 4.0 hrs./183 days	03/21/2016
Galvan, Yanixsa	Preschool Assistant (B), Position #2665 San Miguel 3.0 hrs./183 days Preschool Assistant (B), Position #2578 Driffill 3.0 hrs./183 days	03/08/2016
Leon, Sandra	NfL Family Liaison, Position #2433 Sierra Linda 6.0 hrs./180 days Paraeducator II (B), Position #1324 & 1325 Pupil Services 5.5 hrs./180 days	02/29/2016
Magallanes, Marisela	Attendance Accounting Technician, Position #2244 Haydock 8.0 hrs./210 days Attendance Accounting Technician, Position #634 Driffill 8.0 hrs./210 days	03/14/2016
Meza, Rosa	Library Media Technician, Position #1039 Marina West 5.0 hrs./190 days Library Media Technician, Position #2523 Ramona 5.0 hrs./190 days	03/14/2016

Roman, Valerie	Child Nutrition Worker, Position #2616 Itinerant 5.5 hrs./185 days	02/22/2016
	Child Nutrition Worker, Position #6408 Lemonwood 5.0 hrs./185 days	
Sanchez, Briana C.	Child Nutrition Worker, Position #2393 Soria 5.0 hrs./185 days	02/22/2016
	Child Nutrition Worker, Position #2054 Soria 5.0 hrs./185 days	
Velasquez, Rosario	Child Nutrition Worker, Position #1287 Rose Ave. 5.0 hrs./185 days	02/22/2016
	Child Nutrition Worker, Position #7277 Fremont 5.0 hrs./185 days	

Voluntary Demotion

Nava, Sonia	NfL Family Liaison, Position #2432 Harrington 6.0 hrs./180 days	02/29/2016
	Preschool Teacher (B), Position #544 Elm 4.0 hrs./183 days	

Return from Leave of Absence

Figueroa, Karina	Attendance Accounting Technician, Position #1836 Ramona 8.0 hrs./210 days	03/14/2016
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Medical Layoff

8368	Outreach Specialist (B), Position #2563 Lemonwood 8.0 hrs./180 days	03/25/2016
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Resignation

Arellano, Alicia	Child Nutrition Cafeteria Coordinator , Position #1388 Ramona 8.0 hrs./189 days	06/21/2016
Hernandez, Yvonne	Child Nutrition Worker, Position #2846 Curren 5.0 hrs./185 days	03/24/2016
Saucedo, Belinda	Intermediate School Secretary (B), Position #6244 Lemonwood 8.0 hrs./192 days	01/20/2016

Retirement

Boulch, Frank	Locksmith, Position #696 Facilities 8.0 hrs./246 days	04/28/1997- 04/29/2016
Loyola, Romeo	Custodian, Position #2398 Soria 8.0 hrs./246 days	08/25/1997- 04/29/2016
Partida, Amador	Bus Driver, Position #1453 Transportation 8.0 hrs./183 days	08/08/1988- 04/29/2016
Picola, James	Director Child Nutrition Services, Position #108 Child Nutrition 8.0 hrs./246 days	12/01/2000 05/31/2016

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| <p>▪ Jose Salas, Executive Director for Esperanza Oxnard Academy Charter School, distributed and provided a response to the Oxnard School District’s Findings of Fact for denying the petition for a proposed charter school by Esperanza Oxnard Academy.</p> | <p>Public Comment<br/>TO PROPOSED<br/>CHARTER SCHOOL<br/>BY ESPERANZA<br/>OXNARD ACADEMY</p> |
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D.1 Dr. Morales, District Superintendent introduced Ms. Nitasha Sawhney, legal counselor, who informed the Board that the item before them was for their consideration for the approval or denial of the petition for Esperanza Oxnard Academy. She provided a brief summary of the process required by California Education Code and the process administrators took to review the petition.

CONSIDERATION OF RESOLUTION #15-35 DENYING THE PETITION FOR A PROPOSED CHARTER SCHOOL BY ESPERANZA OXNARD ACADEMY

Dr. Morales, District Superintendent distributed and read into record a letter received dated April 13, 2016 from Mr. Ramon Miramontes, President of Olin Virtual Academy. Accordingly, Dr. Morales recommended that the Board approve Resolution #15-35 and Written Findings denying the petition for a proposed charter school by Esperanza Oxnard Academy.

On motion by Trustee Morrison, seconded by Trustee Cordes and carried on a roll call vote of 5-0; the Board of Trustees considered and adopted Resolution #15-35 and Finding of Fact denying the charter petition for Esperanza Charter Academy of Oxnard.

(Motion #15-120)

D.2 On motion by Trustee Morrison, seconded by Trustee O’Leary and carried on a roll call vote of 5-0, the Board of Trustees approved WAL #004 for the amount not to exceed \$14,875.00, to be paid with Measure R Funds, for the Preparation of a Preliminary Environmental Assessment (PEA) for the Doris/Patterson Site per Master Agreement #13-135 with ATC Group Services LLC.

APPROVAL OF WAL #004 FOR PREPARATION OF A PRELIMINARY ENVIRONMENTAL ASSESSMENT WITH ATC GROUP SERVICES LLC FOR THE DORIS/PATTERSON SITE (Motion #15-121)

D.3 On motion by Trustee Cordes, seconded by Trustee O’Leary and carried on a roll call vote of 5-0, the Board of Trustees approved Field Contract #FC-P16-04429, for the installation of a new HVAC unit in the office of the CIO, to West Coast Air Conditioning, in the amount of \$7,650.00, to be paid with Deferred Maintenance Funds.

APPROVAL OF FIELD CONTRACT #FC-P16-04429 – WEST COAST AIR CONDITIONING (Motion #15-122)

D.4 On motion by Trustee Cordes, seconded by Trustee Duff and carried on a roll call vote of 5-0, the Board of Trustees approved the Agreement for the Purchase and Sale of Real Property and Joint Escrow Instructions and authorized the Superintendent to execute the Agreement consistent with the authority delegated to him by the Board of Trustees.

CONSIDERATION AND APPROVAL OF FORM OF AGREEMENT FOR PURCHASE AND SALE OF REAL PROPERTY AND JOINT ESCROW INSTRUCTIONS AND DELEGATION OF AUTHORITY TO SUPERINTENDENT TO EXECUTE THE AGREEMENT (Motion #15-123)



F.1 The Board of Trustee reviewed the revised Board Policies, Administrative Regulations and Bylaws, as presented for first reading:

FIRST READING OF  
BOARD POLICIES,  
REGULATIONS AND  
BYLAWS

Revision AR 0420.4	Philosophy, Goals, Objectives, and Comprehensive Plans CHARTER SCHOOLS	Freeman
Revision BP 0500	Philosophy, Goals, Objectives, and Comprehensive Plans ACCOUNTABILITY	Freeman
Revision BP 6179	Instruction SUPPLEMENTAL INSTRUCTION	Freeman

Dr. Cesar Morales:

SUPERINTENDENT  
ANNOUNCEMENTS

- Announced he was very proud to be the Superintendent of the Oxnard School District as we celebrate our first Gold Ribbon School Juan Soria, he congratulated the Aztec Family and the Trustees' hard work and leadership.
- Reported as of today, April 19, 2016, students had finished reading 687,121 digital books, spent 989,761 hours reading, and 555,756,179 words read by students. He reported as the students reach the million book mark and billion book mark the district becomes eligible for a variety of state and nation awards for promoting literacy through a digital platform. He recognized Ramona Elementary as one of the leaders in the district for promoting the program.
- Reported he had met with Mr. Rafael Agustin who works with Mr. Edward James Olmos on the Latino Film Institute Youth Cinema Project and would be bring an agreement for participation of 4<sup>th</sup> grade class.
- Request the Board save the date of Saturday, May 14, 2016 at 10:00 a.m. to 12:30 p.m. for the First Oxnard School District Book Festival "Read Like Super Hero's" to students in our district.
- Reported that student Evelyn Cacho, 6<sup>th</sup> grader at Curren had won during the Migrant Speech Contest and would be representing the District in Fresno.
- Announced Mr. Armando Lopez the owner of Plaza 14 Theater was donating 290 tickets for students to attend eight summer films for free and Dr. Morales was working with Ginger Shea to develop a process to get the tickets to students.
- Reminded the Board and community of the Lemonwood Groundbreaking taking place on April 28, 2016 at 10:00 a.m.
- Thanked the Masons Anacapa Lodge 710 for their annual recognition of teachers and classified staff that are demonstrating excellence at their schools, along with the Hueneme School District.
- In closing, Dr. Morales shared pictures of students who participated in trips during spring break to Washington D.C. by Curren, Driffill and Soria teachers and students; and Peru by Haydock teachers and students.

Mr. Albert Duff Sr.:

TRUSTEE  
ANNOUNCEMENTS

- Reported he visited Chavez School, enrollment of 930 students, grades K-8, the school is in good clean condition, two-story building and visited with Principal Perez and Assistant Principal Cortez.
- He also visited Sierra Linda School, enrollment of 800 students, grades K-5, toured campus with Principal Coletti and reported 12 portables.

Mr. Denis O'Leary:

- Congratulated to all the parents and teachers, students and staff at Juan Soria School for the recognition of the Gold Ribbon.
- Reported on March 17, 2016, he participated in the Cesar Chavez Oral Competition as a judge at Chavez School sponsored by AMAE, stated it was a difficult task because all of the participants did an excellent job. He was impressed by all speeches but especially one about the first Latino Astronaut to go into space and an activist in the late 1950s in New York for homosexuality and she was Latina. Stated Cesar Chavez would have been proud because of the topics that came up.
- On March 18, 2016 attended the MICOP Center and toured the offices and yesterday they signed their licensing agreement to broadcast their radio station over the airways up until now they were only on the computer. He asked how many of our Mexican community have computers and their reply was that there was a school district that gives iPads to all of their students.
- On March 21, 2016 he took a tour of strawberry fields with the California Strawberry Commission the purpose was to establish communication between the Commission, local farm owners, and farm workers and the school districts.
- Reported on March 24-26, 2016 he attended the California Association for Bilingual Education Conference, attendance is going up, there were good workshops and one of his highlights was he met Maria from Sesame Street she had been on the show for 46 years and was retiring.
- On April 7, 2016 he met with Arturo Rodriguez and one of the side discussions actually took proof today, the local UFW office for the first time in 16 years actually contracted with two more fields in the area, 260 field workers signed with UFW.
- On April 10, 2016 he participated in the Cesar Chavez March in Colonia with 600-800 people participating in the end, great time and it was the 21<sup>st</sup> year of the March and 50<sup>th</sup> anniversary on the march to Sacramento.
- Later that afternoon he participated in a meeting with the Council General of El Salvador in Los Angeles and the topic was how we could serve the Salvadorans that are coming to Oxnard.
- In closing, on April 29<sup>th</sup> he and Dr. Vaca had been invited to the Mexican Consulate Ceremony for the unveiling of their art calendar by students and were advised that many students from Juan Soria School had submitted work; this calendar is used by every consulate in the world.

Mr. Ernest Morrison:

- Thanked the Superintendent for keeping them posted on the millions of words and the tens of thousands of books being read by students, he suggested the schools advertise this on their marquees.
- Reported he visited and participated in the Driffill Career Day as a speaker, the students were the hosts, ushering and showing people around, showed their purpose and pride it was a great activity.
- Congratulated Soria School for being in the first group of the Gold Ribbon Award and suggested that they provide information and workshops to other school communities in the District, demonstrated what they did in putting the project together, they could be the pioneers and helpers.

Mrs. Debra M. Cordes:

- Congratulated Soria School, they excelled in all areas. She reported she attended a few of the basketball games during the Rotary Tournament and it was a lot of fun.
- Reported that one of the speeches for the Cesar Chavez Speech contest was on Michele Serros, a young author who passed away from cancer, it was very nice that she was acknowledged.
- Congratulated the Mason Award Winners, she was going to attend but had jetlag from her China Trip. She questioned if we went first or second and Dr. Morales reported OSD went first.
- Reported tomorrow, April 20, 2016 from 9:00 a.m. until 2:00 p.m. LULAC would be hosting a Free Health Fair for Seniors at the Elks in Oxnard.
- Announced she was looking forward to the Lemonwood Groundbreaking next week.
- Thanked Robin Freeman for the presentation on the STAR 360 program. And looked forward to more presentation throughout the year.
- Announced that May 14, 2016 was the Kiwanis Club of Oxnard Track Meet. She suggested that maybe the Trustees could get together and coordinate what events they will attend that way they could cover more events because there are a lot of events.

Mrs. Veronica Robles-Solis:

- Congratulated Soria School for the Gold Ribbon Award and reported her daughter came home very excited because they had a celebration and got popsicles.
- Thanked Ms. Preciado for the t-shirt signed by the students for their program of Read and Pedal.
- Questioned how many schools were participating in the Ventura Corporate Games, she reported that Soria and Fremont have a team. She reported it was very competitive and wished everyone luck.
- Reported that Soria School was having a Color Run on Friday from 1:00 – 3:00 p.m. and Brekke would be having a Color Run the following Friday from 1:00 – 3:00 p.m.
- Stated she was excited to attend the Groundbreaking at Lemonwood which the community has been waiting for since 1997 with Measure L. She invited anyone who was free to attend on Thursday, April 27, 2016 at 10:00 a.m.
- In closing, she acknowledged all of the students that participated in the Ventura County Fair and looked forward to attending the fair; Dr. Morales will provide the dates of the Ventura County Fair.

President Robles-Solis stated she would like to conclude each board meeting by reading the District's Vision and Mission Statements. Ms. Robin Freeman read them in English and Dr. Morales read them in Spanish.

District's Vision and Mission Statements

There being no further business, on motion by Trustee Cordes, seconded by Trustee Duff, President Robles-Solis adjourned the meeting at 8:49 p.m.

ADJOURNMENT

Respectfully Submitted,  
DR. CESAR MORALES

District Superintendent and  
Secretary to the Board of Trustees

By our signature below, given on this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, the Governing Board of the Oxnard School District approves the Minutes of the Regular Board meeting of April 20, 2016; on motion of Trustee \_\_\_\_\_, seconded by Trustee \_\_\_\_\_.

Signed:

\_\_\_\_\_  
President of the Board of Trustees

\_\_\_\_\_  
Clerk of the Board of Trustees

\_\_\_\_\_  
Member of the Board of Trustees

\_\_\_\_\_  
Member of the Board of Trustees

\_\_\_\_\_  
Member of the Board of Trustees

**BOARD AGENDA ITEM**

**Name of Contributor(s):** Dr. Morales/ Lisa Cline

**Date of Meeting:** 5/18/16

<b>STUDY SESSION</b>	_____
<b>CLOSED SESSION</b>	_____
<b>SECTION B: HEARINGS</b>	<u>  X  </u>
<b>SECTION C: CONSENT AGENDA</b>	_____
<b>SECTION D: ACTION</b>	_____
<b>SECTION E: REPORTS/DISCUSSION</b>	_____
<b>SECTION F: BOARD POLICIES</b>	1 <sup>st</sup> Reading _____ 2 <sup>nd</sup> Reading _____

**Public Hearing for the Mitigated Negative Declaration as Prepared for the Marshall Elementary School New Classroom Building Project (Morales/Cline/CFW)**

The purpose of this agenda item is to conduct a public hearing to receive the public comments on the District’s Mitigated Negative Declaration (“MND”) for the 12 Classroom Building Project at Marshall Elementary School.

The District retained Tetra Tech to prepare the MND, required by the California Environmental Quality Act (“CEQA”) prior to proceeding with the construction of the 12 classroom building project. Based on the discussion and analysis provided in the draft MND, it is anticipated that the proposed project would not cause any significant adverse impacts on the environment with inclusion of mitigation measures for the following: aesthetics, biology, cultural, geology, hydrology, and noise. Further, the site is not included on any lists of hazardous waste or disposal sites as enumerated under Section 65962.5 of the California Government Code.

On April 18, 2016, the District opened a 30-day review period during which the public could provide comments to the MND. The period closes on May 18, 2016. As part of this agenda item, the Board of Trustees will hold a public hearing to receive and consider any additional comments from the public or interested agencies regarding the MND. The Board will consider an item to adopt the MND at a June meeting.

**FISCAL IMPACT:**

None

**RECOMMENDATION:**

It is the recommendation of the Superintendent and the Deputy Superintendent, Business and Fiscal Services, in conjunction with Caldwell Flores Winters, that the Board of Trustees consider any and all comments received, whether written or oral, for the Mitigated Negative Declaration for the Marshall Elementary School New Classroom Building Project.

**ADDITIONAL MATERIAL(S):**

- Mitigated Negative Declaration for the Marshall Elementary School New Classroom Building Project – prepared by Tetra Tech (779 pages)

Job No. 34007.04

**Draft Initial Study/  
Mitigated Negative Declaration  
Proposed Expansion of  
Thurgood Marshall Elementary  
Oxnard, California**

*Prepared for:*

Ms. Lisa Cline  
Deputy Superintendent, Business & Fiscal Services  
Oxnard School District  
1051 S A Street  
Oxnard, CA 93030

*Prepared by:*

Tetra Tech, Inc.  
5383 Hollister Avenue, Suite 130  
Santa Barbara, California 93111

April 18, 2016

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- B Cultural Records Search
- C Native American Heritage Commission SLF Search and Native American Contact List
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- E PEA
- F Traffic and Circulation Study



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## **1.0 INTRODUCTION**

### **1.1 INTRODUCTION**

This Draft Initial Study/Mitigated Negative Declaration (IS/MND) has been prepared for the Oxnard School District (OSD) by Tetra Tech, Inc. to evaluate whether the proposed expansion of Thurgood Marshall Elementary School would have a significant effect on the environment. OSD acting as the Lead Agency, may prepare a Negative Declaration if there is no substantial evidence that the project or any of its aspects may cause a significant effect on the environment. According to *State CEQA Guidelines* Section 15070, a public agency shall prepare or have prepared a proposed negative declaration or mitigated negative declaration for a project subject to CEQA when:

- (a) The initial study shows that there is no substantial evidence, in light of the whole record before the agency, that the project may have a significant effect on the environment, or
- (b) The initial study identifies potentially significant effects, but:
  - (1) Revisions in the project plans or proposals made by, or agreed to by the applicant before a proposed mitigated negative declaration and initial study are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur, and
  - (2) There is no substantial evidence, in light of the whole record before the agency, that the project as revised may have a significant effect on the environment.

### **1.2 REQUIRED CONTENT**

A Negative Declaration circulated for public review shall include:

- (a) A brief description of the project, including a commonly used name for the project, if any;
- (b) The location of the project, preferably shown on a map, and the name of the project proponent;
- (c) A proposed finding that the project will not have a significant effect on the environment;
- (d) An attached copy of the Initial Study documenting reasons to support the finding; and
- (e) Mitigation measures, if any, included in the project to avoid potentially significant effects.

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## 2.0 PROJECT INFORMATION

Project title:	Expansion of Thurgood Marshall Elementary
Lead agency name and address:	Oxnard School District 1051 S. A Street Oxnard, CA 93030
Contact person and phone number:	Ms. Lisa Cline, (805) 385-1501
Project location:	2900 Thurgood Marshall Drive Oxnard, California, 93036
Project sponsor's name and address:	Ms. Lisa Cline  Oxnard School District 1051 S. A Street Oxnard, CA 93030
General Plan Designation:	SCH- School
Zoning Designation:	CR- Community Reserve
Surrounding land uses:	North: Residential, Golf Course South: Agriculture, Oxnard High School (SW) East: Residential, Golf Course West: Residential

## 2.1 ENVIRONMENTAL SETTING

The project site is the existing Thurgood Marshall Elementary School campus that is located within the Northwest Golf Course Community Specific Plan Area. Thurgood Marshall Elementary School (K-5) is located at 2900 Thurgood Marshall Drive in the City of Oxnard, in Ventura County, California. The school occupies Assessor Parcel Number (APN) 179-0-070-010 and access to the school is provided from Thurgood Marshall Drive. The Site is relatively flat and developed as a public elementary school with associated play areas. A Site Location Map is provided as Figure 2-1 and an Aerial Photo of the Project Site is provided as Figure 2-2.

## 2.2 PROJECT DESCRIPTION

Oxnard School District (OSD or District) proposes to construct and operate a new two-story, 12-classroom building on the existing Marshall Elementary School site in compliance with current seismic codes. The school would be reconfigured to include grades 6<sup>th</sup> through 8<sup>th</sup> thereby accommodating students in grades K-8 at the Thurgood Marshall Elementary School site (herein referred to as the proposed project or project). The new facilities are needed to accommodate growing District enrollment in the 6<sup>th</sup> through 8<sup>th</sup> grades. The proposed 12-classroom permanent structure would increase capacity at the Marshall School to 900 students at State loading standards, satisfying the District's education specification for a K-8 facility.

The proposed project would add 12,821 square feet (sq. ft.) of teaching facilities and an additional 2,280 sq. ft. devoted to restroom (1,270 sq. ft.) , storage (593 sq. ft.) and locker room facilities (417 sq. ft.). This would increase building square footage at the Marshall School by a total of 15,101 sq. ft. A total of 20 additional parking spaces are proposed by modifications to the existing parking lot at the north east side of the campus). Setbacks from the nearest residential uses are expected to exceed 300 feet. Table 2-1 summarizes the changes in permanent classrooms, square footage, student capacity, and parking that would result at the Marshall School after implementation of the proposed project.

**Table 2-1:**

**Permanent Classrooms, Square Footage, Student Capacity, and Parking for the Existing Elementary (K-5) School and Proposed K-8 School**

	<b>Permanent Classrooms</b>	<b>Square Footage (sq. ft.)</b>	<b>Student Capacity</b>	<b>Parking Spaces</b>
<b>Existing Facilities</b>	28	55,024 sq. ft.	555	68
<b>Facilities after Proposed Improvements</b>	40	70,125 sq. ft.	900	88
<b>% Increase</b>	42.86%	27.44%	62.16%	29.41%

The 12-classroom building would be added on the south and west side of the existing school administration building in the area that is currently utilized as playfields and a blacktop play area. The existing soccer field layout would remain but existing hardtop play areas would be relocated to the east of the proposed new building. The new building location maintains the existing fire lane, provides connection to the existing campus, and adds new courtyards spaces. A conceptual site plan is provided as Figure 2-3. Improvements are planned to be architecturally integrated to match the appearance and design features of the existing campus.

Project construction is anticipated to begin during the summer of 2016 and last approximately 18 months. During construction, the project site would be separated from the existing school facilities by temporary construction fencing. Construction workers and vehicles would access the site from the fire road to the west.

**2.3 OTHER PUBLIC AGENCIES WHOSE APPROVAL IS REQUIRED**

Other public agencies whose approval is required for permits, financing approval, or participation agreement, for example, is as follows:

- California Department of Education;
- California Department of the State Architect;
- California Department of Toxic Substances Control;

- California Geological Survey; and
- City of Oxnard.

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### 3.0 ENVIRONMENTAL CHECKLIST

#### 3.1 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked would be potentially affected by this project, involving at least one impact that is a “Potentially Significant Impact” as indicated by the checklist on the following pages.

- |   |   |   |
|---|---|---|
| <input type="checkbox"/> Aesthetics               | <input type="checkbox"/> Agriculture and Forestry Resources | <input type="checkbox"/> Air Quality                        |
| <input type="checkbox"/> Biological Resources     | <input type="checkbox"/> Cultural Resources                 | <input type="checkbox"/> Geology/Soils                      |
| <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards & Hazardous Materials      | <input type="checkbox"/> Hydrology/Water Quality            |
| <input type="checkbox"/> Land Use/Planning        | <input type="checkbox"/> Mineral Resources                  | <input type="checkbox"/> Noise                              |
| <input type="checkbox"/> Population/Housing       | <input type="checkbox"/> Public Services                    | <input type="checkbox"/> Recreation                         |
| <input type="checkbox"/> Transportation/Traffic   | <input type="checkbox"/> Utilities/Service Systems          | <input type="checkbox"/> Mandatory Findings of Significance |



**3.2 DETERMINATION: (To be completed by the Lead Agency)**

On the basis of this initial evaluation:

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Lisa Cline April 18, 2016  
Signature Date

\_\_\_\_\_  
Signature Date

Lisa Cline, Deputy Superintendent  
Print Name

\_\_\_\_\_  
Print Name

### 3.3 EVALUATION OF ENVIRONMENTAL IMPACTS

- (1) A brief explanation is required for all answers except “no impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “no impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “no impact” answer should be explained if it is based on project-specific factors as well as general standards (e.g., the project would not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- (2) All answers must take account of the whole action involved, including off site as well as on site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- (3) Once the lead agency has determined that a particular physical impact may occur, the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. “Potentially significant impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “potentially significant impact” entries when the determination is made, an EIR is required.
- (4) “Negative declaration: less than significant with mitigation incorporated” applies when the incorporation of mitigation measures has reduced an effect from a “potentially significant impact” to a “less than significant impact.” The lead agency must describe the mitigation measures and briefly explain how they reduce the effect to a less than significant level.
- (5) Earlier analyses may be used if, pursuant to tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration (Section 15063[c][3][D]). In this case, a brief discussion should identify the following:
  - a. Earlier analysis used. Identify and state where earlier analyses are available for review.
  - b. Impacts adequately addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards and state whether such effects were addressed by mitigation measures based on the earlier analysis.
  - c. Mitigation measures. For effects that are “less than significant with mitigation incorporated,” describe the mitigation measures that were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

For purposes of this Initial Study, the City’s General Plan and Zoning Code Update Final EIR (May 2011) is hereby incorporated by reference.

- (6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, when appropriate, include a reference to the page or pages where the statement is substantiated.
- (7) Supporting information sources. A source list should be attached and other sources used or individuals contacted should be cited in the discussion.

- (8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
- (9) The explanation of each issue should identify:
  - a. The significance criteria or threshold, if any, used to evaluate each question, and
  - b. The mitigation measure identified, if any, to reduce the impact to a less than significant level.
- (10) The proposed Project includes compliance with applicable local, regional, state, and federal laws, regulations, and rules.

### 3.4 ENVIRONMENTAL IMPACT ANALYSIS

#### 3.4.1 AESTHETICS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Have a substantial adverse effect on a scenic vista?			X	
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings along a scenic highway?			X	
c. Substantially degrade the existing visual character or quality of the site and its surroundings?			X	
d. Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?		X		

#### Existing Conditions:

##### Regional

The project area is located along the northwestern edge of the relatively low-lying Oxnard Plain in the City of Oxnard. Prominent visual features within or adjacent to the Oxnard Plain include the Camarillo Hills to the northeast, the Santa Monica Mountains to the southeast, the Pacific Ocean and coastline to the southwest, and the Oxnard/Ventura and Oxnard/Camarillo greenbelts. Visually, the City of Oxnard is characterized by agriculture/open space, low rise commercial, and residential development. The western and southern edges of the city are framed by the Pacific Ocean and agricultural areas in the Oxnard-Ventura Greenbelt. The northern edge is bounded by the Santa Clara River and the northeastern and eastern sides by agricultural land in the Oxnard-Camarillo Greenbelt. Inland views to the foothills and mountain ranges in the Los Padres National Forest and the Santa Monica Mountains are visible from many of the City's north-south and east-west oriented streets (Impact Sciences, Inc. 1997).

##### Project Site and Immediate Vicinity

The existing 11-acre elementary school campus was developed in 2003 and there are nighttime security lights on the site. The campus is primarily surrounded by single-family residential communities including Victoria Estates to the north and west, and Windsor North River Ridge to the east. The Cabrillo neighborhood is located to the southeast and agriculture land is located to the south. This agricultural land south of Gonzales Road is part of the Oxnard-Ventura Greenbelt. (Matrix Design Group, Inc. 2006) Based on the school's location and surroundings, the buildings are not generally directly visible from mid-range and long range viewing angles.

According to the Caltrans Map of Designated Scenic Routes (Caltrans 2015), there are no official State-designated routes in the project vicinity. However, State Route 1, which runs through the City of Oxnard, is under consideration. State Route 33 in Ventura is the closest officially designated scenic route to the project site, but it is located approximately 20 miles to the north.



**Figure 3-1. Image of Existing School Buildings (Google Earth 2015)**



**Figure 3-2. Design Overview, Thurgood Marshall School Rendering (CSDA 2015)**





**Figure 3-3. Proposed Courtyard Area (Looking east from Thurgood Marshall Drive) (Google Earth 2015)**



**Figure 3-4. Design Overview, Courtyard Rendering (CSDA 2015) (Looking west towards Thurgood Marshall Drive)**

**Discussion:**

**a. Would the project have a substantial adverse effect on a scenic vista?**

**Less Than Significant Impact.** The site is fairly level and is adjacent to the existing school and nearby residential development. The school building would be constructed as a two-story 12-classroom building with similar design and landscaping as the existing school. Due to its location and being primarily surrounded by residential development, the proposed project would not cause an adverse impact to any scenic vista. Therefore, the project impact would be less than significant.

**b. Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?**

**Less Than Significant Impact.** The proposed project is not located adjacent to a designated State scenic highway or eligible State scenic highway as identified on the California Scenic Highway Mapping System (Caltrans 2015). The project site is located in a developed residential area, and contains no scenic resources such as unique geologic structures, or historic structures visible from a State scenic highway. Although the Greenbelt Area south of the project site is visible from the school, the new building would not reduce the visibility of that area from Gonzales Road. The existing landscape trees are not expected to be removed or damaged. Therefore, project impact would be less than significant.

**c. Would the project substantially degrade the existing visual character or quality of the site and its surroundings?**

**Less Than Significant Impact.** The proposed project is designed to enhance the onsite visual quality and would have an overall beneficial effect on the surrounding visual setting at the site. Since construction of the new two-story building would be on the existing school campus, and the building and landscaping would be consistent with the existing buildings and landscape; the existing visual quality of the project site and surrounding area would not be adversely affected. Project construction activities may be visible from some adjacent uses on a short-term temporary basis. However, since construction would be short-term and would occur within an existing developed campus, the proposed project would result in a less than significant impact on the visual character/quality of the site and surrounding area.

**d. Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?**

**Less Than Significant Impact With Mitigation Incorporated.** Use of nighttime lighting would be expanded as needed for the parking lot and walkways between and around the buildings, as the school would continue to be used in the evening for community meetings, and periodic evening school activities. As with the existing buildings, the proposed new building will have inside shades that can be closed to help reduce the amount of indoor lighting seen at night. Landscaping and building design would be compatible with the existing school (see Figures 3-1 through 3-4), except that the new building would be two stories instead of one. Single family residences to the north, west, and east of the site are located relatively close together and are characteristic of suburban development with traditional street lighting that contributes to nighttime lights.

The proposed project could represent a new source of light or glare from the windows and additional lighting, which could impact day or nighttime views in the area. The proposed project would include exterior lighting around the buildings and for walkways and parking as needed for adequate safety and security at night. The additional lighting would be in conformance with the City of Oxnard lighting



requirements for reducing light spillage and glare. Furthermore, the project site is located within an area that is already subject to a base level of light and glare due to existing surrounding residential developments and streets. Therefore, with Mitigation Measure AES-1 incorporated into the design, the proposed project would result in a less than significant Impact.

**Mitigation Measures:**

The following Mitigation Measure shall be implemented:

**AES-1** Low impact, fully-shielded lighting shall be used for all nighttime light sources. This includes lamps with visors, hoods, and opaque reflectors to ensure that no unnecessary light is emitted.

**3.4.2 AGRICULTURE AND FOREST RESOURCES**

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b. Conflict with existing zoning for agricultural use or conflict with a Williamson Act contract?				X
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in PRC Section 12220(g)) or timberland (as defined in PRC Section 4526)?				X
d. Result in the loss of forest land or conversion of forest land to non-forest use?				X
e. Involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?				X

**Existing Conditions:**

The project site is currently developed with a public elementary school. The project site is located within the Northwest Golf Course Community Specific Plan Area and is identified as an elementary school site on the land use concept plan diagram. According to the City’s zoning Map, the project site is zoned C-R, Community Reserve. Ventura County Important Farmland Map 2012 (DOC 2012) prepared by the California Department of Conservation designated the site as urban and built-up land.

There are no agricultural uses or forest land located onsite. The project site is surrounded by residential uses to the north, east and west. Agricultural fields are located adjacent to the project site to the south across West Gonzales Road. Located to the southwest is Oxnard High School and agricultural lands. A residential neighborhood is located to the southeast.

**Discussion:**

**a. Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?**

**No Impact.** The project site is currently developed with a public elementary school and there are no agricultural uses located onsite. The project site is not identified as being prime, unique or farmland of statewide importance on the Ventura County Important Farmland Map (2012) prepared by the California Department of Conservation. Therefore, no project impact would result.

**b. Would the project conflict with existing zoning for agricultural use or a Williamson Act contract?**

**No Impact.** The project site is developed with an existing public elementary school and there are no agricultural uses located onsite. The proposed project would not conflict with existing zoning for agricultural use. The project site is located within the Northwest Golf Course Community Specific Plan Area and is identified as an elementary school site on the land use concept plan diagram. The project site is zoned C-R, Community Reserve and a public school is allowed as a related use subject to a special use permit. The project site is currently used as a public school and would continue to do so with the proposed project.

The Williamson Act enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use (DOC 2015). The project site is a public school and not under a Williamson Act Contract. Therefore, no project impact would result.

**c. Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in PRC Section 12220(g)) or timberland (as defined in PRC Section 4526)?**

**No Impact.** The proposed project would not conflict with zoning for, or cause rezoning of, forest land or timberland. The project site is located within the Northwest Golf Course Community Specific Plan Area and is identified as an elementary school site on the land use concept plan diagram. The project site is zoned C-R and a public school is allowed as a related use subject to a special use permit. While forestry is also a permitted use in the CR zone (Chapter 16, Article III, SEC. 16-256), the project site is not located within an area containing forest land or timberland. The project site is currently developed with a public school and is designated for school use in the General Plan and Northwest Golf Course Community Specific Plan. Therefore, no project impact on timberland would result.

**d. Would the project result in the loss of forest land or conversion of forest land to non-forest use?**

**No Impact.** The project site is currently developed with a public school and the project site would continue to be used as a public school with the proposed project. There is no forest land located on or adjacent to the project site. Therefore, the proposed project would not result in the loss of forest land or conversion of forest land to a non-forest use, and no project impact would result.

**e. Would the project involve other changes in the existing environment that, due to their location or nature, could individually or cumulatively result in loss of Farmland to non-agricultural use or conversion of forest land to non-forest use?**

**No Impact.** The project site does not contain agricultural or forestry land and is currently developed with a public school. The proposed project includes compact infill development on the existing school campus to help accommodate the educational needs of students within the OSD. While the proposed project would increase the land use intensity of the site, the site would continue to be used as a public school. No off-site improvements are proposed as part of the project. Therefore, no project impact would result.

**Mitigation Measures:**

No mitigation required.

**3.4.3 AIR QUALITY**

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:					
a.	Conflict with or obstruct implementation of the applicable air quality plan?				X
b.	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			X	
c.	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a non-attainment area for an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?			X	
d.	Expose sensitive receptors to substantial pollutant concentrations?			X	
e.	Create objectionable odors affecting a substantial number of people?			X	

**Existing Conditions:**

Pursuant to the Clean Air Act Amendments of 1990, the USEPA has established National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment. The NAAQS are classified as primary and secondary standards. Primary standards prescribe the maximum permissible concentration in the ambient air and are required to protect public health. Secondary standards specify levels of air quality required to protect public welfare, including materials, soils, vegetation, and wildlife, from any known or anticipated adverse effects. NAAQS are established for six pollutants (known as criteria pollutants): ozone (O<sub>3</sub>), particle pollution (i.e., respirable particulate matter less than 10 microns in diameter [PM<sub>10</sub>] and respirable particulate matter less than 2.5 microns in diameter [PM<sub>2.5</sub>]), carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), and lead (Pb). The California Air Resources Board (CARB) has also established its own air quality standards in the state of California, known as the California Ambient Air Quality Standards (CAAQS). The CAAQS are generally more stringent than the NAAQS and include air quality standards for all the criteria pollutants listed under NAAQS plus sulfates (SO<sub>4</sub>), hydrogen sulfide (H<sub>2</sub>S), vinyl chloride, and visibility-reducing particulate matter.

The USEPA classifies the air quality within an Air Quality Control Region with regard to its attainment of federal primary and secondary NAAQS. According to USEPA guidelines, an area with air quality better than the NAAQS for a specific pollutant is designated as being in attainment for that pollutant. Any area not meeting the NAAQS is classified as a nonattainment area. Where there is a lack of data for the USEPA to make a determination regarding attainment or nonattainment, the area is designated as unclassified and is treated as an attainment area until proven otherwise. Similarly, the CARB makes state area designations for the state criteria pollutants.

The Proposed project is within Ventura County, which is subject to the Ventura County Air Pollution Control District (VCAPCD) regulations. Pollutant concentrations within the Ventura County are assessed relative to both the federal and state ambient air quality standards. Ventura County is in attainment for all federal standards except the 8-hour O<sub>3</sub> standard (U.S. EPA 2015) and all state standards except O<sub>3</sub> and PM<sub>10</sub> standards (CARB 2014). Applicable VCAPCD rules are presented in Table 3-1.

**Table 3-1  
Applicable Rules**

<b>Rule</b>	<b>Title</b>
10	Permits Required
51	Nuisance
55	Fugitive Dust
55.1	Paved Roads and Public Unpaved Roads
74.2	Architectural coatings
74.4	Cutback Asphalt

**Discussion:**

**a. Would the project conflict with or obstruct implementation of the applicable air quality plans?**

**No Impact.** In order to pursue improvement of air quality in Ventura County, the VCAPCD prepared the 2007 Air Quality Management Plan (AQMP), which presents comprehensive list of pollution control strategies aimed at attaining Ventura County’s federal 8-hour ozone standard as required by the Clean Air Act Amendments of 1990, and the VCAPCD’s Triennial Assessment and Plan Update required by the California Clean Air Act of 1988. These strategies are developed in part, based on regional population, housing, and employment projections prepared by the Southern California Association of Governments and reflected in local general plans. A proposed project that is inconsistent with a local general plan is also inconsistent with the AQMP. A proposed project would be inconsistent with a general plan if it resulted in a land use re-designation, causing a general plan amendment and an increase in population beyond what is budgeted. The proposed project site is within the City of Oxnard and located in a land use area designated as School (SCH) within the City of Oxnard’s General Plan. Since the land use associated with the proposed project is in accordance with the General Plan, construction of the proposed project is

not expected to result in a violation of the General Plan and the AQMP. Therefore, the proposed project would not conflict with or obstruct implementation of the AQMP and no project impact would result.

**b. Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?**

**Less Than Significant Impact.** The release of various criteria pollutants would be expected from the construction (short-term) and operation (long-term) activities of the proposed project, which by itself is not expected to generate significant air emissions. Short-term air quality impacts would result from emissions associated with construction activities (e.g., site preparation, site grading, soil importing, construction worker and vendor vehicle trips, operation of construction equipment, asphalt paving, and architectural coating). The construction equipment likely to be used for this project would include air compressors, cement mixers, industrial saws, cranes, forklifts, generator sets, graders, pavers, rollers, dozers, scrapers, backhoes, welders, water trucks, concrete delivery trucks, and pumpers. Emissions from construction activities are calculated using California Emissions Estimator Model (CalEEMod). CalEEMod is widely accepted to provide a uniform platform to estimate potential emissions resulting from construction and operation activities of land use projects. CalEEMod input values and calculated air emission results for the proposed project are included as Appendix A. Table 3-2 presents a summary of the proposed project’s construction air emission results.

**Table 3-2  
Project Construction Emissions of Criteria Pollutants (lb/day)**

<b>Project Phase</b>	<b>CO</b>	<b>VOCs</b>	<b>NOx</b>	<b>SOx</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>
Construction (2016)	18.89	1.86	19.96	0.03	2.13	1.24
Construction (2017)	18.32	47.10	18.88	0.03	1.67	1.05
Threshold of Significance	None	None	None	None	None	None
Significant?	No	No	No	No	No	No

Notes: CO carbon monoxide  
 lb/day pounds per day  
 NOx oxides of nitrogen (nitric oxide and nitrogen dioxide)  
 PM<sub>10</sub> respirable particulate matter less than 10 microns in diameter  
 PM<sub>2.5</sub> respirable particulate matter less than 2.5 microns in diameter  
 SOx oxides of sulfur (sulfur dioxide and sulfur trioxide)  
 VOC volatile organic compounds

The results presented in Table 3-2 include implementation of Tier 2 interim engines for all off road construction equipment and watering of exposed areas twice a day. These measures would contribute to the overall reduction of daily emissions of VOCs and NOx, which are highest during grading and architectural activities respectively. Watering exposed areas would contribute to mitigation of fugitive dust. Ventura County does not have specific thresholds of significance for construction-related emissions since construction emissions are temporary and do not contribute to long-term air quality impacts. Therefore, construction emissions would have a less than significant impact on air quality.

Long-term impacts to air quality include emissions resulting from equipment used during operation of the proposed project (e.g., commercial water heaters, boilers, and lawn mowers) and from motor vehicles associated with school employees, student drop-off and pick-up, and vendors. Other activities that would contribute emissions during the operation of the proposed project include upkeep of structures (e.g., reapplication of architectural coatings and patching of paved surfaces). Emissions resulting from operation of the proposed project were calculated using CalEEMod and are summarized in Table 3-3.

Detailed CalEEMod input values and calculated air emission results are included as Appendix A. Emissions resulting from the operation of the proposed project are below the thresholds of significance established by Ventura County to support attainment of federal standards. Therefore, the proposed project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation, and project impact would be less than significant.

**Table 3-3**  
**Project Operation Emissions of Criteria Pollutants (lb/day)**

Project Phase	CO	VOCs	NOx	SOx	PM <sub>10</sub>	PM <sub>2.5</sub>
Operation	16.44	2.32	3.79	0.03	2.54	0.71
Threshold of Significance	None	25	25	None	None	None
Significant?	No	No	No	No	No	No

Notes: CO carbon monoxide  
 lb/day pounds per day  
 NOx oxides of nitrogen (nitric oxide and nitrogen dioxide)  
 PM<sub>10</sub> respirable particulate matter less than 10 microns in diameter  
 PM<sub>2.5</sub> respirable particulate matter less than 2.5 microns in diameter  
 SOx oxides of sulfur (sulfur dioxide and sulfur trioxide)  
 VOC volatile organic compounds

**c. Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?**

**Less Than Significant Impact.** The proposed project would result in significant cumulative impacts if it exceeds daily thresholds of significance established by VCAPCD or if it incurred an increase of emissions beyond what is planned in the City of Oxnard General Plan. Since the proposed project's long-term emissions are significantly less than established thresholds of significance and its land use is in accordance with the General Plan of the City of Oxnard, the proposed project would not result in a cumulative considerable net increase of any criteria pollutant for which the region is non-attainment under applicable federal or state ambient air standards. Therefore, the project impact would be less than significant.

**d. Would the project expose sensitive receptors to substantial pollutant concentrations?**

**Less Than Significant Impact.** The proposed project would be constructed within the existing Thurgood Marshall Elementary School campus. The project site is surrounded by residential units in the west, north and east sides and by agricultural land in the south end. The proposed project is a public school that qualifies as a sensitive receptor (i.e., a facility serving populations likely to suffer adverse health effects from pollution, such as children and the elderly), and its proposed location is not expected to expose students to sources of substantial pollutant concentrations (e.g., industrial facilities emitting odorous or hazardous substances). During the construction period, construction activities would occur at the same time as the current student population attends classes. Construction activities would generate air emissions from the operation of construction equipment. However, the emissions would be temporary and approximately no less than 40 feet from the nearest classroom, minimizing impact to students and staff. Additionally, the project site would be separated from the existing school facilities by temporary



construction fencing. Construction workers and vehicles would access the site from the fire road to the west. Therefore, the proposed project would have a less than significant impact on sensitive receptors.

**e. Would the project create objectionable odors affecting a substantial number of people?**

**Less Than Significant Impact.** Construction and operation of the proposed project is not anticipated to create long-term objectionable odors, and sources of objectionable odors are not identified near the proposed project site. Objectionable odors may result from combustion gases exiting the exhaust pipes of construction equipment and construction worker vehicles. However, a buffer of approximately 40 feet would separate the construction site from the nearest classroom, minimizing impact to students and staff. Additionally, the project site would be separated from the existing school facilities by temporary construction fencing. Construction workers and vehicles would access the site from the fire road to the west. Therefore, the proposed project would have less than significant impacts related to objectionable odors.

**Mitigation Measures:**

Mitigation measures are not required to reduce emissions to below thresholds of significance. Standard best management practices (BMPs) such as dust mitigation measures similar to what is required under VCAPCD Rule 55 were taken into consideration in performing construction emissions calculations. Similarly, BMPs such as continued implementation of a school bus program and use of water efficient fixtures were considered in performing operational emissions calculations. Detailed CalEEMod input values including those mentioned above are presented in Appendix A.

### 3.4.4 BIOLOGICAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		X		
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?				X
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marshes, vernal pools, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means?				X
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?			X	
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?		X		
f. Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?				X

**Existing Conditions:**

The project site is currently developed with a public school and has disturbed land consisting of non-native grasses and ornamental shrubs and trees. The Santa Clara River Estuary is located one mile to the north of the site. Barriers between the project site and the Santa Clara River include roads, residential developments, and the River Ridge Golf Club.

A query of the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDDB) was conducted to determine the known locations of any special-status species (sensitive, threatened, endangered, rare, or candidate species) within the project area (CDFW 2015).

A general survey was conducted of the project site on December 29, 2015 to assess the biological resources at the site. Wildlife species observed within the project site were common, year-round bird species. These included American crows (*Corvus brachyrhynchos*), pigeons (*Columba livia*), house finches (*Carpodacus mexicanus*), song sparrows (*Melospiza melodia*), killdeer (*Charadrius vociferus*), and European starlings (*Sturnus vulgaris*). Overhead transient species that did not stop within the project site included Canadian geese (*Branta canadensis*), western gulls (*Larus occidentalis*), and one red tailed hawk (*Buteo jamaicensis*). No other wildlife was observed during the site visit.

**Discussion:**

**a. Would the project have a substantial adverse impact, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?**

**Less than significant with Mitigation Incorporated.** Table 3-4 lists the special-status species that have been previously observed within the Oxnard U.S. Geological Survey (USGS) 7 1/2-minute quadrangle according to the results of the CNDDDB search and may occur at the project site (CDFW 2015). None of the species listed in Table 3-4 have been previously observed within the project site. Species from the CNDDDB search for which there is no potential habitat at the site (for example, species that inhabit streams) have not been included within Table 3-4.

**Table 3-4:  
Special-Status Species that Could Occur within Thurgood Marshall Project Site**

<b>Common Name</b>	<b>Scientific Name</b>	<b>Status</b>	<b>Nearest Location</b>
Bank swallow	<i>Riparia riparia</i>	ST	Within 3 miles
Burrowing owl	<i>Athene cunicularia</i>	SSC	Within 3 miles
Coast horned lizard	<i>Phrynosoma blainvillii</i>	SSC	Within 1.5 miles
Least Bell's vireo	<i>Vireo bellii pusillus</i>	FE, SE, FP	Within 1.5 miles
Monarch - California overwintering population	<i>Danaus plexippus</i>	CNDDDB	Within 3 miles
Pallid bat	<i>Antrozous pallidus</i>	SSC	Within 5 miles
Silvery legless lizard	<i>Anniella pulchra pulchra</i>	SSC	Within 2.5 miles
Western pond turtle	<i>Emys marmorata</i>	SSC	Within 1 mile

**Note:** Results are from the CNDDDB. Nearest locations are approximate.

**Status:** SSC=California Department of Fish and Wildlife Species of Special Concern.

CNDDDB=Species tracked by CNDDDB

FT=Federally threatened.

FE=Federally endangered.

ST=State threatened.

SE=State endangered.

FP=State Fully Protected

1B=California Native Plant Society List 1B=Plants that are rare or endangered in California and elsewhere.

No special-status plant or wildlife species were observed during the December 29, 2015 survey. Due to the highly developed nature of the site and the lack of native habitat on-site, it is unlikely that any special-status species would occur on-site. Additional analysis on the species listed in Table 3-4 is provided below.

### **Wildlife**

The bank swallow (*Riparia riparia*) has been previously reported at the mouth of the Santa Clarita River approximately three miles west of the project site. The bank swallow typically lives in riparian and coastal areas. They nest in burrows in bluffs, banks, and man-made sites such as road cuts. Based on the habitat requirements of bank swallow, it is highly unlikely any would nest at the project site, however, it is possible that they could use the project site for foraging.

The burrowing owl (*Athene cunicularia*) has been previously reported at a location approximately three miles west of the project site. The burrowing owl can inhabit a range of habitats, but typically prefers habitats with low-growing vegetation, including grasslands and scrublands. This species constructs burrow sites within grassland habitat with low-growing vegetation. The project site and surrounding

areas are highly disturbed and, with the site's lack of native vegetation and absence of burrows during the site visit, burrowing owls are highly unlikely to occur on site.

The coast horned lizard (*Phrynosoma blainvillii*) has been found approximately 1.5 miles north of the project site. The coast horned lizard can be found in a variety of habitats, although it is most common in lowlands along sandy washes with scattered low bushes. Given the lack of native habitat and the heavily disturbed nature of the site, this species is highly unlikely to occur at the project site.

The least Bell's vireo (*Vireo bellii pusillus*) has been previously located approximately 1.5 miles north of the project site. The least Bell's vireo occurs in lowland riparian habitats. Due to the lack of riparian habitat and foraging locations on the site, it is highly unlikely that least Bell's vireo would occur at the project site.

Monarch butterflies (*Danaus plexippus*) have been found at a location approximately three miles northwest of the project site. This species roosts in wind-protected tree groves of eucalyptus, Monterey pine, and cypress. While the project site does contain trees, it does not contain the species that commonly support roosting. Therefore, roosting habitat for Monarch butterflies is not present within the project site.

The pallid bat (*Antrozous pallidus*) has been previously documented approximately five miles northwest of the project site. The pallid bat occupies a wide variety of habitats, although it is most common in open, dry habitats with rocky areas for roosting. There is no adequate areas for roosting on the project site, making it highly unlikely that the pallid bat would roost at the project site. Since the pallid bat forages one to three miles from its roost, it is also highly unlikely that the pallid bat would forage at the project site.

The silvery legless lizard (*Anniella pulchra pulchra*) has been previously found 2.5 miles southwest of the project site. The silvery legless lizard occurs primarily in areas with sandy or loose soils, typically in coastal regions. Due to the lack of adequate habitat within the project site, the silvery legless lizard is highly unlikely to occur at the project site.

The western pond turtle (*Emys marmorata*) has been previously found within the Santa Clarita River approximately one mile north of the project site. The western pond turtle is highly unlikely to occur at the project site due to the lack of permanent water or nearly permanent water bodies on-site.

Vegetation at the project site may provide habitat for nesting birds protected under the Migratory Bird Act and Mitigation Measure BIO-1 has been identified to reduce project impact to less than significant. When possible, removal of vegetation should be avoided during the nesting season (February 15-September 1). If the disturbance or removal of vegetation occurs during the nesting bird season (February 15-September 1), clearance surveys will be conducted by a qualified biologist. Surveys must be conducted within two weeks prior to ground disturbance. If nesting birds are found, the biologist will establish an appropriate buffer within which no work will occur, or work must halt until the nest is determined by the biologist to be inactive.

## **Plants**

The CNDDDB search found the following four special-status plant species that have been previously recorded within a five mile radius of the project site: Ventura marsh milk-vetch (*Astragalus pycnostachyus* var. *lanosissimus*), Davidson's saltscale (*Atriplex serenana* var. *davidsonii*), salt marsh bird's beak (*Chloropyron maritimum* ssp. *maritimum*), and Orcutt's pincushion (*Chaenactis glabriuscula* var. *orcuttiana*). However, based on the habitat requirements for these species, there is no possibility of

their occurrence of the project site. For example, salt marsh bird's-beak occurs in coastal salt marshes, which are not present at the project site. Additionally, none of the species were observed during the site visit. Given the lack of habitat for these species and the results of the survey, they do not occur at the project site.

**b. Would the project have a substantial adverse impact on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?**

**No Impact.** The CNDDDB search indicated that southern riparian scrub, southern coastal salt marsh, and coastal and valley freshwater marsh habitats are present within the Oxnard USGS quadrangle. However, these habitats are not present within the project site. In addition, no riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or protected by the CDFW or U.S. Fish and Wildlife Service is present within the project site. Therefore, the proposed project would not impact these resources.

**c. Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marshes, vernal pools, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means?**

**No Impact.** The CNDDDB search indicated that southern coastal salt marsh and coastal and valley freshwater marsh habitats are present within the Oxnard USGS quadrangle. However, no wetlands were observed at the site and no impacts on these resources would occur from the proposed project.

**d. Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?**

**Less than significant.** Due to the lack of native habitat at the site, and the developed and disturbed nature of the surrounding area, the site is unlikely to be used as a wildlife corridor or wildlife nursery site. Therefore, the proposed project would have a less than significant impact on the movement of any native wildlife species, established native resident or migratory wildlife corridors, or the use of native wildlife nursery sites.

**e. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?**

**Less Than Significant With Mitigation Incorporated.** This project will not conflict with any local policies or ordinances that protect biological resources. Additionally, no tree preservation policy is applicable to the project site. When possible, tree removal should be avoided during the nesting season (February 15-September 1). If the disturbance or removal of trees occurs during the nesting bird season, clearance surveys will be conducted by a qualified biologist. Surveys must be conducted within two weeks prior to tree disturbance or removal. If nesting birds are found, the biologist will establish an appropriate buffer within which no work will occur, or work must halt until the nest is determined by the biologist to be inactive. With incorporation of Mitigation Measure BIO-2, project impact would be less than significant.

**f. Would the project conflict with the provisions of an adopted habitat conservation plan, natural communities conservation plan, or any other approved local, regional, or state habitat conservation plan?**

**No Impact.** The proposed project site is not included in any state, regional, or local habitat conservation plans. Therefore, no project impacts would result.

**Mitigation Measures:**

The following Mitigation Measures shall be implemented:

**BIO-1:** When possible, removal of vegetation should be avoided during the nesting season (February 15-September 1). If the disturbance or removal of vegetation occurs during the nesting bird season, clearance surveys will be conducted by a qualified biologist. Surveys must be conducted within two weeks prior to ground disturbance. If nesting birds are found, the biologist will establish an appropriate buffer within which no work will occur, or work must halt until the nest is determined by the biologist to be inactive.

**BIO-2:** When possible, tree removal should be avoided during the nesting season (February 15-September 1). If the disturbance or removal of trees occurs during the nesting bird season, clearance surveys will be conducted by a qualified biologist. Surveys must be conducted within two weeks prior to tree disturbance or removal. If nesting birds are found, the biologist will establish an appropriate buffer within which no work will occur, or work must halt until the nest is determined by the biologist to be inactive.

### 3.4.5 CULTURAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?				X
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?		X		
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		X		
d. Disturb any human remains, including those interred outside of formal cemeteries?			X	

#### Existing Conditions

The project site is currently developed with a public elementary school. Agriculture activities were previously conducted in the area where the school site is located. Additional ground disturbance occurred during grading for the existing elementary school that was developed in 2003. Therefore, a recent archeological survey was not conducted since the proposed building site is currently utilized as playfields and a blacktop play area; hence, the native ground surface is not visible.

A cultural resources record and literature search was conducted for the project Area of Potential Effect (APE) and a one-mile radius (study area) at the South Central Coastal Information Center (SCCIC) of the California Historical Resources Information System at California State University, Fullerton, California (IC File Number 15844-1889). In addition, a sacred lands file search was conducted by the Native American Heritage Commission (NAHC). Outreach letters regarding the project were sent to the Native American individuals and organizations in February and March 2016, as recommended by the NAHC. No California Register of Historical Resources (CRHR) eligible or previously recorded resources were identified within the Project Area of Potential Affect (APE). The project APE has been extensively altered by previous ground disturbance.

#### Discussion



**a. Would the project cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?**

**No Impact.** Section 15064.5(a) (3) of the CEQA Guidelines defines a “historical resource” as a resource that meets one or more of the following criteria:

- Listed in, or determined eligible for listing in, the California Register of Historical Resources (CRHR); or
- A resource listed in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code (PRC); or
- Identified as significant in an historical resource survey meeting the requirements of Section 5024.1(g) of the PRC; or
- Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California that may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record.

Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (PRC, § 5024.1, Title 14 California Code of Regulation [CCR], Section 4852) including the following:

- An association with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States.
- An association with the lives of persons important to local, California, or national history.
- An embodiment of the distinctive characteristics of a type, period, region, or method of construction, or a representation of the work of a master, or possesses high artistic values.
- A resource that has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

The proposed project would not cause a substantial adverse change in the significance of a historical resource defined in Section 15064.5 of the CEQA guidelines. The APE does not contain any known historic resources based on archival research conducted for the APE (see item [b] below). Therefore, the proposed project would not cause a substantial adverse change in the significance of an historical resource and no project impact would result.

**b. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?**

**Less than Significant with Mitigation Incorporated.** On December 9, 2015, a literature and records search was conducted of the cultural resource site and project file collection at the SCCIC of the California Historical Resources Information System at California State University, Fullerton, California (IC File Number 15844-1889) (Appendix B). As part of the record search, the SCCIC database of survey reports and overviews, documented cultural resources, cultural landscapes, and ethnic resources was

consulted. Additionally, the search included a review of the following publications and lists: California Office of Historical Preservation (OHP) Historic Properties Directory/National Register of Historic Properties, OHP Archaeological Determinations of Eligibility, California Inventory of Historical Resources/California Register of Historic Resources, *California Points of Historical Interest*, *California Historical Landmarks*, Caltrans Bridge Survey, ethnographic information, historical literature, historical maps, and local historic resource inventories. The record search focused specifically on the proposed project site, APE and the project study area, a one-mile buffer around the APE. The records search revealed that a total of 22 previous cultural resources investigations have been conducted within the project study area. Of these surveys, only three investigations (VN-236, VN-1578 and VN-2465) have been conducted adjacent to the proposed project's APE. One CRHR and NRHP eligible historic district, the Leonard Ranch Historic District (SCCIC primary number 56-152764) was identified over a half mile to the northwest of the project's APE. The Leonardo Ranch Historic District is also listed in the Oxnard General Plan as a designated historic district consisting of 3.45 acres containing ranch buildings: a ranch house, the Main Residence, and a Cook's Cabin. The historic map review illustrated the project APE as an orchard (1941 USGS 7.5' Oxnard California Topographic map). Review of historic plat maps and USGS quadrangle maps did not identify any potential structures or features within the project APE. No previous investigation or archaeological sites or historic resources are recorded within the project's APE.

No previous investigation or archaeological sites or historic resources as defined by the CEQA Guidelines are recorded within the project's APE.

#### Tribal Cultural Resources:

Under CEQA, Assembly Bill (AB) 52 requires a lead agency to evaluate a project's potential to impact "tribal cultural resources." In addition, AB 52 requires the lead agency to consult with any California Native American tribe that has previously requested that the lead agency provide the tribe with notice of such projects and consultation, and is traditionally and culturally affiliated with the geographic area of a proposed project. Consultations must include discussing the type of environmental review necessary, the significance of tribal cultural resources, and the significance of the project's impacts on the tribal cultural resources (as applicable), and alternatives and mitigation measures recommended by the tribe. That consultation must take place prior to the determination of whether a negative declaration, mitigated negative declaration, or environmental impact report is required for a project. Pursuant to State requirements, Native American consultations should be initiated early in the planning process and should be conducted by the lead State/public agency, if agency consultation has been requested by a California Native American tribe (per Assembly Bill 52, PRC 210803, Section 1.2).

On January 13, 2016, the Native American Heritage Commission (NAHC) was contacted to request a Sacred Lands file search. The NAHC responded on January 27, 2016 that no Native American cultural resources were identified by their search as being within the proposed project study area (Appendix C). A list of 11 Native American contacts was also provided.

A project outreach letter was sent to each of the individuals listed by the NAHC in February and March 2016. The letter provided information regarding the project and a request regarding any known cultural resources in the project study area. The outreach letters are for informational purposes only and do not take the place of formal consultation under AB 52 between the lead agency and tribes. Outreach to these contacts and meaningful discussions may reveal tribal cultural resources that could be impacted by the proposed project, or provide community concerns regarding the project's treatment of cultural resources.

Ms. Isabel Ayala, representative of the Coastal Band of the Chumash Nation, responded on February 19, 2016. Ms. Ayala noted that the protection of tribal resources is extremely important to the tribe. She noted

that at this time, the tribe does not have any concerns regarding the proposed project, but requested continued communication and any notices regarding the project to be sent to her in order for the tribe to monitor the progress. Mr. Romero, representative of the Santa Ynez Band of Mission Indians, responded by email on March 11, 2016 and asked if local tribes have been contacted regarding the project. Tetra Tech responded by email that the NAHC had provided a list of Native American tribes in Ventura County for the project and that all the tribes/individuals listed were contacted. To date, no additional comments have been received.

As a result of the background research, the following resource sensitivity levels have been assigned to the project APE:

- Prehistoric Archaeological Resources: Low-Medium
- Historic Archaeological Resources: Low
- Historic Resources (Built Environment): Low

These sensitivity assignments are supported by the research and literature search presented in impact discussions (a) and (b) above. Sensitivity levels are determined by the extent of prior survey coverage, the patterning and density of cultural resources within the project study area, indications of structures on historic maps, and an understanding of prehistoric and historic land use. The Santa Clara River is approximately 0.80-miles north of the project APE. The river and surrounding area would have been a resource for prehistoric people. In addition, the study area was historically used for agriculture and the project APE was used as an agricultural field, potentially resulting in the existence of historic features associated with past agriculture use (e.g. outbuilding foundation, refuse deposit). Hence, there may be a potential for subsurface cultural resources.

The existing school campus including the proposed new building site has undergone extensive ground disturbance. Agriculture activities were previously conducted in the area where the school site is located. Additional ground disturbance occurred during grading for the existing elementary school. Based on geotechnical studies of the project site, the depth of previous ground disturbance that occurred in the area of the new proposed two-story classroom building varies from 1.5 feet to three feet in depth (CTE, South, Inc. 2015). The proposed building site is currently utilized as playfields and a blacktop play area. The native ground surface is, therefore, not visible.

The project APE has been altered by previous ground disturbance. The depth of that ground disturbance ranges from 1.5 feet to three feet. Proposed construction activities below that depth could encounter undisturbed native soils that may contain cultural resources. Therefore, in order to reduce the potential for significant effects to unidentified archaeological resources under CEQA, the following mitigation measures shall be implemented and adhered to prior to and during any ground disturbance within native soils. With incorporation of Mitigation Measures CR-1 through CR-3 listed below, these significant effects on archaeological resources as a result of project construction would be reduced to less than significant.

**c. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?**

**Less than Significant Impact with Mitigation.** Native soils containing paleontological resources could potentially be disturbed if ground disturbing construction activities extend into native soils. The proposed

project could potentially cause a substantial adverse change in significance to a paleontological resource, but incorporation of the following Mitigation Measure CR-4 would reduce the potential impact on paleontological resources to less than significant.

**d. Would the project disturb any human remains, including those interred outside of formal cemeteries?**

**Less than Significant Impact.** Results of the SCCIC records search and NAHC Sacred Lands File search did not identify any prehistoric resources within the project APE. However, ground disturbance within native soils may contain unanticipated cultural material.

Existing regulations require that if human remains and/or cultural items defined by the Health and Safety Code, Section 7050.5, are inadvertently discovered, all work in the vicinity of the find would cease and the Ventura County Coroner would be contacted immediately. If the remains are found to be Native American as defined by Health and Safety Code, Section 7050.5, the coroner will contact the NAHC by telephone within 24 hours. The NAHC shall immediately notify the person it believes to be the Most Likely Descendant (MLD) as stipulated by California PRC, Section 5097.98. The MLD(s), with the permission of the landowner and/or authorized representative, shall inspect the site of the discovered remains and recommend treatment regarding the remains and any associated grave goods. The MLD shall complete their inspection and make their recommendations within 48 hours of notification by the NAHC. Any discovery of human remains would be treated in accordance with Section 5097.98 of the Public Resources Code (PRC) and Section 7050.5 of the Health and Safety Code. Therefore, with compliance with existing regulations, project impact would be less than significant.

**Mitigation Measures:**

The following Mitigation Measures shall be implemented:

**CR-1: Worker Education/Training**—Prior to any ground disturbing activities within the project APE, all project personnel will be briefed by a qualified project archaeologist (retained on-call for the project by the applicant) about the potential and procedures for the inadvertent discovery of prehistoric and historic archaeological resources. The training will include procedures for temporarily halting or redirecting work in the event of a discovery, identification and evaluation procedures, and a discussion on the importance of, and the legal basis for, the protection of archaeological resources. Personnel will be also be provided with a handout regarding identification of cultural resources and protocols for reporting finds.

**CR-2: Inadvertent Discoveries of Archaeological Resources**— If the construction staff or others observe previously unidentified archaeological resources during ground disturbing activities, they will halt work within a 200-foot radius of the find(s), delineate the area of the find with flagging tape or rope (may also include dirt spoils from the find area), and immediately notify the qualified project Archaeologist (retained on-call by applicant). Construction will halt within the flagged or roped-off area. The Archaeologist will assess the resource as soon as possible and determine appropriate next steps in coordination with OSD. Such finds will be formally recorded and evaluated. The resource will be protected from further disturbance or looting pending evaluation.

**CR-3: Archaeological Monitoring**— If proposed project construction ground disturbing activities will reach depths containing undisturbed native soils (areas below 1.5 feet), a qualified archaeological monitor and Native American monitor (if requested) will be present on-site during ground disturbing activities. A cultural resource monitoring and inadvertent discovery plan that outlines protocols and procedures will be

developed prior to any construction (including grading) of the project APE by the qualified on-call Archaeologist (see CR-1). If any cultural resources are identified by the monitor(s) during ground disturbing activities, the resource will be treated as an inadvertent discovery and the protocols outlined in the monitoring plan will be followed. If requested by interested Tribes, a Native American monitor will also be present during construction ground disturbing activities.

**CR-4: Inadvertent Discoveries of Paleontological Resources**— If the construction staff or others observe previously unidentified paleontological resources during ground disturbing activities, they will halt work within a 200-foot radius of the find(s), delineate the area of the find with flagging tape or rope (may also include dirt spoils from the find area), and immediately notify a qualified Paleontologist (retained on-call by the applicant). Construction will halt within the flagged or roped-off area. The Paleontologist will assess the resource as soon as possible and determine appropriate next steps in coordination with OSD. Such finds will be formally recorded and evaluated. The resource will be protected from further disturbance or looting pending evaluation.

### 3.4.6 GEOLOGY AND SOILS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i.) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the state geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.			X	
ii.) Strong seismic ground shaking?		X		
iii.) Seismic-related ground failure, including liquefaction?		X		
iv.) Landslides?			X	
b. Result in substantial soil erosion or the loss of topsoil?		X		
c. Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project and potentially result in an onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?		X		
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?			X	
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater?				X

**Existing Conditions:**

The site is located on the Oxnard Plain of the central Ventura Basin within the Western Transverse Ranges geomorphic province of California. The Transverse Ranges Province is a series of ranges and intervening valleys that extends for 325 miles "directly across the structural grain of California" (Oakeshott 1978). The province extends from Point Arguello and San Miguel Island eastward to the Pinto and Eagle Mountains which end in the Mojave and Colorado Deserts respectively. The province ranges in width from 10 to 50 miles. The narrowest points are at the western extreme in the Santa Ynez Mountains and at the Cajon Pass which separates the San Gabriel and San Bernardino Mountains. The province's broadest point is the distance from the Santa Monica coast, across the Santa Monica, Topatopa and Pine Mountains, to the Tehachapi Mountains.

The Ventura Basin is large synclinal structure situated between the Santa Ynez Range and Topa Mountains on the north, the Channel Islands and Santa Monica Mountains on the south, the San Gabriel Fault on the east, and extending to the western end of the Santa Barbara Channel (Norris and Webb 1990). Structure in the Oxnard Plain is characterized by a series of broadly folded west-trending and east-northeast-trending anticlines and synclines associated with thrust and reverse faults that formed in the Saugus Formation and may have also deformed the overlying older alluvium (Department of Conservation, California Geological Survey [CGS] 2002).

Based on the Geologic Map of the Oxnard 7.5' Quadrangle, Ventura County, California the project site is underlain by Holocene alluvial fan deposit composed predominantly of clay with interbeds of sand and occasional gravel (Clahan 2003).

The proposed development is located at approximate elevations 50 to 55 feet above mean sea level. Based on review of the groundwater map presented in the *Seismic Hazard Zone Report for the Oxnard Quadrangle, Ventura County, California; Seismic Hazard Zone Report 052* (Plate 1.2) (CGS 2002), the historic high groundwater level is approximately 10 feet below ground surface. Fluctuations of the groundwater level should be anticipated, including higher groundwater during the rainy season.

The Ventura County General Plan Hazard Appendix (County of Ventura 2013) indicates that even though the historic record indicates that no strong earthquakes or surface displacement have occurred along the faults in southern Ventura County in the Site area, the likelihood of the occurrence of one or more of such events within the next 50 to 100 years is not remote. The earthquake faults located nearest to the Site are the Oak Ridge Fault, located approximately 2.1 km (1.3 miles) north of the Site, the Ventura-Pitas Point Fault, located approximately 4.3 km (2.5 miles) north of the Site, the Wright Road Fault, located approximately 6.7 km (4 miles) east of the Site, the Springville Fault, located approximately 7.6 km (4.5 miles) east of the Site, and the Camarillo Fault located approximately 11 km (6.85 miles) east of the Site (Tetra Tech 2015). The San Fernando Earthquake of 1971 occurred along a fault having little historic record of activity. Several of the faults within the south half of the County, such as Santa Susana and San Cayetano, are subject to similar tectonic forces as those that caused the San Fernando Earthquake. Crustal deformation (shortening) resulting in earthquakes will continue into the indefinite future. It is probable that earthquakes of magnitude 6 or larger will occur in the south half of the County area.

According to the "Geology and Mineral Resources Study of Southern Ventura County" (1972) prepared by the State Division of Mines and Geology in cooperation with the Ventura County Department of Public Works, the earthquake history of the south half of the county is dominated by small to moderate shocks. No earthquake greater than magnitude 4.7 has been recorded in Ventura County, or the immediate offshore area, since 1934, when adequate instrumental records became available. These relatively minor shocks have caused local damage but no recorded loss of life. A review of the earlier less accurate record

from 1769 to 1934 suggests a similar history for the south half, although there were significant earthquakes in 1812, 1857, 1925, 1971, and 1994 that caused structural damage in specific areas of the south half of the County (County of Ventura 2013).

**Discussion:**

**a. Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:**

- i.) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the state geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.**

**Less Than Significant Impact.** A Preliminary Geotechnical and Geological Investigation was performed for the Project by CTE, South, Inc. (CTE) in accordance with California law, including Sections 17212 and 17212.5 of the California Education Code (CEC), the 2013 Edition of the California Building Code (CBC) (California Building Standards Commission [CBSC] 2013) as described in California Code of Regulations (CCR) Title 24, and California Department of Conservation, California Geological Survey (CGS) Note 48 (*Checklist for the Review of Engineering Geology and Seismology Reports for California Public Schools, Hospitals, and Essential Services Buildings* (CGS 2013) (CTE, South, Inc. 2015). The CTE Preliminary Geotechnical and Geological Investigation is included in Appendix D. The CTE Preliminary Geotechnical and Geological Investigation concluded that:

“Based on our site reconnaissance and review of the referenced literature, the site is not within a State of California-designated Alquist-Priolo Earthquake Fault Studies Zone, and no known active fault traces underlie or project toward the site. According to the California Geological Survey (CGS 2002), a fault is active if it displays evidence of activity in the last 11,000 years. Therefore, the potential for surface rupture from displacement or fault movement beneath the proposed improvements is considered low.”

Therefore, project impact would be less than significant.

- ii.) Strong seismic ground shaking?**

**Less Than Significant Impact with Mitigation Incorporated.** The Ventura County General Plan Hazard Appendix (County of Ventura 2013) indicates that even though the historic record indicates that no strong earthquakes or surface displacement have occurred along the faults in southern Ventura County in the Site area, the likelihood of the occurrence of one or more of such events within the next 50 to 100 years is not remote. The project site is likely to be subjected to strong ground shaking associated with earthquakes generated on nearby and distant faults.

Due to the proximity of the project site to the Simi-Santa Rosa Fault, Pita Point-Ventura Fault and the Oak Ridge Fault, near field effects from strong ground motion associated with a large earthquake along these faults may occur at the Site. Based on the information available in, Appendix A of the *California Probabilistic Seismic Hazard Maps* (CGS 2003) a 7.0 Maximum Moment Magnitude (M) earthquake may occur on the nearby Simi-Santa Rosa Fault and Oak Ridge (onshore) Fault, and a 6.9 M on the Pitas Point-Ventura Fault. Large earthquakes could occur on other faults in the general area, but because of their greater distance and/or lower probability of occurrence, they are less important to the site from a seismic shaking standpoint.



The project site is located in an area with a potential for strong ground motion during earthquakes. The Site is located in an area underlain by unconsolidated Holocene deposits, which are considered to be potentially hazardous with respect to ground motion potential. Because the mapped 1-second spectral response period ( $S_1$ ) for the Project site is 1.071g, which is greater than 0.75g, in accordance with Section 1616A.1.3 the 2013 CBC; a site specific ground motion hazard analysis was performed by CTE in accordance with *Standard 7-05, Minimum Design Loads for Buildings and other Structures* (ASCE 7-10) (ASCE 2013) Chapter 21 as modified by Section 1803A.6 of the 2013 CBC (CTE 2015).

Mitigation measure GEO-1 requires that the building design for structures at the Project use geotechnical building design recommendations that are based on a site specific ground motion hazard analysis for the Project site in accordance with ASCE 7-10 (ASCE 2013) Chapter 21 as modified by Section 1803A.6 of the 2013 CBC. The site specific ground motion hazard analysis and geotechnical building design recommendations shall be approved by the California Geological Survey (CGS) and the Department of the State Architect (DSA). With the implementation of Mitigation Measure GEO-1; the project would have a less than significant impact.

**iii.) Seismic-related ground failure, including liquefaction?**

**Less Than Significant Impact with Mitigation Incorporated.** Generally, there is a potential for liquefaction when the following three conditions are met: (1) a site is located on Holocene age, unconsolidated, coarse-grained sediments; (2) the site is in area of potentially strong ground motion; and (3) groundwater is less than 50 feet below ground surface (bgs). The *Seismic Hazards Zone Report for the Oxnard 7.5-Minute Quadrangle, Ventura County California* (CGS 2002) (Seismic Hazards Zone Report), *State of California Seismic Hazard Zones Oxnard Quadrangle, Revised Official Map* (CGS 2002), and Figure 2.4b of the *Ventura County General Plan, Hazards Appendix* (County of Ventura 2013) indicates that the Site is located in a recognized geological hazard zone for earthquake induced liquefaction. The findings in these data are based on the assumptions that the Site area is underlain by coarse grained Holocene age sediments, which are generally considered have a significant liquefaction potential, and because the depth to groundwater for the Site area is estimated to be less than 50 feet bgs. Plate 1.2 of the Seismic Hazards Zone Report indicates that the historically high groundwater for the Project site is between 5 and 10 feet bgs, which is much shallower than the 50 feet bgs depth used as the maximum depth criterion for potentially liquefiable conditions.

CTE evaluated the liquefaction potential at the Site in accordance with the 2013 CBC (CBSC 2013) and the methods in the *Guidelines for Evaluating and Mitigating Seismic Hazards in California, Special Publication 117A* (CGS 2008). CTE concluded that considering the soil types and groundwater conditions at the Site, there is a potential for liquefaction to occur. If liquefaction were to occur at the site, the repercussions would likely be in the form of dynamic settlement; loss of soil bearing strength and lateral spreading are not anticipated (CTE 2015).

CTE evaluated the potential effects of liquefaction using data from borings. Applying the Site Specific PGA of 0.997g, the earthquake modal magnitude of 7.04 for a soil type  $S_D$  (stiff soil profile), and an assumed groundwater level of 10 feet bgs, CTE concluded that under these conditions, liquefaction would occur below a depth of approximately 10 feet below existing grades in discontinuous soil layers. Total liquefaction settlements are estimated to be approximately 1.65 and 2.33 inches (CTE 2015).

Mitigation Measure GEO-2 requires that the building design for structures at the Project use geotechnical building design recommendations that are based on a site specific evaluation of the liquefaction potential performed in accordance with the 2013 CBC (CBSC 2013) and the methods in the *Guidelines for Evaluating and Mitigating Seismic Hazards in California, Special Publication 117A* (CGS 2008). The

site specific liquefaction potential analysis and geotechnical building design recommendations shall be approved by the CGS and the DSA. With the implementation of Mitigation Measure GEO-2; the project would have a less than significant impact.

**iv.) Landslides?**

**Less Than Significant Impact.** A review of the CGS Seismic Hazards Map for the 7.5 Minute Series Oxnard Quadrangle (CGS 2002), Figure 2.7.1b of the *Ventura County General Plan, Hazards Appendix* (County of Ventura 2013), and Section 6.2.2 of the *City of Oxnard General Plan Draft Background Report* (City of Oxnard 2006) indicates that the Site is not in an area prone to landslides and slope instability. The CTE report indicates that land sliding is not a significant geologic hazard for the project site (CTE 2015). Therefore, project impact would be less than significant.

**b. Would the project result in substantial soil erosion or the loss of topsoil?**

**Less Than Significant With Mitigation Incorporated.** Soil erosion would potentially occur during construction activities, including site grading, structure assembly, and utility extension. With the implementation of Mitigation Measure GEO-3, this impact would be reduced to a less than significant level with standard erosion mitigation measures, including the use of hay bales and other erosion control devices as determined by site-specific conditions, limiting construction to the dry season, soil wetting, and adherence to applicable regulatory guidelines and standards. These measures would also reduce potential air quality impacts and sedimentation. Therefore, project impact would be less than significant with Mitigation Measure GEO-3 incorporated.

**c. Is the project located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in onsite or offsite landslides, lateral spreading, subsidence, liquefaction, or collapse?**

**Less Than Significant Impact with Mitigation Incorporated.** As noted in Section 3.4.6 a. iv above; the project site is not located in a Landslide Hazard Zone on the State of California Seismic Hazard Zones Map (CGS 2002a, 2002 b). Therefore, due to the lack of significant topographic variations at the project site, land sliding is not a potential problem on the site. Based on the results of the 2015 CTE liquefaction analysis, the potential for lateral spreading at the Site was determined to be very low. The assessment for lateral spreading was developed by considering the depth and discontinuous nature of the potentially liquefiable soils with respect to the site topography. Lateral spreading can occur when a soil mass either slides laterally on liquefied soil layers towards a free slope face, or when a soil mass moves downslope on gently sloping ground. CTE concluded that due to the relatively flat site area topography and the lack of significant ditches, trenches or other features exhibiting differential elevations, that the potential for lateral spreading to affect the site during a major seismic event is low (CTE 2015). Land subsidence is the sinking or gradual lowering of the earth surface. Man-made causes of land subsidence most often include groundwater pumping, mining, oil and gas production and river channelization. Based on the *City of Oxnard General Plan Draft Background Report* (City of Oxnard 2006), there is some land subsidence occurring at about 0.05 feet per year in the general area, including most of the City of Oxnard. The CTE report states that “land subsidence has been documented in the central eastern portion Oxnard Plain (Ventura County General Plan, 2000). Based on the information available and our review, land subsidence is not anticipated to be a significant hazard at the project site (CTE 2015).”

Mitigation Measure GEO-2 requires that the building design for structures at the Project use geotechnical building design recommendations that are based on a site specific evaluation of the liquefaction potential performed in accordance with the 2013 CBC (CBSC 2013) and the methods in the *Guidelines for*

*Evaluating and Mitigating Seismic Hazards in California, Special Publication 117A* (CGS 2008). The site specific liquefaction potential analysis and geotechnical building design recommendations shall be approved by the CGS and the DSA. With the implementation of Mitigation Measure GEO-2; the project would have a less than significant impact.

**d. Is the project located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?**

**Less Than Significant Impact.** The CTE report indicated that the near-surface materials at the site are considered to have a very low to low expansion potential (EI less than 50), and should not pose a significant risk to the proposed construction (CTE 2015). Therefore, project impact would be less than significant.

**e. Would the project have soils that are incapable of supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?**

**No Impact.** Wastewater for the proposed project would be disposed of through the municipal sewer system. The proposed project would not use septic tanks or alternative wastewater disposal systems. Therefore, no project impact would result.

**Mitigation Measures:**

The following Mitigation Measures shall be implemented:

**GEO-1:** The building design for structures at the Project shall use geotechnical building design recommendations that are based on a site specific ground motion hazard analysis for the Project site performed in accordance with ASCE 7-10 (ASCE 2013) Chapter 21 as modified by Section 1803A.6 of the 2013 CBC. The site specific ground motion hazard analysis and geotechnical building design recommendations shall be approved by the CGS and the DSA.

**GEO-2:** The building design for structures at the Project shall use geotechnical building design recommendations that are based on a site specific a site specific evaluation of the liquefaction potential performed in accordance with the 2013 CBC (CBSC 2013) and the methods in the *Guidelines for Evaluating and Mitigating Seismic Hazards in California, Special Publication 117A* (CGS 2008). The site specific liquefaction potential analysis and geotechnical building design recommendations shall be approved by the CGS and the DSA.

**GEO-3:** Potential soil erosion that would occur during construction activities, including site grading, structure assembly, and utility extension shall be reduced to a less than significant level with standard erosion mitigation measures, including the use of hay bales and other erosion control devices as determined by site-specific conditions, limiting construction to the dry season, and soil wetting, applied as required under applicable regulatory guidelines and standards.

**3.4.7 GREENHOUSE GAS EMISSIONS**

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>GREENHOUSE GAS EMISSIONS.</b> Would the project:					
a.	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b.	Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?			X	

**Existing Conditions:**

Significant changes in global climate patterns have recently been associated with global warming, an average increase in the temperature of the atmosphere near the Earth’s surface attributed to accumulation of greenhouse gas (GHG) emissions in the atmosphere. GHGs trap heat in the atmosphere, which in turn heats the surface of the earth. Some GHGs occur naturally and are emitted to the atmosphere through natural processes while others are anthropogenic (i.e., created and emitted solely through human activities).

Regulated GHGs consist of carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF<sub>6</sub>), and nitrogen trifluoride (NF<sub>3</sub>) (California Health and Safety Code 38505). GHGs are commonly quantified in the equivalent mass of CO<sub>2</sub>, denoted CO<sub>2</sub>e, which takes into account the global warming potential of each individual GHG compound.

Carbon dioxide enters the atmosphere through burning fossil fuels (coal, natural gas, and oil), solid waste, trees and wood products, and also as a result of certain chemical reactions (e.g., manufacture of cement). Carbon dioxide is removed from the atmosphere (or “sequestered”) when it is absorbed by plants as part of the biological carbon cycle. Methane is emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from livestock and other agricultural practices and by the decay of organic waste in municipal solid waste landfills. Nitrous oxide is emitted during agricultural and industrial activities, as well as during combustion of fossil fuels and solid waste. Hydrofluorocarbons, PFCs, SF<sub>6</sub>, and NF<sub>3</sub> are synthetic, powerful greenhouse gases that are emitted from a variety of industrial processes. These gases are typically emitted in smaller quantities, but because they are potent greenhouse gases, they are sometimes referred to as High Global Warming Potential gases (“High GWP gases”). HFCs and PFCs are sometimes used as substitutes for stratospheric ozone-depleting substances (e.g.,

chlorofluorocarbons, hydrochlorofluorocarbons, and halons). SF6 is employed in electricity transmission and distribution and semiconductor manufacturing. NF<sub>3</sub> results from semiconductor manufacturing processes (CARB 2015).

**Discussion:**

**a. Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?**

**Less Than Significant Impact.** GHGs resulting from the proposed project were calculated using CalEEMod and are summarized in Table 3-5. Detailed CalEEMod input values and calculated GHG results are included as Appendix A.

The proposed project would generate GHGs during construction and operation activities but not in significant quantities. These emissions would contribute to the cumulative GHGs in the County. However, GHG emissions resulting from the proposed project are anticipated to have a less than significant impact in the environment.

**Table 3-5  
Project Construction and Operation Emissions of GHGs**

<b>Project Phase</b>	<b>Annual MT CO<sub>2</sub>e</b>
Project Construction 2016	92.57
Project Construction 2017	107.56
Project Operation	388.62
Threshold of Significance	10,000
Significant?	No

Notes: MT CO<sub>2</sub>e metric tons of carbon dioxide equivalent

Pursuant to state law (CEQA Guidelines 15064.7), VCAPCD is authorized to adopt thresholds of significance for GHG emissions. To date, VCAPCD has evaluated multiple options, but has not made a decision to adopt any of these options. VCAPCD is leaning towards the adoption of thresholds of significance for land use development consistent with those adopted by the South Coast Air Quality Management District (SCAQMD). On December, 5 2008, SCAQMD Governing Board adopted a proposal for an interim GHG threshold of significance for projects where the SCAQMD is lead agency. The threshold of significance is applicable for stationary sources and can be used for determining significant impacts for proposed projects (SCAQMD 2008). Under the interim thresholds of significance projects can emit up to 10,000 MT per year of CO<sub>2</sub>e before being deemed as having significant impacts. Calculated CO<sub>2</sub>e emissions resulting from the construction and operation activities of the proposed project are much less than the interim threshold of significance adopted by SCAQMD. Based on this criterion, the proposed project GHG emissions would have less than significant impact on the environment.

**b. Would the project conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?**

**Less Than Significant Impact.** In September 2006, the Global Warming Solutions Act of 2006 (also known as AB 32), was signed into law. AB 32 requires that the State of California to reduce its GHG emissions to 1990 levels by 2020. CARB established the 1990 target at 427 million metric tons (MM) CO<sub>2</sub>e. Under AB 32, CARB has primary responsibility for promulgating regulations, programs, and enforcement mechanisms to achieve the GHG reduction target. CARB is required to and has developed a Climate Change Scoping Plan, which lays out California's strategy for meeting the goals of AB 32. The Climate Change Scoping Plan relies in part on integration of its GHG reduction strategies in general plans. The proposed project would not result in an increase of either population or emissions sources beyond what has been planned for in the City of Oxnard General Plan and does not required a general plan amendment. Therefore, the proposed project would be consistent with and have no impact on the State's Climate Change Scoping Plan and project impact would be less than significant.

**Mitigation Measures:**

No mitigation measures are required to reduce emissions below the interim threshold of significance.

**3.4.8 HAZARDS AND HAZARDOUS MATERIALS**

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:					
a.	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
b.	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X	
c.	Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?			X	
d.	Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e.	Be located within an airport land use plan area or, where such a plan has not been adopted, be within 2 miles of a public airport or public use airport, and result in a safety hazard for people residing or working in the project area?			X	
f.	Be located within the vicinity of a private airstrip and result in a safety hazard for people residing or working in the project area?				X
g.	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
h. Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?			X	

**Existing Conditions:**

The project site is currently used as a public school that does not handle or generate large quantities of hazardous materials. Hazardous materials used onsite include cleaners (e.g., disinfectants, bleach) and office supplies (e.g., toner) that are stored in cabinets and supply rooms. The project site and adjacent properties are not included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 (EnviroStor 2015).

On behalf of the OCD, ENSR conducted a three-phase Preliminary Endangerment Assessment (PEA) for the California Environmental Protection Agency Department of Toxic Substances Control (DTSC) at the Thurgood Marshall Elementary School (ENSR 2001) (Appendix E). The PEA assessment was conducted consistent with DTSC guidelines to 1) determine if there had been a release of hazardous substances from historical agricultural and nearby former landfill operations, 2) identify if the presence of these chemicals pose a potential risk to human health and the environment, and 3) confirm that contaminated soils have been removed from the site. The PEA report indicated that no actual or potential hazardous release was indicated which could pose a threat to the human health or the environment under any land use and DTSC concurred that no further investigation was required for the site (DTSC 2001).

The project site is located within two miles of Oxnard Airport. The airport is located over a mile to the south at 2830 Teal Club Rd, Oxnard, CA 93030.

**Discussion:**

**a. Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?**

**Less Than Significant Impact.** The proposed project would not handle or generate large quantities of hazardous materials. The project site is currently used as a public school and would continue to do so with the proposed project. Potential hazardous materials used onsite include those needed during short term temporary construction activities such as architectural coatings and sealants. During long term operations, potential hazardous materials stored at the school would include cleaners (e.g., disinfectants, bleach) and office supplies (e.g., toner). As is standard for schools, these materials would be kept in cabinets or supply rooms and therefore, would not be considered a hazard to students, staff, or the public. Therefore, project impact would be less than significant.



**b. Would the project create a significant hazard to the public or the environment through the reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment?**

**Less Than Significant Impact.** The proposed school expansion would not create a significant hazard to the public or the environment involving the likely release of hazardous materials. As noted in response 3.4.8 a) above; the proposed project is a public school that would not handle or generate large quantities of hazardous materials. Common hazardous materials needed for routine maintenance and operations would be stored in small quantities in cabinets and supply rooms. Since hazardous materials on campus would be limited and stored away from students and the public; project impact would be less than significant.

**c. Would the project emit hazardous emissions or handle hazardous materials or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?**

**Less Than Significant Impact.** The project site is currently used as a public school and would continue to do so with the proposed project. The proposed project would not generate hazardous emissions or use materials in hazardous quantities. Therefore, project impact would be less than significant.

**d. Is the project located on a site that is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?**

**No Impact.** The project site and adjacent properties are not included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 (EnviroStor 2015). Therefore, no project impact would result.

**e. For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?**

**Less Than Significant Impact.** Oxnard Airport is located over a mile to the south of the project site at 2830 Teal Club Rd, Oxnard, CA 93030. The proposed project would increase building square footage at the Marshall School by a total of 15,101 sq. ft. No tall features such as a communication tower that could create a potential airport hazard are proposed. The project site is currently used as a public school and would continue to be used as a public school with the proposed project. Therefore, project impact would be less than significant.

**f. For a project located within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?**

**No Impact.** The proposed site is not located near a private airstrip. Therefore, there would be no impact on the safety of people residing or working within the project area.

**g. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?**

**Less Than Significant Impact.** The proposed project would not impair implementation of, or physically interfere with, an adopted emergency response plan. The project site is a public school and would continue to be used as a public school with the proposed project. The new classroom facilities would be

located to the south of the existing fire lane. Access to the project site from the fire lane would continue to be maintained with the proposed project. Therefore, project impact is less than significant.

**h. Would the project expose people or structures to the risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?**

**Less Than Significant Impact.** There are no wildlands located on or adjacent to the project site. The project site is currently developed with a public school and is surrounded by residential development to the north, east, and west. Located to the south of the project site across West Gonzales Road is agricultural land. Therefore, project impact from wildland fire is less than significant.

**Mitigation Measures:**

No Mitigation Measures are required.

**3.4.9 HYDROLOGY AND WATER QUALITY**

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:					
a.	Violate any water quality standards or waste discharge requirements?			X	
b.	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge, resulting in a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?		X		
c.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on site or off site?			X	
d.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on site or off site?			X	
e.	Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?			X	
f.	Otherwise substantially degrade water quality?			X	
g.	Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary, Flood Insurance Rate Map or other flood hazard delineation map?				X
h.	Place within a 100-year flood hazard area structures that would impede or redirect flood flows?				X

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
i.	Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?		X		
j.	Contribute to inundation by seiche, tsunami, or mudflow?				X

**Existing Conditions:**

The project site is located within the jurisdiction of the Los Angeles Regional Water Quality Control Board (RWQCB).

The project site lies within the Oxnard Subwatershed (Ventura County Resource Management Agency [VCRMA] 2014) of the South Coast Hydrologic Region; however, runoff from the site is conveyed north to the Santa Clara Watershed where it ultimately drains to the Santa Clara River (City of Oxnard 2016). Runoff is conveyed throughout the site using storm drain inlets and underground piping, as well as aboveground vegetated swales. A bioswale is located in the southeast corner of the school which discharges to the Patterson Drain, a municipal drainage channel. There are no perennial or ephemeral surface water bodies on the project site.

The project site overlies the Santa Clara River Valley Groundwater Basin, Oxnard Subbasin. No water supply wells are located onsite; 9 water supply wells are located within 1000 feet of the site (State Water Resources Control Board 2016).

The City of Oxnard supplies potable water to the school. The City’s water supply consists of imported surface water from the Calleguas Municipal Water District (CMWD), imported groundwater from the United Water Conservation District (UWCD), and local groundwater from City wells. Groundwater from City wells and from UWCD, comprises the greatest portion of the City’s water supply (Oxnard Public Works 2015).

The City of Oxnard Wastewater Treatment Plant currently treats domestic wastewater from the school. The Oxnard Wastewater Treatment Plant is owned and operated by the City of Oxnard and is located at 6001 South Perkins Road, Oxnard, California. The treatment plant is a secondary treatment facility with an ocean outfall (Oxnard Public Works 2015).

**Discussion:**

**a. Would the project violate any water quality standards or waste discharge requirements?**

**Less than Significant Impact.** The project would connect to the existing sanitary sewer main which conveys domestic wastewater to the Oxnard Wastewater Treatment Plant (OWTP). The OWTP, owned and operated by the City of Oxnard, is a secondary treatment facility located at 6001 South Perkins Road,

Oxnard, California (Oxnard Public Works 2015). The OWTP treats and discharges wastewater pursuant to National Pollutant Discharge Elimination System Order No. R4-2013-0094, adopted by the Los Angeles Regional Water Quality Board on June 6, 2013. The project would generate domestic wastewater from restroom facilities, which would be treated by the OWTP. The project would include construction of two science labs; however, the curriculum of these labs would not generate and/or discharge any hazardous wastes to the sanitary sewer.

**b. Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (i.e., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?**

**Less than Significant Impact With Mitigation Incorporated.** The City's current water supply consists of four sources:

1. Imported surface water from the Calleguas Municipal Water District (CMWD). CMWD purchases State Water Project (SWP) water from the Metropolitan Water District of Southern California (MWD).
2. Groundwater from the United Water Conservation District (UWCD).
3. Groundwater from City wells subject management of the Fox Canyon Groundwater Management Agency (FCGMA). Groundwater from City wells and from UWCD, comprise the greatest portion of the City's water supply. Local groundwater is extracted from the aquifers of the Oxnard Plain Groundwater Basin, including the Upper Aquifer System and the Lower Aquifer System (Oxnard Public Works Department 2015). As of December 2014, both these aquifer systems were in overdraft (Fox Canyon Groundwater Management Agency 2014).
4. Recycled water from the City's Advanced Water Purification Facility (AWPF). This water supply offsets potable water used for irrigation or is provided to agricultural users in exchange for groundwater allocation.

Additional water sources are becoming available through the implementation of the new Groundwater Recovery Enhancement and Treatment (GREAT) Program. The GREAT Program combines wastewater recycling associated with the AWPF, brackish groundwater desalination, groundwater injection, storage and recovery, and restoration of local wetlands to supplement the City's water supply source to the Oxnard Plain.

The City plans and manages its water supplies according to an Urban Water Management Plan (UWMP), which is updated every five years and currently in the process of being updated (2012). Original development of Thurgood Marshall Elementary School was anticipated in the City's 2010 UWMP (2012), which accounted for build out under the City's *2030 General Plan* (2011). The *2030 General Plan* includes by reference the *Northwest Golf Course Community Specific Plan* adopted in November of 1999 and amended in 2000, 2002, and 2004.

The City's *2030 General Plan* describes a multifaceted strategy that outlines how the City plans to provide an adequate water supply to meet forecast water demands well into the future. It includes policies and measures to address a range of groundwater supply and resource issues. Further, the City is currently updating its Water Master Plan and 2010 UWMP, and actively works with local groundwater managers

such as the FCGMA, UWCD, and CMWD on local groundwater management programs, as well as with the CMWD and MWD on regional imported supplies.

The City's water supplies continue to be affected by a recent multiyear drought, and 12 percent monthly demand reductions (as compared to 2013 monthly usage) imposed by the State Water Resources Control Board (SWRCB) under Resolution No. 2014-0038 are anticipated to continue into fiscal year 2016/2017 (2014). As of November 2015, the City had exceeded its water conservation goals primarily reducing its own usage; by adopting and enforcing *Mandatory Water Conservation Measures* applicable to residents, businesses, and institutions (i.e., schools); enhancing public and education related to the drought and ways for the public to conserve water; initiating the AWPf and actively converting irrigation systems located along the Recycled Water Backbone System from potable water to AWPf recycled water (City of Oxnard 2012, 2015).

The project would increase capacity of Thurgood Marshall Elementary School to 900 students, a 62 percent increase (i.e., 345 students) from the current capacity of 555 students. There would be no net increase in landscaping or sports fields. The project would connect to the City of Oxnard municipal water system with water conservation features including low flow toilets and waterless urinals. The project would include the use of dry wells to help balance site hydrology (i.e., reduce runoff) and recharge the aquifer.

The OSD institutes a standard educational schedule, resulting in approximately 183 school days. Applying an average demand factor of 5.4 gallons per student per school day (Mays 2001), the project would require an additional 340,929 gallons (1.05 acre-feet) of water annually. Given the long-term management of local groundwater basins by the City of Oxnard, coupled with incorporation of mitigation measure HYRDO-1 requiring low-flow flush toilets, self-closing faucets, and insulated piping; the project would have a less than significant impact.

**c. Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on site or off site?**

**Less Than Significant Impact.** The project includes redevelopment of existing school features and facilities, including grading portions of the school site for construction of 22 parking spaces and a new classroom facility. No perennial or ephemeral water bodies are located on or close to the site; therefore, the project would not alter the course of a stream or river.

Since the project is anticipated to disturb greater than one acre of land (including laydown and stockpile areas), the project must comply with State Water Resources Control Board Order No. 2009-0009-DWQ, *National Pollutant Discharge Elimination System General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities* (Construction General Permit). Pursuant to the Construction General Permit, prior to terminating permit coverage the project site must be stabilized and not pose any additional sediment discharge risk than it did prior to the commencement of construction activity. The post-construction plans for the site include landscaping and hardscaping that will prevent erosion or siltation; therefore the project would not alter the site in a manner that would result in substantial erosion or siltation on-site or off-site (State Water Resources Control Board 2009).

**d. Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on site or off site?**

**Less Than Significant Impact.** The project includes redevelopment of existing school features and facilities, including grading portions of the school site for construction of 22 parking spaces and a new classroom facility. No perennial or ephemeral water bodies are located on or close to the site; therefore, the project would not alter the course of a stream or river.

The new classroom facility and parking spaces would increase the total impervious surface area of the site by more than 5,000 square feet; therefore, the project must comply with the *Ventura County Technical Guidance Manual for Stormwater Quality Control Measures* (TGM, Ventura County Watershed Protection District 2011). The TGM provides guidance for the implementation of stormwater management control measures in new development and redevelopment projects in the County of Ventura and the incorporated cities therein. By adhering to the TGM, integrated water resource management and low impact development features will be incorporated into the project. One example of this includes the dry wells that are planned for use. These dry wells and other features would infiltrate, reuse, and/or evaporate water on-site; thereby mitigating the effects of the project's new impervious surface. Additionally, these features would be constructed to overflow to the local municipal storm drain system when rainfall exceeds the designed capacity or flow. As a result, no on-site or off-site flooding would occur.

**e. Would the project create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?**

**Less Than Significant Impact.** The new classroom facility and parking spaces would increase the total impervious surface area of the site by more than 5,000 square feet; therefore, the project must comply with the *Ventura County Technical Guidance Manual for Stormwater Quality Control Measures* (Ventura County Watershed Protection District 2011). The TGM provides guidance for the implementation of stormwater management control measures in new development and redevelopment projects in the County of Ventura and the incorporated cities therein. By adhering to the TGM integrated water resource management and low impact development features would be incorporated into the project. One example of this includes the dry wells that are planned for use. These dry wells and other features would infiltrate, reuse, and/or evaporate water on-site; thereby mitigating the effects of the project's new impervious surface. Additionally, these features would be constructed to overflow to the local municipal storm drain system when rainfall exceeds the designed capacity or flow. These features would not only limit surface runoff, but would also improve the quality of runoff by way of sedimentation/settling, filtration, plant uptake, ion exchange, adsorption, and microbially-mediated decomposition. Therefore, the project would not provide for substantial additional sources of polluted runoff, or create or contribute runoff that would exceed the capacity of the existing drainage system.

**f. Would the project otherwise substantially degrade water quality?**

**Less Than Significant Impact.** The new classroom facility and parking spaces would increase the total impervious surface area of the site by more than 5,000 square feet; therefore, the project must comply with the *Ventura County Technical Guidance Manual for Stormwater Quality Control Measures* (Ventura County Watershed Protection District 2011). The TGM provides guidance for the implementation of stormwater management control measures in new development and redevelopment projects in the County of Ventura and the incorporated cities therein. By adhering to the TGM integrated water resource management and low impact development features would be incorporated into the project. One example of this includes the dry wells that are planned for use. These dry wells and other features would infiltrate, reuse, and/or evaporate water on-site; thereby mitigating the effects of the project's new impervious surface. These features would not only limit surface runoff, but would also improve the quality of runoff

by way of sedimentation/settling, filtration, plant uptake, ion exchange, adsorption, and microbially-mediated decomposition. Therefore, the project would not provide for substantial additional sources of polluted runoff, or create or contribute runoff that would exceed the capacity of the existing drainage system.

**g. Would the project place housing within a 100-year floodplain, as mapped on a federal Flood Hazard Boundary, Flood Insurance Rate Map or other flood hazard delineation map?**

**No Impact.** No housing is located on the site and no housing is proposed as part of the project. Therefore, no project impact would result.

**h. Would the project place within a 100-year floodplain structures that would impede or redirect flood flows?**

**No Impact.** As noted above the proposed project would not place buildings or structures within a 100-year floodplain. Therefore, no project impact would result.

**i. Would the project expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?**

**Less Than Significant Impact with Mitigation Incorporated.** A dam that stores more than 1,000 acre-feet of water, is higher than 150 feet, and has the potential to cause downstream property damage is classified as a high hazard dam by FEMA. A review of Section 2.11 and Figures 2.11.1 and 2.11.2 of the *Ventura County General Plan, Hazards Appendix* (County of Ventura 2013) and Section 4.3.3.1 and Tables 4-5, 4-6, and, 4-7, and Figure 4-3 of the *Multi-Jurisdictional Hazard Mitigation Plan for Ventura County, California* (County of Ventura 2005) indicates that there are four major reservoirs in the Santa Clara River watershed upstream of the project site that are FEMA high hazard dams that would inundate the Site area in the event of a reservoir failure. Information for each of these dams is summarized below.

**Santa Felicia Dam:** The Santa Felicia Dam (Lake Piru) is operated by the United Water Conservation District (UWCD), can hold up to 100,000 acre-feet of water, and is located on Piru Creek approximately 32 miles upstream of the Site (Figure 3-4). Data provided by the UWCD indicates that the Site would be inundated by flood waters approximately 6 hours and 41 minutes after the dam failure to maximum depths of five to 10 feet under a “Sunny Day” scenario, and approximately four hours and four minutes after the dam failure to maximum depths of 10 to 20 feet under a “Rainy Day” scenario (UWCD 2015).

**Castaic Dam.** The Castaic Dam is operated by the California Department of Water Resources (CDWR), can hold up to 325,000 acre-feet of water, and is located on Castaic Creek approximately 42 miles upstream of the Site (Figure 3-4). Data provided by the CDWR indicates that the Site would be inundated by flood waters to depths of 10 to 20 feet approximately 4.8 hours after a failure of the Castaic Dam (CDWR 2015).

**Pyramid Dam.** The Pyramid Dam is operated by the CDWR, can hold up to 179,000 acre-feet of water, and is located on Piru Creek approximately 20 miles upstream of the Santa Felicia Dam and 52 miles upstream of the Site (Figure 3-4). Data provided by the CDWR indicates that the Site would be inundated by flood waters to depths of 10 to 20 feet approximately 5.7 hours after a failure of the Pyramid Dam (CDWR 2015).

**Bouquet Canyon Dam.** The Bouquet Canyon Dam is operated by the Los Angeles Department of Water and Power (LADWP), can hold up to 36,500 acre-feet of water, and is located approximately 57 miles



upstream of the Site (Figure 3-4). Data provided by the LADWP indicates that the Site would be inundated by flood waters to depths of 15 to 20 feet approximately 4.5 hours after a failure of the Bouquet Canyon Dam (LADWP 2015).

The need for dam failure disaster planning was demonstrated by the midnight collapse in March 1928 of the St. Francis Dam in Los Angeles County, which occurred after the newly constructed cement arched dam was completely filled for the first time. The ensuing flooding from the dam's total collapse resulted in the loss of over 400 lives in Ventura County as floodwaters washed out homes and structures along the banks of the Santa Clara River. The communities of Piru, Fillmore, Santa Paula, Bardsdale, Saticoy, Montalvo and El Rio sustained extensive life and property loss from the flood (County of Ventura 2013).

More recently, the San Fernando Earthquake in 1971 resulted in ground shaking in the vicinity of the Van Norman Dam in Los Angeles County. As a result of the earthquake, structural damage threatened the dam's immediate collapse. Approximately 80,000 residents in the San Fernando Valley had to be evacuated to areas of safety in the midst of many other earthquake-related emergencies (County of Ventura 2013).

The California's Dam Safety Act (Section 8589.5 California Emergency Services Act) requires the preparation of dam inundation maps showing areas of potential flooding in the event of sudden or total dam failure as well as emergency procedures for notification and evacuation of nearby residents (County of Ventura 2013).

In Ventura County, disaster coordination and planning is the responsibility of the Sheriff's Department through its Office of Emergency Services (OES). Within California's emergency management organizational structure, each county serves as an Operational Area. In this role, Sheriff's OES acts as an agent between Cal OES and the cities (including the City of Oxnard), special districts and unincorporated areas of Ventura County. OES is responsible for countywide disaster planning, mitigation, response and recovery activities. The OES serves as the depository for the County's Dam Inundation Maps and is charged with ongoing maintenance of the County's Dam Failure Response Plan which was adopted by the Board of Supervisors on September 13, 1983. The Dam Failure Response Plan was currently updated by the OES during 2013 (County of Ventura 2013). With compliance with Mitigation Measure HYDRO-2, that requires OSD to develop and implement a Site specific flooding evacuation plan to be implemented in conjunction with the County of Ventura OES Dam Failure Response Plan, project impacts would be less than significant.

**j. Would the project contribute to inundation by seiche, tsunami, or mudflow?**

**No Impact.** The project site is located at an average mean sea level elevation of approximately 50 to 55 feet, and there are no enclosed large bodies of water in the immediate vicinity of the property. The project site is located in an area of relatively flat topography and is not near any hills or watercourses that would generate mud flows. The site is located outside areas mapped as subject to Tsunami/Seiche as delineated in the *Ventura County General Plan, Hazards Appendix* (County of Ventura 2013). Therefore, tsunamis and seiche are not considered to be potential hazards to the Site.

**Mitigation Measures:**

The following Mitigation Measures shall be implemented:

**HYDRO-1:** The project contractor shall include low-flow flush toilets and urinals, self-closing faucets, and insulated piping to reduce water consumption to the extent feasible.

**HYDRO-2:** The OSD shall develop and implement a site evacuation plan to be implemented in conjunction with the County of Ventura OES Dam Failure Response Plan.

**3.4.10 LAND USE AND PLANNING**

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:					
a.	Physically divide an established community?				X
b.	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				X
c.	Conflict with any applicable habitat conservation plan or natural community conservation plan?				X

**Existing Conditions:**

The project site is currently developed with a public elementary school. The City of Oxnard 2030 General Plan Land Use Map identifies the project site as School (SCH). The SCH designation is for campuses of the elementary and secondary public school districts that serve the City of Oxnard (Oxnard 2011).

The project site is located within the Northwest Golf Course Community Specific Plan Area and is identified as an elementary school site on the land use concept plan diagram (Oxnard 2004). The project site is zoned C-R, Community Reserve on the City’s Zoning Map and identified as Marshall Elementary.

**Discussion:**

**a. Would the project physically divide an established community?**

**No Impact.** The proposed project would not physically divide an established community. The project site is currently developed with a public elementary school. The 12-classroom building would be added on the south and west side of the existing school administration building in the area that is currently utilized as playfields and a blacktop play area. The existing soccer field layout would remain but existing hardtop play areas would be relocated to the east of the proposed new building. The new building location maintains the existing fire lane, provides connection to the existing campus, and adds new courtyards spaces. Therefore, the proposed project would not physically divide an established community and no project impact would result.

**b. Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?**

**No Impact.** The project site is currently used as a public school and would continue to do so with the proposed project. The project site is located within the Northwest Golf Course Community Specific Plan Area and is identified as an elementary school site on the land use concept plan diagram. A public school is consistent with the General Plan land use designation e and the proposed project would also be consistent with a C-R zoning designation that allows for a public school as a related use. Therefore, the proposed project would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect and no project impact would result.

**c. Would the project conflict with any applicable habitat conservation plan or natural communities conservation plan?**

**No Impact.** A review of the City of Oxnard website for local conservation plans and on the CDFW website for regional conservation plans was conducted and no conservation plans applicable to the project site were identified. Therefore, no project impact would result.

**Mitigation Measures:**

No Mitigation Measures are required.

**3.4.11 MINERAL RESOURCES**

		<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation Incorporated</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
Would the project:					
a.	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
b.	Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?				X

**Existing Conditions:**

Minerals

Pursuant to the California Surface Mining and Reclamation Act of 1975 (SMARA), the Mining and Geology Board classifies lands into Mineral Resource Zones (MRZs) based on the known or estimated mineral resource potential of that land. The mineral resources SMARA addresses first are sand, gravel, and crushed rock (aggregate). The main purpose of mineral land classification is to ensure that the mineral resource potential of lands is considered in the land use planning process (Matrix Design Group, Inc. 2006 and County of Ventura 2011) The MRZ categories are as follows:

- MRZ-1. Areas where adequate information indicates that no significant mineral deposits are present or where it is judged that little likelihood exists for their presence.
- MRZ-2. Areas where adequate information indicates significant mineral deposits are present, or where it is judged that a high likelihood exists for their presence.
- MRZ-3. Areas containing mineral deposits the significance of which cannot be evaluated from available data.
- MRZ-3(a) - Areas other than deposits classified MRZ-3, judged on the basis of the limited available geologic data and field work, to have higher potential as sources of aggregate material suitable for use in construction.
- MRZ-4. Areas where available information is inadequate for assignment to any other MRZ.

In the City of Oxnard, important mineral/sand/gravel deposits are primarily located along the Santa Clara River channel, along the U.S. Route 101 (Ventura Freeway) corridor, and along the eastern edge of the City extending as far west as Oxnard Boulevard in several areas. Areas of significant mineral deposits are identified as MRZ-2 and MRZ-3 areas. The MRZ-2 area encompasses the course of the Santa Clara River through the City and also a corridor of land along U.S. Route 101 from the Santa Clara River eastward to

approximately Del Norte Avenue. MRZ-3 areas are located south of the Santa Clara River (west of the Ventura Freeway), and a large area bordering State Route 1 through the center of the City of Oxnard (Matrix Design Group, Inc. 2006).

According to the Ventura County General Plan Resources Appendix (County of Ventura 2011), the project site is located within an aggregate resources (sand, gravel, and crushed rock) MRZ-3 area, which is an area containing mineral deposits, the significance of which cannot be evaluated from available data. As discussed in the General Plan Resources Appendix, areas classified as MRZ-3 and MRZ-3(a) are not considered available aggregate supplies because of the highly speculative nature of viable aggregate deposits.

#### Petroleum

According to the California Department of Conservation, Division of Oil, Gas, and Geothermal Well Finder (2015), there are five oil and gas fields located within the City of Oxnard boundaries: West Montalvo, El Rio, Santa Clara Avenue, Oxnard, and Cabrillo. The project site is located within the West Montalvo oil field. However, there are no active oil or gas wells located near the project site.

#### **Discussion:**

**a. Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?**

**No Impact.** The proposed project would be constructed on an existing school site that is not currently used for mineral or petroleum extraction. Project implementation would not impact the availability of sand, gravel, or aggregate supplies. Although the project site is located within the West Montalvo oil field, it is not located near any active oil wells and would not affect the production or availability of oil or gas. Additionally, due to the limited size of the proposed new building in comparison with the surrounding existing developments, the proposed project would not require enough of the existing mineral resources in the area to create a shortage of supplies for other projects and consumers. Therefore, no project impact would result.

**b. Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?**

**No Impact.** According to the County of Ventura and the City of Oxnard General Plans, the project site is located in an area that is considered not available for aggregate supplies because of the highly speculative nature of viable aggregate deposits. Furthermore, the proposed project would be constructed on an existing school campus that is already developed. Project implementation would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan and no project impact would result.

#### **Mitigation Measures:**

No Mitigation Measures are required.

**3.4.12 NOISE**

		<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation Incorporated</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
Would the project:					
a.	Expose persons to or generate noise levels in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies?			X	
b.	Expose persons to or generate excessive groundborne vibration or groundborne noise levels?			X	
c.	Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
d.	Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?		X		
e.	Be located within an airport land use plan area, or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport and expose people residing or working in the project area to excessive noise levels?				X
f.	Be located in the vicinity of a private airstrip and expose people residing or working in the project area to excessive noise levels?				X

**Existing Conditions:**

The existing noise environment consists of vehicle noise from local street traffic (West Gonzales Road, North Patterson Road, and Thurgood Marshall Drive), nature sounds, and community sounds. Agriculture land is located south of the project site across West Gonzales Road. Single family homes are located to north and west of the project site across Thurgood Marshall Drive as well as to the east across North Patterson Road. Residents of these homes would be considered sensitive noise receptors. Ambient noise monitoring data for the project vicinity was not publicly available. However, existing land use and street patterns as well as the existing noise contours published in the City of Oxnard’s Noise Element, indicate

that the existing ambient noise levels at the proposed project site should be at or below 70 A-weighted decibels (dBA) Community Noise Equivalent Level (CNEL) under existing conditions.

**Discussion:**

**a. Would the project result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?**

**Less Than Significant Impact.** The City of Oxnard General Plan Noise Element identifies the land use compatibility standard for noise-sensitive land uses as a CNEL of 55 dBA to 70 dBA as conditionally acceptable. Ambient noise monitoring data for the project vicinity was not available. However, existing land use and street patterns as well as the existing noise contours published in the City of Oxnard's Noise Element, indicate that the existing ambient noise levels at the proposed project site should be at or below 70 A-weighted decibels (dBA) Community Noise Equivalent Level (CNEL) under existing conditions. The proposed project would have only a minimal impact on daily traffic volumes in the project vicinity, and thus would have minimal impact on traffic noise conditions.

The City of Oxnard's Code of Ordinances Chapter 7 Section 7-185 limits noise propagation to residential land uses from stationary equipment during the daytime period (7:00 am to 10:00 pm) to 55 dBA  $L_{eq}$  and during the nighttime period (10:00 pm to 7:00 am) to 50 dBA  $L_{eq}$ . The project is proposing a new classroom building to be located where the playfields and blacktop play areas are currently located. This relocation would move the hardtop play areas farther away from the nearest residential area, which would result in noise levels that are similar or less than the current conditions. The building is also proposed to include 13 packaged air conditioning units to be located on the roof. According to the manufacturers, the sound power levels for the packaged air conditioning unit is 78 dBA. Given the elevated rooftop height for the mechanical equipment and assuming the rooftop mechanical equipment operates simultaneously, the noise levels from the operation of all the rooftop mechanical equipment would range from 25 dBA  $L_{eq}$  at the single family residential homes located to the south across Thurgood Marshall Drive, to 34 dBA  $L_{eq}$  at the single family residential homes located to the west across Thurgood Marshall Drive. Existing classrooms are located directly north adjacent to the proposed classroom building. The noise levels at the existing classroom building to the north would range from 45 dBA  $L_{eq}$  at the first level to 47 dBA  $L_{eq}$  at the second level. The noise levels generated by the proposed project would comply with the City of Oxnard's General Plan and Code of Ordinances. Therefore, project impact would be less than significant.

**b. Would the project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?**

**Less Than Significant Impact.** Operation of the school would not generate vibration; however, construction of the classroom buildings and site grading would require the use of equipment that could generate vibration. Possible sources of vibration may include bulldozers, dump trucks, backhoes, rollers, and other construction equipment that produces vibration. No blasting would be required at the project site.

Project construction activities would occur within approximately 45 feet from the adjacent classroom building and 190 feet from the nearest single family residences. According to the Federal Transit Administration (FTA) guidelines, a vibration level of 65 VdB (Vibration Velocity Level) is the threshold of perceptibility for humans. For a significant impact to occur, vibration levels must exceed 80 VdB during infrequent events (Federal Transit Administration 1995). Based on the levels published by the FTA (Federal Transit Administration 2006) and the type of equipment proposed for use at the proposed project,



coupled with the distance to the existing identified noise sensitive receptors, analysis shows that all identified sensitive residential receptors would be below the 65 VdB vibration threshold of perceptibility for humans. The vibration level at the adjacent classroom building would be perceptible, but would be below the 80 VdB threshold. This vibration level is considered acceptable for impacts to sensitive receptors and is, therefore, considered to be a less than significant impact.

**c. Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?**

**Less Than Significant Impact.** The dominant noise source in the vicinity of the proposed project is traffic noise associated with West Gonzales Road, North Patterson Road, and Thurgood Marshall Drive. Based on existing traffic volumes, noise impacts to adjacent residences range from 55 dBA CNEL to 68 dBA CNEL. The project would result in an increase in traffic along West Gonzales Road and North Patterson Road during the arrival and departure of students. The project traffic analysis identifies an increase of 559 Average Daily Trips (ADT). The ADT on West Gonzales Road and North Patterson Road would each be increased by 279.5 ADTs as a result of the proposed project. This increase in ADT's represents an increase of less than one dBA at the residences adjacent to the proposed project. According to the CEQA guidelines, an increase in the overall ambient community noise level of less than one dBA is considered to be a less than significant impact.

The proposed project building is planned to be equipped with 13 packaged air conditioning units to be located on the roof. The noise levels generated from the operation of all the rooftop mechanical equipment would range from 25 dBA  $L_{eq}$  at the single family residential homes located to the south across Thurgood Marshall Drive and to 34 dBA  $L_{eq}$  at the single family residential homes located to the west across Thurgood Marshall Drive. Existing classrooms are located directly north adjacent to the proposed new building. The noise levels at the existing classroom building to the north would range from 45 dBA  $L_{eq}$  at the first level to 47 dBA  $L_{eq}$  at the second level. Based on the existing noise levels generated by vehicle traffic, the noise impacts from the rooftop mechanical equipment would result in an increase of less than one dBA to the ambient noise levels at the adjacent residential property lines. Since the proposed project is shown to only increase the overall ambient community noise level by less than one dBA it is considered to be a less than significant impact.

**d. Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?**

**Less Than Significant With Mitigation Incorporated.** Long term operation of the proposed project would not result in a substantial or periodic increase in ambient noise levels in the project vicinity. The proposed project related increase in ADT's represents an increase of less than one dBA at the residences adjacent to the proposed project. Furthermore, based on the existing noise levels generated by vehicle traffic, the noise impacts from the rooftop mechanical equipment would result in an increase of less than one dBA to the ambient noise levels at the adjacent residential property lines. According to the CEQA guidelines, an increase in the overall ambient community noise level of less than one dBA is considered to be a less than significant impact. Since the proposed project is shown to only increase the overall ambient community noise level by less than one dBA, it would be a less than significant impact.

Construction of the proposed school is planned to start in the summer of 2016 and last approximately 18 months. The project construction activities are anticipated to occur in phases and include site preparation, grading, building construction, paving, architectural coating, and landscaping. These construction activities would require a variety of equipment. Typical construction equipment would not be expected to

generate noise levels above 90 dBA at 50 feet, and most equipment types would typically generate noise levels of less than 85 dBA at 50 feet.

The highest noise levels during construction are normally generated during site grading and foundation work. Grading equipment would be the loudest equipment used at the site. This equipment is expected to generate a maximum instantaneous noise level ( $L_{max}$ ) of up to 70 - 75 dBA at the single family homes located at a distance of 140 feet. At the adjacent classroom, the construction equipment is expected to generate a maximum instantaneous noise level ( $L_{max}$ ) of up to 85 - 90 dBA. This would be loud enough to temporarily interfere with speech communication outdoors and indoors with the windows open. Project construction would occur between the hours of 7:00 a.m. and 6:00 p.m., Monday through Friday. Due to the infrequent nature of loud construction activities at the site, the limited hours of construction, and the implementation of Mitigation Measure N-1, the temporary increase in noise due to construction is considered to be a less than significant impact with mitigation incorporated.

**e. For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?**

**No Impact.** The nearest airport to the project site is Oxnard Airport, located over a mile to the south of the project site at 2830 Teal Club Rd, Oxnard, CA 93030. The City of Oxnard's Noise Element indicates that the proposed site is located approximately 1.12 miles outside of the 60 dBA CNEL contour and outside of the airport influence area. Therefore, no project impact would result

**f. For a project located within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?**

**No Impact.** Maps and aerial photos for the project region show no private airstrips close enough to generate a significant noise impact at the project site. Therefore, no project impact would result.

**Mitigation Measures:**

The following Mitigation Measure shall be implemented:

**N-1** The construction contractor shall limit activities as follows:

- Equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically-attenuating shields or shrouds) wherever feasible.
- Stationary noise sources shall be located as far from adjacent receptors as possible and shall be muffled and enclosed within temporary sheds, incorporate insulation barriers or other measures to the extent feasible.
- Impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically-powered tools. However, where use of pneumatically powered tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used where feasible. This could achieve a

reduction of 5 dBA. Quieter procedures shall be used such as drilling rather than impact equipment whenever feasible.

- Heavy construction equipment operations should be limited during the school period when classrooms are being utilized in the adjacent building.

**3.4.13 POPULATION AND HOUSING**

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:					
a.	Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?			X	
b.	Displace a substantial number of existing housing units, necessitating the construction of replacement housing elsewhere?				X
c.	Displace a substantial number of people, necessitating the construction of replacement housing elsewhere?				X

**Existing Conditions:**

**Population**

The District is located in the southwestern portion of Ventura County, California, primarily in the City of Oxnard but also serving a portion of the City of Port Hueneme. In 2014, the population of the County of Ventura was approximately 842,967 and the population in the City of Oxnard was approximately 203,645 (U.S. Census Bureau 2015a). The population in the City of Oxnard has increased 2.8 percent from 2010 to 2014, which was 0.5 percent higher compared to the population growth for the County of Ventura during that same time period. According to a report prepared by the Ventura County Planning Division (2008), the population in the County of Ventura is estimated to increase by almost 10 percent from 2014 to 2020. The population in the City of Oxnard is estimated to increase by over 13 percent from 2014 to 2020, over 3 percent more than the expected population growth in Ventura County. Table 3-6 shows existing population and housing numbers in 2010 and 2014 for the City of Oxnard and the County of Ventura for comparison. The Thurgood Marshall Elementary School is located in Census Tract 29.01, which had an estimated population of 5,797 in 2014 (U.S. Census Bureau 2015b).

**Table 3-6.  
Population and Housing**

	2010	2014	2020 Projections*	2010-2014 Percent Change	2014-2020 Percent Change
<b>Population</b>					
Ventura County Population	823,318	842,967	935,452	2.3	9.9
Oxnard City Population	197,899	203,645	234,304	2.8	13.1
<b>Housing Units</b>					
Ventura County Housing Units	281,695	284,489	306,265	1.0	7.1
Oxnard City Housing Units	52,772	53,637	66,944	1.6	19.9

Source: U. S. Census Bureau 2015a, Southern California Association of Governments’ (SCAG) 2015a, SCAG 2015b, and \*Ventura County Planning Division 2008.

Note: Numbers are rounded.

**Housing**

As shown in Table 3-6, the number of housing units in the City of Oxnard increased by 1.6 percent from 2010 to 2014, 0.6 percent more than for the County of Ventura during that same time period. Existing residential communities within the Thurgood Marshall Elementary School attendance area include the Northwest Golf Community, located immediately north and west of the Marshall School; and the Windsor North River Ridge development, located immediately east of the school. Both of these neighborhoods generally make up Census Tract 29.01, which was estimated as containing 1,787 housing units in 2014.

The Ventura County Planning Division (2008) estimates the number of housing units in the County of Ventura will increase by over 7 percent from 2014 to 2020, and that the number of housing units in the City of Oxnard will increase by almost 20 percent from 2014 to 2020. The growth anticipated for the City of Oxnard is approximately 13 percent more housing units compared to the County of Ventura.

According to the City of Oxnard’s Planning Division Quarterly Project List (October 2015), several residential projects are in various phases of development within the City of Oxnard. Currently, a total of 631 residential units are proposed, 338 units are approved, 657 units are in the plan check process, and 752 units are under construction (City of Oxnard 2015).

**Discussion:**

- a. Would the project induce substantial population growth in an area, either directly (e.g., by proposing new homes and business) or indirectly (e.g., through extension of roads or other infrastructure)?**

**Less than Significant Impact.** The school expansion is necessary to satisfy current demand for schools in the area resulting from existing and planned development. The proposed project would utilize the existing school campus and would not require other land outside the existing school boundary. The proposed project is a new two-story, 12-classroom building on an existing school campus. No new homes or businesses are being directly proposed as part of this project. The proposed project also does not include the extension of roads or other infrastructure. Expansion of the school would address the current shortage of classrooms for intermediate students enrolled in the District and for projected future students. The proposed project would require that additional school staff be added at the campus in order to accommodate the projected addition of 345 students maximum in the 12 new classrooms. Additional staff would include teachers and administrative or support staff. Most or all of the additional school staff could be hired from the existing qualified applicant pool already residing within or near the District. However, if teachers or other staff are hired outside the District area to fill a specific role, it may result in a few new people and their families moving into surrounding neighborhoods, thus creating a slight increase in the local population. However, the proposed project would not induce substantial population growth in the area. A less than significant impact is anticipated.

**b. Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?**

**No Impact.** The project site is the existing Thurgood Marshall Elementary School campus that does not contain any housing. Therefore, no housing would be removed and no project impact would result.

**c. Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?**

**No Impact.** The project site is the existing Thurgood Marshall Elementary School campus that does not contain any housing. Thereby, no people would be displaced necessitating the need for the construction of replacement housing elsewhere. No project impact would result.

**Mitigation Measures:**

No Mitigation Measures are required.

**3.4.14 PUBLIC SERVICES**

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:				
i.) Fire protection?			X	
ii.) Police protection?			X	
iii.) Schools?				X
iv.) Parks?			X	
v.) Other public facilities?			X	

**Existing Conditions:**

Fire Protection Services

The Oxnard Fire Department provides a full range of emergency and non-emergency services to the community and is staffed by approximately 103 personnel, including civilian and safety positions. The majority of the safety positions are assigned to the Suppression Division that provides emergency services for City residents. The mission of the Oxnard Fire Department is to serve the public and safeguard the community by preventing or minimizing the impact of emergency situations to life, the environment, and property by responding to both emergency and non-emergency calls for service (City of Oxnard 2011a). There are seven Fire Stations in the City of Oxnard and the nearest Fire Stations to the project site are Stations 1 located and 4 (City of Oxnard 2016a). The location of Fire Stations within the City and the approximate distance of the Stations to the project site are identified in Table 3-7.

**Table 3-7  
Fire Station Locations**

<b>Station Number</b>	<b>Address</b>	<b>Approximate Distance to Project Site</b>
1	491 South "K" Street, Oxnard, CA 93030	2.8 miles
2	531 East Pleasant Valley Road, Oxnard, CA 93030	6.7 miles
3	150 Hill Street, Oxnard, CA 93030	4.3 miles
4	230 West Vineyard Avenue, Oxnard, CA 93030	2.6 miles
5	1450 Colonia Road, Oxnard, CA 93030	3.7 miles
6	2601 Peninsula Road, Oxnard, CA 93030	4.1 miles
7	3300 Turnout Park Circle, Oxnard, CA 93036	4.1 miles

#### Police Protection Services

The Oxnard Police Department provides police protection services to the City of Oxnard including the project site. The Oxnard Police Department employs approximately 254 sworn officers and 158 civilian support personnel under the leadership of Police Chief Jeri Williams (Oxnard PD 2015). The project site is located within Police Beat 11.

#### Public Education

OSD provides kindergarten through eighth grade educational services to the residents of the City of Oxnard and a portion of the City of Port Hueneme. District schools include 16 elementary campuses serving grades K-6, ranging in size from 550 to 1,027, and three intermediate sites serving grades 7-8, ranging in size from 777 to 1,255. In total, the District provides education to approximately 17,000 students in kindergarten through eighth grades. In addition to the traditional elementary and intermediate grade levels, the District also offers Pre-K education at seven of the sixteen elementary schools and at San Miguel Preschool (Caldwell Flores Winters, Inc. 2013).

The Dolinka Group, LLC (Dolinka Group) prepared a School Facilities Needs Analysis report for OSD (March 12, 2015). Based on this report, the District's 2014-2015 enrollment totaled 16,932 students (13,555 elementary school students plus 3,377 intermediate school students). In the 2014-2015 school year, the capacity of the facilities for elementary students was 13,808 students (an excess capacity of 253), and the capacity for intermediate school students was 3,222 (exceeding capacity by 155 students). The State of California defines a school's capacity based on the number of permanent classrooms constructed. The District's loading capacity standards are 27 students per classroom between grades K through 3, and 35 students per classroom between grades 4 through 8 (Caldwell Flores Winters, Inc. 2013).

The Dolinka Group, LLC (2015) determined that future housing units within the District would increase by 925. The projected student enrollment from those future housing units would total 209 students (165 for elementary school plus 44 for intermediate school) (Dolinka Group, LLC 2015). This report determined that although there is sufficient capacity currently at the elementary level, the projected



student enrollment from the future housing units will create a shortage at the elementary level and there will continue to be a capacity shortage for intermediate students.

The Rio School District (RSD) serves the unincorporated community of El Rio, the River Park development and portions of the City of Oxnard. The District strives to provide world-class education to its more than 4,950 students through five elementary schools, one K-8 school academy, and two middle schools.

Oxnard Union High School District provides public education for grades 9 through 12 and serves the cities of Oxnard, Camarillo and Port Hueneme.

### Parks

Oxnard residents enjoy access to a variety of City parks and open space areas as well as nearby Federal, State, County of Ventura, and City of Port Hueneme parks and beaches. The Channel Islands National Park, Santa Monica National Recreation Area, McGrath State Beach, and Point Mugu State Beach are all close enough for day and weekend use by city residents (Oxnard 2011). Within the City of Oxnard there are approximately 552.54 acres of parks.

### **Discussion:**

**a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:**

#### **i.) Fire Protection**

**Less Than Significant Impact.** The Oxnard Fire Department provides fire protection services to the City of Oxnard including the project site. The project site is currently used as a public school and would continue to do so with the proposed project. The project site is located near the existing fire lane that would continue to be maintained with the proposed project. The new classroom facilities would be located to the south of the existing fire lane. The proposed project would somewhat increase the land use intensity of the site but it would not result in a substantial increased demand for fire protection services. Therefore, project impact would be less than significant.

#### **ii.) Police Protection**

**Less Than Significant Impact.** The Oxnard Police Department provides police protection services to the City of Oxnard including the project site. The project site is currently used as a public school and would continue to do so with the proposed project. Student capacity with the proposed project would add up to 345 additional students for a total capacity of 900 students on campus. While the additional students would generate some increased demand for police protection services, it would not be a substantial increase in demand. Therefore, project impact would be less than significant.

#### **iii.) Schools**

**No Impact.** The project site is currently used as a public school and would continue to do so with the proposed project. Student capacity with the proposed project would add up to 345 additional students for

a total capacity of 900 students on campus. The new school facilities are needed to accommodate existing and anticipated future enrollment in the OSD. The increased school capacity with the proposed project would have a beneficial impact on school facilities. Therefore, no adverse project impact on school facilities would result.

**iv.) Parks**

**Less Than Significant Impact.** The project site is the existing Thurgood Marshall Elementary School that has play areas and fields to support the recreational needs of the students on campus. The proposed project includes a 12-classroom building that would be added on the south and west side of the existing school administration building in the area that is currently utilized as playfields and a blacktop play area. The existing soccer field layout would remain but existing hardtop play areas would be relocated to the east of the proposed new building. While the proposed project would relocate some play areas, the recreational needs of students would continue to be met on campus. Therefore, project impact on parks would be less than significant.

**v.) Other Public Facilities**

**Less Than Significant Impact.** Demand for public services is typically linked to an increase in population growth in the area through the development of new housing units or the generation of new jobs. The proposed project would add new school facilities on the existing campus. The new school facilities are needed to accommodate existing and future enrollment in the District. While the proposed project may generate a few additional jobs, it would not be substantial resulting in the need for new or expanded public facilities. Student recreational needs would continue to be met with the on campus play areas and play fields. Therefore, project impact would be less than significant.

**Mitigation Measures:**

No Mitigation Measures required.

3.4.15 RECREATION

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:					
a.	Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			X	
b.	Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?		X		

**Existing Conditions:**

Within the City of Oxnard there are approximately 552.54 acres of parks. Oxnard residents have access to a variety of City parks and open space areas as well as nearby Federal, State, County of Ventura, and City of Port Hueneme parks and beaches. In addition, the Channel Islands National Park, Santa Monica National Recreation Area, McGrath State Beach, and Point Mugu State Beach are all located close enough for day and weekend use by city residents (Oxnard 2011).

**Discussion:**

**a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?**

**Less Than Significant Impact.** The City of Oxnard Recreation & Community Services Department provides park and recreation services in the City. The nearest park to the project site is Cabrillo Park located approximately a half mile to the south of the project site at 1600 Ebony Drive. This 6 acre park has a playground, area lighting, concert walks, and turf areas. Cabrillo Park is one of the many parks in the City of Oxnard designed to meet the recreational needs of the City.

The proposed project is not anticipated to result in a substantial increase in use of area parks since recreational facilities are provided on campus and the proposed project would not induce substantial population growth. The project site is the existing Thurgood Marshall Elementary School that has play areas and fields to support the recreational needs of the students on campus. Demand for park and recreational services is typically linked to an increase in population growth in the area through the development of new housing units or the generation of new jobs. While the proposed project may add a

few additional jobs, it would not be a substantial increase resulting in the need for new or expanded park and recreational facilities. The proposed project would add new school facilities on the existing campus. The new school facilities are needed to accommodate existing and future enrollment in the District and the recreational needs of students during the school day would continue to be met on campus. Therefore, project impact would be less than significant.

**b. Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?**

**Less Than Significant Impact with Mitigation.** The proposed project is relatively small and would not require the construction of new off-site recreational facilities. Student recreational needs would continue to be accommodated on the existing school campus. The proposed project includes a 12-classroom building that would be added on the south and west side of the existing school administration building in the area that is currently utilized as playfields and a blacktop play area. The existing soccer field layout would remain but existing hardtop play areas would be relocated to the east of the proposed new building.

Potential environmental impacts associated with the proposed project, including relocated recreational areas, are discussed by environmental resources topic throughout this IS/MND. While there are no specific Mitigation Measures for recreation required; mitigation measures were identified for other resources topics to reduce potential impacts associated with construction and operation of the proposed project, including relocated recreational areas. Therefore, project impact would be considered less than significant with mitigation incorporated.

**Mitigation Measures:**

No additional specific Mitigation Measures for recreation are required.

**3.4.16 TRANSPORTATION/TRAFFIC**

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a.	Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?		X	
b.	Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?		X	
c.	Result in a change in air traffic patterns including either an increase in traffic levels or a change in location that results in substantial safety risks?			X
d.	Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?		X	
e.	Result in inadequate emergency access?		X	
f.	Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?		X	

**Existing Conditions:**

Associated Transportation Engineers (ATE) prepared a Traffic and Circulation Study for the proposed project that is the basis of the traffic analysis summarized herein and the complete study is provided as Appendix F. The project study area for the Traffic and Circulation Study is generally bounded by

Thurgood Marshall Drive on the north, North Patterson Road on the east, West Gonzales Road on the south, and Merion Way on the west. Primary access to the project site is provided by 2 driveway connections on Thurgood Marshall Drive. The project driveways on Thurgood Marshall Drive are inbound and outbound only providing a counter clockwise circulation pattern for pick-ups and drop-offs.

### Existing Street Network

The project site is served by a circulation system comprised of arterials and collector streets. The major roadways serving the site are as follows:

*Gonzales Road* is a 4- to 6-lane east-west arterial. Providing access to Downtown Oxnard from U.S. Highway 101, the road is primarily fronted by commercial uses. Gonzales Road also fronts the southern border of the Thurgood Marshall School, providing access to the site. Signals are located at Merion Way, Campus Road and Patterson Road within the study area.

*Patterson Road* is a 2- to 4-lane arterial oriented north-south in the study area. Patterson Road extends north from Channel Islands Boulevard, then transitions eastward as Vineyard Road in north Oxnard. In the study area, Patterson Road is signalized at Gonzales Road.

*Thurgood Marshall Drive* is a 2- lane roadway that extends north from Gonzales Road to Patterson Road. Thurgood Marshall Drive provides access to the school and the adjacent residential community. Thurgood Marshall Drive is stop-sign controlled at Gonzales Road and Patterson Road.

### Bicycle Facilities

Gonzales Road and Patterson Road are identified as part of the City of Oxnard Bikeway System. Class II bike lanes exist along Gonzales Road from Victoria Avenue to "C" Street. Class II bike lanes exist along Patterson Road from Doris Avenue to Gonzales Road. A multi-use path exists on Patterson Road from Gonzales Road to Vineyard Avenue. The multi-use path connects to the Class II bike lane on Vineyard Avenue.

### Pedestrian Facilities

There are extensive pedestrian facilities (cross-walks/sidewalks etc.) located in the study area. Existing sidewalks are provided along Gonzales Road, Patterson Road and Thurgood Marshall Drive. The sidewalks connect the school to the residential neighborhoods surrounding the school. Crosswalks are provided at each of the study area intersections. A mid-block crosswalk and an intersection crosswalk are provided on Thurgood Marshall Drive connecting the school to the adjacent gated residential community.

### Existing Volumes and Intersection Levels of Service

Traffic flow on urban arterials is most constrained at intersections. Therefore, a detailed analysis of traffic flows must examine the operating conditions of critical intersections during peak travel periods. In rating intersection operations, "Levels of Service" (LOS) A through F are used, with LOS A indicating free flow operations and LOS F indicating congested operations (more complete definitions of levels of service are included in the Traffic Study, Appendix E). LOS C is the minimum acceptable standard for intersection operations in the City of Oxnard.

Table 3-8 lists the existing (2015) levels of service for study area intersections during the A.M. and P.M. peak hour periods. Intersection traffic counts were collected in December 2015. Existing levels of service were calculated for the study area intersections using the Intersection Capacity Utilization (ICU) methodology for signalized intersections, and the Highway Capacity Manual (HCM) methodology for unsignalized intersections, as required by the City of Oxnard.

**Table 3 - 8  
Existing Peak Hour Levels of Service**

<b>Intersection</b>	<b>Control</b>	<b>A.M. Peak Hour</b>	<b>P.M. Peak Hour</b>
		<b>ICU-Delay/LOS</b>	<b>ICU-Delay/LOS</b>
Gonzales Road/Marion Way	Signal	0.44/LOS A	0.38/LOS A
Gonzales Road/Campus Way	Signal	0.59/LOS A	0.45/LOS A
Gonzales Road/Thurgood Marshall Drive	STOP-Sign	14.8 sec./LOS B	10.6 sec./LOS B
Gonzales Road/Patterson Road	Signal	0.54/LOS A	0.47/LOS A
Patterson Road/Thurgood Marshall Drive	STOP-Sign	11.9 sec./LOS B	10.2 sec./LOS B

The data presented in Table 3-8 indicates that the study area intersections currently operate at LOS B or better during the A.M. and P.M. peak hour periods, meeting the City's LOS C standard.

Traffic Analysis Scenarios

The traffic analysis includes the following traffic scenarios:

- Existing Conditions
- Existing plus Project Conditions
- Cumulative (Existing plus approved and pending projects) Conditions
- Cumulative + Project Conditions

Traffic Impact Thresholds

The City of Oxnard's criteria for evaluating project impacts at intersections is based upon the change in Intersection Capacity Utilization (ICU)/LOS attributable to the project. The City of Oxnard has established LOS C as the threshold of significance for determining project impacts at intersections. If the addition of project traffic increases the ICU by 0.02 or more at an intersection operating at LOS C or worse, it should be mitigated to the ICU level identified without the project traffic.

**Discussion:**

**a. Would the project conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?**

**Less Than Significant Impact.** Trip generation estimates were calculated for the project based on the rates published in the Institute of Transportation Engineers, Trip Generation, 9th Edition for Elementary

School (Land Use Code #520) and Middle School/Junior High School (Land Use Code #522). Table 3-9 summarizes the average daily, A.M. and P.M. peak hour trips generated by the project.

**Table 3-9  
Project Trip Generation**

Land Use	Size	Average Daily Trips		A.M. Peak Hour		P.M. Peak Hour	
		Rate	Trips	Rate	Trips (In/Out)	Rate	Trips (In/Out)
Existing: Elementary	555 Students	1.29	716	0.45	250 (138/112)	0.15	83 (41/42)
Proposed: Middle	345 Students	1.62	559	0.54	186 (102/84)	0.16	55 (27/28)
Net Change:			+ 559		+ 186 (102/84)		+ 55 (27/28)

The data presented in Table 3-9 show that the proposed project would generate 559 average daily trips (ADT), 186 A.M. peak hour trips, and 55 P.M. peak hour trips. The data presented in Table 3-9 show that the existing school generates 716 ADT, 250 A.M. peak hour trips, and 83 P.M. peak hour trips. The proposed project together with the existing school would generate 1,275 ADT, 436 A.M. peak hour trips, and 138 P.M. peak hour trips.

The Thurgood Marshall School currently operates a student bussing program. The school bussing program provides transportation to and from school for students that live more than 1.5 miles from school, for overflow students, and for special needs students. Currently 239 (43%) of the existing student population are bussed to school. The bussing program reduces the number of school private vehicle trips, thus reducing congestion on City of Oxnard streets during the morning commute period. The bussing program would continue to operate when the school adds the 6<sup>th</sup>, 7<sup>th</sup> and 8<sup>th</sup> grades.



The A.M. and P.M. peak hour trips generated by the project were distributed and assigned to the study area intersections based on school enrollment boundaries provided by the Oxnard School District, as well as a general knowledge of the population in residential areas in the City of Oxnard. Levels of service were calculated for the study area intersections for the existing + project scenario. Tables 3-10 and 3-11 show the results of the LOS calculations and identify the project's impacts based on the City of Oxnard's thresholds.

**Table 3-10  
Existing + Project A.M. Peak Hour Levels of  
Service**

Intersection	Existing		Existing + Project		Change	Impact?
	ICU/Delay	LOS	ICU/Delay	LOS		
Gonzales Road/Merion Way	0.44	LOS A	0.44	LOS A	0.00	No
Gonzales Road/Campus Road	0.59	LOS A	0.60	LOS A	0,01	No
Gonzales Road/Thurgood Marshall Drive	14.8 sec.	LOS B	15.6sec.	LOS C	0.8 sec.	No
Gonzales Road/Patterson Road	0.54	LOS A	0.57	LOS A	0.03	No
Patterson Road/Thurgood Marshall Drive	11.9 sec.	LOS B	16.2sec.	LOS C	4.3 sec.	No

**Table 3-11  
Existing + Project P.M. Peak Hour Levels of  
Service**

Intersection	Existing		Existing + Project		Change	Impact?
	ICU/Delay	LOS	ICU/Delay	LOS		
Gonzales Road/Merion Way	0.38	LOS A	0.38	LOS A	0.00	No
Gonzales Road/Campus Road	0.45	LOS A	0.45	LOS A	0.00	No
Gonzales Road/Thurgood Marshall Drive	10.6 sec.	LOS B	10.8 sec.	LOS B	0.2 sec.	No
Gonzales Road/Patterson Road	0.47	LOS A	0.47	LOS A	0.00	No
Patterson Road/Thurgood Marshall Drive	10.6 sec.	LOS B	10.7 sec.	LOS B	0.1 sec.	No

The data presented in Tables 3-10 and 3-11 indicate that the project would not have a significant impact on study area intersections based on City of Oxnard impact thresholds.

The City of Oxnard requires that intersections be analyzed with the addition of traffic generated by projects which have been approved or are pending within the project study area. ATE and City staff identified 2 approved/pending projects in the vicinity which would add traffic to the study area

intersections. Trip generation estimates were developed for the cumulative developments using rates presented in the ITE, Trip Generation, 9th Edition. The approved/pending projects would generate a total of 16,088 average daily trips; 1,269 A.M. peak hour trips and 1,575 P.M. peak hour trips. The traffic generated by the approved/pending projects was distributed and assigned to the study area intersections based on the location of each project, recent traffic studies, existing traffic patterns as well as a general knowledge of the population, employment and commercial centers in Oxnard. Cumulative levels of service for the study area intersections are shown in Table 3-12.

**Table 3-12  
Cumulative Peak Hour Levels of Service**

Intersection	A.M. Peak Hour		P.M. Peak Hour	
	ICU/Delay	LOS	I ICU/Delay	LOS
Gonzales Road/Merion Way	0.44	LOS A	0.38	LOS A
Gonzales Road/Campus Road	0.60	LOS A	0.46	LOS A
Gonzales Road/Thurgood Marshall Drive	15.1 sec.	LOS C	10.8 sec.	LOS B
Gonzales Road/Patterson Road	0.56	LOS A	0.50	LOS A
Patterson Road/Thurgood Marshall Drive	14.1 sec.	LOS B	11.0 sec.	LOS B

The data presented in Table 3-12 indicate that the study area intersections with the cumulative traffic would operate at LOS C or better during the A.M. peak hour and P.M. peak hour periods. No significant impact on study area intersections based on City of Oxnard impact thresholds would result.

Levels of service were calculated for the study area intersections under the Cumulative + Project scenario and the proposed project would not contribute to a significant cumulative impact on the study area intersections based on City of Oxnard impact thresholds.

Parking Analysis

A total of 88 on-site parking spaces would be provided as part of the Thurgood Marshall School expansion. ATE evaluated the adequacy of the on-site parking supply based on a parking demand survey and empirical parking demand data to determine if the parking supply is sufficient to meet the peak parking demands. Parking demands for the existing elementary school were qualified based on a parking survey conducted at the school. Peak demand estimates for the new school classrooms were developed based on parking rates for Middle School/Junior High School (Land Use Code 522) land uses published in the Institute of Transportation Engineers (ITE), Parking Generation, 4<sup>th</sup> Edition.

The existing peak parking demand for the 555 student elementary school is 42 parking spaces. Based the ITE parking demand rates, the new 345 middle school students would generate a peak parking demand of 31 additional spaces. Based on the parking survey and the empirical parking demand data, the peak parking demand is 73 parking spaces. The 88 on-site parking spaces would accommodate the peak parking demands for the Thurgood Marshall School.

Collision Analysis

ATE staff reviewed collision data for the Gonzales Road/Merion Way, Gonzales Road/Campus Road, Gonzales Road/Thurgood Marshall Drive, Gonzales Road/Patterson Road and Patterson Road/Thurgood Marshall Drive intersections. The collision data covers a five-year period from January 2009 to December 2013.

At the signalized Gonzales Road/Merion Way intersection, there were a total of 6 collisions with no reported fatalities. The accident rate calculated for the Gonzales Road/Merion Way intersection is 0.17 accidents per million entering vehicles. The statewide average collision rate for similar signalized intersections is 0.43.

At the signalized Gonzales Road/Campus Road intersection, there were a total of 2 collisions with no reported fatalities. The accident rate calculated for the Gonzales Road/Campus Road intersection is 0.05 accidents per million entering vehicles. The statewide average collision rate for similar signalized intersections is 0.43.

At the unsignalized Gonzales Road/Thurgood Marshall Drive intersection, there were a total of 4 collisions with no reported fatalities. The accident rate calculated for the Gonzales Road/Thurgood Marshall Drive intersection is 0.11 accidents per million entering vehicles. The statewide average collision rate for similar unsignalized intersections is 0.14.

At the signalized Gonzales Road/Patterson Road intersection, there were a total of 21 collisions with no reported fatalities. The accident rate calculated for the Gonzales Road/Patterson Road intersection is 0.54 accidents per million entering vehicles. The statewide average collision rate for similar signalized intersections is 0.43. ATE utilized the Caltrans significance test to determine if the number of accidents at the Gonzales Road/Patterson Road intersection were significant. There were 21 reported accidents at the Gonzales Road/Patterson Road intersection which were found to be less than significant (29 accidents required to meet significance threshold).

At the unsignalized Patterson Road/Thurgood Marshall Drive intersection, there were a total of 2 collisions with no reported fatalities. The accident rate calculated for the Patterson Road/Thurgood Marshall Drive intersection is 0.30 accidents per million entering vehicles. The statewide average collision rate for similar unsignalized intersections is 0.14. There were 2 reported accidents at the Patterson Road/Thurgood Marshall Drive intersection which were found to be less than significant (5 accidents required to meet significance threshold).

The accident rates for the majority of the study-area intersections are significantly less than the statewide accident rates for similar intersections. There was one collision involving a pedestrian reported. That collision occurred at the Gonzales Road/Patterson Road intersection at 8:00 A.M. during the morning school arrival period. Based on the Caltrans significance test, the number of accidents at the Gonzales Road/Patterson Road and Patterson Road/Thurgood Marshall Drive intersections was found to be less than significant.

#### Significance Conclusions

Therefore, proposed project would not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit and project impact would be less than significant.

**b. Would the project conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?**

**Less than Significant Impact.** For the purposes of Ventura County Congestion Management Program (CMP) traffic impact analysis, LOS E is considered to be acceptable, and a significant impact occurs if the proposed project increases traffic demand on a CMP facility by 2% of capacity ( $V/C > 0.02$ ), causing or worsening LOS F ( $V/C > 1.00$ ). All five study area intersections along Gonzales Road and Patterson Road are contained in the County's CMP. The intersections are all expected to operate at LOS C or better with the addition of cumulative + project peak hour volumes, and thus would not exceed the CMP LOS E standard. Therefore, project impact would be less than significant.

**c. Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?**

**No Impact.** The nearest airport to the project site is Oxnard Airport, located over a mile to the south of the project site at 2830 Teal Club Rd, Oxnard, CA 93030. Expansion and reconfiguration of the Thurgood Marshall School would not affect air traffic levels at the Oxnard Airport, or change the location of the flight paths. Therefore, no project impact would result.

**d. Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?**

**Less Than Significant Impact.** The proposed project would not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). The project site is currently used as a public school and would continue to do so with the proposed project. Primary access to the project site would be provided by 3 driveway connections on Thurgood Marshall Drive. The project driveways on Thurgood Marshall Drive would allow full access (left-turns and right-turns inbound and outbound). The project parking lot is being modified to increase the supply of parking spaces from 68 parking spaces to 88 parking spaces. No additional site access or circulation improvements are planned as part of the proposed project. Therefore, project impact would be less than significant.

**e. Would the project result in inadequate emergency access?**

**Less Than Significant Impact.** The project site is currently used as a public school and would continue to do so with the proposed project. The project site is located near the existing fire lane that would continue to be maintained with the proposed project. Therefore, the proposed project would not result in inadequate emergency access and project impact would be less than significant.

**f. Would the project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?**

**Less Than Significant Impact.** The project site is currently used as a public school and would continue to do so with the proposed project. No new bicycle or pedestrian facilities are planned as part of the proposed project. There are extensive pedestrian facilities (cross-walks/sidewalks etc.) located in the study area. Existing sidewalks are provided along Gonzales Road, Patterson Road and Thurgood Marshall Drive. The sidewalks connect the school to the residential neighborhoods surrounding the school.

Crosswalks are provided at each of the study area intersections. A mid-block crosswalk and an intersection crosswalk are provided on Thurgood Marshall Drive connecting the school to the adjacent gated residential community. In addition, Gonzales Road and Patterson Road are identified as part of the City of Oxnard Bikeway System. Class II bike lanes exist along Gonzales Road from Victoria Avenue to "C" Street. Class II bike lanes exist along Patterson Road from Doris Avenue to Gonzales Road. A multi-use path exists on Patterson Road from Gonzales Road to Vineyard Avenue. The multi-use path connects to the Class II bike lane on Vineyard Avenue. Therefore, the proposed project would not conflict with adopted policies or plans or programs regarding public transit, bicycle, or pedestrian facilities or otherwise decrease the performance or safety of such facilities and project impact would be less than significant.

**Mitigation Measures:**

No Mitigation Measures are required.

### 3.4.17 UTILITIES AND SERVICE SYSTEMS

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:					
a.	Exceed wastewater treatment requirements of the applicable regional water quality control board?			X	
b.	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
c.	Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
d.	Have sufficient water supplies available to serve the project from existing entitlements and resources, or would new or expanded entitlements be needed?		X		
e.	Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			X	
f.	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			X	
g.	Comply with federal, state, and local statutes and regulations related to solid waste?			X	

#### **Existing Conditions:**

The City's water supply consists of imported surface water from the CMWD, imported groundwater from the UWCD, and local groundwater from City wells. Groundwater from City wells and from UWCD, comprises the greatest portion of the City's water supply (Oxnard Public Works 2015c).

The City of Oxnard Wastewater Treatment Plant (OWWTP) currently treats domestic wastewater from the school. The Oxnard Wastewater Treatment Plant is owned and operated by the City of Oxnard and is located at 6001 South Perkins Road, Oxnard, California. The treatment plant is a secondary treatment facility with an ocean outfall (Oxnard Public Works 2015). The OWWTP has a current design capacity of 39.6 million gallons per day Average Dry Weather Flow (ADWF) and 75.4 million gallons per day Peak Wet Weather Flow (PWWF) (Matrix 2006). The City established a Wastewater Conveyance Fund to pay for operations, maintenance, and capital costs of the wastewater collection system, and to establish the Wastewater Treatment Plant Fund to pay for operations, maintenance and capital costs of wastewater treatment. The City also collects sewer connection fees, and/or requires developers to build improvements, to expand the wastewater collection system to service new customers (Matrix 2006).

Waste in the City of Oxnard is primarily transported to the Simi Valley Landfill & Recycling Center (SVLRC) and Toland Road Landfill (CalRecycle 2014).

**Discussion:**

**a. Would the project exceed wastewater treatment requirements of the applicable regional water quality control board?**

**Less Than Significant Impact.** The proposed school expansion would not create a substantial amount of wastewater or exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board. The proposed project must comply with the *Ventura County Technical Guidance Manual for Stormwater Quality Control Measures* (Ventura County Watershed Protection District 2011). The TGM provides guidance for the implementation of stormwater management control measures in new development and redevelopment projects in the County of Ventura and the incorporated cities therein. By adhering to the TGM integrated water resource management and low impact development features would be incorporated into the project. One example of this includes the dry wells that are planned for use. These dry wells and other features would infiltrate, reuse, and/or evaporate water on-site; thereby mitigating the effects of the project's new impervious surface. Therefore, project impact would be less than significant.

**b. Would the project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?**

**Less Than Significant Impact.** The 2030 General Plan accounted for development of the project site with a public school. Utilities, including water and sewer, would be extended to the new school building onsite from the existing school. While the proposed project would somewhat increase the land use intensity, the proposed project is relatively small and would not require or result in the construction of new water or wastewater treatment facilities. Therefore, project impact would be less than significant.

**c. Would the project require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?**

**Less Than Significant Impact.** The proposed project would not create or contribute runoff that would exceed the capacity of the existing drainage system. The proposed project must comply with the *Ventura County Technical Guidance Manual for Stormwater Quality Control Measures* (Ventura County Watershed Protection District 2011). The TGM provides guidance for the implementation of stormwater management control measures in new development and redevelopment projects in the County of Ventura

and the incorporated cities therein. By adhering to the TGM integrated water resource management and low impact development features would be incorporated into the project. One example of this includes the dry wells that are planned for use. These dry wells and other features would infiltrate, reuse, and/or evaporate water on-site; thereby mitigating the effects of the project's new impervious surface. Additionally, these features would be constructed to overflow to the local municipal storm drain system when rainfall exceeds the designed capacity or flow. These features would not only limit surface runoff, but would also improve the quality of runoff by way of sedimentation/settling, filtration, plant uptake, ion exchange, adsorption, and microbially-mediated decomposition. Therefore, project impact would be less than significant.

**d. Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?**

**Less Than Significant Impact with Mitigation Incorporated.** As discussed in Hydrology Section 3.4.9 response b) above, the proposed project would have adequate capacity to serve the proposed project with compliance with water conservation Mitigation Measure Hydro-1. No additional mitigation measures are required. The project would increase capacity of Thurgood Marshall Elementary School to 900 students, a 62 percent increase (i.e., 345 students) from the current capacity of 555 students. There would be no net increase in landscaping or sports fields. The project would connect to the City of Oxnard municipal water system with water conservation features including low flow toilets and waterless urinals. The project would include the use of dry wells to help balance site hydrology (i.e., reduce runoff) and recharge the aquifer. Given the long-term management of local groundwater basins by the City of Oxnard, coupled with incorporation of mitigation measure HYRDO-1 requiring water conservation measures; the project would have a less than significant impact.

**e. Has the wastewater treatment provider that serves or may serve the project determined that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?**

**Less Than Significant Impact.** The 2030 General Plan accounted for development of the project site with a public school. While the proposed project would somewhat increase the land use intensity, the proposed project is relatively small and would not generate a substantial amount of new sewage. The city of Oxnard requires individual building projects to pay the City's sewer connection fees, which provide funds to the City to make improvements identified in utility planning documents. In addition, the City requires individual building projects to provide adequate capacity to convey sewage to a safe point of discharge. Therefore, project impact would be less than significant.

**f. Is the project served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?**

**Less than Significant Impact.** Waste in the City of Oxnard is primarily transported to the SVLRC and Toland Road Landfill (CalRecycle 2014). The Toland Road Landfill is a permitted and active landfill that can accept mixed municipal, construction/demolition, agricultural, industrial, and sludge (biosolids) waste. As of June 1, 2006 the remaining capacity was 21,983,000 cubic yards with an estimated closure date of May 31, 2027 (CalRecycle 2016). The SVLRC is a fully permitted non-hazardous municipal solid waste landfill and recycling facility. The SVLRC is permitted to accept up to 3,000 tons per day of refuse and can accept 6,250 tons of recyclable materials. The SVLRC, on average, recycles approximately 25% of all tons accepted (Waste Management 2015). As of April 3, 2012 the remaining landfill capacity was 119,600,000 cubic yards and has an estimated closure date of January 31, 2052. Therefore, the proposed



project would be served by a landfill with sufficient capacity and project impact would be less than significant.

**g. Would the project comply with federal, state, and local statutes and regulations related to solid waste?**

**Less Than Significant Impact.** The proposed project would not generate a substantial amounts of solid waste and the project would comply with applicable federal, state, and local statutes and regulations related to solid waste. Project construction waste would be recycled to the extent feasible. Recycle bins for paper, bottles and cans would be provided on campus as part of long-term school operations. Therefore, project impact would be less than significant.

**Mitigation Measures:**

No additional Mitigation Measures for utility and service systems are required.

**3.4.18 MANDATORY FINDINGS OF SIGNIFICANCE**

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>MANDATORY FINDINGS OF SIGNIFICANCE</b>					
a.	Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?		X		
b.	Does the project have impacts that are individually limited but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)		X		
c.	Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?			X	

**Discussion:**

**a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?**

**Less than Significant Impact with Mitigation Incorporated.** The site of the proposed new building is currently occupied by playfields and blacktop play areas. It does not contain fish or wildlife habitat, natural habitat communities, rare or endangered plant or animal ranges, or important examples of the major periods of California history or prehistory. Use of construction equipment would cause an increase of air emissions during construction activities; however, impacts to air quality would be short-term and reduced to less than significant with implementation of emission control mitigation measures. Noise

impacts would also be temporary and less than significant with the implementation of mitigation measures. Therefore, the proposed project would have a less than significant impact on the environment with the implementation of appropriate mitigation measures (included previously in this IS/MND) and adherence to applicable regulations.

**b. Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)**

**Less than Significant Impact with Mitigation Incorporated.** The proposed project would add a 12-classroom building on the south and west side of the existing school administration building in the area that is currently utilized as playfields and a blacktop play area. All individual project impacts can be mitigated to a less than significant level.

CEQA refers to cumulative impacts as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.” With the implementation of appropriate mitigation measures included previously in this IS/MND, the proposed project would not generate a cumulatively considerable contribution to a significant cumulative impact.

**c. Does the project have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?**

**Less than Significant Impact.** No environmental effects have been identified in this IS/MND that would cause substantial adverse effects, either directly or indirectly, on human beings. The proposed project does not involve the use of hazardous materials in a manner that pose any unusual risks. Additionally, the proposed project: 1) does not involve operational noise that would interfere with surrounding uses; 2) would not create a traffic hazard; 3) would not create adverse impacts to water bodies; and 4) would not generate any hazardous wastes. The impact is less than significant.

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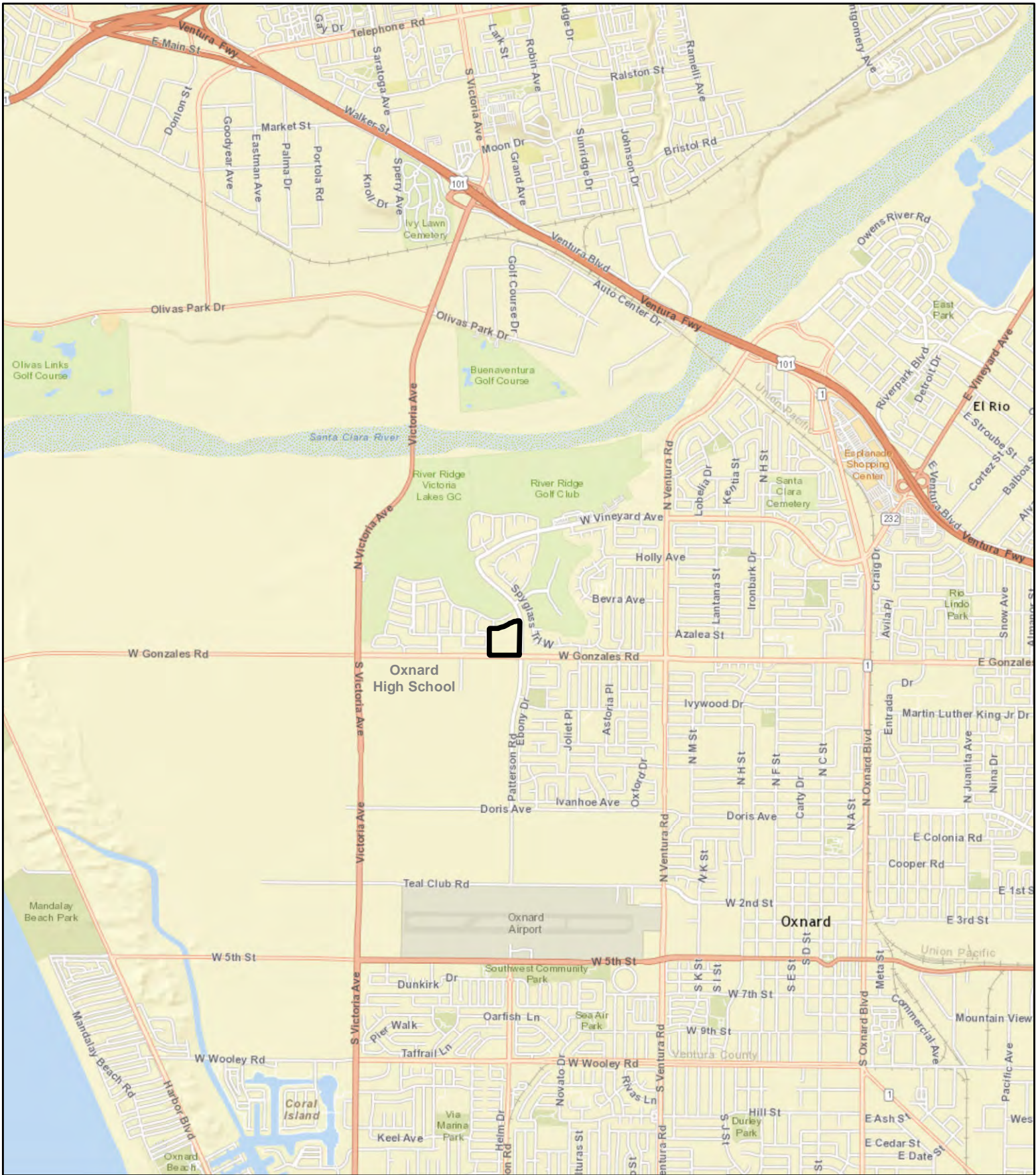
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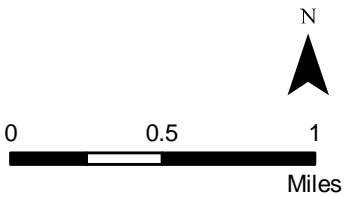
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**Legend**  
 Project Area



**Figure 2-1**  
**Project Location**  
 Thurgood Marshall Elementary School  
 Oxnard, CA





THURGOOD MARSHALL DR

THURGOOD MARSHALL DR

N PATTERSON RD

W GONZALES RD



Legend

 Project Area

N

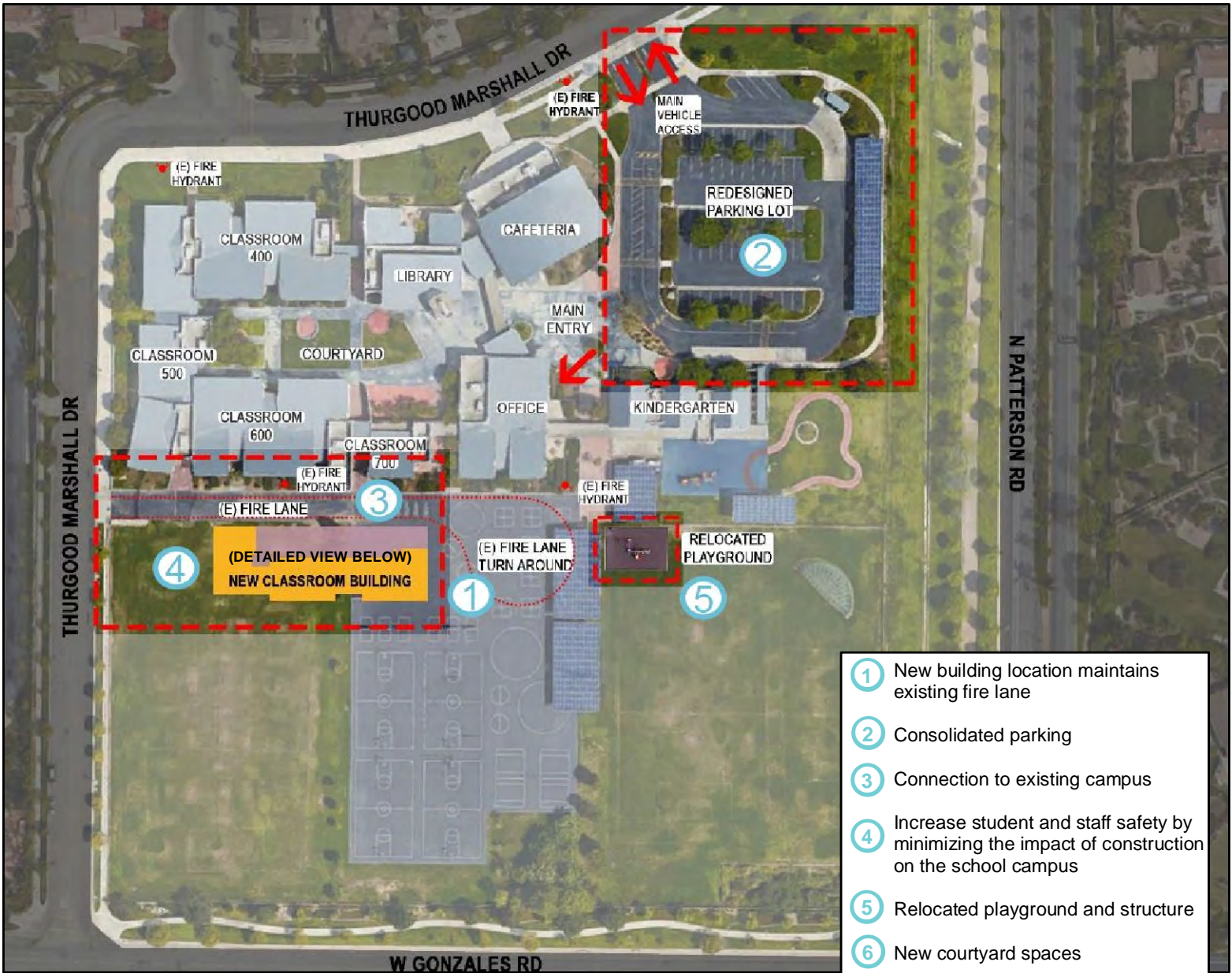


0 50 100  
Feet

**Figure 2-2  
Project Location  
Aerial Photograph**

Thurgood Marshall Elementary School  
Oxnard, CA





- 1 New building location maintains existing fire lane
- 2 Consolidated parking
- 3 Connection to existing campus
- 4 Increase student and staff safety by minimizing the impact of construction on the school campus
- 5 Relocated playground and structure
- 6 New courtyard spaces
- 7 Existing soccer field layout to remain
- 8 Existing hardtop play areas to be relocated



**Figure 2-3  
Conceptual Site Plan**  
Thurgood Marshall Elementary School  
Oxnard, CA

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**A CALIFORNIA EMISSIONS ESTIMATOR MODEL DATA**



**Marshall School**  
**Ventura County APCD Air District, Winter**

**1.0 Project Characteristics**

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**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior High School	345.00	Student	1.00	15,200.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.6	<b>Precipitation Freq (Days)</b>	31
<b>Climate Zone</b>	8			<b>Operational Year</b>	2017
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MWhr)</b>	630.89	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics -

Land Use - Building square feet 15,212 and lot size estimated as 1 acre.

Construction Phase - Duration estimated by Facilities Implementation Program Manager.

Off-road Equipment - Equipment types estimated by Facility Implementation Manager.

Off-road Equipment - Equipment types estimated by Facility Implementation Manager.

Off-road Equipment - Equipment types estimated by Facility Implementation Manager.

Off-road Equipment - Equipment types estimated by Facility Implementation Manager.

Off-road Equipment - Equipment types estimated by Facility Implementation Manager.

Off-road Equipment - Equipment types estimated by Facility Implementation Manager.

Trips and VMT - Worker trips based on estimated number of workers on site. Hauled material during site preparation and grading based on 10 CY truck capacity.

Demolition -

Grading - Values as entered.

Vehicle Trips -

Construction Off-road Equipment Mitigation - Mitigation as presented.

Mobile Land Use Mitigation -

Mobile Commute Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	7,606.00	20,279.00
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tblAreaCoating	Area_Nonresidential_Interior	22818	60838
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
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tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
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tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	5.00	20.00
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	NumDays	2.00	10.00
tblConstructionPhase	NumDays	5.00	60.00
tblConstructionPhase	NumDays	1.00	10.00
tblGrading	AcresOfGrading	2.50	0.50
tblGrading	MaterialExported	0.00	395.00
tblGrading	MaterialImported	0.00	149.00

tblLandUse	LandUseSquareFeet	40,558.78	15,200.00
tblLandUse	LotAcreage	0.93	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
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tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	6.00	4.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	6.00	4.00
tblOffRoadEquipment	UsageHours	8.00	5.00

tblOffRoadEquipment	UsageHours	6.00	1.00
tblOffRoadEquipment	UsageHours	7.00	5.00
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tblTripsAndVMT	HaulingTripNumber	0.00	40.00
tblTripsAndVMT	HaulingTripNumber	68.00	15.00
tblTripsAndVMT	VendorTripNumber	2.00	7.00
tblTripsAndVMT	WorkerTripNumber	10.00	13.00
tblTripsAndVMT	WorkerTripNumber	10.00	5.00
tblTripsAndVMT	WorkerTripNumber	6.00	95.00
tblTripsAndVMT	WorkerTripNumber	1.00	3.00

## 2.0 Emissions Summary

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**2.2 Overall Operational****Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.5460	3.4000e-004	0.0359	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		0.0755	0.0755	2.1000e-004		0.0799
Energy	5.5700e-003	0.0507	0.0426	3.0000e-004		3.8500e-003	3.8500e-003		3.8500e-003	3.8500e-003		60.8000	60.8000	1.1700e-003	1.1100e-003	61.1700
Mobile	1.8188	3.9278	16.9791	0.0356	2.6516	0.0452	2.6969	0.7069	0.0416	0.7485		3,016.9018	3,016.9018	0.1236		3,019.4963
<b>Total</b>	<b>2.3704</b>	<b>3.9788</b>	<b>17.0576</b>	<b>0.0359</b>	<b>2.6516</b>	<b>0.0492</b>	<b>2.7009</b>	<b>0.7069</b>	<b>0.0456</b>	<b>0.7525</b>		<b>3,077.7773</b>	<b>3,077.7773</b>	<b>0.1249</b>	<b>1.1100e-003</b>	<b>3,080.7463</b>

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.5217	3.4000e-004	0.0359	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		0.0755	0.0755	2.1000e-004		0.0799
Energy	5.5700e-003	0.0507	0.0426	3.0000e-004		3.8500e-003	3.8500e-003		3.8500e-003	3.8500e-003		60.8000	60.8000	1.1700e-003	1.1100e-003	61.1700
Mobile	1.7945	3.7398	16.3598	0.0336	2.4959	0.0429	2.5387	0.6653	0.0395	0.7048		2,846.1224	2,846.1224	0.1173		2,848.5857
<b>Total</b>	<b>2.3218</b>	<b>3.7908</b>	<b>16.4383</b>	<b>0.0339</b>	<b>2.4959</b>	<b>0.0468</b>	<b>2.5427</b>	<b>0.6653</b>	<b>0.0434</b>	<b>0.7088</b>		<b>2,906.9979</b>	<b>2,906.9979</b>	<b>0.1187</b>	<b>1.1100e-003</b>	<b>2,909.8356</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	2.05	4.72	3.63	5.60	5.87	4.84	5.86	5.87	4.80	5.81	0.00	5.55	5.55	5.00	0.00	5.55

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2016	9/28/2016	5	20	
2	Site Preparation	Site Preparation	9/29/2016	10/12/2016	5	10	
3	Grading	Grading	10/13/2016	10/26/2016	5	10	
4	Building Construction	Building Construction	10/27/2016	3/15/2017	5	100	
5	Paving	Paving	3/16/2017	6/7/2017	5	60	
6	Architectural Coating	Architectural Coating	6/8/2017	7/5/2017	5	20	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 60,838; Non-Residential Outdoor: 20,279 (Architectural Coating – sqft)

#### OffRoad Equipment



Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	5.00	81	0.73
Demolition	Rubber Tired Dozers	1	5.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	2	5.00	97	0.37
Site Preparation	Graders	1	4.00	174	0.41
Site Preparation	Rubber Tired Dozers	1	5.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	5.00	97	0.37
Grading	Concrete/Industrial Saws	1	6.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Air Compressors	1	7.00	78	0.48
Building Construction	Cement and Mortar Mixers	1	7.00	9	0.56
Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Generator Sets	1	7.00	84	0.74
Building Construction	Other Material Handling Equipment	1	6.00	167	0.40
Building Construction	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Cement and Mortar Mixers	0	6.00	9	0.56
Paving	Other Construction Equipment	1	4.00	171	0.42
Paving	Pavers	1	4.00	125	0.42
Paving	Plate Compactors	1	7.00	8	0.43
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Paving	Trenchers	1	6.00	80	0.50
Architectural Coating	Air Compressors	1	5.00	78	0.48

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	13.00	0.00	40.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	40.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	5.00	0.00	15.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	95.00	7.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	3.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

### 3.1 Mitigation Measures Construction

- Use Cleaner Engines for Construction Equipment
- Water Exposed Area
- Clean Paved Roads

### 3.2 Demolition - 2016

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.4333	0.0000	0.4333	0.0656	0.0000	0.0656			0.0000			0.0000
Off-Road	1.6037	15.6268	11.9284	0.0134		0.9337	0.9337		0.8764	0.8764		1,352.1577	1,352.1577	0.3320		1,359.1292
<b>Total</b>	<b>1.6037</b>	<b>15.6268</b>	<b>11.9284</b>	<b>0.0134</b>	<b>0.4333</b>	<b>0.9337</b>	<b>1.3670</b>	<b>0.0656</b>	<b>0.8764</b>	<b>0.9420</b>		<b>1,352.1577</b>	<b>1,352.1577</b>	<b>0.3320</b>		<b>1,359.1292</b>

### 3.2 Demolition - 2016

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0366	0.6094	0.4973	1.4400e-003	0.0347	8.8800e-003	0.0436	9.4900e-003	8.1700e-003	0.0177		145.1029	145.1029	9.1000e-004		145.1220
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0499	0.0569	0.5642	1.2100e-003	0.1068	8.2000e-004	0.1076	0.0283	7.6000e-004	0.0291		101.2435	101.2435	5.2500e-003		101.3538
<b>Total</b>	<b>0.0865</b>	<b>0.6663</b>	<b>1.0615</b>	<b>2.6500e-003</b>	<b>0.1415</b>	<b>9.7000e-003</b>	<b>0.1512</b>	<b>0.0378</b>	<b>8.9300e-003</b>	<b>0.0467</b>		<b>246.3464</b>	<b>246.3464</b>	<b>6.1600e-003</b>		<b>246.4758</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1950	0.0000	0.1950	0.0295	0.0000	0.0295			0.0000			0.0000
Off-Road	0.4668	11.5205	8.2626	0.0134		0.3760	0.3760		0.3760	0.3760	0.0000	1,352.1577	1,352.1577	0.3320		1,359.1292
<b>Total</b>	<b>0.4668</b>	<b>11.5205</b>	<b>8.2626</b>	<b>0.0134</b>	<b>0.1950</b>	<b>0.3760</b>	<b>0.5710</b>	<b>0.0295</b>	<b>0.3760</b>	<b>0.4055</b>	<b>0.0000</b>	<b>1,352.1577</b>	<b>1,352.1577</b>	<b>0.3320</b>		<b>1,359.1292</b>

### 3.2 Demolition - 2016

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0366	0.6094	0.4973	1.4400e-003	0.0347	8.8800e-003	0.0436	9.4900e-003	8.1700e-003	0.0177		145.1029	145.1029	9.1000e-004		145.1220
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0499	0.0569	0.5642	1.2100e-003	0.1068	8.2000e-004	0.1076	0.0283	7.6000e-004	0.0291		101.2435	101.2435	5.2500e-003		101.3538
<b>Total</b>	<b>0.0865</b>	<b>0.6663</b>	<b>1.0615</b>	<b>2.6500e-003</b>	<b>0.1415</b>	<b>9.7000e-003</b>	<b>0.1512</b>	<b>0.0378</b>	<b>8.9300e-003</b>	<b>0.0467</b>		<b>246.3464</b>	<b>246.3464</b>	<b>6.1600e-003</b>		<b>246.4758</b>

### 3.3 Site Preparation - 2016

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.8168	0.0000	3.8168	2.0746	0.0000	2.0746			0.0000			0.0000
Off-Road	1.4961	15.8936	10.5247	0.0106		0.8516	0.8516		0.7835	0.7835		1,104.1468	1,104.1468	0.3331		1,111.1408
<b>Total</b>	<b>1.4961</b>	<b>15.8936</b>	<b>10.5247</b>	<b>0.0106</b>	<b>3.8168</b>	<b>0.8516</b>	<b>4.6684</b>	<b>2.0746</b>	<b>0.7835</b>	<b>2.8581</b>		<b>1,104.1468</b>	<b>1,104.1468</b>	<b>0.3331</b>		<b>1,111.1408</b>

### 3.3 Site Preparation - 2016

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0732	1.2188	0.9947	2.8800e-003	0.0694	0.0178	0.0871	0.0190	0.0163	0.0353		290.2058	290.2058	1.8200e-003		290.2440
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0307	0.0350	0.3472	7.5000e-004	0.0657	5.1000e-004	0.0662	0.0174	4.7000e-004	0.0179		62.3037	62.3037	3.2300e-003		62.3716
<b>Total</b>	<b>0.1039</b>	<b>1.2539</b>	<b>1.3419</b>	<b>3.6300e-003</b>	<b>0.1351</b>	<b>0.0183</b>	<b>0.1534</b>	<b>0.0364</b>	<b>0.0168</b>	<b>0.0532</b>		<b>352.5094</b>	<b>352.5094</b>	<b>5.0500e-003</b>		<b>352.6155</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.7176	0.0000	1.7176	0.9336	0.0000	0.9336			0.0000			0.0000
Off-Road	0.3455	9.1687	6.7148	0.0106		0.2554	0.2554		0.2554	0.2554	0.0000	1,104.1468	1,104.1468	0.3331		1,111.1408
<b>Total</b>	<b>0.3455</b>	<b>9.1687</b>	<b>6.7148</b>	<b>0.0106</b>	<b>1.7176</b>	<b>0.2554</b>	<b>1.9730</b>	<b>0.9336</b>	<b>0.2554</b>	<b>1.1890</b>	<b>0.0000</b>	<b>1,104.1468</b>	<b>1,104.1468</b>	<b>0.3331</b>		<b>1,111.1408</b>

### 3.3 Site Preparation - 2016

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0732	1.2188	0.9947	2.8800e-003	0.0694	0.0178	0.0871	0.0190	0.0163	0.0353		290.2058	290.2058	1.8200e-003		290.2440
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0307	0.0350	0.3472	7.5000e-004	0.0657	5.1000e-004	0.0662	0.0174	4.7000e-004	0.0179		62.3037	62.3037	3.2300e-003		62.3716
<b>Total</b>	<b>0.1039</b>	<b>1.2539</b>	<b>1.3419</b>	<b>3.6300e-003</b>	<b>0.1351</b>	<b>0.0183</b>	<b>0.1534</b>	<b>0.0364</b>	<b>0.0168</b>	<b>0.0532</b>		<b>352.5094</b>	<b>352.5094</b>	<b>5.0500e-003</b>		<b>352.6155</b>

### 3.4 Grading - 2016

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7604	0.0000	0.7604	0.4149	0.0000	0.4149			0.0000			0.0000
Off-Road	1.1506	10.0830	7.7610	0.0105		0.7171	0.7171		0.6805	0.6805		1,045.444 2	1,045.444 2	0.2243		1,050.154 2
<b>Total</b>	<b>1.1506</b>	<b>10.0830</b>	<b>7.7610</b>	<b>0.0105</b>	<b>0.7604</b>	<b>0.7171</b>	<b>1.4775</b>	<b>0.4149</b>	<b>0.6805</b>	<b>1.0955</b>		<b>1,045.444 2</b>	<b>1,045.444 2</b>	<b>0.2243</b>		<b>1,050.154 2</b>

### 3.4 Grading - 2016

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0275	0.4571	0.3730	1.0800e-003	0.0260	6.6600e-003	0.0327	7.1100e-003	6.1200e-003	0.0132		108.8272	108.8272	6.8000e-004			108.8415
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.0192	0.0219	0.2170	4.7000e-004	0.0411	3.2000e-004	0.0414	0.0109	2.9000e-004	0.0112		38.9398	38.9398	2.0200e-003			38.9822
<b>Total</b>	<b>0.0467</b>	<b>0.4790</b>	<b>0.5900</b>	<b>1.5500e-003</b>	<b>0.0671</b>	<b>6.9800e-003</b>	<b>0.0741</b>	<b>0.0180</b>	<b>6.4100e-003</b>	<b>0.0244</b>		<b>147.7670</b>	<b>147.7670</b>	<b>2.7000e-003</b>			<b>147.8237</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Fugitive Dust					0.3422	0.0000	0.3422	0.1867	0.0000	0.1867			0.0000			0.0000	
Off-Road	0.4253	9.1585	6.9917	0.0105		0.3523	0.3523		0.3523	0.3523	0.0000	1,045.444 2	1,045.444 2	0.2243			1,050.154 2
<b>Total</b>	<b>0.4253</b>	<b>9.1585</b>	<b>6.9917</b>	<b>0.0105</b>	<b>0.3422</b>	<b>0.3523</b>	<b>0.6944</b>	<b>0.1867</b>	<b>0.3523</b>	<b>0.5390</b>	<b>0.0000</b>	<b>1,045.444 2</b>	<b>1,045.444 2</b>	<b>0.2243</b>			<b>1,050.154 2</b>

### 3.4 Grading - 2016

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0275	0.4571	0.3730	1.0800e-003	0.0260	6.6600e-003	0.0327	7.1100e-003	6.1200e-003	0.0132		108.8272	108.8272	6.8000e-004			108.8415
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.0192	0.0219	0.2170	4.7000e-004	0.0411	3.2000e-004	0.0414	0.0109	2.9000e-004	0.0112		38.9398	38.9398	2.0200e-003			38.9822
<b>Total</b>	<b>0.0467</b>	<b>0.4790</b>	<b>0.5900</b>	<b>1.5500e-003</b>	<b>0.0671</b>	<b>6.9800e-003</b>	<b>0.0741</b>	<b>0.0180</b>	<b>6.4100e-003</b>	<b>0.0244</b>		<b>147.7670</b>	<b>147.7670</b>	<b>2.7000e-003</b>			<b>147.8237</b>

### 3.5 Building Construction - 2016

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	2.4709	21.9699	14.3138	0.0220		1.4436	1.4436		1.3712	1.3712		2,179.5254	2,179.5254	0.4738			2,189.4750
<b>Total</b>	<b>2.4709</b>	<b>21.9699</b>	<b>14.3138</b>	<b>0.0220</b>		<b>1.4436</b>	<b>1.4436</b>		<b>1.3712</b>	<b>1.3712</b>		<b>2,179.5254</b>	<b>2,179.5254</b>	<b>0.4738</b>			<b>2,189.4750</b>



### 3.5 Building Construction - 2016

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0712	0.6956	0.9829	1.5500e-003	0.0460	0.0113	0.0573	0.0131	0.0104	0.0235		155.2454	155.2454	1.0600e-003			155.2678
Worker	0.3644	0.4161	4.1229	8.8500e-003	0.7804	6.0300e-003	0.7864	0.2070	5.5400e-003	0.2125		739.8561	739.8561	0.0384			740.6623
<b>Total</b>	<b>0.4356</b>	<b>1.1118</b>	<b>5.1058</b>	<b>0.0104</b>	<b>0.8264</b>	<b>0.0173</b>	<b>0.8438</b>	<b>0.2201</b>	<b>0.0159</b>	<b>0.2360</b>		<b>895.1016</b>	<b>895.1016</b>	<b>0.0395</b>			<b>895.9301</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	1.4291	18.8461	13.7803	0.0220		0.9019	0.9019		0.8822	0.8822	0.0000	2,179.5254	2,179.5254	0.4738			2,189.4750
<b>Total</b>	<b>1.4291</b>	<b>18.8461</b>	<b>13.7803</b>	<b>0.0220</b>		<b>0.9019</b>	<b>0.9019</b>		<b>0.8822</b>	<b>0.8822</b>	<b>0.0000</b>	<b>2,179.5254</b>	<b>2,179.5254</b>	<b>0.4738</b>			<b>2,189.4750</b>

### 3.5 Building Construction - 2016

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0712	0.6956	0.9829	1.5500e-003	0.0460	0.0113	0.0573	0.0131	0.0104	0.0235		155.2454	155.2454	1.0600e-003			155.2678
Worker	0.3644	0.4161	4.1229	8.8500e-003	0.7804	6.0300e-003	0.7864	0.2070	5.5400e-003	0.2125		739.8561	739.8561	0.0384			740.6623
<b>Total</b>	<b>0.4356</b>	<b>1.1118</b>	<b>5.1058</b>	<b>0.0104</b>	<b>0.8264</b>	<b>0.0173</b>	<b>0.8438</b>	<b>0.2201</b>	<b>0.0159</b>	<b>0.2360</b>		<b>895.1016</b>	<b>895.1016</b>	<b>0.0395</b>			<b>895.9301</b>

### 3.5 Building Construction - 2017

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	2.2327	19.9930	14.0586	0.0220		1.2859	1.2859		1.2213	1.2213		2,159.6361	2,159.6361	0.4639			2,169.3781
<b>Total</b>	<b>2.2327</b>	<b>19.9930</b>	<b>14.0586</b>	<b>0.0220</b>		<b>1.2859</b>	<b>1.2859</b>		<b>1.2213</b>	<b>1.2213</b>		<b>2,159.6361</b>	<b>2,159.6361</b>	<b>0.4639</b>			<b>2,169.3781</b>

### 3.5 Building Construction - 2017

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0629	0.6242	0.9280	1.5500e-003	0.0461	9.7200e-003	0.0558	0.0131	8.9400e-003	0.0220		152.7822	152.7822	1.0000e-003			152.8032
Worker	0.3283	0.3743	3.6919	8.8400e-003	0.7804	5.8200e-003	0.7862	0.2070	5.3700e-003	0.2124		711.1189	711.1189	0.0352			711.8588
<b>Total</b>	<b>0.3912</b>	<b>0.9985</b>	<b>4.6199</b>	<b>0.0104</b>	<b>0.8265</b>	<b>0.0155</b>	<b>0.8420</b>	<b>0.2201</b>	<b>0.0143</b>	<b>0.2344</b>		<b>863.9011</b>	<b>863.9011</b>	<b>0.0362</b>			<b>864.6620</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	1.3140	17.8826	13.6952	0.0220		0.8316	0.8316		0.8148	0.8148	0.0000	2,159.6361	2,159.6361	0.4639			2,169.3781
<b>Total</b>	<b>1.3140</b>	<b>17.8826</b>	<b>13.6952</b>	<b>0.0220</b>		<b>0.8316</b>	<b>0.8316</b>		<b>0.8148</b>	<b>0.8148</b>	<b>0.0000</b>	<b>2,159.6361</b>	<b>2,159.6361</b>	<b>0.4639</b>			<b>2,169.3781</b>

### 3.5 Building Construction - 2017

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0629	0.6242	0.9280	1.5500e-003	0.0461	9.7200e-003	0.0558	0.0131	8.9400e-003	0.0220		152.7822	152.7822	1.0000e-003			152.8032
Worker	0.3283	0.3743	3.6919	8.8400e-003	0.7804	5.8200e-003	0.7862	0.2070	5.3700e-003	0.2124		711.1189	711.1189	0.0352			711.8588
<b>Total</b>	<b>0.3912</b>	<b>0.9985</b>	<b>4.6199</b>	<b>0.0104</b>	<b>0.8265</b>	<b>0.0155</b>	<b>0.8420</b>	<b>0.2201</b>	<b>0.0143</b>	<b>0.2344</b>		<b>863.9011</b>	<b>863.9011</b>	<b>0.0362</b>			<b>864.6620</b>

### 3.6 Paving - 2017

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	1.2071	11.7875	7.5577	0.0106		0.7523	0.7523		0.6928	0.6928		1,075.5235	1,075.5235	0.3234			1,082.3154
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
<b>Total</b>	<b>1.2071</b>	<b>11.7875</b>	<b>7.5577</b>	<b>0.0106</b>		<b>0.7523</b>	<b>0.7523</b>		<b>0.6928</b>	<b>0.6928</b>		<b>1,075.5235</b>	<b>1,075.5235</b>	<b>0.3234</b>			<b>1,082.3154</b>

### 3.6 Paving - 2017

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0449	0.0512	0.5052	1.2100e-003	0.1068	8.0000e-004	0.1076	0.0283	7.4000e-004	0.0291		97.3110	97.3110	4.8200e-003		97.4123
<b>Total</b>	<b>0.0449</b>	<b>0.0512</b>	<b>0.5052</b>	<b>1.2100e-003</b>	<b>0.1068</b>	<b>8.0000e-004</b>	<b>0.1076</b>	<b>0.0283</b>	<b>7.4000e-004</b>	<b>0.0291</b>		<b>97.3110</b>	<b>97.3110</b>	<b>4.8200e-003</b>		<b>97.4123</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9509	11.3925	7.8465	0.0106		0.6186	0.6186		0.5817	0.5817	0.0000	1,075.5235	1,075.5235	0.3234		1,082.3154
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>0.9509</b>	<b>11.3925</b>	<b>7.8465</b>	<b>0.0106</b>		<b>0.6186</b>	<b>0.6186</b>		<b>0.5817</b>	<b>0.5817</b>	<b>0.0000</b>	<b>1,075.5235</b>	<b>1,075.5235</b>	<b>0.3234</b>		<b>1,082.3154</b>

### 3.6 Paving - 2017

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.0449	0.0512	0.5052	1.2100e-003	0.1068	8.0000e-004	0.1076	0.0283	7.4000e-004	0.0291		97.3110	97.3110	4.8200e-003			97.4123
<b>Total</b>	<b>0.0449</b>	<b>0.0512</b>	<b>0.5052</b>	<b>1.2100e-003</b>	<b>0.1068</b>	<b>8.0000e-004</b>	<b>0.1076</b>	<b>0.0283</b>	<b>7.4000e-004</b>	<b>0.0291</b>		<b>97.3110</b>	<b>97.3110</b>	<b>4.8200e-003</b>			<b>97.4123</b>

### 3.7 Architectural Coating - 2017

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Archit. Coating	46.9972					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000	
Off-Road	0.2769	1.8209	1.5567	2.4800e-003		0.1445	0.1445		0.1445	0.1445		234.5400	234.5400	0.0248			235.0601
<b>Total</b>	<b>47.2741</b>	<b>1.8209</b>	<b>1.5567</b>	<b>2.4800e-003</b>		<b>0.1445</b>	<b>0.1445</b>		<b>0.1445</b>	<b>0.1445</b>		<b>234.5400</b>	<b>234.5400</b>	<b>0.0248</b>			<b>235.0601</b>

### 3.7 Architectural Coating - 2017

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.0104	0.0118	0.1166	2.8000e-004	0.0246	1.8000e-004	0.0248	6.5400e-003	1.7000e-004	6.7100e-003		22.4564	22.4564	1.1100e-003			22.4798
<b>Total</b>	<b>0.0104</b>	<b>0.0118</b>	<b>0.1166</b>	<b>2.8000e-004</b>	<b>0.0246</b>	<b>1.8000e-004</b>	<b>0.0248</b>	<b>6.5400e-003</b>	<b>1.7000e-004</b>	<b>6.7100e-003</b>		<b>22.4564</b>	<b>22.4564</b>	<b>1.1100e-003</b>			<b>22.4798</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Archit. Coating	46.9972					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.0949	1.9604	1.5270	2.4800e-003		0.0792	0.0792		0.0792	0.0792	0.0000	234.5400	234.5400	0.0248			235.0601
<b>Total</b>	<b>47.0921</b>	<b>1.9604</b>	<b>1.5270</b>	<b>2.4800e-003</b>		<b>0.0792</b>	<b>0.0792</b>		<b>0.0792</b>	<b>0.0792</b>	<b>0.0000</b>	<b>234.5400</b>	<b>234.5400</b>	<b>0.0248</b>			<b>235.0601</b>

### 3.7 Architectural Coating - 2017

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.0104	0.0118	0.1166	2.8000e-004	0.0246	1.8000e-004	0.0248	6.5400e-003	1.7000e-004	6.7100e-003		22.4564	22.4564	1.1100e-003			22.4798
<b>Total</b>	<b>0.0104</b>	<b>0.0118</b>	<b>0.1166</b>	<b>2.8000e-004</b>	<b>0.0246</b>	<b>1.8000e-004</b>	<b>0.0248</b>	<b>6.5400e-003</b>	<b>1.7000e-004</b>	<b>6.7100e-003</b>		<b>22.4564</b>	<b>22.4564</b>	<b>1.1100e-003</b>			<b>22.4798</b>

### 4.0 Operational Detail - Mobile

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#### 4.1 Mitigation Measures Mobile

Implement School Bus Program



	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.7945	3.7398	16.3598	0.0336	2.4959	0.0429	2.5387	0.6653	0.0395	0.7048		2,846.1224	2,846.1224	0.1173		2,848.5857
Unmitigated	1.8188	3.9278	16.9791	0.0356	2.6516	0.0452	2.6969	0.7069	0.0416	0.7485		3,016.9018	3,016.9018	0.1236		3,019.4963

### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior High School	558.90	0.00	0.00	897,511	844,793
Total	558.90	0.00	0.00	897,511	844,793

### 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior High School	9.50	7.30	7.30	72.80	22.20	5.00	63	25	12

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.474465	0.063133	0.180505	0.158349	0.070139	0.010387	0.013452	0.017129	0.000779	0.000670	0.005599	0.000320	0.005072

## 5.0 Energy Detail

### 5.1 Fleet Mix

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	5.5700e-003	0.0507	0.0426	3.0000e-004		3.8500e-003	3.8500e-003		3.8500e-003	3.8500e-003		60.8000	60.8000	1.1700e-003	1.1100e-003	61.1700
NaturalGas Unmitigated	5.5700e-003	0.0507	0.0426	3.0000e-004		3.8500e-003	3.8500e-003		3.8500e-003	3.8500e-003		60.8000	60.8000	1.1700e-003	1.1100e-003	61.1700

### 5.2 Energy by Land Use - NaturalGas

#### Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior High School	516.8	5.5700e-003	0.0507	0.0426	3.0000e-004		3.8500e-003	3.8500e-003		3.8500e-003	3.8500e-003		60.8000	60.8000	1.1700e-003	1.1100e-003	61.1700
<b>Total</b>		<b>5.5700e-003</b>	<b>0.0507</b>	<b>0.0426</b>	<b>3.0000e-004</b>		<b>3.8500e-003</b>	<b>3.8500e-003</b>		<b>3.8500e-003</b>	<b>3.8500e-003</b>		<b>60.8000</b>	<b>60.8000</b>	<b>1.1700e-003</b>	<b>1.1100e-003</b>	<b>61.1700</b>

### 5.2 Energy by Land Use - NaturalGas

#### Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior High School	0.5168	5.5700e-003	0.0507	0.0426	3.0000e-004		3.8500e-003	3.8500e-003		3.8500e-003	3.8500e-003		60.8000	60.8000	1.1700e-003	1.1100e-003	61.1700
<b>Total</b>		<b>5.5700e-003</b>	<b>0.0507</b>	<b>0.0426</b>	<b>3.0000e-004</b>		<b>3.8500e-003</b>	<b>3.8500e-003</b>		<b>3.8500e-003</b>	<b>3.8500e-003</b>		<b>60.8000</b>	<b>60.8000</b>	<b>1.1700e-003</b>	<b>1.1100e-003</b>	<b>61.1700</b>

### 6.0 Area Detail

#### 6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.5217	3.4000e-004	0.0359	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		0.0755	0.0755	2.1000e-004		0.0799
Unmitigated	0.5460	3.4000e-004	0.0359	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		0.0755	0.0755	2.1000e-004		0.0799

## 6.2 Area by SubCategory

### Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2173					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3253					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.4600e-003	3.4000e-004	0.0359	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		0.0755	0.0755	2.1000e-004		0.0799
<b>Total</b>	<b>0.5460</b>	<b>3.4000e-004</b>	<b>0.0359</b>	<b>0.0000</b>		<b>1.3000e-004</b>	<b>1.3000e-004</b>		<b>1.3000e-004</b>	<b>1.3000e-004</b>		<b>0.0755</b>	<b>0.0755</b>	<b>2.1000e-004</b>		<b>0.0799</b>

## 6.2 Area by SubCategory

### Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Consumer Products	0.3010					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.4600e-003	3.4000e-004	0.0359	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		0.0755	0.0755	2.1000e-004		0.0799
Architectural Coating	0.2173					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>0.5217</b>	<b>3.4000e-004</b>	<b>0.0359</b>	<b>0.0000</b>		<b>1.3000e-004</b>	<b>1.3000e-004</b>		<b>1.3000e-004</b>	<b>1.3000e-004</b>		<b>0.0755</b>	<b>0.0755</b>	<b>2.1000e-004</b>		<b>0.0799</b>

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Toilet

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

## 9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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## **10.0 Vegetation**

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**Marshall School**  
**Ventura County APCD Air District, Annual**

**1.0 Project Characteristics**

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**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior High School	345.00	Student	1.00	15,200.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.6	<b>Precipitation Freq (Days)</b>	31
<b>Climate Zone</b>	8			<b>Operational Year</b>	2017
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MWhr)</b>	630.89	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics -

Land Use - Building square feet 15,212 and lot size estimated as 1 acre.

Construction Phase - Duration estimated by Facilities Implementation Program Manager.

Off-road Equipment - Equipment types estimated by Facility Implementation Manager.

Off-road Equipment - Equipment types estimated by Facility Implementation Manager.

Off-road Equipment - Equipment types estimated by Facility Implementation Manager.

Off-road Equipment - Equipment types estimated by Facility Implementation Manager.

Off-road Equipment - Equipment types estimated by Facility Implementation Manager.

Off-road Equipment - Equipment types estimated by Facility Implementation Manager.

Trips and VMT - Worker trips based on estimated number of workers on site. Hauled material during site preparation and grading based on 10 CY truck capacity.

Demolition -

Grading - Values as entered.

Vehicle Trips -

Construction Off-road Equipment Mitigation - Mitigation as presented.

Mobile Land Use Mitigation -

Mobile Commute Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	7,606.00	20,279.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	22,818.00	60,838.00
tblAreaCoating	Area_Nonresidential_Interior	22818	60838
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00



tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	5.00	20.00
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	NumDays	2.00	10.00
tblConstructionPhase	NumDays	5.00	60.00
tblConstructionPhase	NumDays	1.00	10.00
tblGrading	AcresOfGrading	2.50	0.50
tblGrading	MaterialExported	0.00	395.00
tblGrading	MaterialImported	0.00	149.00

tblLandUse	LandUseSquareFeet	40,558.78	15,200.00
tblLandUse	LotAcreage	0.93	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Building Construction
tblOffRoadEquipment	PhaseName		Building Construction
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Paving
tblOffRoadEquipment	PhaseName		Building Construction
tblOffRoadEquipment	PhaseName		Paving
tblOffRoadEquipment	PhaseName		Paving
tblOffRoadEquipment	UsageHours	6.00	5.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	6.00	4.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	6.00	4.00
tblOffRoadEquipment	UsageHours	8.00	5.00

tblOffRoadEquipment	UsageHours	6.00	1.00
tblOffRoadEquipment	UsageHours	7.00	5.00
tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblProjectCharacteristics	OperationalYear	2014	2017
tblTripsAndVMT	HaulingTripNumber	0.00	40.00
tblTripsAndVMT	HaulingTripNumber	68.00	15.00
tblTripsAndVMT	VendorTripNumber	2.00	7.00
tblTripsAndVMT	WorkerTripNumber	10.00	13.00
tblTripsAndVMT	WorkerTripNumber	10.00	5.00
tblTripsAndVMT	WorkerTripNumber	6.00	95.00
tblTripsAndVMT	WorkerTripNumber	1.00	3.00

## 2.0 Emissions Summary

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## 2.2 Overall Operational

### Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0993	3.0000e-005	3.2300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.1600e-003	6.1600e-003	2.0000e-005	0.0000	6.5300e-003
Energy	1.0200e-003	9.2500e-003	7.7700e-003	6.0000e-005		7.0000e-004	7.0000e-004		7.0000e-004	7.0000e-004	0.0000	40.1228	40.1228	1.5700e-003	4.7000e-004	40.3017
Mobile	0.2197	0.5057	2.0857	4.6500e-003	0.3384	5.8500e-003	0.3443	0.0904	5.3900e-003	0.0957	0.0000	357.7527	357.7527	0.0146	0.0000	358.0582
Waste						0.0000	0.0000		0.0000	0.0000	12.7803	0.0000	12.7803	0.7553	0.0000	28.6415
Water						0.0000	0.0000		0.0000	0.0000	0.2653	9.9540	10.2194	0.0277	7.4000e-004	11.0301
<b>Total</b>	<b>0.3200</b>	<b>0.5149</b>	<b>2.0967</b>	<b>4.7100e-003</b>	<b>0.3384</b>	<b>6.5600e-003</b>	<b>0.3450</b>	<b>0.0904</b>	<b>6.1000e-003</b>	<b>0.0964</b>	<b>13.0457</b>	<b>407.8357</b>	<b>420.8814</b>	<b>0.7991</b>	<b>1.2100e-003</b>	<b>438.0380</b>

## 2.2 Overall Operational

### Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0949	3.0000e-005	3.2300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.1600e-003	6.1600e-003	2.0000e-005	0.0000	6.5300e-003
Energy	1.0200e-003	9.2500e-003	7.7700e-003	6.0000e-005		7.0000e-004	7.0000e-004		7.0000e-004	7.0000e-004	0.0000	40.1228	40.1228	1.5700e-003	4.7000e-004	40.3017
Mobile	0.2165	0.4814	2.0053	4.3900e-003	0.3185	5.5400e-003	0.3241	0.0850	5.1000e-003	0.0901	0.0000	337.5089	337.5089	0.0138	0.0000	337.7989
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.2325	9.5688	9.8014	0.0243	6.5000e-004	10.5149
<b>Total</b>	<b>0.3125</b>	<b>0.4907</b>	<b>2.0163</b>	<b>4.4500e-003</b>	<b>0.3185</b>	<b>6.2500e-003</b>	<b>0.3248</b>	<b>0.0850</b>	<b>5.8100e-003</b>	<b>0.0909</b>	<b>0.2325</b>	<b>387.2067</b>	<b>387.4392</b>	<b>0.0397</b>	<b>1.1200e-003</b>	<b>388.6220</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
<b>Percent Reduction</b>	<b>2.37</b>	<b>4.71</b>	<b>3.84</b>	<b>5.52</b>	<b>5.87</b>	<b>4.73</b>	<b>5.85</b>	<b>5.88</b>	<b>4.75</b>	<b>5.80</b>	<b>98.22</b>	<b>5.06</b>	<b>7.95</b>	<b>95.03</b>	<b>7.44</b>	<b>11.28</b>

## 3.0 Construction Detail

### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2016	9/28/2016	5	20	
2	Site Preparation	Site Preparation	9/29/2016	10/12/2016	5	10	
3	Grading	Grading	10/13/2016	10/26/2016	5	10	
4	Building Construction	Building Construction	10/27/2016	3/15/2017	5	100	
5	Paving	Paving	3/16/2017	6/7/2017	5	60	
6	Architectural Coating	Architectural Coating	6/8/2017	7/5/2017	5	20	

**Acres of Grading (Site Preparation Phase): 0.5**

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 60,838; Non-Residential Outdoor: 20,279 (Architectural Coating – sqft)**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	5.00	81	0.73
Demolition	Rubber Tired Dozers	1	5.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	2	5.00	97	0.37
Site Preparation	Graders	1	4.00	174	0.41
Site Preparation	Rubber Tired Dozers	1	5.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	5.00	97	0.37
Grading	Concrete/Industrial Saws	1	6.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Air Compressors	1	7.00	78	0.48
Building Construction	Cement and Mortar Mixers	1	7.00	9	0.56
Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Generator Sets	1	7.00	84	0.74
Building Construction	Other Material Handling Equipment	1	6.00	167	0.40
Building Construction	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Cement and Mortar Mixers	0	6.00	9	0.56
Paving	Other Construction Equipment	1	4.00	171	0.42
Paving	Pavers	1	4.00	125	0.42
Paving	Plate Compactors	1	7.00	8	0.43
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Paving	Trenchers	1	6.00	80	0.50
Architectural Coating	Air Compressors	1	5.00	78	0.48

**Trips and VMT**



Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	13.00	0.00	40.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	40.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	5.00	0.00	15.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	95.00	7.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	3.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

### 3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Clean Paved Roads

### 3.2 Demolition - 2016

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					4.3300e-003	0.0000	4.3300e-003	6.6000e-004	0.0000	6.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0160	0.1563	0.1193	1.3000e-004		9.3400e-003	9.3400e-003		8.7600e-003	8.7600e-003	0.0000	12.2666	12.2666	3.0100e-003	0.0000	12.3298
<b>Total</b>	<b>0.0160</b>	<b>0.1563</b>	<b>0.1193</b>	<b>1.3000e-004</b>	<b>4.3300e-003</b>	<b>9.3400e-003</b>	<b>0.0137</b>	<b>6.6000e-004</b>	<b>8.7600e-003</b>	<b>9.4200e-003</b>	<b>0.0000</b>	<b>12.2666</b>	<b>12.2666</b>	<b>3.0100e-003</b>	<b>0.0000</b>	<b>12.3298</b>

### 3.2 Demolition - 2016

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.5000e-004	6.1300e-003	4.4800e-003	1.0000e-005	3.4000e-004	9.0000e-005	4.3000e-004	9.0000e-005	8.0000e-005	1.7000e-004	0.0000	1.3182	1.3182	1.0000e-005	0.0000	1.3184
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.6000e-004	5.5000e-004	5.5100e-003	1.0000e-005	1.0500e-003	1.0000e-005	1.0600e-003	2.8000e-004	1.0000e-005	2.9000e-004	0.0000	0.9258	0.9258	5.0000e-005	0.0000	0.9268
<b>Total</b>	<b>8.1000e-004</b>	<b>6.6800e-003</b>	<b>9.9900e-003</b>	<b>2.0000e-005</b>	<b>1.3900e-003</b>	<b>1.0000e-004</b>	<b>1.4900e-003</b>	<b>3.7000e-004</b>	<b>9.0000e-005</b>	<b>4.6000e-004</b>	<b>0.0000</b>	<b>2.2441</b>	<b>2.2441</b>	<b>6.0000e-005</b>	<b>0.0000</b>	<b>2.2452</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.9500e-003	0.0000	1.9500e-003	3.0000e-004	0.0000	3.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6700e-003	0.1152	0.0826	1.3000e-004		3.7600e-003	3.7600e-003		3.7600e-003	3.7600e-003	0.0000	12.2666	12.2666	3.0100e-003	0.0000	12.3298
<b>Total</b>	<b>4.6700e-003</b>	<b>0.1152</b>	<b>0.0826</b>	<b>1.3000e-004</b>	<b>1.9500e-003</b>	<b>3.7600e-003</b>	<b>5.7100e-003</b>	<b>3.0000e-004</b>	<b>3.7600e-003</b>	<b>4.0600e-003</b>	<b>0.0000</b>	<b>12.2666</b>	<b>12.2666</b>	<b>3.0100e-003</b>	<b>0.0000</b>	<b>12.3298</b>

### 3.2 Demolition - 2016

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.5000e-004	6.1300e-003	4.4800e-003	1.0000e-005	3.4000e-004	9.0000e-005	4.3000e-004	9.0000e-005	8.0000e-005	1.7000e-004	0.0000	1.3182	1.3182	1.0000e-005	0.0000	1.3184
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.6000e-004	5.5000e-004	5.5100e-003	1.0000e-005	1.0500e-003	1.0000e-005	1.0600e-003	2.8000e-004	1.0000e-005	2.9000e-004	0.0000	0.9258	0.9258	5.0000e-005	0.0000	0.9268
<b>Total</b>	<b>8.1000e-004</b>	<b>6.6800e-003</b>	<b>9.9900e-003</b>	<b>2.0000e-005</b>	<b>1.3900e-003</b>	<b>1.0000e-004</b>	<b>1.4900e-003</b>	<b>3.7000e-004</b>	<b>9.0000e-005</b>	<b>4.6000e-004</b>	<b>0.0000</b>	<b>2.2441</b>	<b>2.2441</b>	<b>6.0000e-005</b>	<b>0.0000</b>	<b>2.2452</b>

### 3.3 Site Preparation - 2016

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0191	0.0000	0.0191	0.0104	0.0000	0.0104	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.4800e-003	0.0795	0.0526	5.0000e-005		4.2600e-003	4.2600e-003		3.9200e-003	3.9200e-003	0.0000	5.0083	5.0083	1.5100e-003	0.0000	5.0401
<b>Total</b>	<b>7.4800e-003</b>	<b>0.0795</b>	<b>0.0526</b>	<b>5.0000e-005</b>	<b>0.0191</b>	<b>4.2600e-003</b>	<b>0.0233</b>	<b>0.0104</b>	<b>3.9200e-003</b>	<b>0.0143</b>	<b>0.0000</b>	<b>5.0083</b>	<b>5.0083</b>	<b>1.5100e-003</b>	<b>0.0000</b>	<b>5.0401</b>

### 3.3 Site Preparation - 2016

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.5000e-004	6.1300e-003	4.4800e-003	1.0000e-005	3.4000e-004	9.0000e-005	4.3000e-004	9.0000e-005	8.0000e-005	1.7000e-004	0.0000	1.3182	1.3182	1.0000e-005	0.0000	1.3184
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	1.7000e-004	1.7000e-003	0.0000	3.2000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2849	0.2849	1.0000e-005	0.0000	0.2852
<b>Total</b>	<b>4.9000e-004</b>	<b>6.3000e-003</b>	<b>6.1800e-003</b>	<b>1.0000e-005</b>	<b>6.6000e-004</b>	<b>9.0000e-005</b>	<b>7.6000e-004</b>	<b>1.8000e-004</b>	<b>8.0000e-005</b>	<b>2.6000e-004</b>	<b>0.0000</b>	<b>1.6031</b>	<b>1.6031</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>1.6036</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					8.5900e-003	0.0000	8.5900e-003	4.6700e-003	0.0000	4.6700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7300e-003	0.0458	0.0336	5.0000e-005		1.2800e-003	1.2800e-003		1.2800e-003	1.2800e-003	0.0000	5.0083	5.0083	1.5100e-003	0.0000	5.0400
<b>Total</b>	<b>1.7300e-003</b>	<b>0.0458</b>	<b>0.0336</b>	<b>5.0000e-005</b>	<b>8.5900e-003</b>	<b>1.2800e-003</b>	<b>9.8700e-003</b>	<b>4.6700e-003</b>	<b>1.2800e-003</b>	<b>5.9500e-003</b>	<b>0.0000</b>	<b>5.0083</b>	<b>5.0083</b>	<b>1.5100e-003</b>	<b>0.0000</b>	<b>5.0400</b>

### 3.3 Site Preparation - 2016

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.5000e-004	6.1300e-003	4.4800e-003	1.0000e-005	3.4000e-004	9.0000e-005	4.3000e-004	9.0000e-005	8.0000e-005	1.7000e-004	0.0000	1.3182	1.3182	1.0000e-005	0.0000	1.3184
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	1.7000e-004	1.7000e-003	0.0000	3.2000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2849	0.2849	1.0000e-005	0.0000	0.2852
<b>Total</b>	<b>4.9000e-004</b>	<b>6.3000e-003</b>	<b>6.1800e-003</b>	<b>1.0000e-005</b>	<b>6.6000e-004</b>	<b>9.0000e-005</b>	<b>7.6000e-004</b>	<b>1.8000e-004</b>	<b>8.0000e-005</b>	<b>2.6000e-004</b>	<b>0.0000</b>	<b>1.6031</b>	<b>1.6031</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>1.6036</b>

### 3.4 Grading - 2016

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.8000e-003	0.0000	3.8000e-003	2.0700e-003	0.0000	2.0700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.7500e-003	0.0504	0.0388	5.0000e-005		3.5900e-003	3.5900e-003		3.4000e-003	3.4000e-003	0.0000	4.7421	4.7421	1.0200e-003	0.0000	4.7634
<b>Total</b>	<b>5.7500e-003</b>	<b>0.0504</b>	<b>0.0388</b>	<b>5.0000e-005</b>	<b>3.8000e-003</b>	<b>3.5900e-003</b>	<b>7.3900e-003</b>	<b>2.0700e-003</b>	<b>3.4000e-003</b>	<b>5.4700e-003</b>	<b>0.0000</b>	<b>4.7421</b>	<b>4.7421</b>	<b>1.0200e-003</b>	<b>0.0000</b>	<b>4.7634</b>

### 3.4 Grading - 2016

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.3000e-004	2.3000e-003	1.6800e-003	1.0000e-005	1.3000e-004	3.0000e-005	1.6000e-004	4.0000e-005	3.0000e-005	7.0000e-005	0.0000	0.4943	0.4943	0.0000	0.0000	0.4944
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-005	1.1000e-004	1.0600e-003	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	6.0000e-005	0.0000	0.1781	0.1781	1.0000e-005	0.0000	0.1782
<b>Total</b>	<b>2.2000e-004</b>	<b>2.4100e-003</b>	<b>2.7400e-003</b>	<b>1.0000e-005</b>	<b>3.3000e-004</b>	<b>3.0000e-005</b>	<b>3.6000e-004</b>	<b>9.0000e-005</b>	<b>3.0000e-005</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>0.6724</b>	<b>0.6724</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.6726</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.7100e-003	0.0000	1.7100e-003	9.3000e-004	0.0000	9.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1300e-003	0.0458	0.0350	5.0000e-005		1.7600e-003	1.7600e-003		1.7600e-003	1.7600e-003	0.0000	4.7421	4.7421	1.0200e-003	0.0000	4.7634
<b>Total</b>	<b>2.1300e-003</b>	<b>0.0458</b>	<b>0.0350</b>	<b>5.0000e-005</b>	<b>1.7100e-003</b>	<b>1.7600e-003</b>	<b>3.4700e-003</b>	<b>9.3000e-004</b>	<b>1.7600e-003</b>	<b>2.6900e-003</b>	<b>0.0000</b>	<b>4.7421</b>	<b>4.7421</b>	<b>1.0200e-003</b>	<b>0.0000</b>	<b>4.7634</b>

### 3.4 Grading - 2016

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.3000e-004	2.3000e-003	1.6800e-003	1.0000e-005	1.3000e-004	3.0000e-005	1.6000e-004	4.0000e-005	3.0000e-005	7.0000e-005	0.0000	0.4943	0.4943	0.0000	0.0000	0.4944
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-005	1.1000e-004	1.0600e-003	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	6.0000e-005	0.0000	0.1781	0.1781	1.0000e-005	0.0000	0.1782
<b>Total</b>	<b>2.2000e-004</b>	<b>2.4100e-003</b>	<b>2.7400e-003</b>	<b>1.0000e-005</b>	<b>3.3000e-004</b>	<b>3.0000e-005</b>	<b>3.6000e-004</b>	<b>9.0000e-005</b>	<b>3.0000e-005</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>0.6724</b>	<b>0.6724</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.6726</b>

### 3.5 Building Construction - 2016

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0581	0.5163	0.3364	5.2000e-004		0.0339	0.0339		0.0322	0.0322	0.0000	46.4650	46.4650	0.0101	0.0000	46.6771
<b>Total</b>	<b>0.0581</b>	<b>0.5163</b>	<b>0.3364</b>	<b>5.2000e-004</b>		<b>0.0339</b>	<b>0.0339</b>		<b>0.0322</b>	<b>0.0322</b>	<b>0.0000</b>	<b>46.4650</b>	<b>46.4650</b>	<b>0.0101</b>	<b>0.0000</b>	<b>46.6771</b>

### 3.5 Building Construction - 2016

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.5400e-003	0.0165	0.0202	4.0000e-005	1.0600e-003	2.6000e-004	1.3300e-003	3.0000e-004	2.4000e-004	5.5000e-004	0.0000	3.3254	3.3254	2.0000e-005	0.0000	3.3259
Worker	7.8800e-003	9.4700e-003	0.0947	2.1000e-004	0.0180	1.4000e-004	0.0181	4.7800e-003	1.3000e-004	4.9100e-003	0.0000	15.8995	15.8995	8.2000e-004	0.0000	15.9167
<b>Total</b>	<b>9.4200e-003</b>	<b>0.0260</b>	<b>0.1149</b>	<b>2.5000e-004</b>	<b>0.0191</b>	<b>4.0000e-004</b>	<b>0.0195</b>	<b>5.0800e-003</b>	<b>3.7000e-004</b>	<b>5.4600e-003</b>	<b>0.0000</b>	<b>19.2249</b>	<b>19.2249</b>	<b>8.4000e-004</b>	<b>0.0000</b>	<b>19.2426</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0336	0.4429	0.3238	5.2000e-004		0.0212	0.0212		0.0207	0.0207	0.0000	46.4649	46.4649	0.0101	0.0000	46.6770
<b>Total</b>	<b>0.0336</b>	<b>0.4429</b>	<b>0.3238</b>	<b>5.2000e-004</b>		<b>0.0212</b>	<b>0.0212</b>		<b>0.0207</b>	<b>0.0207</b>	<b>0.0000</b>	<b>46.4649</b>	<b>46.4649</b>	<b>0.0101</b>	<b>0.0000</b>	<b>46.6770</b>



### 3.5 Building Construction - 2016

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.5400e-003	0.0165	0.0202	4.0000e-005	1.0600e-003	2.6000e-004	1.3300e-003	3.0000e-004	2.4000e-004	5.5000e-004	0.0000	3.3254	3.3254	2.0000e-005	0.0000	3.3259
Worker	7.8800e-003	9.4700e-003	0.0947	2.1000e-004	0.0180	1.4000e-004	0.0181	4.7800e-003	1.3000e-004	4.9100e-003	0.0000	15.8995	15.8995	8.2000e-004	0.0000	15.9167
<b>Total</b>	<b>9.4200e-003</b>	<b>0.0260</b>	<b>0.1149</b>	<b>2.5000e-004</b>	<b>0.0191</b>	<b>4.0000e-004</b>	<b>0.0195</b>	<b>5.0800e-003</b>	<b>3.7000e-004</b>	<b>5.4600e-003</b>	<b>0.0000</b>	<b>19.2249</b>	<b>19.2249</b>	<b>8.4000e-004</b>	<b>0.0000</b>	<b>19.2426</b>

### 3.5 Building Construction - 2017

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0592	0.5298	0.3726	5.8000e-004		0.0341	0.0341		0.0324	0.0324	0.0000	51.9185	51.9185	0.0112	0.0000	52.1527
<b>Total</b>	<b>0.0592</b>	<b>0.5298</b>	<b>0.3726</b>	<b>5.8000e-004</b>		<b>0.0341</b>	<b>0.0341</b>		<b>0.0324</b>	<b>0.0324</b>	<b>0.0000</b>	<b>51.9185</b>	<b>51.9185</b>	<b>0.0112</b>	<b>0.0000</b>	<b>52.1527</b>

### 3.5 Building Construction - 2017

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										MT/yr						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.5400e-003	0.0167	0.0214	4.0000e-005	1.2000e-003	2.6000e-004	1.4600e-003	3.4000e-004	2.4000e-004	5.8000e-004	0.0000	3.6905	3.6905	2.0000e-005	0.0000	0.0000	3.6910
Worker	8.0100e-003	9.6000e-003	0.0958	2.4000e-004	0.0203	1.5000e-004	0.0205	5.3900e-003	1.4000e-004	5.5300e-003	0.0000	17.2330	17.2330	8.5000e-004	0.0000	0.0000	17.2508
<b>Total</b>	<b>9.5500e-003</b>	<b>0.0263</b>	<b>0.1172</b>	<b>2.8000e-004</b>	<b>0.0215</b>	<b>4.1000e-004</b>	<b>0.0219</b>	<b>5.7300e-003</b>	<b>3.8000e-004</b>	<b>6.1100e-003</b>	<b>0.0000</b>	<b>20.9235</b>	<b>20.9235</b>	<b>8.7000e-004</b>	<b>0.0000</b>	<b>0.0000</b>	<b>20.9418</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0348	0.4739	0.3629	5.8000e-004		0.0220	0.0220		0.0216	0.0216	0.0000	51.9184	51.9184	0.0112	0.0000	52.1527
<b>Total</b>	<b>0.0348</b>	<b>0.4739</b>	<b>0.3629</b>	<b>5.8000e-004</b>		<b>0.0220</b>	<b>0.0220</b>		<b>0.0216</b>	<b>0.0216</b>	<b>0.0000</b>	<b>51.9184</b>	<b>51.9184</b>	<b>0.0112</b>	<b>0.0000</b>	<b>52.1527</b>

### 3.5 Building Construction - 2017

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.5400e-003	0.0167	0.0214	4.0000e-005	1.2000e-003	2.6000e-004	1.4600e-003	3.4000e-004	2.4000e-004	5.8000e-004	0.0000	3.6905	3.6905	2.0000e-005	0.0000	3.6910
Worker	8.0100e-003	9.6000e-003	0.0958	2.4000e-004	0.0203	1.5000e-004	0.0205	5.3900e-003	1.4000e-004	5.5300e-003	0.0000	17.2330	17.2330	8.5000e-004	0.0000	17.2508
<b>Total</b>	<b>9.5500e-003</b>	<b>0.0263</b>	<b>0.1172</b>	<b>2.8000e-004</b>	<b>0.0215</b>	<b>4.1000e-004</b>	<b>0.0219</b>	<b>5.7300e-003</b>	<b>3.8000e-004</b>	<b>6.1100e-003</b>	<b>0.0000</b>	<b>20.9235</b>	<b>20.9235</b>	<b>8.7000e-004</b>	<b>0.0000</b>	<b>20.9418</b>

### 3.6 Paving - 2017

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0362	0.3536	0.2267	3.2000e-004		0.0226	0.0226		0.0208	0.0208	0.0000	29.2710	29.2710	8.8000e-003	0.0000	29.4558
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0362</b>	<b>0.3536</b>	<b>0.2267</b>	<b>3.2000e-004</b>		<b>0.0226</b>	<b>0.0226</b>		<b>0.0208</b>	<b>0.0208</b>	<b>0.0000</b>	<b>29.2710</b>	<b>29.2710</b>	<b>8.8000e-003</b>	<b>0.0000</b>	<b>29.4558</b>

### 3.6 Paving - 2017

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2400e-003	1.4900e-003	0.0148	4.0000e-005	3.1400e-003	2.0000e-005	3.1700e-003	8.4000e-004	2.0000e-005	8.6000e-004	0.0000	2.6697	2.6697	1.3000e-004	0.0000	2.6724
<b>Total</b>	<b>1.2400e-003</b>	<b>1.4900e-003</b>	<b>0.0148</b>	<b>4.0000e-005</b>	<b>3.1400e-003</b>	<b>2.0000e-005</b>	<b>3.1700e-003</b>	<b>8.4000e-004</b>	<b>2.0000e-005</b>	<b>8.6000e-004</b>	<b>0.0000</b>	<b>2.6697</b>	<b>2.6697</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>2.6724</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0285	0.3418	0.2354	3.2000e-004		0.0186	0.0186		0.0175	0.0175	0.0000	29.2709	29.2709	8.8000e-003	0.0000	29.4558
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0285</b>	<b>0.3418</b>	<b>0.2354</b>	<b>3.2000e-004</b>		<b>0.0186</b>	<b>0.0186</b>		<b>0.0175</b>	<b>0.0175</b>	<b>0.0000</b>	<b>29.2709</b>	<b>29.2709</b>	<b>8.8000e-003</b>	<b>0.0000</b>	<b>29.4558</b>

### 3.6 Paving - 2017

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2400e-003	1.4900e-003	0.0148	4.0000e-005	3.1400e-003	2.0000e-005	3.1700e-003	8.4000e-004	2.0000e-005	8.6000e-004	0.0000	2.6697	2.6697	1.3000e-004	0.0000	2.6724
<b>Total</b>	<b>1.2400e-003</b>	<b>1.4900e-003</b>	<b>0.0148</b>	<b>4.0000e-005</b>	<b>3.1400e-003</b>	<b>2.0000e-005</b>	<b>3.1700e-003</b>	<b>8.4000e-004</b>	<b>2.0000e-005</b>	<b>8.6000e-004</b>	<b>0.0000</b>	<b>2.6697</b>	<b>2.6697</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>2.6724</b>

### 3.7 Architectural Coating - 2017

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4700					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.7700e-003	0.0182	0.0156	2.0000e-005		1.4400e-003	1.4400e-003		1.4400e-003	1.4400e-003	0.0000	2.1277	2.1277	2.2000e-004	0.0000	2.1324
<b>Total</b>	<b>0.4727</b>	<b>0.0182</b>	<b>0.0156</b>	<b>2.0000e-005</b>		<b>1.4400e-003</b>	<b>1.4400e-003</b>		<b>1.4400e-003</b>	<b>1.4400e-003</b>	<b>0.0000</b>	<b>2.1277</b>	<b>2.1277</b>	<b>2.2000e-004</b>	<b>0.0000</b>	<b>2.1324</b>

### 3.7 Architectural Coating - 2017

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										MT/yr						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	1.1000e-004	1.1400e-003	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	7.0000e-005	0.0000	0.2054	0.2054	1.0000e-005	0.0000	0.2056	
<b>Total</b>	<b>1.0000e-004</b>	<b>1.1000e-004</b>	<b>1.1400e-003</b>	<b>0.0000</b>	<b>2.4000e-004</b>	<b>0.0000</b>	<b>2.4000e-004</b>	<b>6.0000e-005</b>	<b>0.0000</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>0.2054</b>	<b>0.2054</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.2056</b>	

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										MT/yr						
Archit. Coating	0.4700					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.5000e-004	0.0196	0.0153	2.0000e-005		7.9000e-004	7.9000e-004		7.9000e-004	7.9000e-004	0.0000	2.1277	2.1277	2.2000e-004	0.0000	2.1324	
<b>Total</b>	<b>0.4709</b>	<b>0.0196</b>	<b>0.0153</b>	<b>2.0000e-005</b>		<b>7.9000e-004</b>	<b>7.9000e-004</b>		<b>7.9000e-004</b>	<b>7.9000e-004</b>	<b>0.0000</b>	<b>2.1277</b>	<b>2.1277</b>	<b>2.2000e-004</b>	<b>0.0000</b>	<b>2.1324</b>	

### 3.7 Architectural Coating - 2017

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	1.1000e-004	1.1400e-003	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	7.0000e-005	0.0000	0.2054	0.2054	1.0000e-005	0.0000	0.2056
<b>Total</b>	<b>1.0000e-004</b>	<b>1.1000e-004</b>	<b>1.1400e-003</b>	<b>0.0000</b>	<b>2.4000e-004</b>	<b>0.0000</b>	<b>2.4000e-004</b>	<b>6.0000e-005</b>	<b>0.0000</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>0.2054</b>	<b>0.2054</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.2056</b>

### 4.0 Operational Detail - Mobile

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#### 4.1 Mitigation Measures Mobile

Implement School Bus Program

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2165	0.4814	2.0053	4.3900e-003	0.3185	5.5400e-003	0.3241	0.0850	5.1000e-003	0.0901	0.0000	337.5089	337.5089	0.0138	0.0000	337.7989
Unmitigated	0.2197	0.5057	2.0857	4.6500e-003	0.3384	5.8500e-003	0.3443	0.0904	5.3900e-003	0.0957	0.0000	357.7527	357.7527	0.0146	0.0000	358.0582

#### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior High School	558.90	0.00	0.00	897,511	844,793
Total	558.90	0.00	0.00	897,511	844,793

#### 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior High School	9.50	7.30	7.30	72.80	22.20	5.00	63	25	12

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.474465	0.063133	0.180505	0.158349	0.070139	0.010387	0.013452	0.017129	0.000779	0.000670	0.005599	0.000320	0.005072

#### 5.0 Energy Detail

##### 2.4 Fleet Mix

Historical Energy Use: N

#### 5.1 Mitigation Measures Energy



	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	30.0567	30.0567	1.3800e-003	2.9000e-004	30.1743
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	30.0567	30.0567	1.3800e-003	2.9000e-004	30.1743
Natural Gas Mitigated	1.0200e-003	9.2500e-003	7.7700e-003	6.0000e-005		7.0000e-004	7.0000e-004		7.0000e-004	7.0000e-004	0.0000	10.0661	10.0661	1.9000e-004	1.8000e-004	10.1274
Natural Gas Unmitigated	1.0200e-003	9.2500e-003	7.7700e-003	6.0000e-005		7.0000e-004	7.0000e-004		7.0000e-004	7.0000e-004	0.0000	10.0661	10.0661	1.9000e-004	1.8000e-004	10.1274

**5.2 Energy by Land Use - Natural Gas**  
**Unmitigated**

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Junior High School	188632	1.0200e-003	9.2500e-003	7.7700e-003	6.0000e-005		7.0000e-004	7.0000e-004		7.0000e-004	7.0000e-004	0.0000	10.0661	10.0661	1.9000e-004	1.8000e-004	10.1274
<b>Total</b>		<b>1.0200e-003</b>	<b>9.2500e-003</b>	<b>7.7700e-003</b>	<b>6.0000e-005</b>		<b>7.0000e-004</b>	<b>7.0000e-004</b>		<b>7.0000e-004</b>	<b>7.0000e-004</b>	<b>0.0000</b>	<b>10.0661</b>	<b>10.0661</b>	<b>1.9000e-004</b>	<b>1.8000e-004</b>	<b>10.1274</b>

### 5.2 Energy by Land Use - NaturalGas

#### Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Junior High School	188632	1.0200e-003	9.2500e-003	7.7700e-003	6.0000e-005		7.0000e-004	7.0000e-004		7.0000e-004	7.0000e-004	0.0000	10.0661	10.0661	1.9000e-004	1.8000e-004	10.1274
<b>Total</b>		<b>1.0200e-003</b>	<b>9.2500e-003</b>	<b>7.7700e-003</b>	<b>6.0000e-005</b>		<b>7.0000e-004</b>	<b>7.0000e-004</b>		<b>7.0000e-004</b>	<b>7.0000e-004</b>	<b>0.0000</b>	<b>10.0661</b>	<b>10.0661</b>	<b>1.9000e-004</b>	<b>1.8000e-004</b>	<b>10.1274</b>

### 5.3 Energy by Land Use - Electricity

#### Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior High School	105032	30.0567	1.3800e-003	2.9000e-004	30.1743
<b>Total</b>		<b>30.0567</b>	<b>1.3800e-003</b>	<b>2.9000e-004</b>	<b>30.1743</b>

### 5.3 Energy by Land Use - Electricity

#### Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior High School	105032	30.0567	1.3800e-003	2.9000e-004	30.1743
<b>Total</b>		<b>30.0567</b>	<b>1.3800e-003</b>	<b>2.9000e-004</b>	<b>30.1743</b>

### 6.0 Area Detail

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#### 6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0949	3.0000e-005	3.2300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.1600e-003	6.1600e-003	2.0000e-005	0.0000	6.5300e-003
Unmitigated	0.0993	3.0000e-005	3.2300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.1600e-003	6.1600e-003	2.0000e-005	0.0000	6.5300e-003

## 6.2 Area by SubCategory

### Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0397					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0594					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.1000e-004	3.0000e-005	3.2300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.1600e-003	6.1600e-003	2.0000e-005	0.0000	6.5300e-003
<b>Total</b>	<b>0.0993</b>	<b>3.0000e-005</b>	<b>3.2300e-003</b>	<b>0.0000</b>		<b>1.0000e-005</b>	<b>1.0000e-005</b>		<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>6.1600e-003</b>	<b>6.1600e-003</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>6.5300e-003</b>

## 6.2 Area by SubCategory

### Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0397					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0549					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.1000e-004	3.0000e-005	3.2300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.1600e-003	6.1600e-003	2.0000e-005	0.0000	6.5300e-003
<b>Total</b>	<b>0.0949</b>	<b>3.0000e-005</b>	<b>3.2300e-003</b>	<b>0.0000</b>		<b>1.0000e-005</b>	<b>1.0000e-005</b>		<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>6.1600e-003</b>	<b>6.1600e-003</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>6.5300e-003</b>

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Toilet

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	9.8014	0.0243	6.5000e-004	10.5149
Unmitigated	10.2194	0.0277	7.4000e-004	11.0301

## 7.2 Water by Land Use

### Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior High School	0.836363 / 2.15065	10.2194	0.0277	7.4000e-004	11.0301
<b>Total</b>		<b>10.2194</b>	<b>0.0277</b>	<b>7.4000e-004</b>	<b>11.0301</b>

### Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior High School	0.732988 / 2.15065	9.8014	0.0243	6.5000e-004	10.5149
<b>Total</b>		<b>9.8014</b>	<b>0.0243</b>	<b>6.5000e-004</b>	<b>10.5149</b>

## 8.0 Waste Detail

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### 8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

**Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	12.7803	0.7553	0.0000	28.6415

**8.2 Waste by Land Use**

**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior High School	62.96	12.7803	0.7553	0.0000	28.6415
<b>Total</b>		<b>12.7803</b>	<b>0.7553</b>	<b>0.0000</b>	<b>28.6415</b>

## 8.2 Waste by Land Use

### Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior High School		0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

## 9.0 Operational Offroad

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Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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## 10.0 Vegetation

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**From:** [South Central Coastal Information Center](#)  
**To:** [Farrell, Jenna](#)  
**Subject:** RE: Record Search Request-and question  
**Date:** Tuesday, November 24, 2015 1:22:43 PM

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We will have to let you know once we start the search if your "Not to exceed amount" of \$600 is sufficient. This is because we essentially have to do the electronic portion of the record search to see if you are within budget or not. Our turnaround time is up to 5 weeks - not including holiday time off.

Thank you for using the California Historical Resources Information System (CHRIS)  
Stacy St. James, Coordinator  
South Central Coastal Information Center  
C.S.U.F, Dept. of Anthropology, MH 426  
800 N. State College Blvd.  
Fullerton, CA 92834-6846  
Phone 657.278.5395  
Fax 657.278.5542

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**From:** Farrell, Jenna [Jenna.Farrell@tetrattech.com]  
**Sent:** Monday, November 23, 2015 11:07 AM  
**To:** [sccic@fullerton.edu](mailto:sccic@fullerton.edu)  
**Subject:** Record Search Request-and question

Hello SCCIC staff:

Do you accept email record search request?

I would like to request a record search for a small project in Ventura County (map attached and Data Request sheet), I can also provide a GIS shapefile for the Project area if that is easier. The project is located on USGS 7.5 quad Oxnard, however no TRS did not come up in PLSS and it is listed as Landgrants/Civil colonies Name: Rio de Santa Clara, UTM 296570.18, 3788823.67 of center point of project. Thurgood Marshall Elementary School (K-5) is located at 2900 Thurgood Marshall Drive in Oxnard, California, 93036. The school occupies Assessor Parcel Number (APN) 179-0-070-010. Oxnard School District (OSD or District) proposes to construct and operate a new two-story, 12-classroom building on the existing Marshall Elementary School site in compliance with current seismic codes.

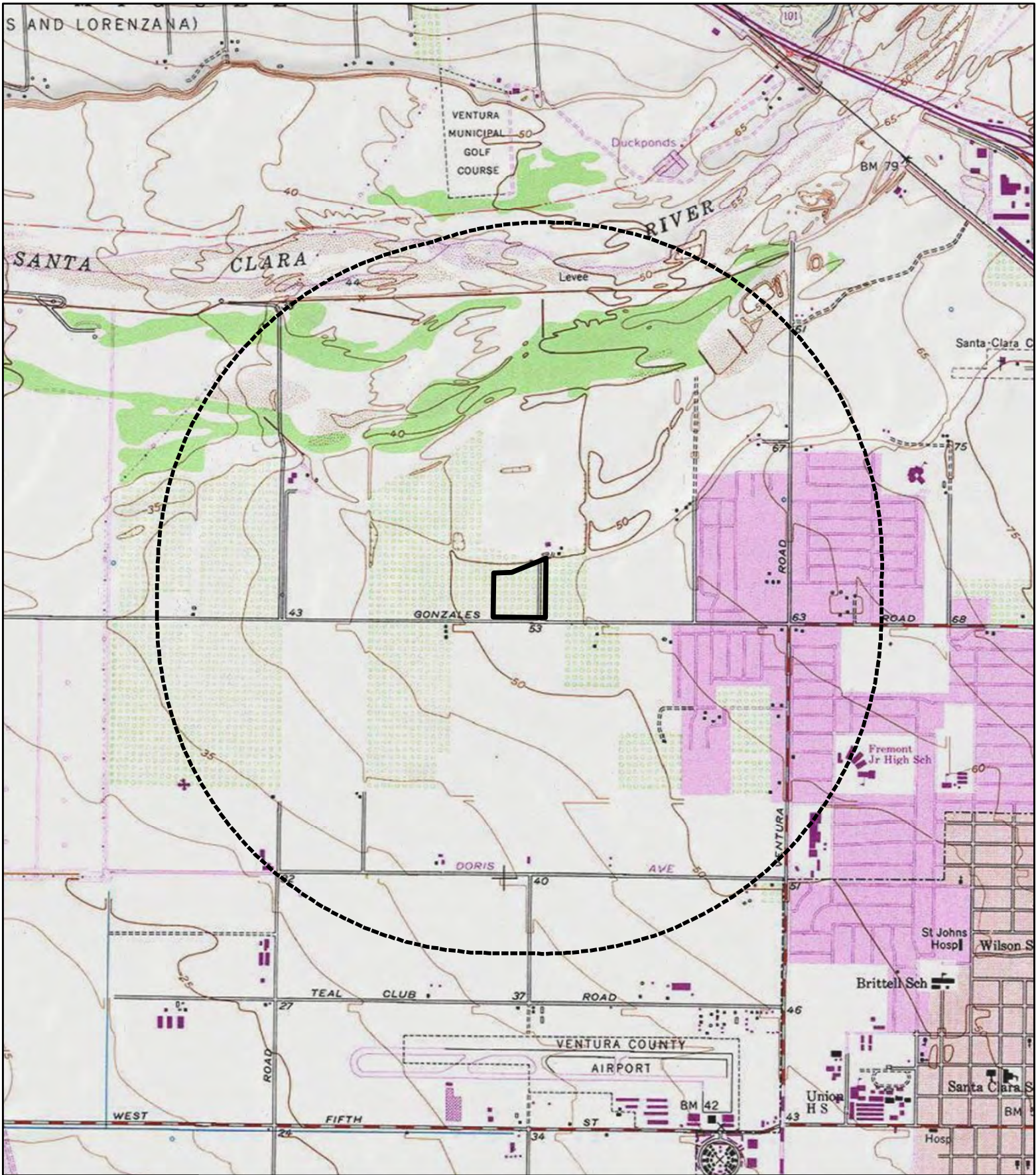
Please do not exceed \$600.00. We would like to request the shapefiles for any previously recorded sites and inventories within a 1-mile radius of the Project. I would also like electronic pdf copies of site records and reports (if under not to exceed cost).

Please accept this email as verification to begin the record search. Please email me and let me know approximately how long it will take the SCCIC to conduct the search and when I should expect the results. Please let me know if you need this information faxed, or any other information.

Thank you,

Jenna Farrell

**Jenna Farrell** | Archaeologist



**Legend**

- Project Area
- Project Area 1-mile Radius

N  
▲

0      0.25      0.5  
Miles

**Project Location**





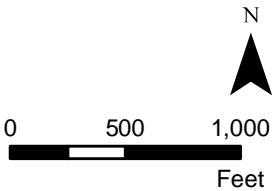
P-56-152763

W Gonzales Rd

N Patterson Rd



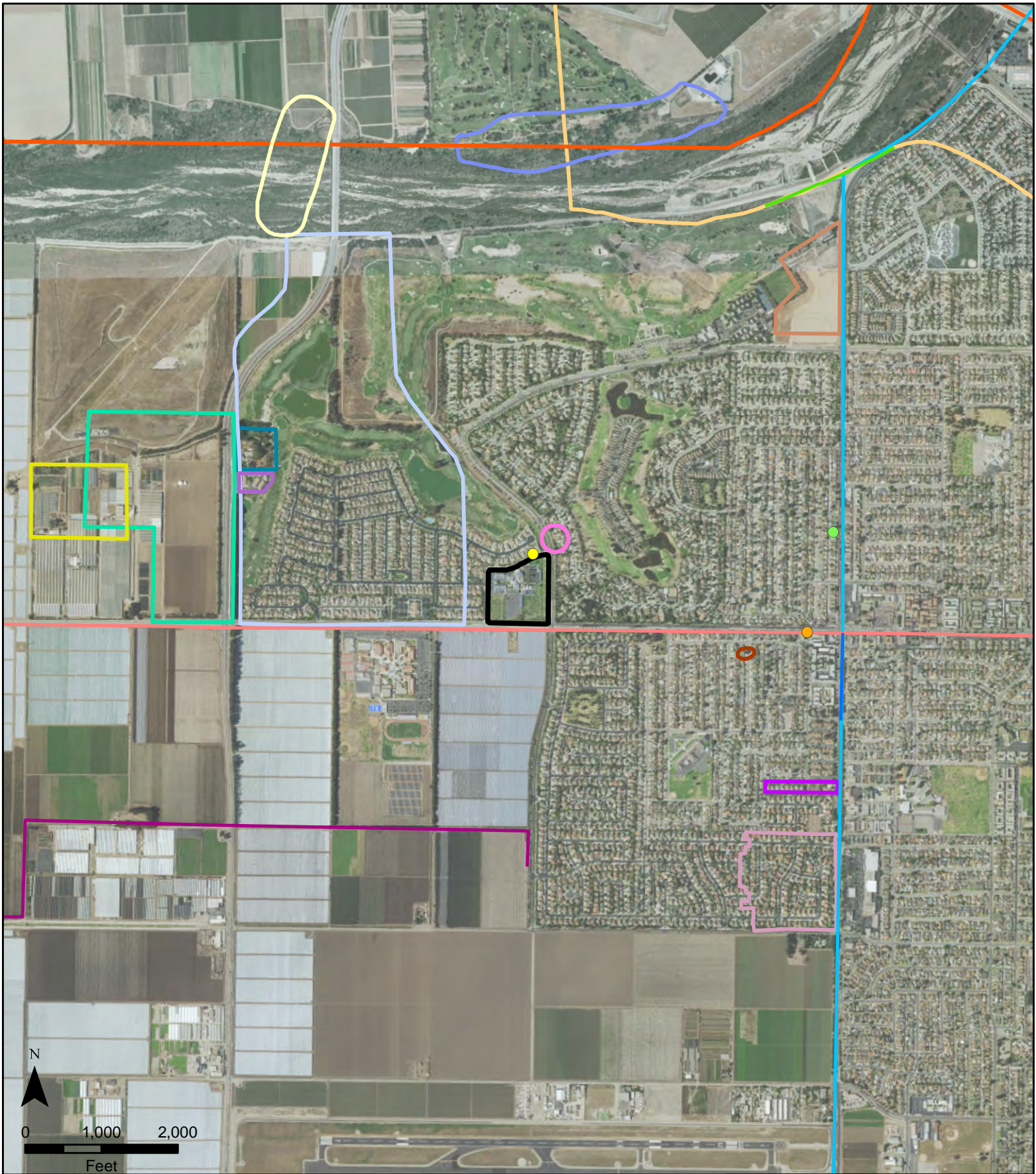
- Legend**
- Project Area
  - Record Search Site



**Record Search Sites within the Project Area**

Thurgood Marshall Elementary School  
Oxnard, CA





**Legend**

Project Area	VN-02933	VN-02978	VN1793	VN2468
Record Search Report	VN1387	VN1022	VN1878	VN513
VN-02796	VN236	VN127	VN2008	VN876
VN-02899	VN2434	VN1578	VN2429	VN971
VN2465	VN976	VN1583	VN2441	

**Record Search Reports  
within the Project Area**

Thurgood Marshall Elementary School  
Oxnard, CA

## Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
VN-00127		1978	Clelow, William C. Jr.	An Archaeological and Historical Assessment of Areas Within the Takelines of the Proposed Features of the Ventura County Water Management Project	University of California, Los Angeles Archaeological Survey	56-000071, 56-000170, 56-000171, 56-000214, 56-000215, 56-000216, 56-000217, 56-000218, 56-000219, 56-000272, 56-000445, 56-000446, 56-000447, 56-000448, 56-000450, 56-000451, 56-000452, 56-000455, 56-000456, 56-000493, 56-000555
VN-00236		1980	Horne, Stephen	Final Report: Onshore Cultural Resources Assessment, Union Oil Company Platform Gina and Platform Gilda Project Federal Lease Ocs P-0202 and P-0216, Offshore Southern California	Dames & Moore/Stephen Horne	56-000553, 56-000662, 56-000663, 56-000664, 56-000665, 56-000666, 56-000667, 56-001234, 56-120002, 56-120003
VN-00513		1986	Mouriquand-Blodgett, Leslie	Archival Search for a 31.8 Acre Parcel on the Northwest Corner of Ventura Road and Doris Avenue, Oxnard, California.	LESLIE MOURIQUAND-BLODGETT,	
VN-00876		1990	Wlodarski, Robert J.	A Phase I Archaeological Study for Approximately 20 Acres of Land [c.u.p. #4293-4], Ventura County, California	Historical, Environmental, Archaeological, Research, Team	
VN-00971		1990	Singer, Clay A. and John E. Atwood	Cultural Resources Survey and Impact Assessment for Four Alternative Recycling Station Sites in Ventura County, California	C.A. Singer & Associates, Inc.	56-000666, 56-000918
VN-00976		1990	Singer, Clay A. and John E. Atwood	Cultural Resources Survey and Impact Assessment for the Proposed Realignment of the Doris Drain in the City of Oxnard, Ventura County, California	C.A. Singer & Associates, Inc.	
VN-01022		1991	Singer, Clay A. and John E. Atwood	Cultural Resources Survey and Impact Assessment for the Victoria Bridge Widening Project in the City of Ventura, Ventura County, California.	C.A. Singer & Associates, Inc.	
VN-01387		1995		Phase 1 Archaeological Survey and Cultural Resources Assessment for the Olivas Park Drive Extension Project, Ventura County, California	W & S Consultants	
VN-01578		1998	McKenna, Jeanette A.	Historic Research and Review of the Mcloughlin/ Maxwell Property, Located in Both Unincorporated Ventura County (250 Acres) and the City of Oxnard (80 Acres), Ventura County, California	McKenna et al.	



## Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
VN-01583		1997	Anonymous	Phase 1 Archaeological Survey and Cultural Resources Assessment for the Northwest Golf Course Community Specific Plan Study Area, Oxnard, Ventura County, California	W & S Consultants	
VN-01793		1998	Scheid, Ann	Leonard Ranch Historic District	Ann Scheid, Preservation Planner and Architectural Historian	56-152763, 56-152764, 56-152765, 56-152766
VN-01878		2000	Iverson, Gary	Proposed Bridge Replacement on Interstate Route 101: Vineyard Avenue to Johnson Drive	California Department of Transportation, District 7	
VN-02008		2001	Martinez, Al	Nhpa Section 106 Review, Per Fcc Direction of Sprint Pcs Wireless Communications Facility No. Vr54x442d (Iemon Grove Located at South East Corner of Victoria Avenue and Gonzales Road, Oxnard, California 93030	Michael Brandman Associates	
VN-02429		2005	Simon, Joseph M.	Phase I Archaeological Survey for the Villa Victoria Study Area, Oxnard, Ventura County, California	W & S Consultants	
VN-02434		2006	Maki, Mary K.	Archaeological Survey Report of Approximately 44,000 Linear Feet for the Recycled Water Backbone System Project, City of Oxnard, Ventura County, California	Conejo Archaeological Consultants	56-000662, 56-000664, 56-150015, 56-150016, 56-150017, 56-152763, 56-152786, 56-152788, 56-152790, 56-152791, 56-152792, 56-152801, 56-152803, 56-152804, 56-152805, 56-152807, 56-152808, 56-152809, 56-152812, 56-152814
VN-02441	Paleo -	2005	Richards, Michael D.	A Phase I Cultural Resource Assessment of 21 Acres in the City of Oxnard, Ventura County, California	ArchaeoPaleo Resource Management, Inc.	
VN-02465		2004	McKenna, Jeanette A.	Cultural Resources Monitoring Program at the McLaughlin House, Oxnard, Ventura County	McKenna et al.	
VN-02468		2003	Foster, John M.	Archaeological Investigation for Tentative Tract	Greenwood and Associates	
VN-02796		2009	Schmidt, June A.	Moorpark-Shellline-Valdez 66kV New Pole Installation/ Old Pole Removal and WO 6039-4800; 9-4857 Deteriorated Pole Replacements, Various Distribution Circuits, Ventura County, California	Compass Rose Archaeological, Inc.	56-000031, 56-000032, 56-000033, 56-000034, 56-000201, 56-000241, 56-152746, 56-152747, 56-152748

## Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
VN-02899		2010	Bonner, Wayne	Cultural Resources Records Search and Site Visit Results for T-Mobile USA Candidate SV12609-A (Ventura & Bevra JPA), Adjacent to 2045 North Ventura Road, Ventura County, California	Michael Brandman Associates	
VN-02933		2011	Toren, A. George	Phase I Archaeological Investigation for the City of Oxnard Recycled Water Project New Alignment	Compass Rose Archaeological, Inc.	
VN-02978		2004	Sharpe, Jim and Durio, Lori	Groundwater Recovery Enhancement and Treatment (GREAT) Program, Cultural Resources Inventory Report	CH2MHill	56-000506, 56-000662, 56-000664, 56-000665, 56-000666, 56-000726, 56-000789, 56-000918, 56-100060, 56-152779, 56-152780, 56-152781, 56-152782, 56-152783, 56-152784



---

**C      NATIVE AMERICAN HERITAGE COMMISSION SLF  
SEARCH AND NATIVE AMERICAN CONTACT LIST**

**From:** Farrell, Jenna  
**To:** ["nahc@nahc.ca.gov"](mailto:nahc@nahc.ca.gov)  
**Subject:** Sacred Lands File Search Request-Thurgood Marshall Elementary School Project  
**Date:** Wednesday, January 13, 2016 4:49:00 PM  
**Attachments:** [Marshal School Project.pdf](#)

---

To NAHC Staff:

Please find attached a request for a sacred lands file search for the Thurgood Marshall Elementary School Project, Ventura County, California. Please let me know if you have any questions or comments.

Thank you,

Jenna Farrell

**Jenna Farrell | Archaeologist**

Direct: 916.853.4575 | Main: 916.852.8300 | Fax: 916.852.0307 | Cell: 916.206.8705

[Jenna.Farrell@tetrattech.com](mailto:Jenna.Farrell@tetrattech.com)

**Tetra Tech, Inc. | Sciences**

2969 Prospect Park Drive, Suite 100 | Rancho Cordova, CA 95670 | [www.tetrattech.com](http://www.tetrattech.com)

## Sacred Lands File & Native American Contacts List Request

### NATIVE AMERICAN HERITAGE COMMISSION

1550 Harbor Blvd, Suite 100  
West Sacramento, CA 95501  
(916) 373-3710  
(916) 373-5471 – Fax  
[nahc@nahc.ca.gov](mailto:nahc@nahc.ca.gov)

*Information Below is Required for a Sacred Lands File Search*

Project: \_\_\_\_\_

County: \_\_\_\_\_

USGS Quadrangle

Name: \_\_\_\_\_

Township: \_\_\_\_\_ Range: \_\_\_\_\_ Section(s): \_\_\_\_\_

Company/Firm/Agency:

\_\_\_\_\_  
Contact Person: \_\_\_\_\_

Street Address: \_\_\_\_\_

City: \_\_\_\_\_ Zip: \_\_\_\_\_

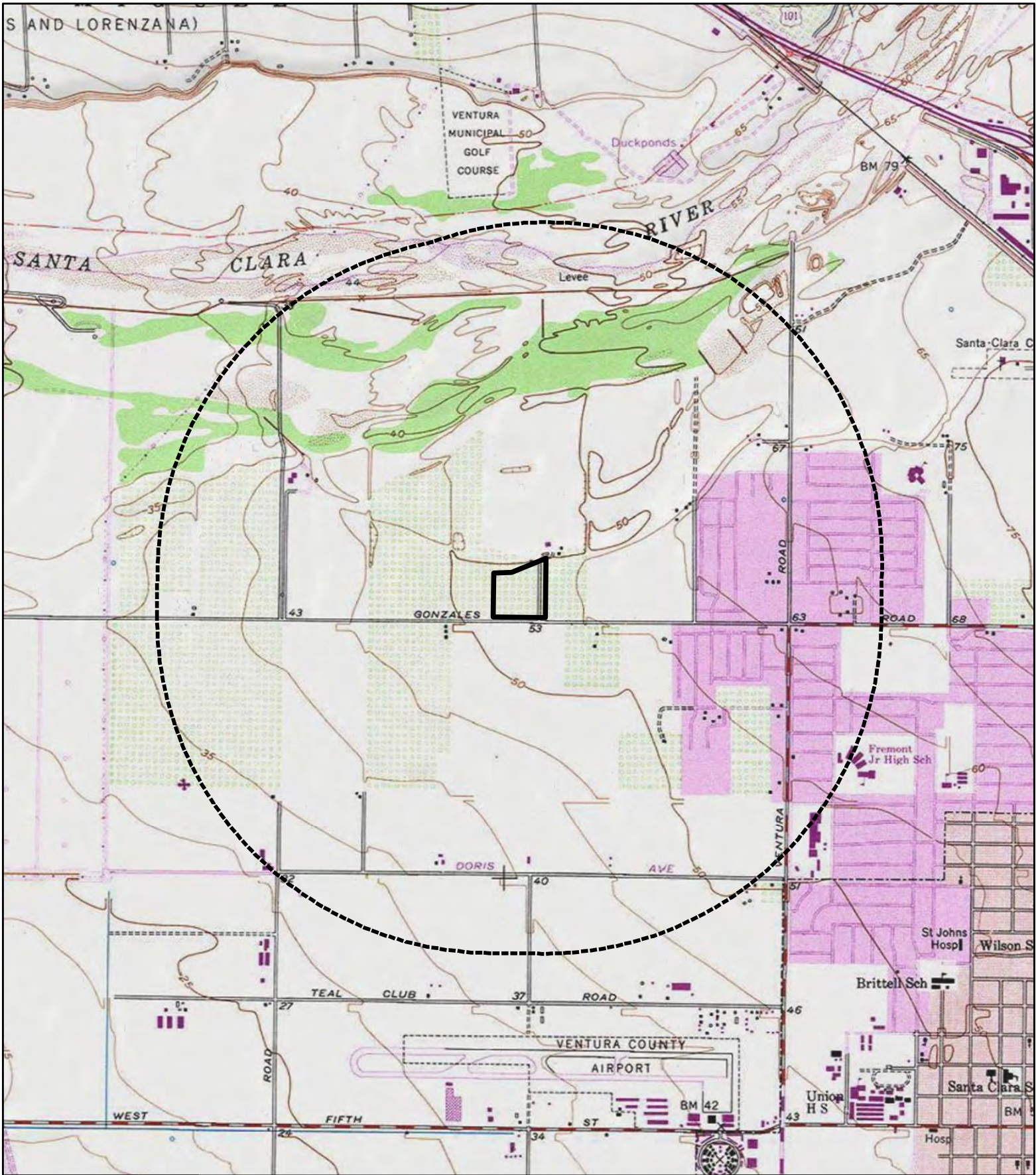
Phone: \_\_\_\_\_ Extension: \_\_\_\_\_

Fax: \_\_\_\_\_

Email: \_\_\_\_\_

Project Description:

\_\_\_\_ Project Location Map is attached



**Legend**

- Project Area
- Project Area 1-mile Radius

N

0      0.25      0.5

Miles

**Marshall School Project Location**



**NATIVE AMERICAN HERITAGE COMMISSION**

1550 Harbor Blvd., ROOM 100  
West SACRAMENTO, CA 95691  
(916) 373-3710  
Fax (916) 373-5471



January 25, 2016

Jenna Farrell  
Tetra Tech, Inc.  
2969 Prospect Park Dr., Suite 100  
Rancho Cordova, CA 95670

Email to: [jenna.farrell@tetrattech.com](mailto:jenna.farrell@tetrattech.com)

Re: Thurgood Marshall Elementary School Project; River Park School District Project

Dear Ms. Farrell,

A record search of the sacred land file has failed to indicate the presence of Native American cultural resources in the immediate project areas. The absence of specific site information in the sacred lands file does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Enclosed is a list of Native Americans individuals/organizations who may have knowledge of cultural resources in the project area. The Commission makes no recommendation or preference of a single individual, or group over another. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated, if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe or group. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at (916) 373-3712.

Sincerely,

A handwritten signature in black ink, appearing to read "Joshua Standing Horse".

Joshua Standing Horse  
Associate Governmental Program Analyst

**Native American Contact List  
Ventura County  
January 26, 2016**

Barbareno/Ventureno Band of Mission Indians  
Julie Lynn Tumamait-Stennslie, Chair  
365 North Poli Ave Chumash  
Ojai , CA 93023  
jtumamait@hotmail.com  
(805) 646-6214

Coastal Band of the Chumash Nation  
Mia Lopez, Chairperson  
, Chumash  
cbcn.nahc.sb@gmail.com  
(805) 324-0135

Barbareno/Ventureno Band of Mission Indians  
Kathleen Pappo  
2762 Vista Mesa Drive Chumash  
Rancho Pales Verdes CA 90275  
(310) 831-5295

Coastal Band of the Chumash Nation  
Gino Altarmirano  
, Chumash  
cbcn.nahc.slo@gmail.com  
(510) 862-7615

Barbareno/Ventureno Band of Mission Indians  
Raudel Joe Banuelos, Jr.  
331 Mira Flores Court Chumash  
Camarillo , CA 93012  
(805) 987-5314

Coastal Band of the Chumash Nation  
Isabel Ayala  
, Chumash  
cbcn.nahc.ventura@gmail.com  
(661) 340-6997

**This list is current only as of the date of this document.**

**Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.**

**This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed Thurgood Marshall Elementary School Project & River Park School District Project, Ventura County.**

**Native American Contact List  
Ventura County  
January 26, 2016**

San Luis Obispo County Chumash Council  
Chief Mark Steven Vigil  
1030 Ritchie Road Chumash  
Grover Beach CA 93433  
(805) 481-2461  
  
(805) 474-4729 Fax

Santa Ynez Tribal Elders Council  
Antonio Flores, Chairperson  
P.O. Box 365 Chumash  
Santa Ynez , CA 93460  
elders@santaynezchumash.org  
(805) 688-7997  
  
(805) 693-1768 Fax

Santa Ynez Band of Mission Indians  
Vincent Armenta, Chairperson  
P.O. Box 517 Chumash  
Santa Ynez , CA 93460  
varmenta@santaynezchumash.  
(805) 688-7997  
  
(805) 686-9578 Fax

Santa Ynez Tribal Elders Council  
Freddie Romero, Cultural Resources Coordinator  
P.O. Box 365 Chumash  
Santa Ynez , CA 93460  
freddyromero1959@yahoo.com  
(805) 688-7997, Ext 37

Santa Ynez Band of Mission Indians  
Tribal Admin/Counsel Sam Cohen  
P.O. Box 517 Chumash  
Santa Ynez , CA 93460  
info@santaynezchumash.org  
(805) 688-7997  
  
(805) 686-9578 Fax

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**This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed Thurgood Marshall Elementary School Project & River Park School District Project, Ventura County.**



February/March, 2016

Address

Address

Address

Submittal via email:

**Subject:** Thurgood Marshall School Project, Ventura County, California - Proposed Construction of a New Two-Story, 12-Classroom Building on the Existing Thurgood Marshall School Property

Dear Mr./Ms.:

Tetra Tech, Inc. is assisting the Oxnard School District (OSD or District) with an Initial Study for the proposed Thurgood Marshall School Project. Thurgood Marshall Elementary School (K-5) is located at 2900 Thurgood Marshall Drive in Oxnard, California, 93036. The school occupies Assessor Parcel Number (APN) 179-0-070-010 (see attachments 1 and 2). OSD proposes to construct and operate a new two-story, 12-classroom building on the existing Marshall Elementary School site in compliance with current seismic codes. The school would be reconfigured to include grades 6th through 8th thereby accommodating students in grades K-8 at the Thurgood Marshall Elementary School site (herein referred to as the project). The new facilities are needed to accommodate growing District enrollment in the 6th through 8th grades.

The existing 11-acre elementary school site was developed in 2003. It is bounded by Thurgood Marshall Drive on the north and west, by Patterson Road on the east, and by Gonzales Road on the south. The Project site is primarily surrounded by single-family residential communities including Victoria Estates to the north and west, and Windsor North River Ridge to the east. The Cabrillo neighborhood is located to the southeast, and agriculture land is located to the south. The Project is subject to the requirements of the California Environmental Quality Act (CEQA), and OSD is the lead agency for CEQA. As part of the Initial Study, a cultural resources record and literature search was conducted at the South Central Coastal Information Center (SCCIC) of the California Historical Resources Information System at the California State University, Fullerton, California (IC File Number 15844-1889). The records search revealed that a total of 22 previous cultural resources investigations have been conducted within the Project study area (the Project Area of Potential Effect or APE and a 1-mile radius), and no previous investigation or archaeological sites or historic resources are recorded within the Project's APE. An archeological survey has not been conducted at this time as the Project area is developed (structures, pavement, and landscaping with non-native grasses and ornamental trees), and the native ground surface is not visible.

The Native American Heritage Commission (NAHC) was contacted by email on January 13, 2016 to request a sacred lands file search. The NAHC responded on January 27, 2016 that no Native American cultural resources were identified by their search as within the immediate Project area. The NAHC provided a list of Native American individuals and organizations that may have knowledge of cultural resources in the Project area. Your

**Tetra Tech, Inc.**

2969 Prospect Park Drive, Suite 100, Rancho Cordova, CA 95670

Tel 916.852.8300 Fax 916.852.0307 [www.tetratech.com](http://www.tetratech.com)

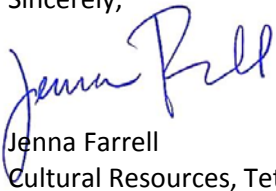


name was included on the NAHC list and we are contacting you as part of our outreach efforts to identify any known cultural resources within the Project study area, or if you have any other questions or interest in the Project.

We understand that under AB 52, the lead State/public agency is responsible for formal government-to-government consultation with Native American tribes for this Project. This letter does not take the place of nor is it intended to serve as official government-to-government consultation.

I hope this information on the proposed Project has been helpful. If you require any additional details, copies of maps, or other data regarding the Project, please feel free to contact me. Please reference "Thurgood Marshall School Project" in your correspondence, and send any comments or questions to my attention at Tetra Tech, Inc., 2969 Prospect Park Dr. #100, Rancho Cordova, CA 95670, or call 916-853-4575, or email me at [jenna.farrell@tetratech.com](mailto:jenna.farrell@tetratech.com).

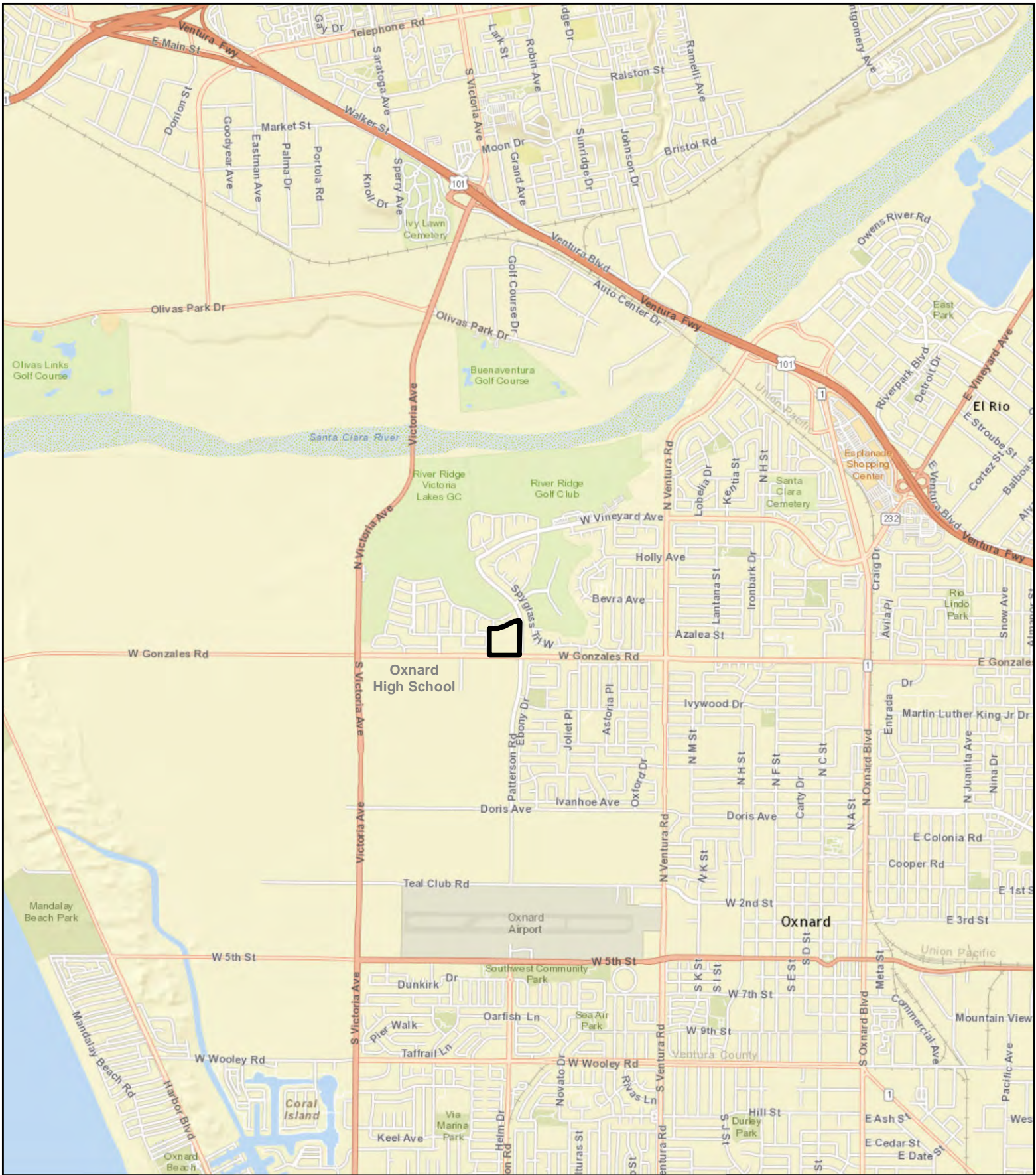
Sincerely,


A handwritten signature in blue ink that reads "Jenna Farrell". The signature is written in a cursive style with a large initial "J".

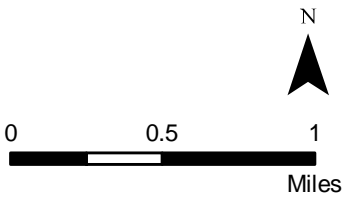
Jenna Farrell  
Cultural Resources, Tetra Tech

Cc: NAHC Native American Contact List

Attachment A: Maps

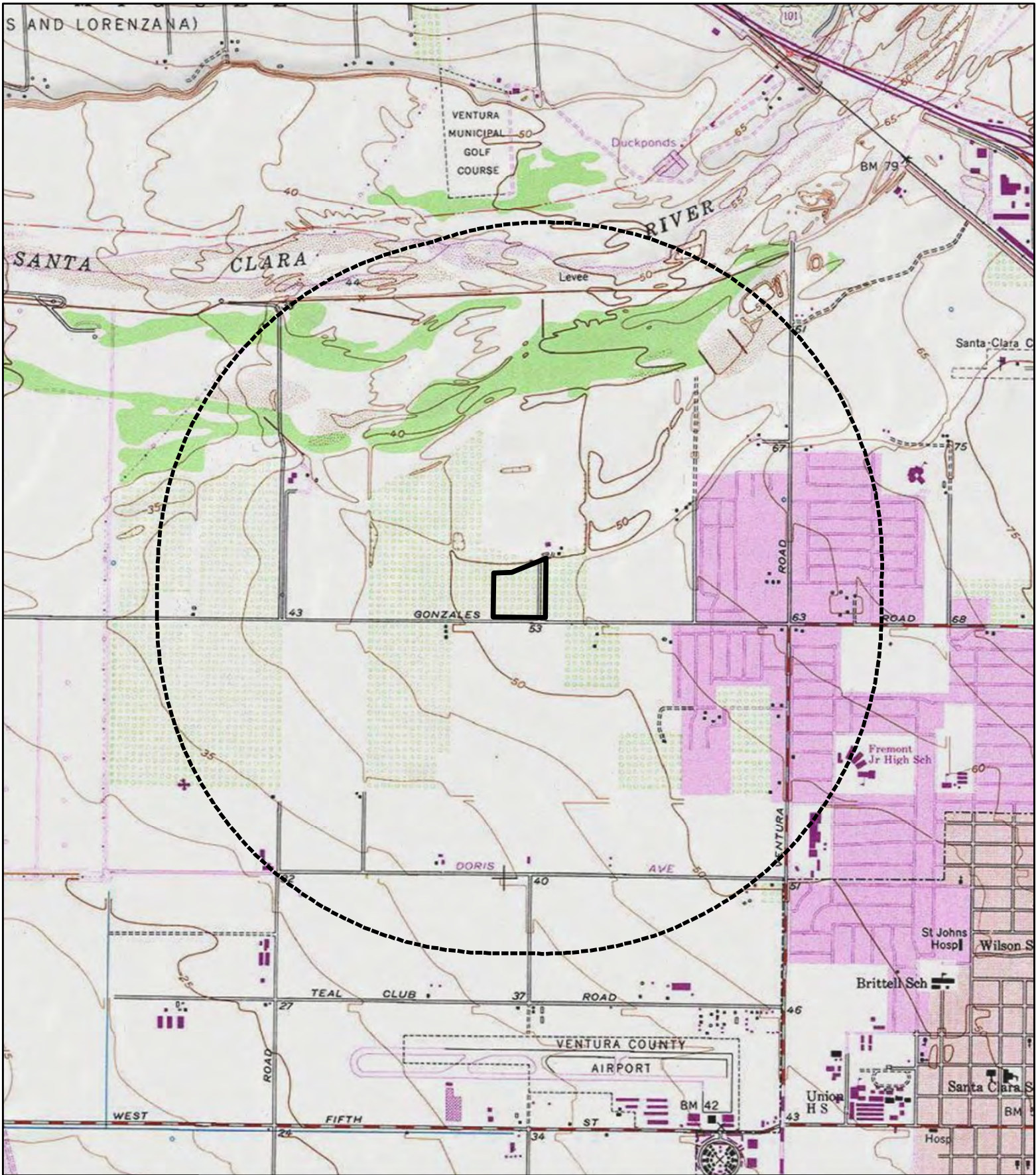


**Legend**  
 Project Area



**Attachment A**  
**Figure 1-1**  
**Project Location**  
 Thurgood Marshall Elementary School  
 Oxnard, CA





**Legend**

- Project Area
- Project Area 1-mile Radius

N

0      0.25      0.5

Miles

**Attachment A**  
**Figure 1-1**  
**Project Location and 1**  
**Mile Radius Study Area**





THURGOOD MARSHALL DR

THURGOOD MARSHALL DR

N PATTERSON RD

W GONZALES RD



Legend

 Project Area

N

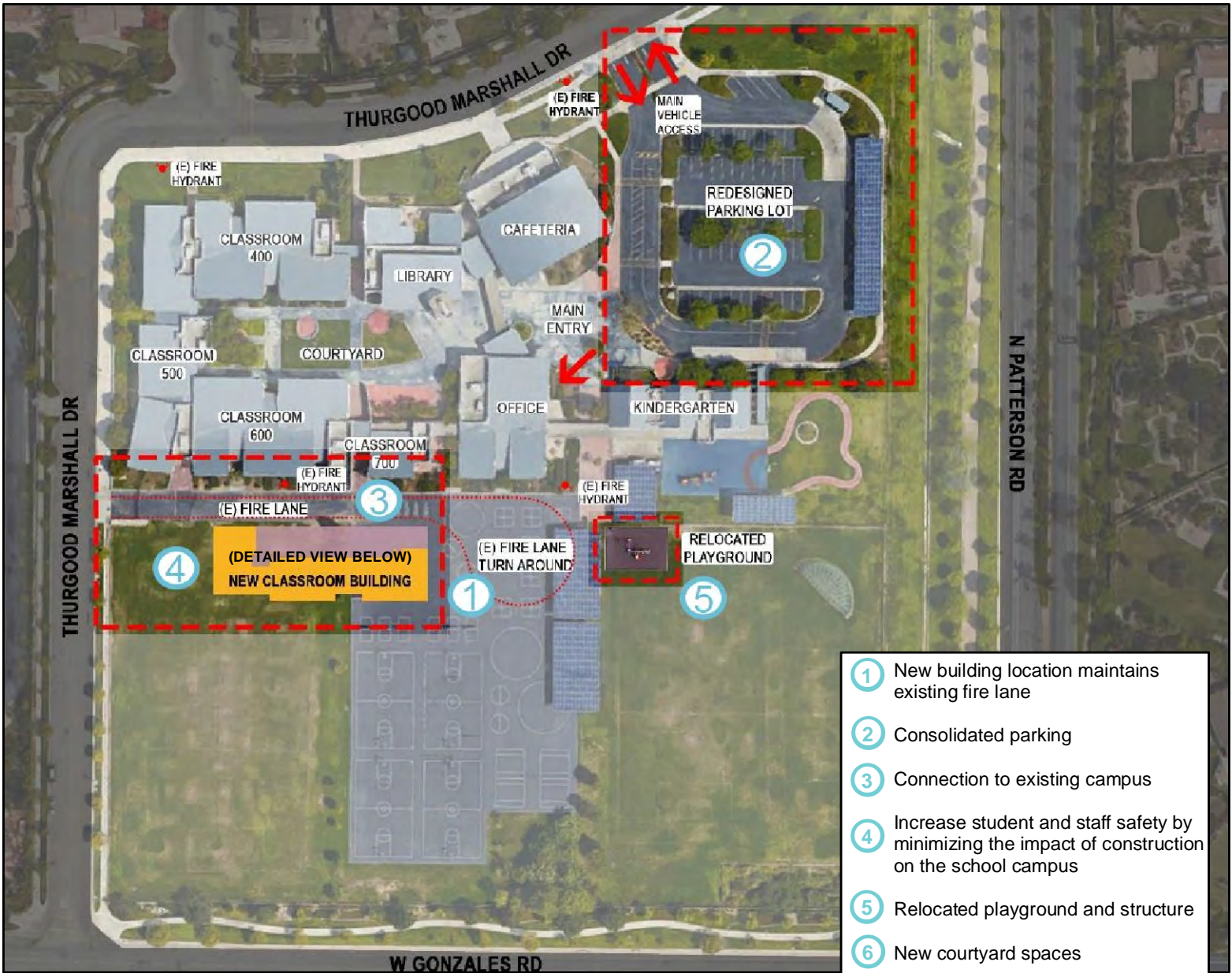


0 50 100  
Feet

**Attachment A**  
**Figure 1-3 Project**  
**Location Aerial**  
**Photograph**

Thurgood Marshall Elementary School  
Oxnard, CA





- 1 New building location maintains existing fire lane
- 2 Consolidated parking
- 3 Connection to existing campus
- 4 Increase student and staff safety by minimizing the impact of construction on the school campus
- 5 Relocated playground and structure
- 6 New courtyard spaces
- 7 Existing soccer field layout to remain
- 8 Existing hardtop play areas to be relocated



**Attachment A**  
**Figure 1-4**  
**Conceptual Site Plan**  
 Thurgood Marshall Elementary School  
 Oxnard, CA

**Native American Contact List  
Ventura County  
January 26, 2016**

Barbareno/Ventureno Band of Mission Indians  
Julie Lynn Tumamait-Stennslie, Chair  
365 North Poli Ave Chumash  
Ojai , CA 93023  
jtumamait@hotmail.com  
(805) 646-6214

Coastal Band of the Chumash Nation  
Mia Lopez, Chairperson  
, Chumash  
cbcn.nahc.sb@gmail.com  
(805) 324-0135

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(310) 831-5295

Coastal Band of the Chumash Nation  
Gino Altarmirano  
, Chumash  
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(510) 862-7615

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(805) 987-5314

Coastal Band of the Chumash Nation  
Isabel Ayala  
, Chumash  
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(661) 340-6997

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Ventura County  
January 26, 2016**

San Luis Obispo County Chumash Council  
Chief Mark Steven Vigil  
1030 Ritchie Road Chumash  
Grover Beach CA 93433  
(805) 481-2461  
  
(805) 474-4729 Fax

Santa Ynez Tribal Elders Council  
Antonio Flores, Chairperson  
P.O. Box 365 Chumash  
Santa Ynez , CA 93460  
elders@santaynezchumash.org  
(805) 688-7997  
  
(805) 693-1768 Fax

Santa Ynez Band of Mission Indians  
Vincent Armenta, Chairperson  
P.O. Box 517 Chumash  
Santa Ynez , CA 93460  
varmenta@santaynezchumash.  
(805) 688-7997  
  
(805) 686-9578 Fax

Santa Ynez Tribal Elders Council  
Freddie Romero, Cultural Resources Coordinator  
P.O. Box 365 Chumash  
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freddyromero1959@yahoo.com  
(805) 688-7997, Ext 37

Santa Ynez Band of Mission Indians  
Tribal Admin/Counsel Sam Cohen  
P.O. Box 517 Chumash  
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info@santaynezchumash.org  
(805) 688-7997  
  
(805) 686-9578 Fax

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**This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed Thurgood Marshall Elementary School Project & River Park School District Project, Ventura County.**

**From:** [Coastal Band](#)  
**To:** [Farrell, Jenna](#)  
**Subject:** Re: Thurgood Marshall School Project-Letter Attached  
**Date:** Friday, February 19, 2016 1:07:33 PM

---

Dear Ms. Farrell ,

Haku. The Coastal Band of the Chumash Nation (the “Coastal Band”) has received your letter regarding the above-referenced project, dated February 5, 2016. Thank you for the information regarding the project. The protection of our ancient village sites, burial grounds, traditional gathering and ceremonial locations, and other cultural, religious and historic resources is extremely important to us, as we trust it is to you as well. However, at this time we do not believe that our involvement in this project is necessary. Please continue to copy us on communications and notices related to this matter so that we can monitor it. If we change our position and wish to be actively involved in the decision-making, we will notify you. You may reach me at [cbcn.nahc.ventura@gmail.com](mailto:cbcn.nahc.ventura@gmail.com) if you have any questions.

Also, we wish to remind you that the Coastal Band is only one of several Chumash tribal organizations that may be interested in this project. We urge you to contact all other Chumash organizations and any other Native American tribal organizations that may be impacted.

Ksukuwiyuw (Respectfully),

**Isabel M Ayala,**  
Ventura County Regional  
Representative



# Coastal Band of the Chumash Nation

On Fri, Feb 5, 2016 at 12:51 PM, Farrell, Jenna <[Jenna.Farrell@tetrattech.com](mailto:Jenna.Farrell@tetrattech.com)> wrote:

Dear Ms. Ayala:

Tetra Tech, Inc. is assisting the Oxnard School District (OSD or District) with an Initial Study for the proposed Thurgood Marshall School Project. Thurgood Marshall Elementary School (K-5) is located at 2900 Thurgood Marshall Drive in Oxnard, California, 93036. As part of our Initial Study for the project, the NAHC provided a list of Native American individuals and organizations that may have knowledge of cultural resources in the Project area. Your name was included on the NAHC list and we are contacting you as part of our outreach efforts to identify any known cultural resources within the Project study area or answer any question you may have.

Please see the attached letter that provides information on the Project and maps. Please feel free to contact me by email or the phone numbers below with any comments or questions.

Sincerely,

Jenna

**Jenna Farrell | Cultural Resources**

Direct: [916.853.4575](tel:916.853.4575) | Main: [916.852.8300](tel:916.852.8300) | Fax: [916.852.0307](tel:916.852.0307) | Cell: [916.206.8705](tel:916.206.8705)

[Jenna.Farrell@tetrattech.com](mailto:Jenna.Farrell@tetrattech.com)

**Tetra Tech, Inc. | Sciences**

2969 Prospect Park Drive, Suite 100 | Rancho Cordova, CA 95670 | [www.tetrattech.com](http://www.tetrattech.com)

**From:** Farrell, Jenna  
**To:** ["Freddie Romero"](#)  
**Subject:** RE: Thurgood Marshall School Project-Outreach letter  
**Date:** Friday, March 11, 2016 12:51:00 PM  
**Attachments:** [Ventura Contact List Thurgood Marshall Elementary and River Park School.pdf](#)

---

Hi Mr. Romero:

The NAHC provided a list of Native American Contacts for Ventura County (see attached), we have provided a letter to all those on that list.

Thank you for your quick reply,

Jenna

---

**From:** Freddie Romero [mailto:[freddyromero1959@yahoo.com](mailto:freddyromero1959@yahoo.com)]  
**Sent:** Friday, March 11, 2016 12:44 PM  
**To:** Farrell, Jenna <[Jenna.Farrell@tetrattech.com](mailto:Jenna.Farrell@tetrattech.com)>  
**Subject:** Re: Thurgood Marshall School Project-Outreach letter

Ms. Farrell,

I don't know of any cultural sites in the area, but have you contacted any of the local tribes?

Freddie Romero  
Cultural Resources Coordinator  
SYBCI Elders Council  
805-688-7997 X4109  
805-403-2873

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---

**From:** "Farrell, Jenna" <[Jenna.Farrell@tetrattech.com](mailto:Jenna.Farrell@tetrattech.com)>  
**To:** "[freddyromero1959@yahoo.com](mailto:freddyromero1959@yahoo.com)" <[freddyromero1959@yahoo.com](mailto:freddyromero1959@yahoo.com)>  
**Sent:** Friday, March 11, 2016 12:34 PM  
**Subject:** Thurgood Marshall School Project-Outreach letter

Dear Mr. Romero:

Hello. Tetra Tech, Inc. is assisting the Oxnard School District (OSD or District) with an

Initial Study for the proposed Thurgood Marshall School Project. Thurgood Marshall Elementary School (K-5) is located at 2900 Thurgood Marshall Drive in Oxnard, California, 93036. As part of our Initial Study for the project, the NAHC provided a list of Native American individuals and organizations that may have knowledge of cultural resources in the Project area. Your name was included on the NAHC list and we are contacting you as part of our outreach efforts to identify any known cultural resources within the Project study area or answer any question you may have.

Please see the attached letter that provides information on the Project and maps. Please feel free to contact me with any comments or questions.

Sincerely,

Jenna

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PRELIMINARY GEOTECHNICAL AND GEOLOGICAL INVESTIGATION  
FOR A NEW CLASSROOM BUILDING AT  
THE THURGOOD MARSHALL ELEMENTARY SCHOOL  
2900 THURGOOD MARSHALL DRIVE  
OXNARD, CALIFORNIA

Prepared for:  
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October 30, 2015

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Inspection | Testing | Geotechnical | Construction Engineering | Civil Engineering | Surveying

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## 1.0 INTRODUCTION AND SCOPE OF SERVICES

### 1.1 Introduction

This report presents the results of a geotechnical investigation performed by CTE South, Inc. (CTE), and provides conclusions and recommendations for the proposed development at an existing elementary school in Oxnard, California. We have performed this work in accordance with the terms described in our work proposal dated August 4, 2015. It is understood that the project will consist of the construction of a new 2-story building. Associated developments include asphalt and concrete paved areas, landscaping and flatwork. We understand that the existing parking lot northeast of the school's administration building and east of the existing cafeteria will be expanded. Recommendations for excavations, fill placement, and foundation design for the proposed structures are presented in this report. Recommendations for several different forms of grading and foundation design are also presented herein. References reviewed for this report are provided in Appendix A.

### 1.2 Scope of Services

The scope of services provided included:

- Review of readily available geologic and soils reports.
- Coordination with Digalert (an underground utility locating company) and local utility companies in order to avoid damaging utilities during subsurface exploration activities.
- Excavation of truck-mounted exploratory borings, CPT and soil sampling.
- Laboratory testing of selected soil samples.
- Description of the geology and evaluation of potential geologic hazards.
- Engineering and geologic analyses.
- Preparation of this report.



## 2.0 SITE DESCRIPTION

The subject site is located at 2900 Thurgood Marshall Drive in Oxnard, California, which is located northwest of the intersection of Patterson Road and Gonzales Road (Figure 1). The site is an existing elementary school that has been labeled by the Ventura County Assessor's office as having a parcel number of 179-0-007-030 with a size of 13.0 acres. The approximate center of the proposed building has the coordinates of 34.220402°, north latitude and 119.209104° west longitude.

The site's elevation is approximately 51.0 and 52.0 feet above mean sea level, according to a survey performed by MNS Engineers, dated September 2015. The site is relatively flat, but has been minimally graded for use as an elementary school. The site is bordered to the west and north by Thurgood Marshall Drive, beyond which are single-family residences. The site is bordered to the east by Patterson Road, beyond which are single-family residences. To the south, the site is bordered by Gonzales Road, beyond which are agricultural fields. The subject site is illustrated on Figure 2.

## 3.0 FIELD INVESTIGATION AND LABORATORY TESTING

### 3.1 Field Investigation

The field investigation was conducted between September 23, 2015 and October 3, 2015. Our field investigation included the excavation of 2 exploratory borings, sampling of surface

and subsurface soils, and the performance of five exploratory cone penetration tests (CPTs). The locations of the exploratory borings and the CPTs are indicated on Figure 2. The exploratory borings were excavated with a track-mounted drill rig with rubber treads on September 26, 2015. The drilling rig was equipped with eight-inch-diameter, hollow-stem augers that were advanced to depths ranging between 10.5 feet and 50.5 feet below the ground surface (bgs).

On October 3, 2015, five (5) CPTs were performed with a 30-ton, four-axle truck-mounted rig, extending to depths ranging between approximately 28.9 and 50.3 feet below current grades. Practical refusal was met at a depth of approximately 28.9 feet below current grades on CPT-1. As such, CPT-1b was performed approximately 5 feet and advanced to a depth of approximately 50.0 feet.

Disturbed bulk samples representing a mixture of soils at relatively shallow depths were recovered from boring cuttings, as well as sampled from the surface in areas to receive pavement in the northeastern portion of the site. Subsurface soil samples were collected by driving Standard Penetration Test and Modified California samplers within the hollow-stem borings at various depths as indicated on the Boring Logs (Appendix B). The borings and CPTs were either backfilled (per standards set forth by the Ventura County Watershed Protection District) either immediately after completion.

The approximate locations of the borings and CPTs are presented on Figure 2.

The soils were logged in the field by an experienced and state certified CTE South, Inc. geologist, and visually classified in general accordance with the Unified Soil Classification System. The field descriptions have been modified on the boring logs, where appropriate, to reflect laboratory test results.

Additionally, our office reviewed a geotechnical report by S/G Laboratories, Inc. (1999), and a geologic report CFS Engineering Geology, Inc., (1999). Both of these reports reference borings, of which the locations of Borings 4 and 5 are shown on Figure 2. The soil types and data obtained from these borings were incorporated in our analysis of the soil and geologic conditions at the site.

### 3.2 Laboratory Testing

Laboratory tests were conducted on selected soil samples for classification purposes and to evaluate physical properties and engineering characteristics. Laboratory tests included: wash from #200 sieve analysis, Expansion Index, in-situ moisture content and densities, direct shear, and chemical characteristics. Where practical, test results are shown on the boring logs in Appendix B. Test descriptions and the remaining laboratory test results are included in Appendix C.

## 4.0 GEOLOGY

### 4.1 General Geographic and Geologic Settings

The site is located on relatively flat coastal lowlands called the Oxnard Plain. The Oxnard Plain is a relatively thick sequence of sedimentary deposits from the Santa Clara River, approximately 5000 feet to the north and the Callegas Creek, which is approximately 9.0 miles to the east and southeast. The Oxnard Plain is located within the westerly end of the Transverse Ranges, with the Topa Topa Mountains to the north and the Santa Monica and the Santa Susanna Mountains to the east. These mountain ranges are generally considered to be the source of the sediments within the Oxnard Plain, and the sediments beneath the area of the project site.

### 4.2 Geologic and Soil Conditions

Based on the regional geologic map prepared by Clahan, Kevin B. (2003). the surficial geologic unit underlying the site consists of Holocene Alluvial Deposits (Figure 3). Clahan described the alluvial deposits as “Holocene alluvial fan deposits, fine facies; fine-grained alluvial fan and flood plain overbank deposits on very gently sloping portions of the valley floor; composed of predominantly clay with interbedded lenses of coarser alluvium (sand and occasional gravel).”

The United States Department of Agriculture's (USDA) Web Soil Survey identifies the majority of the soil in the project area as "Anacapa sandy loam, 0 to 2 percent slopes." The Anacapa sand loam is described as "sandy loam" to a depth of approximately 35 inches, below which is "stratified coarse sandy loam to loam" to a depth of 60 inches. Our findings generally concurred with this description.

Our subsurface investigation indicated that surface soils at the project site have been disturbed, likely due to agricultural activities prior to and during the development and use of the site as an elementary school. Reports from TRAK Environmental Group (2002a, 2002b, 2002c, 2000d and 2002e) indicate that the site received imported fill soils from various locations.

The disturbed soils appear to extend to various depths ranging between approximately 1.5 feet to 3.0 feet below current grades, and consist typically of dark brown, sandy silt and silty sand, with occasional variations in the amounts of the sand, silt and clay. Below the disturbed surface soils, the soils consisted of clays, silts and sands of various thicknesses.

#### 4.3 Groundwater Conditions

Static groundwater was encountered in Boring B-1 and in all of the CPT locations. The depth of the static groundwater observed in B-1 at 28.0 feet below current grades, and varied between depths of 28.0 and 31.5 feet below current grades in the CPTs when measured in the remaining holes after removing the CPT probe. Additionally, wet materials

were observed at a depth of approximately 24 feet below current ground elevations in Boring B-1, indicating the presence of perched groundwater.

The California Department of Water Resources (DWR) maintains a database of historical groundwater levels from wells across the site. This database can be viewed online at <http://www.water.ca.gov/waterdatalibrary/>. One of the wells in their database is located immediately south of Gonzales Road. This well has a "State Well Number" of 02N22W32C004S. Groundwater levels have been recorded at this well at various intervals between January 2011 and February 2014. According to the DWR, water levels varied between 16.9 feet below ground surface elevations, and 67.0 feet below ground surface elevations.

Additionally, previous geologic and geotechnical studies at the site indicate a static groundwater level as approximately 15 feet below original grades (S/G Laboratories, Inc., 1999, and CFS Engineering Geology, Inc., 1999). Additionally, the studies indicated that historically high groundwater was at 10 feet below original grades, which is the same as our findings.

In the USGS's "Seismic Hazard Zone Report for the Oxnard 7.5-minute Quadrangle," 2002, the USGS indicates that the historically high depth to groundwater is approximately 10 feet below current elevations. As such, it is our opinion that static groundwater levels can rise as high as approximately 10 feet below current ground surface levels during, or shortly,

after relatively wet periods of time. Additionally, at times when static groundwater is lower (such as it's current elevation of approximately 28.0

#### 4.4 Geologic Hazards

Geologic hazards that were considered to have potential impacts to site development were evaluated based on field observations, published hazard maps, literature review, and laboratory test results. There are two main geologic hazards at the site: 1) ground shaking due to earthquakes, and 2) earthquake-induced liquefaction, seismic settlement, and associated phenomena. The following paragraphs address geologic hazards considered and their potential risk to the site.

##### 4.4.1 Surface Fault Rupture

Based on our site reconnaissance and review of the referenced literature, the site is not within a State of California-designated Alquist-Priolo Earthquake Fault Studies Zone, and no known active fault traces underlie or project toward the site. According to the California Geological Survey, a fault is active if it displays evidence of activity in the last 11,000 years. Therefore, the potential for surface rupture from displacement or fault movement beneath the proposed improvements is considered low.

##### 4.4.2 Local and Regional Faulting

The California Geological Survey (CGS) and the United States Geological Survey (USGS) broadly group faults as "Class A" or "Class B" (Frankel et al., 2002). Class

A faults are identified based upon relatively well-defined paleoseismic activity, and a fault-slip rate of more than 5 millimeters per year (mm/yr). In contrast, Class B faults have comparatively less defined paleoseismic activity and are considered to have a fault-slip rate less than 5 mm/yr.

The nearest known Class B fault is the Oakridge Fault. The Oakridge Fault is located approximately 2.1 miles (3.3 km) to the north of the site. The location of this fault is implied, as no surface expression of the fault exists. The fault is thought to be a north-dipping reverse fault that is obscured by Quaternary and Holocene sedimentary deposits (CGS, 2002). Another Class B fault that is relatively close to the site is the the Simi-Santa Rosa Fault Zone. The CGS describes this fault zone as a right-lateral with three segments that extend approximately 40 kilometers into the Transverse Ranges (CGS, 2002) (2002). The closest segment of the Simi-Santa Rosa Fault Zone is the Springville Fault. The southwestern most extension of this fault lies approximately 5.1 miles (8.2 km) to the east of the site.

The nearest known Class A fault is the Carrizo segment of the San Andreas Fault, which is located approximately 44.5 miles (71.5 kilometers) north-northeast of the site at a point near Frasier Park, California.

The following table presents the San Andreas Fault and Simi-Santa Rosa Fault Zone nearest to the site magnitude and fault classifications.



TABLE 2 NEAR-SITE FAULT PARAMETERS			
FAULT NAME	DISTANCE FROM SITE (in miles)	MAXIMUM EARTHQUAKE MAGNITUDE	CLASSIFICATION
San Andreas (Carrizo Segment near Gorman, California)	44.5 (approx.)	7.4	A
Simi-Santa Rosa Fault Zone	5.1 (approx.)	4.5	B
Oakridge Fault	2.1 (approx. and implied)	5.5	B

Figure 4 is a regional map from the California Geologic Survey (CGS), which shows the site's location in relationship to known active faults, as defined by CGS.

The CGS 2008 Probabilistic Seismic Hazards Ground Motion Interpolator Page (on line at [http://www.quake.ca.gov/gmaps/PSHA/psha\\_interpolator.html](http://www.quake.ca.gov/gmaps/PSHA/psha_interpolator.html)) indicates ground motions with 10 percent probability of exceedance in 50 years for the site coordinates 34.220402° latitude and -119.209104° longitude, as underlain by soils corresponding to site Class D, are presented in the following Table 3.

TABLE 3 SITE GROUND MOTION WITH 10% PROBABILITY OF EXCEEDANCE IN 50 YEARS	
PARAMETER	UNIT GRAVITY
Peak Ground Acceleration	0.508
Spectral Acceleration at Short (0.2 second) Period	1.085
Spectral Acceleration at Long (1.0 second) Period	0.667

The site could be subjected to significant shaking in the event of a major earthquake on any of the faults listed above or other faults in the southern California or northern Baja California area.

Note that further parameters, including further parameters are discussed in Appendix E of this report.

#### 4.4.3 Historic Seismicity

The recent seismic history (last 50 years) of the site area is moderate compared to other areas of southern California and northwestern Baja California, Mexico. Three moderately large earthquakes (registering moment magnitudes of between 6.0 and 6.9) have been reported within a 75 km radius of the project site during the period of instrumental recordings, which began in the early 1900s. The largest of the recorded earthquakes was the 1994 Northridge Earthquake (moment magnitude of 6.7).

A previous earthquake that occurred on December 21, 1812 may have been larger. However, little is known about this event. Reports of the amounts and extents of damage vary greatly and seem to have been exaggerated in many of the reported accounts. As such, estimates for a moment magnitude vary greatly. It is known that several structures in the area were damaged by this earthquake, including extensive

damage to the San Buenaventura Mission, located approximately 10.5 miles to the northwest of the site.

Historically there have been several larger (>M5.5) earthquakes within a 74 km radius of the site. Review of the CGS historical California earthquake epicenters (<http://redirect.conservation.ca.gov/cgs/rghm/quakes/historical/index.htm>) for earthquakes with magnitude greater than M5.5 within 75 kilometers (46 miles) of the project site are provided on the following table.

TABLE 4 Relatively Nearby Earthquake History				
EARTHQUAKE DATE (yr-mo-day)	EARTHQUAKE TIME (GMT)	MAGNITUDE	DISTANCE FROM SITE (miles)	GENERAL LOCATION
1812-12-21	1900 (approx.)	7.1 (approx.)	39.5 (approx.)	Offshore and west of Ventura
1827-09-24	0400	6.0	6.6	East of San Buenaventura Mission
1854-05-31	1250	6.0	31 (approx.)	Santa Barbara
1883-09-05	1230	5.8	39.5 (approx.)	San Emigdio
1893-04-04	1940	5.8	37 (approx.)	Newhall area
1893-05-19	0035	5.8	11 (approx.)	Offshore Ventura
1919-02-16	1557	5.7	51.1	Tejon Pass region
1926-02-18	1818	5.5	31.2	Santa Barbara
1973-02-21	1445	5.9	12.2	Point Mugu
1978-08-13	2254	6.0	30.3	Offshore Santa Barbara
1981-09-04	1550	5.9	33.4	50 km south of Ventura
1994-01-17	1230	6.7	34.5	Northridge
1994-01-17	2333	5.9	26.2	Northridge

#### 4.4.4 Liquefaction, Seismic Settlement, & Associated Phenomena

Liquefaction is the significant loss of soil strength due to pore pressure increase (CDMG 1997). Ground shaking reorients the unconsolidated sediment grains into a more compact arrangement. If the water table is close to the surface during this reorientation, the grain-to-grain contacts are reduced and the load is temporarily transferred to the pore water. This increases pore pressure, decreases the soil

shear strength, and the deposit then behaves like a liquid (Costa and Baker 1981). Liquefaction may occur when groundwater is present within the potentially liquefiable material, the soil is granular and meets a specified range of grain sizes, and the soil is in a loose state of low relative density. If these conditions are present and strong ground motion occurs, portions of the soil column could liquefy, depending on the intensity and duration of the strong ground motion. Soils most susceptible to liquefaction are saturated, very loose to loose, fine grained sandy and silty soils. Liquefaction may manifest itself at the surface as lateral spreading, sand boils, lurching and ground fissuring, loss of bearing strength, and settlement. Any structures founded on or above potentially liquefiable soils may experience settling (both total and differential) and loss of foundation support during ground shaking. The potential for the occurrence of liquefaction is evaluated with respect to the Factor of Safety (FS) as defined in CDMG 1997.

$$FS = CSR_{liq}/CSR_{req}$$

Where:

*FS* is the Factor of Safety;

*CSR<sub>liq</sub>* is the cyclic stress ratio required to generate liquefaction; and

*CSR<sub>req</sub>* is the cyclic stress ratio generated by the anticipated earthquake.

Soils with a FS less than 1.3 are considered as potentially liquefiable (CDMG 1997).

#### 4.4.4.1 Regional Liquefaction Potential Data

The potential for liquefaction in the site area was reviewed based on data available from the CGS and USGS. The map associated with the Seismic Hazard Zone Report from the CGS (2002, revised 2010) indicates that the site is in an area

potentially subject to liquefaction-related effects (Figure 6). As such, an analysis of the liquefaction potential was performed by our office as described in Section 4.4.4.2.

#### 4.4.4.2 Liquefaction Analysis

A liquefaction analysis was performed on data obtained from the cone penetration tests (CPTs) CPT-1b, CPT-2, CPT-3, CPT-4, and from Boring B-1. The methods and results of the analyses are summarized below and in Appendix F.

Data from the deep boring and CPT explorations were analyzed with respect to the site seismicity using the appropriate code-derived  $PGA_M$  of 0.997g and a conservative assumed historical high groundwater depth of 10 feet below current grades. The analyses presented in Appendix E confirm that isolated layers of underlying soils are potentially susceptible to liquefaction, and that the subsurface soils are anticipated to locally liquefy under the design seismic event. Based on the evaluation output, dynamic settlement is anticipated to occur in relatively thin and possibly discontinuous layers. Total liquefaction settlements are estimated to be on the order of 1.65 and 2.33 inches.

#### 4.4.4.3 LATERAL SPREADING

Due to the relatively flat site area topography and the lack of significant ditches, trenches or other features exhibiting differential elevations, it is our opinion that the potential for lateral spreading to affect the site during a major seismic event is low.

#### 4.4.5 Flooding, Tsunamis and Seiche Evaluation

According to a 2010 map (shown in Figure 7) produced by the Federal Emergency Management Agency (FEMA), the project site does not lie within an area that is likely to flood. FEMA describes the area as “Zone X,” which is described as “Areas determined to be outside the 0.2% annual chance floodplain.”

The site is located approximately 4700 feet south of the Santa Clara River. However, the published maps that were reviewed by this office do not indicate that the site is subject to flooding.

Due to the elevation of the site and the lack of any significant bodies of water either on or adjacent to the site, it is our opinion that the potential for tsunamis or seiches to affect the subject site is negligible.

#### 4.4.6 Landslides and Debris Flows

The site is relatively flat with no nearby hillsides or other topographic features. The site is also not adjacent to any areas that are potential paths for debris flows, and not mapped as in an area potentially subjected to such hazards (CGS, 2009). Therefore, landsliding and debris flows are not considered significant geologic hazards within or adjacent to the site.

#### 4.4.7 Land Subsidence

Subsidence is generally anticipated to be the result of groundwater extraction, oil extraction, and/or tectonic plate movements. Land subsidence has been documented in the central eastern portion Oxnard Plain (Ventura County General Plan, 2000). Based on the information available and our review, land subsidence is not anticipated to be a significant hazard at the subject site.

#### 4.4.8 Compressible and Expansive Soils

The upper disturbed fill materials from activities prior to and during the construction of the existing buildings at the site as described in Section 4.2 are considered to have a slight to moderate susceptibility to compression. Recommendations for removal and recompaction of these materials are described in Section 5.2 of this report. If followed, the recommendations for removal and compaction should mitigate any potential for compressibility.



The near-surface materials at the site are considered to have a have very low to low expansion potential (EI less than 50), and should not pose a significant risk to the proposed construction.

#### 4.4.9 Corrosive Soils

Laboratory test results indicate that near-surface soils at the site present a moderate sulfate exposure to Portland cement concrete (2010 CBC; ACI 318, 2011, Table 4.3.1). The “Corrosion Guidelines, Version 2.0” by the California Department of Transportation (Caltrans), (2012), indicate:

*“For Structural Elements, the Department considers a site to be corrosive if one or more of the following conditions exist for the representative soil and water samples taken at the site:*

*Chloride concentration is 500 ppm or greater, sulfate concentration is 2000 ppm or greater, or the pH is 5.5 or less.”*

Thus, in accordance with current Caltrans procedures, the subject site would be considered “moderately corrosive,” based on testing for corrosion potential of sampled surface soils from the site. As such, we recommend the use of Type II Portland cement with a minimum water/cement ratio of 0.5 and a minimum strength of 4000 psi per Table 4.3.1 in ACI 318. Additionally, the resistivity test results have been interpreted by others to represent a moderate potential for corrosion for buried metallic conduits (Roberge, 1999).

CTE does not practice corrosion engineering. Therefore, if corrosion of improvements is of more significant concern, a qualified corrosion engineer should be consulted.

## 5.0 CONCLUSIONS AND RECOMMENDATIONS

### 5.1 General

Based on the results of our background review, subsurface explorations, laboratory testing, and engineering analyses, it is our opinion that the site may be utilized for the proposed construction. Existing agricultural and fill soils should not be used to support significant structures or the proposed buildings unless they are removed and recompacted according to the recommendations in this report.

While groundwater was encountered at a depth of 28.0 feet, historical groundwater may be as high as 10 feet below current grades. Additionally, perched groundwater was encountered in Boring 1 at approximately 22 feet. Groundwater and perched groundwater may be located higher than observed after rainy or wet periods at the site.

The existing fill soils and disturbed soils should be removed and replaced as compacted fill. Fills should be compacted as recommended in this report.

## 5.2 Site Preparation

We conclude that the proposed development of the site is feasible from a geotechnical standpoint, provided the recommendations in this report are incorporated into the design and construction of the project. Recommendations for the proposed earthwork and improvements are included in the following sections and Appendix D. However, recommendations in the text of this report supersede those presented in Appendix D, should conflicts exist. All recommendations may require modifications or updating as project plans evolve, buildings locations are modified, or based on the conditions encountered during earthwork or construction.

Following demolition of the existing structures, underground utilities, and irrigation or water structures not to remain, the proposed improvement areas should be cleared of existing debris and deleterious materials. Objectionable materials, such as construction debris, vegetation, and other deleterious materials not suitable for structural backfill should be disposed of off-site at a regulated disposal facility. In the area of the proposed improvements, including structures, roadways, and minor distress-sensitive improvements, existing fill material and any eroded, desiccated, burrowed, disturbed soils from agricultural use, or otherwise loose or disturbed soils should be excavated to the depths described in Section 5.8 in the areas of proposed buildings, to the depth of suitable native materials, or to a minimum 42 inches below the bottom of all footings, whichever depth is greatest. It is this office's opinion that the depth to suitable native material will vary across the site, but

generally lie approximately 4 feet below current grades, with the potential for a few localized deeper areas of fill. The areas of fill to be removed and recompact should be identified by a representative of this office prior to replacement and recompaction.

Removals should extend at least five feet laterally beyond the perimeter of the proposed structures, where feasible. Exposed subgrade should be moisture conditioned and properly compacted prior to receiving fill. The exposed subgrade may also require scarification. A representative of our office should observe the exposed subgrade to determine if scarification is necessary or practical based on the actual conditions present at the time of grading.

Any existing below ground utilities should be redirected around proposed structures or, alternatively, the conflicting utility backfill material overexcavated to the depth of suitable material with a minimum two-sack cement/sand slurry or compacted fill placed in the resulting void. If present, existing utilities at an elevation to extend through the proposed footings should be sleeved and caulked to minimize the potential for moisture migration below the structure slab. Any existing utility backfill present within the prism created by a 1:1 plane extending from the outer edges of the footings to suitable material up to ten feet beyond the building perimeter should be overexcavated and one-sack cement/sand slurry or compacted fill soil should be placed in the resulting area, as feasible. Abandoned pipes exposed by grading should be securely capped to prevent moisture from migrating beneath foundation and slab soils.

An engineer or geologist from CTE should observe the exposed ground surface prior to scarification, if necessary. Excavation should continue until suitable native materials are encountered as indicated by a representative of our office. Organic and other deleterious materials not suitable for structural backfill should be properly disposed of off site.

### 5.3 Site Excavation

Based on CTE's observations, shallow excavations at the site should be feasible using standard, well-maintained construction equipment run by experienced operators.

### 5.4 Fill Placement and Compaction

Following removal of existing fill material and loose, disturbed soils, the areas to receive fills, backfill from overexcavations, or improvements should be moisture conditioned, and properly compacted or wetted and proof-rolled, as appropriate. A representative of our office should observe the overexcavated surface or the excavated areas to determine if scarification is required. Fill and backfill should be compacted to a minimum relative compaction of 90 percent at the wet side of the moisture content, as evaluated by ASTM D 1557. The optimum lift thickness for fill soil will depend on the type of compaction equipment used. Backfill should generally be placed in uniform, horizontal lifts not exceeding six to inches in loose thickness.

### 5.5 Fill Materials

The on-site existing fill material, materials disturbed for agricultural activities, and native materials are considered suitable for use as fill and backfill material. However, these materials should be screened of organic materials and materials generally greater than three inches in maximum dimension. Irreducible materials greater than three inches in maximum dimension were not identified in the preliminary investigation, but may be present due to the variable nature of the materials encountered. If irreducible materials greater than three inches (such as cobbles or boulders) are encountered, they generally should not be used in shallow fills (within six feet of proposed grades). In utility trenches, adequate bedding should surround pipes.

Imported fill beneath structures, pavements and walks should have an Expansion Index of 20 or less (ASTM D 4829). Imported fill soils for use in structural or slope areas should be evaluated by the soils engineer before importation to the site. Imported fill soils may be subject to Department of Toxic Substances Control (DTSC) screening requirements, as determined by the owner.

If proposed, any retaining wall backfill located within a 45-degree wedge extending up from the heel of the wall footing should consist of soil having an Expansion Index of 20 or less (ASTM D 4829) with less than 30 percent passing the No. 200 sieve. The upper 12 to 18

inches of wall backfill could consist of lower permeability soils, in order to reduce surface water infiltration behind walls. We understand that no basements are proposed at this time.

### 5.6 Temporary Construction Slopes

The following recommended temporary slopes should be relatively stable against deep-seated failure, but may experience localized sloughing. Recommended slope ratios as set forth in the following table.

TABLE 5.7 RECOMMENDED TEMPORARY SLOPE RATIOS		
SOIL TYPE	SLOPE RATIO (Horizontal: vertical)	MAXIMUM HEIGHT
Undocumented Fill and Alluvium	1.5:1 (OR FLATTER)	5 to 7 Feet

Actual field conditions and soil type designations must be verified by a "competent person" while excavations exist, according to Cal-OSHA regulations. In addition, the above sloping recommendations do not allow for surcharge loading at the top of slopes by vehicular traffic, equipment or materials, or groundwater/seepage. Appropriate surcharge setbacks must be maintained from the top of all unshored slopes.

## 5.7 Foundation Recommendations

The following recommendations are for preliminary design purposes only. These foundation recommendations should be reviewed after completion of rough grading of the building pad areas.

Conventional continuous and/or spread footings may be suitable. Grade beams should generally be installed across all large entrances or critical areas in the structures. Footings and grade beams should have minimum depths of 18 inches below the lowest adjacent grade for one- and two- story structures. Isolated spread footings should be a minimum of two feet in minimum dimension. Continuous footings and grade beams should be reinforced as required by the structural engineer of record; however, we recommend minimum continuous reinforcement should consist of four No. 5 rebars, two near the top and two near the bottom. Footings may be designed using maximum allowable bearing capacities of 2,000 psf. A one-third increase is also considered acceptable for evaluation of short term loadings due to wind or seismic forces.

### 5.7.1 General Foundation Recommendations

The following general recommendations for footings are also provided:

- The structural engineer should provide recommendations for reinforcement of any spread footings and footings with pipe penetrations.
- Footing excavations should generally be maintained at above optimum moisture content until concrete placement.



- All foundation excavations should be observed by soil engineer during excavation, and prior to placement of reinforcing steel or formwork. The foundation excavations should be moistened to at least optimum moisture content.

### 5.7.2 Foundation Setback

Footings should bear beneath a 1:1 plane extended up from the nearest bottom edge of adjacent trenches and/or excavations. Deepening of affected footings may be a suitable means of attaining the prescribed setbacks.

### 5.7.3 Interior Concrete Slabs

Lightly loaded concrete slabs should be designed for the anticipated loadings but measure at least five inches in thickness. Minimum slab reinforcement should consist of a minimum of number 4 reinforcing bars placed on 18-inch centers, each way, at or above mid-slab height, but with proper concrete cover, or as per the project architect or structural engineer.

In moisture-sensitive floor areas, a suitable vapor retarder of at least ten-mil thickness (with all laps or penetrations sealed or taped) overlying a two-inch layer of consolidated aggregate base or sand (with SE of 30 or more) should be installed. A maximum two-inch layer of similar material may be placed above the vapor retarder to protect the membrane during steel and concrete placement. This recommended protection is generally considered typical in the industry. If proposed floor areas or coverings are considered especially sensitive to moisture emissions, additional recommendations from a specialty consultant could be obtained. CTE is not an expert at preventing moisture penetration through slabs.

A qualified architect or other experienced professional should be contacted if moisture penetration is a more significant concern.

Slabs subjected to heavier loads may require thicker slab sections and/or increased reinforcement. A 110-pci subgrade modulus is considered suitable for elastic design of minimally embedded improvements such as slabs-on-grade.

Subgrade materials should be maintained near or above optimum moisture content until slab underlayment or concrete are placed.

#### 5.8 Seismic Design/ Earthquake Design Criteria - IBC

Seismic ground motion values listed on the following Table 6 were derived in accordance with the ASCE 7-10 Standard, which is incorporated into the 2013 California Building Code that became effective January 1, 2014. The ground motion parameters were established based on Site Class and coordinates using the United States Geological Survey (USGS) U.S. Seismic Design Maps (located online at <http://earthquake.usgs.gov/designmaps/us/application.php>). Results for each set of seismic ground motion values are based on the site coordinates of 34.2204° north latitude and 119.2091° west longitude. These values are intended for the design of structures to resist the effects of earthquake ground motions.

TABLE 6 2013 CBC Chapter 16 SEISMIC GROUND MOTION VALUES		
PARAMETER	VALUE	REFERENCE
Site Class	D	ASCE 7-10 Chapter 20
Mapped Spectral Response Acceleration Parameter, $S_S$	2.544g	CBC Figure 1613.3.1 (1)
Mapped Spectral Response Acceleration Parameter, $S_1$	0.956g	CBC Figure 1613.3.1(2)
Seismic Coefficient, $F_a$	1.0	CBC Table 1613A.5.3(1)
Seismic Coefficient, $F_v$	1.5	CBC Table 1613A.5.3(2)
MCE Spectral Response Acceleration Parameter, $S_{MS}$	2.544g	CBC Section 1613A.3.3
MCE Spectral Response Acceleration Parameter, $S_{M1}$	1.435g	CBC Section 1613A.3.3
Design Spectral Response Acceleration, Parameter $S_{DS}$	1.696g	CBC Section 1613A.3.4
Design Spectral Response Acceleration, Parameter $S_{D1}$	0.956g	CBC Section 1613A.3.4

### 5.9 Lateral Resistance

Lateral loads acting against structures may be resisted by friction between the footings and the supporting soil or passive pressure acting against structures. If frictional resistance is used, we recommend allowable coefficients of friction of 0.30 (total frictional resistance equals the coefficient of friction multiplied by the dead load) for concrete cast directly against compacted fill. A design passive resistance value of 150 pounds per square foot per foot of depth (with a maximum value of 1,500 pounds per square foot) may be used. The allowable lateral resistance can be taken as the sum of the frictional resistance and the

passive resistance, provided the passive resistance does not exceed two-thirds of the total allowable resistance.

### 5.10 Settlement

The anticipated total **static** settlement is approximately 1 inch measured between adjacent structural elements. Differential settlements are expected to be less than one-half of an inch, measured between adjacent structural elements or in a distance of 30 feet.

The estimated total **seismic** settlement is 2.33 inches with maximum differential settlements on the order of 0.68 inches (the difference between the estimated settlement calculations for CPT-1b and CPT-3, as indicated in Appendix F) in a horizontal distance of approximately 30 feet.

### 5.11 Exterior Flatwork

To reduce the potential for cracking in exterior flatwork caused by minor movement of subgrade soils and concrete shrinkage, we recommend that such flatwork be installed with crack-control joints at appropriate spacing as designed by the project architect. Additionally, we recommend that flatwork be installed with at least number 3 reinforcing bars at 18-inch centers, each way, at mid-height of slab or other reinforcement per the project consultants. Flatwork, which should be installed with crack control joints, includes driveways, sidewalks, and architectural features. All subgrades should be prepared according to the earthwork recommendations previously given before placing concrete. Positive drainage should be established and maintained next to all flatwork. Subgrade

materials shall be maintained or elevated to above optimum moisture content until just before concrete placement.

### 5.12 Drainage

Surface runoff should be collected and directed away from improvements by means of appropriate erosion-reducing devices and positive drainage should be established around the proposed improvements. Positive drainage should be directed away from improvements at a gradient of at least two percent for a distance of at least five feet. However, the project civil engineers should evaluate the on-site drainage and make necessary provisions to keep surface water from affecting the site.

Generally, CTE recommends against allowing water to infiltrate building pads or adjacent to slopes. We understand that some agencies are encouraging the use of storm-water infiltration devices. Use of such devices tends to increase the possibility of high groundwater and slope instability. If infiltration devices must be used, then we recommend that they be underlain by an impervious barrier and that the infiltrate be collected via subsurface piping and discharged off site.

### 5.13 Construction Observation

The recommendations provided in this report are based on preliminary design information for the proposed construction and the subsurface conditions observed in the exploratory borings. The interpolated subsurface conditions should be checked in the field during construction to

verify that conditions are as anticipated. When applicable, soil samples should be collected prior to grading and tested for laboratory-defined optimum moisture contents with respect to maximum soil densities of compacted fill material. Upon completion of precise grading, soil samples should be collected to evaluate as-built Expansion Index and soluble-sulfate content of at-grade soils. Foundation recommendations may be revised upon completion of grading and as-built laboratory tests results.

Recommendations provided in this report are based on the understanding and assumption that CTE will provide the observation and testing services for the project. All earthwork should be observed and tested to verify that grading activity has been performed according to the recommendations contained within this report. The project engineer should evaluate all footing trenches before reinforcing steel placement.

#### 5.14 Plan Review

CTE should be authorized to review the project grading and foundation plans before commencement of earthwork to identify potential conflicts with the intent of CTE's recommendations.

### 6.0 LIMITATIONS OF INVESTIGATION

The field evaluation, laboratory testing, and geotechnical analysis presented in this report have been conducted according to current engineering practice and the standard of care exercised by reputable geotechnical consultants performing similar tasks in this area. No

other warranty, expressed or implied, is made regarding the conclusions, recommendations and opinions expressed in this report. Variations may exist and conditions not observed or described in this report may be encountered during construction.

The findings of this report are valid as of the present date. However, changes in the conditions of a property can occur with the passage of time, whether they be due to natural processes or the works of man on this or adjacent properties. In addition, changes in applicable or appropriate standards may occur, whether they result from legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated wholly or partially by changes outside our control. Therefore, this report is subject to review and should not be relied upon after a period of one year.

CTE's conclusions and recommendations are based on an analysis of the observed conditions. If conditions different from those described in this report are encountered, our office should be notified and additional recommendations, if required, will be provided.

We appreciate this opportunity to be of service on this project. If you have any questions regarding this report, please do not hesitate to contact the undersigned.

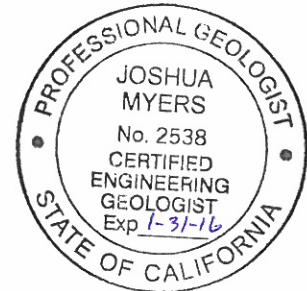
Respectfully submitted,

CTE South, Inc.

*Dharmesh Amin*  
Dharmesh Amin, MS, PE, GE  
Principal Engineer



*Josh Myers*  
Josh Myers, PG, CEG  
Project Geologist





APPENDIX A

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APPENDIX B

FIELD EXPLORATION METHODS AND EXPLORATION LOGS

## EXPLORATION METHODS

The soil conditions within the site were explored by drilling 2 hollow-stem auger borings and 5 Cone Penetrometer Test (CPT) soundings at the location shown on Figure 3. The borings were drilled using 8-inch-diameter hollow-stem auger drilling equipment. The soils encountered were classified in the accordance with the Unified Soil Classification System. Results of the borings are presented in this Appendix.

Our field representative obtained relatively undisturbed and bulk samples for laboratory observation and testing. The number of blows of the hammer needed to drive the sampler 12 inches was recorded as an indication of the density or consistency of the earth materials.

In addition to obtaining undisturbed samples, Standard Penetration Tests (SPT) were performed in hollow stem borings. The results of the tests are indicated on the boring logs. The standard penetration tests were performed in accordance with the ASTM D1586 Test Method.

The hammer weights for various depths and drilling equipment are summarized in the following tables.

### HAMMER WEIGHTS

Sampling Type	Weight in pounds
Undisturbed (30-inch drop)	140
SPT (30-inch drop)	140

### CONE PENETROMETER TEST SOUNDINGS

Cone Penetrometer Test (CPT) soundings were performed for us at 1 locations by Kehoe Testing & Engineering. The soundings extended to depths of approximately 50.0 feet. The locations of the soundings are shown on Figure 3. The results of the soundings and the methodology of performing the soundings are presented in the Kehoe Testing & Engineering report in this appendix.



## DEFINITION OF TERMS

PRIMARY DIVISIONS		SYMBOLS		SECONDARY DIVISIONS	
<b>COARSE GRAINED SOILS</b> MORE THAN HALF OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	<b>GRAVELS</b> MORE THAN HALF OF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE	CLEAN GRAVELS < 5% FINES	 GW	WELL GRADED GRAVELS, GRAVEL-SAND MIXTURES LITTLE OR NO FINES	
		GRAVELS WITH FINES	 GP	POORLY GRADED GRAVELS OR GRAVEL SAND MIXTURES, LITTLE OF NO FINES	
			 GM	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES, NON-PLASTIC FINES	
		 GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES, PLASTIC FINES		
	<b>SANDS</b> MORE THAN HALF OF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE	CLEAN SANDS < 5% FINES	 SW	WELL GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES	
			 SP	POORLY GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES	
		SANDS WITH FINES	 SM	SILTY SANDS, SAND-SILT MIXTURES, NON-PLASTIC FINES	
			 SC	CLAYEY SANDS, SAND-CLAY MIXTURES, PLASTIC FINES	
<b>FINE GRAINED SOILS</b> MORE THAN HALF OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	<b>SILTS AND CLAYS</b> LIQUID LIMIT IS LESS THAN 50		 ML	INORGANIC SILTS, VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS, SLIGHTLY PLASTIC CLAYEY SILTS	
			 CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY, SANDY, SILTS OR LEAN CLAYS	
			 OL	ORGANIC SILTS AND ORGANIC CLAYS OF LOW PLASTICITY	
	<b>SILTS AND CLAYS</b> LIQUID LIMIT IS GREATER THAN 50		 MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS	
			 CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS	
			 OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTY CLAYS	
	<b>HIGHLY ORGANIC SOILS</b>		 PT	PEAT AND OTHER HIGHLY ORGANIC SOILS	

### GRAIN SIZES

BOULDERS	COBBLES	GRAVEL		SAND			SILTS AND CLAYS
		COARSE	FINE	COARSE	MEDIUM	FINE	
12"	3"	3/4"	4	10	40	200	
CLEAR SQUARE SIEVE OPENING				U.S. STANDARD SIEVE SIZE			

### ADDITIONAL TESTS

(OTHER THAN TEST PIT AND BORING LOG COLUMN HEADINGS)

MAX- Maximum Dry Density  
 GS- Grain Size Distribution  
 SE- Sand Equivalent  
 EI- Expansion Index  
 CHM- Sulfate and Chloride  
       Content , pH, Resistivity  
 COR - Corrosivity

PM- Permeability  
 SG- Specific Gravity  
 HA- Hydrometer Analysis  
 AL- Atterberg Limits  
 RV- R-Value  
 CN- Consolidation

PP- Pocket Penetrometer  
 WA- Wash Analysis  
 DS- Direct Shear  
 UC- Unconfined Compression  
 MD- Moisture/Density  
 M- Moisture  
 SC- Swell Compression  
 OI- Organic Impurities



PROJECT: Marshall Elementary School  
 CTE JOB NO: 30-1301G  
 LOGGED BY: J. Myers

Depth (Feet)	Bulk Sample Driven Type	Blows/Foot	Dry Density (pcf)	Moisture (%)	U.S.C.S. Symbol	Graphic Log	BORING LEGEND	
							DESCRIPTION	Laboratory Tests
0							Block or Chunk Sample	
							Bulk Sample	
5								
							Standard Penetration Test	
10							Modified Split-Barrel Drive Sampler (Cal Sampler)	
							Thin Walled Army Corp. of Engineers Sample	
15							Groundwater Table	
							Observed Soil Type or Classification Change	
							Approximate Soil Type or Classification Change	
20							Formation Change [(Approximate boundaries queried (?))]	
25					"SM"		Quotes are placed around classifications where the soils exist in situ as bedrock	

FIGURE:

BL2



PROJECT: Marshall Elementary School      DRILLER: S/G Drilling      SHEET: 1 of 3  
 CTE JOB NO: 30-1301G      DRILL METHOD: 8" Hollow Stem Augers      DRILLING DATE: 9/26/2015  
 LOGGED BY: Josh Myers      SAMPLE METHOD: SPT      ELEVATION: TBD

Depth (Feet)	Bulk Sample Driven Type	Blows/12 Inches	Dry Density (pcf)	Moisture (%)	U.S.C.S. Symbol	Graphic Log	BORING: B-1	
							DESCRIPTION	Laboratory Tests
0							3" of asphalt concrete over 7" aggregate base material.	
					CL (Fill)		<u>FILL</u> : Silty clay (CL), medium stiff, brown, moist, scattered debris.	direct shear
9					CL		<u>NATURAL SOIL</u> : Slightly sandy, silty clay (CL), stiff, brown to gray brown, scattered calcareous deposits.	
					SM		Silty fine sand (SM), loose, light brown, moist.	
					ML		Fine sandy silt (ML), medium stiff, light brown, slightly moist.	
10		6					Slightly silty fine to medium sand (SP-SM), medium dense, slightly moist, light brown to light gray.	-#200 Passing = 48.0%
		16						-#200 Passing = 2.9%
15		35					Increase in sand clast size to coarse, few gravels, dense to very dense.	
		28			SP-SM			
20		28					Slightly clayey, dense, wet, dark brown, few organics.	
25		27					Light brown to light gray, slightly moist to wet, poorly graded.	-#200 Passing = 3.9%

FIGURE: B-1a





PROJECT: Marshall Elementary School      DRILLER: S/G Drilling      SHEET: 2 of 3  
 CTE JOB NO: 30-1301G      DRILL METHOD: 8" Hollow Stem Augers      DRILLING DATE: 9/26/2015  
 LOGGED BY: Josh Myers      SAMPLE METHOD: SPT      ELEVATION: TBD

Depth (Feet)	Bulk Sample Driven Type	Blows/12 Inches	Dry Density (pcf)	Moisture (%)	U.S.C.S. Symbol	Graphic Log	BORING: B-1	
							DESCRIPTION	Laboratory Tests
25		27					<p>Silty fine to coarse sand (SP-SM), as described on the previous page.</p> <p>#200 Passing = 5.1%</p> <p>Ground water observed at a depth of 28.0 feet.</p> <p>Scattered cobbles and gravels.</p> <p>Silty fine to medium sand with few cobbles and gravels (SM), dense, brown, wet, few lenses with calcareous deposits.</p> <p>Gray- brown lense between approximately 45 and 45.5 feet.</p> <p>Very dense</p>	
		23			SP-SM			
		32						
		44						
35								
		51						
		46						
		45			SM			
45		36						
50		65						



PROJECT: Marshall Elementary School      DRILLER: S/G Drilling      SHEET: 3 of 3  
 CTE JOB NO: 30-1301G      DRILL METHOD: 8" Hollow Stem Augers      DRILLING DATE: 9/26/2015  
 LOGGED BY: Josh Myers      SAMPLE METHOD: Rings and Bulk      ELEVATION: TBD

Depth (Feet)	Bulk Sample Driven Type	Blows/12 Inches	Dry Density (pcf)	Moisture (%)	U.S.C.S. Symbol	Graphic Log	BORING: B-1	
							Laboratory Tests	
							DESCRIPTION	
50	█	65			SM	█	Silty, fine to medium sand (SM), as described on the previous page.	
							Bottom of boring at 50.5 feet. Water observed at 28.0 feet. Boring caved at 28.0 feet.	
55								
60								
65								
70								
75							Slightly silty fine to medium sand (SP-SM), dense, light brown to light	



PROJECT: Marshall Elementary School      DRILLER: S/G Drilling      SHEET: 1 of 1  
 CTE JOB NO: 30-1301G      DRILL METHOD: 8" Hollow Stem Augers      DRILLING DATE: 9/28/2015  
 LOGGED BY: Josh Myers      SAMPLE METHOD: Cal. Barrel, SPT and Bulk      ELEVATION: TBD

Depth (Feet)	Bulk Sample Driven Type	Blows/6 Inches	Dry Density (pcf)	Moisture (%)	U.S.C.S. Symbol	Graphic Log	BORING: B-2	
							DESCRIPTION	Laboratory Tests
0					CL		Fill: Silty, gravelly, fine sandy clay (CL), stiff, brown, moist.	
5		13			SM		Clayey, gravelly, silty fine sand (SM), medium dense, dark brown, moist.	
10		22	114.0	14.0	ML		Natural Soil: Clayey, gravelly, fine sandy silt (ML), stiff, dark brown, moist.  Decrease in clay and gravel content, brown, slightly blocky.	
15		20			SW-SM		Slightly silty, slightly gravelly to gravelly, fine to medium sand (SW-SM), dense, light brown to brown.	-#200 Passing = 2.3%
20		29		3.6			Bottom of boring at 20.5 feet. No water observed. Boring caved to 16.5 feet.	
25		45					Slightly silty fine to medium sand (SP-SM), dense, light brown to light	

FIGURE: B-2

**SUMMARY**  
**OF**  
**CONE PENETRATION TEST DATA**

Project:

**Thurgood Marshall Elementary School  
2900 Thurgood Marshall Drive  
Oxnard, CA  
October 3, 2015**

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- CPT Classification/Soil Behavior Chart
- Interpretation Output (CPeT-IT)
- Summary of Shear Wave Velocities
- CPeT-IT Calculation Formulas

# SUMMARY OF CONE PENETRATION TEST DATA

## 1. INTRODUCTION

This report presents the results of a Cone Penetration Test (CPT) program carried out for the Thurgood Marshall Elementary School project located at 2900 Thurgood Marshall Drive in Oxnard, California. The work was performed by Kehoe Testing & Engineering (KTE) on October 3, 2015. The scope of work was performed as directed by CTE (Construction Testing & Eng.) personnel.

## 2. SUMMARY OF FIELD WORK

The fieldwork consisted of performing CPT soundings at five locations to determine the soil lithology. Groundwater measurements and hole collapse depths provided in **TABLE 2.1** are for information only. The readings indicate the apparent depth to which the hole is open and the apparent water level (if encountered) in the CPT probe hole at the time of measurement upon completion of the CPT. KTE does not warranty the accuracy of the measurements and the reported water levels may not represent the true or stabilized groundwater levels.

LOCATION	DEPTH OF CPT (ft)	COMMENTS/NOTES:
CPT-1	30	Refusal, hole open to 28.5 ft (dry)
CPT-1B	50	Groundwater @ 28.0 ft
CPT-2	45	Groundwater @ 30.0 ft
CPT-3	50	Groundwater @ 29.0 ft
CPT-4	50	Groundwater @ 28.0 ft

TABLE 2.1 - Summary of CPT Soundings

## 3. FIELD EQUIPMENT & PROCEDURES

The CPT soundings were carried out by **KTE** using an integrated electronic cone system manufactured by Vertek. The CPT soundings were performed in accordance with ASTM standards (D5778). The cone penetrometers were pushed using a 30-ton CPT rig. The cone used during the program was a 15 cm<sup>2</sup> cone and recorded the following parameters at approximately 2.5 cm depth intervals:

- Cone Resistance (qc)
- Sleeve Friction (fs)
- Dynamic Pore Pressure (u)
- Inclination
- Penetration Speed

At locations CPT-1 & CPT-1B, shear wave measurements were obtained at various depths. The shear wave is generated using an air-actuated hammer, which is located inside the front jack of the CPT rig. The cone has a triaxial geophone, which recorded the shear wave signal generated by the air hammer.

The above parameters were recorded and viewed in real time using a laptop computer. Data is stored at the KTE office for future analysis and reference. A complete set of baseline readings was taken prior to each sounding to determine temperature shifts and any zero load offsets. Monitoring base line readings ensures that the cone electronics are operating properly.

#### **4. CONE PENETRATION TEST DATA & INTERPRETATION**

The Cone Penetration Test data is presented in graphical form in the attached Appendix. These plots were generated using the CPeT-IT program. Penetration depths are referenced to ground surface. The soil classification on the CPT plots is derived from the attached CPT Classification Chart (Robertson) and presents major soil lithologic changes. The stratigraphic interpretation is based on relationships between cone resistance ( $q_c$ ), sleeve friction ( $f_s$ ), and penetration pore pressure ( $u$ ). The friction ratio ( $R_f$ ), which is sleeve friction divided by cone resistance, is a calculated parameter that is used along with cone resistance to infer soil behavior type. Generally, cohesive soils (clays) have high friction ratios, low cone resistance and generate excess pore water pressures. Cohesionless soils (sands) have lower friction ratios, high cone bearing and generate little (or negative) excess pore water pressures.

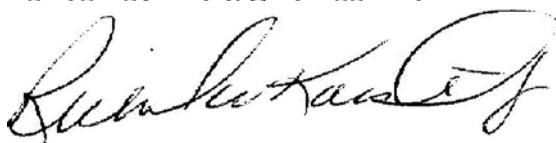
Tables of basic CPT output from the interpretation program CPeT-IT are provided for CPT data averaged over one foot intervals in the Appendix. Spreadsheet files of the averaged basic CPT output and averaged estimated geotechnical parameters are also included for use in further geotechnical analysis. We recommend a geotechnical engineer review the assumed input parameters and the calculated output from the CPeT-IT program. A summary of the equations used for the tabulated parameters is provided in the Appendix.

It should be noted that it is not always possible to clearly identify a soil type based on  $q_c$ ,  $f_s$  and  $u$ . In these situations, experience, judgement and an assessment of the pore pressure data should be used to infer the soil behavior type.

If you have any questions regarding this information, please do not hesitate to call our office at (714) 901-7270.

Sincerely,

**KEHOE TESTING & ENGINEERING**



Richard W. Koester, Jr.  
General Manager

## **APPENDIX**

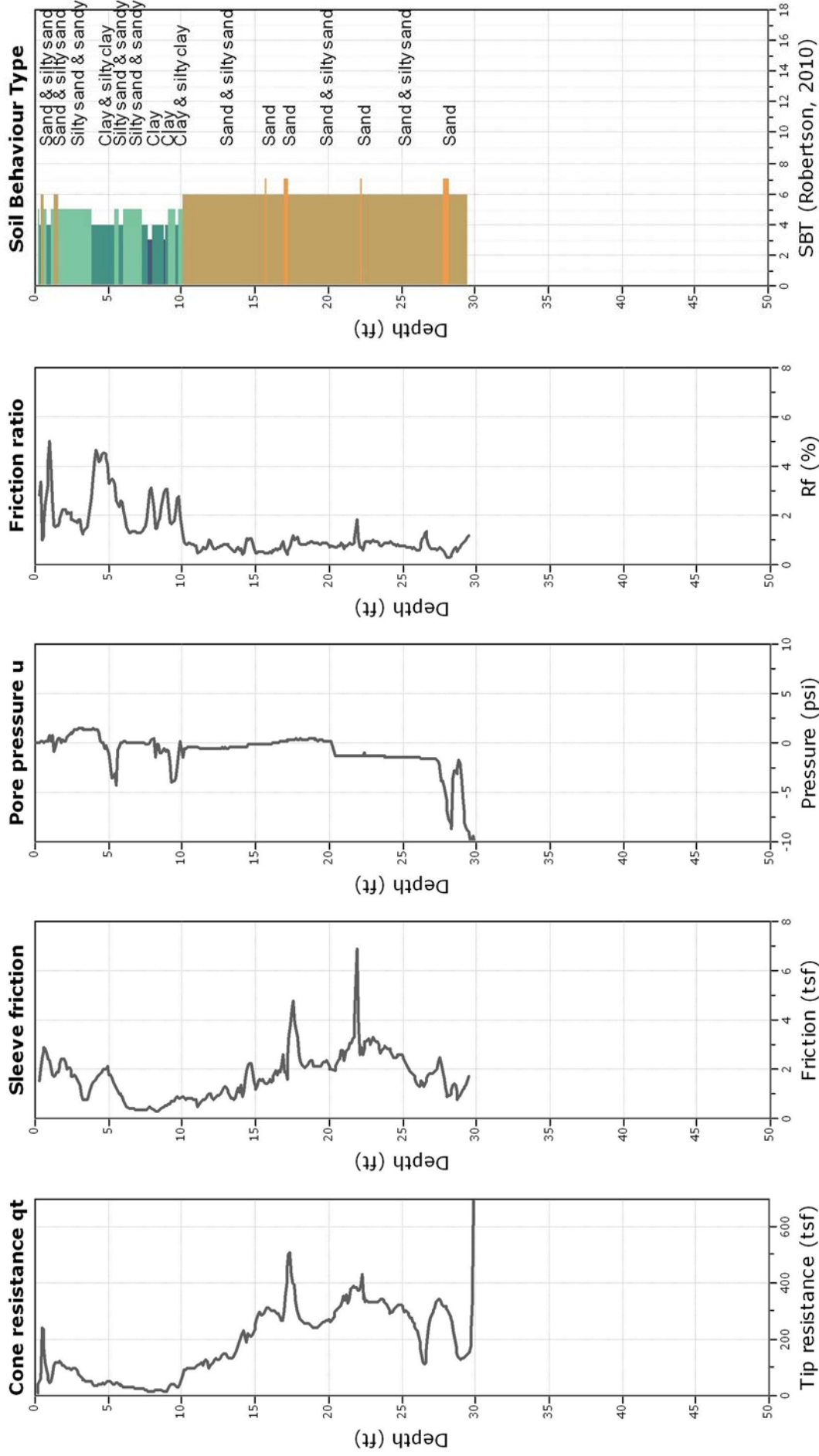




**Kehoe Testing and Engineering**  
 714-901-7270  
 rich@kehoetesting.com  
 www.kehoetesting.com

**Project:** CTE (Construction Testing and Eng.)/Thurgood Marshall Elementary School  
**Location:** 2900 Thurgood Marshall Dr Oxnard, CA

**CPT: CPT-1**  
 Total depth: 29.89 ft, Date: 10/3/2015  
 Cone Type: Vertek

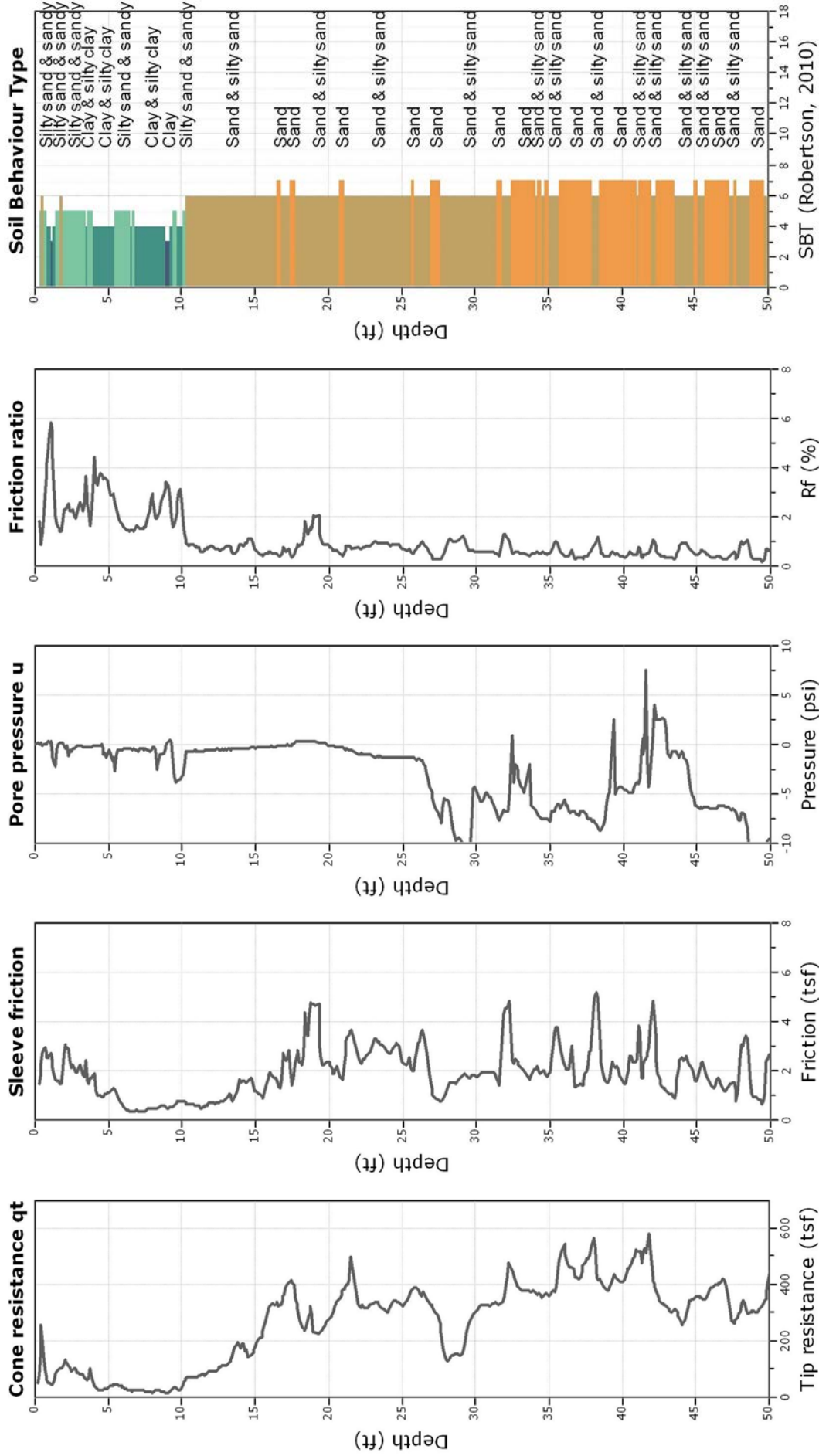




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**Project:** CTE (Construction Testing and Eng.)/Thurgood Marshall Elementary School  
**Location:** 2900 Thurgood Marshall Dr Oxnard, CA

**CPT: CPT-1B**  
 Total depth: 50.30 ft, Date: 10/3/2015  
 Cone Type: Vertek

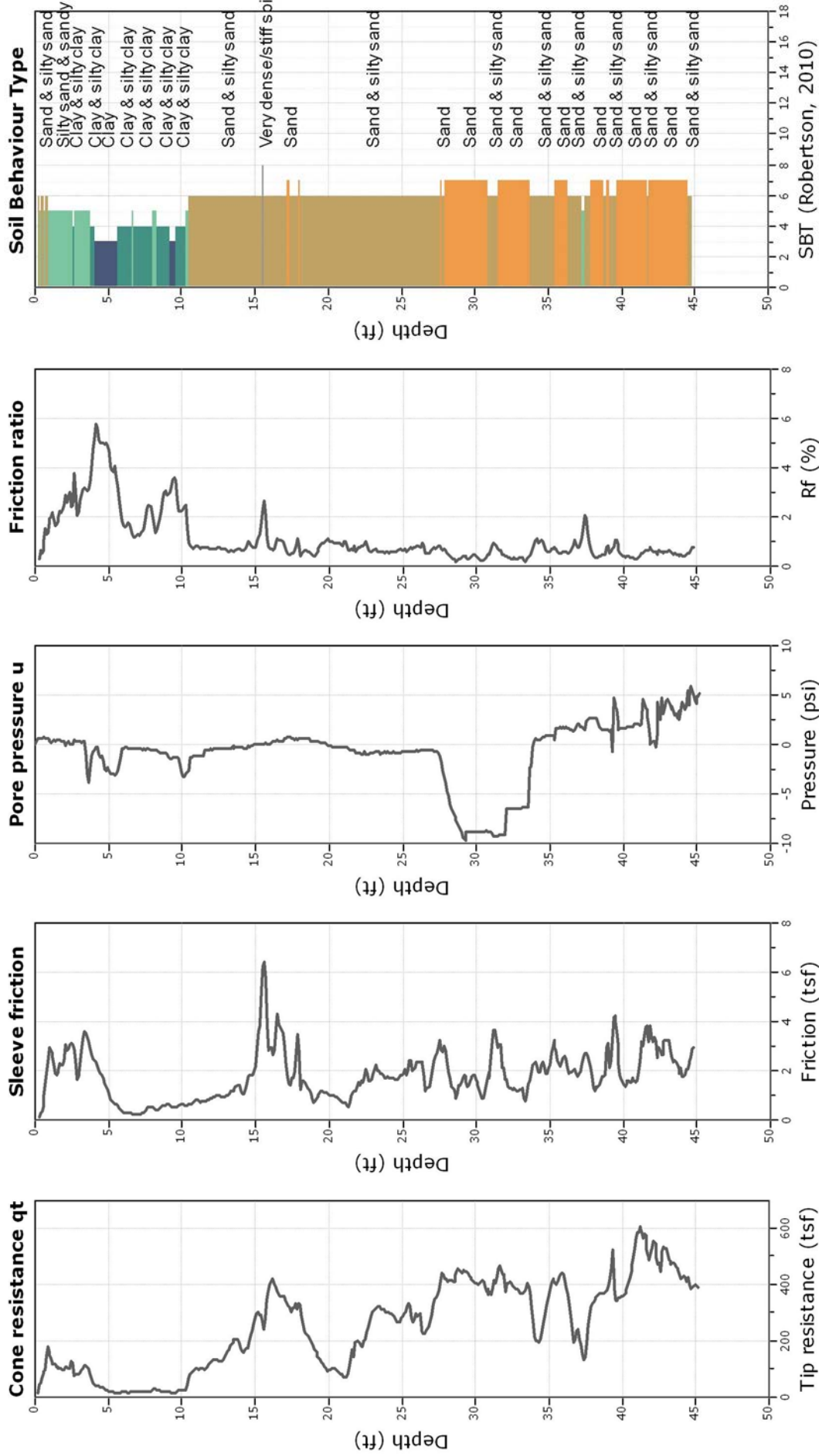




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**Project:** CTE (Construction Testing and Eng.)/Thurgood Marshall Elementary School  
**Location:** 2900 Thurgood Marshall Dr Oxnard, CA

**CPT: CPT-2**  
 Total depth: 45.19 ft, Date: 10/3/2015  
 Cone Type: Vertek



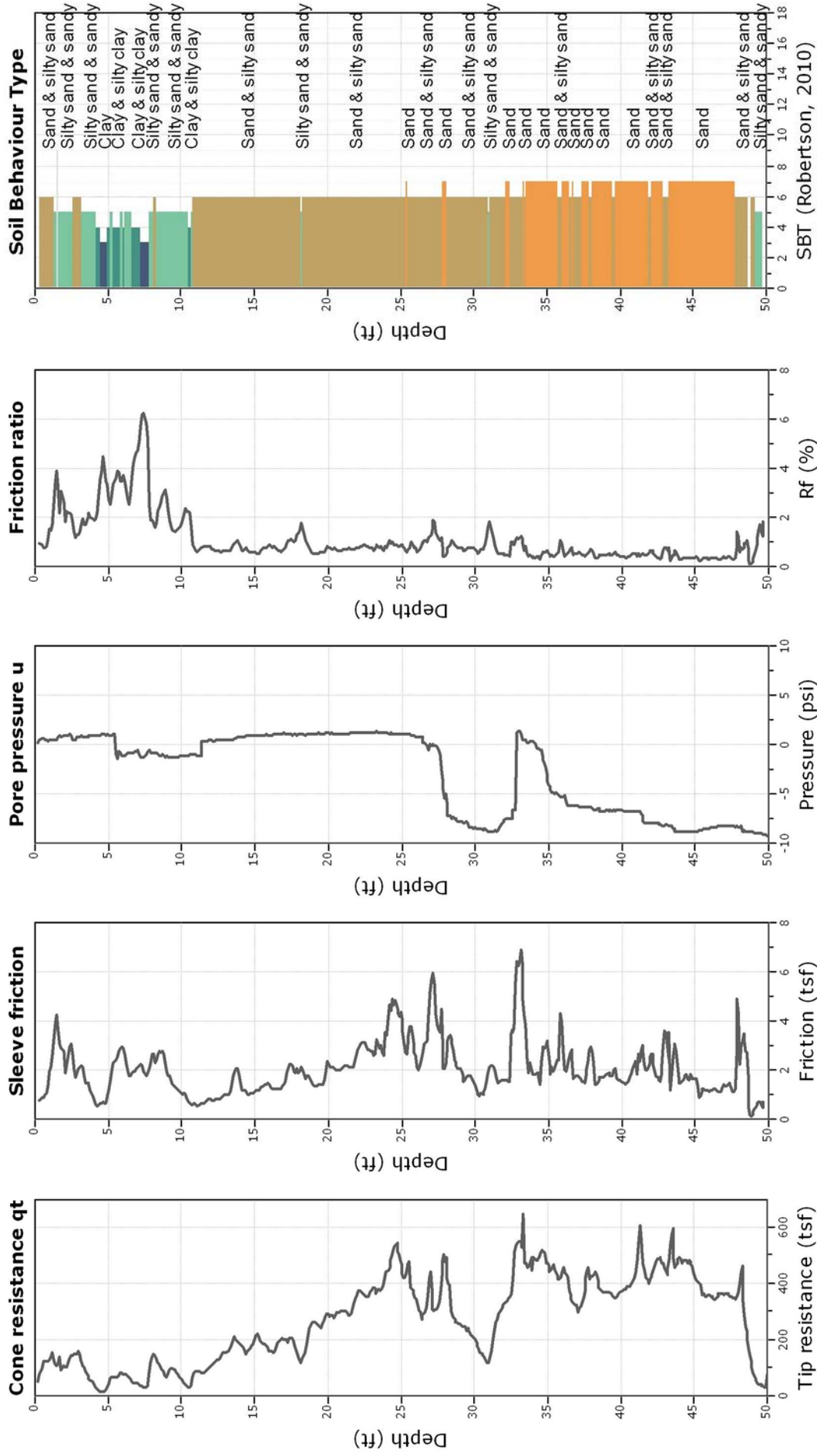




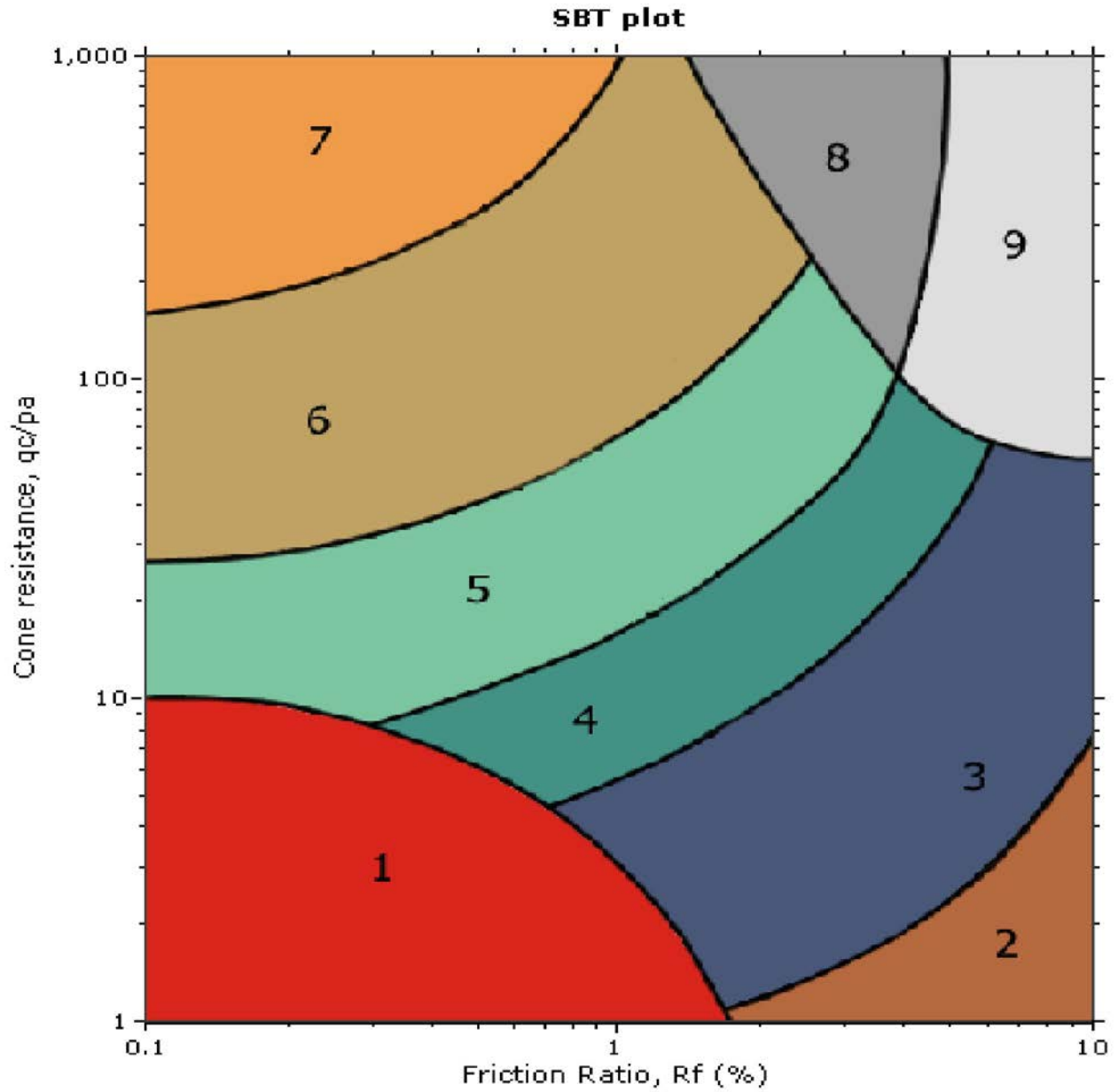
**Kehoe Testing and Engineering**  
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 www.kehoetesting.com

**Project:** CTE (Construction Testing and Eng.)/Thurgood Marshall Elementary School  
**Location:** 2900 Thurgood Marshall Dr Oxnard, CA

**CPT: CPT-4**  
 Total depth: 50.00 ft, Date: 10/3/2015  
 Cone Type: Vertek







#### SBT legend

- |                           |                              |                                   |
|---------------------------|------------------------------|-----------------------------------|
| 1. Sensitive fine grained | 4. Clayey silt to silty clay | 7. Gravelly sand to sand          |
| 2. Organic material       | 5. Silty sand to sandy silt  | 8. Very stiff sand to clayey sand |
| 3. Clay to silty clay     | 6. Clean sand to silty sand  | 9. Very stiff fine grained        |

Depth (ft)	CPT-1 In situ data				Basic output data															
	qc (tsf)	fs (tsf)	u (psi)	Other	qt (tsf)	Rf(%)	SBT	Ic SBT	$\bar{a}$ (pcf)	$\sigma_v$ (tsf)	u0 (tsf)	$\sigma'_{vo}$ (tsf)	Qt1	Fr (%)	Bq	SBTn	n	Cn	Ic	Qtn
1	49.5	2.37	0.59	-0.66	49.5072	4.7872	4	2.61721	126.1024	0.06305	0	0.0631	784.19	4.7933	0.0009	9	0.6687	6.592	2.1391	308.0355
2	107.7	2.39	0.1	-0.73	107.701	2.2191	5	2.14272	128.0596	0.12708	0	0.1271	846.5	2.2217	7E-05	8	0.555	3.242	1.8333	329.605
3	75.1	1.4	1.53	-0.67	75.1187	1.8637	5	2.20038	123.2675	0.18871	0	0.1887	397.05	1.8684	0.0015	6	0.5845	2.7392	1.9032	193.9745
4	38.4	1.52	1.48	-0.61	38.4181	3.9565	4	2.63641	122.2338	0.24983	0	0.2498	152.78	3.9824	0.0028	9	0.7463	2.9367	2.324	105.932
5	51.9	2.01	-0.87	-0.57	51.8894	3.8736	4	2.53688	125.0115	0.31234	0	0.3123	165.13	3.8971	-0.001	8	0.7346	2.4506	2.2845	119.4517
6	34.1	0.82	0.06	-0.56	34.1007	2.4046	4	2.53217	117.4273	0.37105	0	0.3711	90.903	2.4311	0.0001	5	0.7388	2.1689	2.2883	69.13939
7	27	0.34	0.02	-0.55	27.0002	1.2593	5	2.44935	110.4163	0.42626	0	0.4263	62.342	1.2795	5E-05	5	0.7176	1.9201	2.2256	48.22349
8	14.3	0.38	0.38	-0.55	14.3047	2.6565	4	2.85918	109.6807	0.4811	0	0.4811	28.733	2.7489	0.002	4	0.8784	1.9983	2.6398	26.1066
9	19.2	0.54	-0.72	-0.55	19.1912	2.8138	4	2.77073	112.9686	0.53758	0	0.5376	34.699	2.8949	-0.003	4	0.8622	1.7929	2.5903	31.60785
10	69.8	0.86	-1.25	-0.53	69.7847	1.2324	5	2.10786	119.5223	0.59734	0	0.5973	115.82	1.243	-0.001	6	0.6369	1.4393	1.9917	94.11297
11	103.2	0.74	-0.43	-0.55	103.195	0.7171	6	1.83026	119.3769	0.65703	0	0.657	156.06	0.7217	-3E-04	6	0.5454	1.2968	1.7441	125.6686
12	109.6	0.9	-0.5	-0.57	109.594	0.8212	6	1.8448	120.9559	0.71751	0	0.7175	151.74	0.8266	-3E-04	6	0.5602	1.2431	1.7752	127.9125
13	145.3	1.22	-0.5	-0.58	145.294	0.8397	6	1.75612	123.8695	0.77945	0	0.7795	185.41	0.8442	-3E-04	6	0.5368	1.1783	1.706	160.9301
14	204.4	1.31	-0.35	-0.67	204.396	0.6409	6	1.56726	125.2228	0.84206	0	0.8421	241.73	0.6436	-1E-04	6	0.4744	1.1145	1.5346	214.3918
15	248	1.24	-0.2	-0.84	247.998	0.5	6	1.43342	125.2925	0.9047	0	0.9047	273.12	0.5018	-6E-05	6	0.4312	1.0699	1.4133	249.8401
16	307.6	1.53	-0.13	-0.74	307.598	0.4974	6	1.36143	127.3556	0.96838	0	0.9684	316.64	0.499	-3E-05	6	0.4108	1.0371	1.3517	300.5349
17	338.3	1.9	0.15	-0.53	338.302	0.5616	6	1.36803	129.1724	1.03297	0	1.033	326.5	0.5634	3E-05	6	0.4196	1.0101	1.3668	321.9793
18	282.3	2.38	0.35	-0.58	282.304	0.8431	6	1.55001	130.3792	1.09816	0	1.0982	256.07	0.8464	9E-05	6	0.4954	0.9818	1.5578	260.9164
19	240	2.11	0.33	-0.67	240.004	0.8792	6	1.61144	129.1022	1.16271	0	1.1627	205.42	0.8834	0.0001	6	0.5258	0.9516	1.6294	214.8093
20	270.7	2.04	0.15	-0.71	270.702	0.7536	6	1.52697	129.1489	1.22728	0	1.2273	219.57	0.757	4E-05	6	0.4996	0.9286	1.5523	236.4873
21	348.9	2.45	-1.33	-0.73	348.884	0.7022	6	1.42948	131.1077	1.29284	0	1.2928	268.86	0.7049	-3E-04	6	0.467	0.9107	1.4591	299.158
22	374.2	3.67	-1.26	-0.73	374.185	0.9808	6	1.52216	134.2353	1.35995	0	1.36	274.14	0.9844	-2E-04	6	0.5081	0.8803	1.5585	310.1683
23	332.8	3.29	-1.19	-0.09	332.785	0.9886	6	1.55621	133.1496	1.42653	0	1.4265	232.28	0.9929	-3E-04	6	0.528	0.8541	1.6025	267.4614
24	321.7	2.85	-1.48	0.13	321.682	0.886	6	1.5288	132.0163	1.49254	0	1.4925	214.53	0.8901	-3E-04	6	0.5238	0.8351	1.5833	252.711
25	319.3	2.53	-1.56	0.15	319.281	0.7924	6	1.49427	131.1266	1.5581	0	1.5581	203.92	0.7963	-4E-04	6	0.5166	0.8188	1.5562	245.8671
26	233.1	1.38	-1.56	0.22	233.081	0.5921	6	1.50166	125.924	1.62106	0	1.6211	142.78	0.5962	-5E-04	6	0.529	0.798	1.5808	174.56
27	291.1	1.82	-1.64	0.31	291.08	0.6253	6	1.44718	128.4909	1.68531	0	1.6853	171.72	0.6289	-4E-04	6	0.5112	0.7883	1.5261	215.5913
28	312.9	0.91	-6.41	0.38	312.822	0.2909	7	1.21077	123.5949	1.74711	0	1.7471	178.05	0.2925	-0.001	7	0.4248	0.8081	1.2915	237.5812
29	128.8	1.06	-3.38	0.52	128.759	0.8233	6	1.7908	122.5462	1.80838	0.0312	1.7772	71.434	0.835	-0.002	6	0.6647	0.7085	1.9175	85.00101

Depth (ft)	CPT-1B In situ data				Basic output data															
	qc (tsf)	fs (tsf)	u (psi)	Other	qt (tsf)	Rf(%)	SBT	Ic SBT	$\bar{a}$ (pcf)	$\acute{o},v$ (tsf)	u0 (tsf)	$\acute{o}',v\acute{o}$ (tsf)	Qt1	Fr (%)	Bq	SBTn	n	Cn	Ic	Qtn
1	49.1	2.65	0.15	0.09	49.1018	5.397	4	2.65768	126.8994	0.06345	0	0.0635	772.87	5.4039	0.0002	9	0.684	6.8533	2.1795	317.618
2	127.8	2.93	-0.29	0.12	127.796	2.2927	5	2.10335	129.9674	0.12843	0	0.1284	994.04	2.295	-2E-04	8	0.5471	3.1702	1.8128	382.5029
3	86.4	2.16	-0.11	-0.14	86.3987	2.5	5	2.24615	126.7817	0.19182	0	0.1918	449.41	2.5056	-9E-05	5	0.607	2.8193	1.9623	229.6913
4	49.6	1.84	-0.08	-0.88	49.599	3.7098	4	2.53739	124.2548	0.25395	0	0.254	194.31	3.7288	-1E-04	8	0.7173	2.7835	2.2473	129.8069
5	34.7	1.14	-0.73	-1.03	34.6911	3.2862	4	2.61446	119.88	0.31389	0	0.3139	109.52	3.3162	-0.002	5	0.7547	2.5021	2.3374	81.2906
6	35.2	0.58	-0.49	-0.79	35.194	1.648	5	2.4207	114.9706	0.37138	0	0.3714	93.766	1.6656	-0.001	5	0.6975	2.0756	2.1802	68.30825
7	24.3	0.39	-0.67	-0.81	24.2918	1.6055	4	2.54569	111.1624	0.42696	0	0.427	55.895	1.6342	-0.002	5	0.7524	1.9795	2.3168	44.64701
8	17.5	0.48	-0.33	-0.85	17.496	2.7435	4	2.79636	111.8813	0.4829	0	0.4829	35.231	2.8214	-0.001	4	0.8573	1.959	2.5842	31.49878
9	14.2	0.48	0.14	-0.85	14.2017	3.3799	3	2.9231	111.3725	0.53858	0	0.5386	25.369	3.5131	0.0007	4	0.9184	1.8593	2.7357	24.00868
10	34.1	0.76	-3.13	-0.89	34.0617	2.2313	4	2.51213	116.8685	0.59702	0	0.597	56.053	2.2711	-0.007	5	0.7827	1.5651	2.3742	49.49774
11	72.7	0.57	-0.68	-0.91	72.6917	0.7841	6	1.97704	116.6124	0.65533	0	0.6553	109.92	0.7913	-7E-04	6	0.5976	1.3315	1.8812	90.64857
12	91	0.73	-0.53	-0.93	90.9935	0.8023	6	1.90313	118.9704	0.71481	0	0.7148	126.3	0.8086	-4E-04	6	0.5806	1.2557	1.8291	107.1405
13	113.3	0.91	-0.52	-0.95	113.294	0.8032	6	1.82751	121.1177	0.77537	0	0.7754	145.12	0.8088	-3E-04	6	0.5619	1.1909	1.7725	126.639
14	179.6	1.54	-0.38	-0.91	179.595	0.8575	6	1.69355	126.0908	0.83841	0	0.8384	213.21	0.8615	-2E-04	6	0.5214	1.129	1.6582	190.735
15	177.7	1.18	-0.35	-0.6	177.696	0.6641	6	1.62353	124.1166	0.90047	0	0.9005	196.34	0.6674	-1E-04	6	0.5021	1.0844	1.5998	181.1824
16	322.3	1.96	-0.3	-0.71	322.296	0.6081	6	1.40739	129.2817	0.96511	0	0.9651	332.95	0.61	-7E-05	6	0.428	1.0402	1.3973	315.8812
17	369.6	2.52	-0.08	-0.76	369.599	0.6818	6	1.40327	131.4545	1.03084	0	1.0308	357.54	0.6837	-2E-05	6	0.4328	1.0114	1.4018	352.2856
18	283.7	2.37	0.3	-0.71	283.704	0.8354	6	1.54563	130.3604	1.09602	0	1.096	257.85	0.8386	8E-05	6	0.4935	0.9828	1.5531	262.4873
19	229.7	4.65	0.23	-1.65	229.703	2.0244	6	1.90107	134.7769	1.16341	0	1.1634	196.44	2.0347	7E-05	6	0.6365	0.9414	1.9199	203.332
20	277.9	2.31	-0.08	-2.22	277.899	0.8312	6	1.5501	130.1224	1.22847	0	1.2285	225.22	0.8349	-2E-05	6	0.5084	0.9269	1.5754	242.3655
21	383	2.2	-0.46	-2.19	382.994	0.5744	6	1.3377	130.5477	1.29374	0	1.2937	295.04	0.5764	-9E-05	6	0.4315	0.9169	1.3657	330.7627
22	340.2	2.48	-0.89	-1.8	340.189	0.729	6	1.4489	131.1352	1.35931	0	1.3593	249.27	0.7319	-2E-04	6	0.4807	0.8866	1.4866	283.898
23	331.7	3.34	-1.15	-1.57	331.686	1.007	6	1.56335	133.2518	1.42594	0	1.4259	231.61	1.0113	-3E-04	6	0.5307	0.8536	1.6097	266.4174
24	303.3	2.72	-1.21	-1.72	303.285	0.8969	6	1.54945	131.5311	1.4917	0	1.4917	202.31	0.9013	-3E-04	6	0.5322	0.833	1.6055	237.5747
25	327.4	2.28	-1.27	-1.85	327.384	0.6964	6	1.44536	130.4264	1.55692	0	1.5569	209.28	0.6998	-3E-04	6	0.4974	0.8252	1.5061	254.1092
26	388.1	3.15	-1.51	-1.85	388.082	0.8117	6	1.44763	133.2063	1.62352	0	1.6235	238.04	0.8151	-3E-04	6	0.5022	0.8065	1.5104	294.5745
27	328.2	1.14	-5.04	-2.06	328.138	0.3474	7	1.23948	125.3603	1.6862	0	1.6862	193.6	0.3492	-0.001	7	0.4298	0.8185	1.3124	252.5239
28	143.7	1.11	-5.54	-2.04	143.632	0.7728	6	1.7367	123.1501	1.74778	0	1.7478	81.18	0.7823	-0.003	6	0.6389	0.7257	1.8535	97.31016
29	149.3	1.77	-9.84	-2	149.18	1.1865	6	1.84924	126.6568	1.8111	0.0312	1.7799	82.796	1.2011	-0.005	6	0.6848	0.7004	1.9702	97.54247
30	306.3	1.76	-4.62	-2.06	306.243	0.5747	6	1.40581	128.3695	1.87529	0.0624	1.8129	167.89	0.5783	-0.001	6	0.5061	0.7615	1.4968	219.0429
31	327.9	1.96	-5.55	-2.05	327.832	0.5979	6	1.39693	129.3232	1.93995	0.0936	1.8464	176.51	0.6014	-0.002	6	0.5046	0.7551	1.4886	232.5677
32	365.5	4.54	-6.8	-2.02	365.417	1.2424	6	1.61104	135.7341	2.00782	0.1248	1.883	192.99	1.2493	-0.002	6	0.5882	0.7125	1.7038	244.6919
33	388.1	2.15	-4.03	-1.92	388.051	0.5541	7	1.32235	130.4115	2.07302	0.156	1.917	201.34	0.557	-0.001	6	0.4792	0.7522	1.4132	274.3776
34	377.9	2.06	-6.61	-1.9	377.819	0.5452	7	1.32529	130.0334	2.13804	0.1872	1.9508	192.57	0.5483	-0.002	6	0.4837	0.7439	1.4208	264.1038
35	360.3	2.11	-7.54	-1.92	360.208	0.5858	6	1.36213	130.0925	2.20309	0.2184	1.9847	180.38	0.5894	-0.002	6	0.5017	0.7294	1.4637	246.7902
36	541.4	2.21	-5.75	-1.7	541.33	0.4083	7	1.1268	131.4248	2.2688	0.2496	2.0192	266.97	0.41	-0.001	7	0.4065	0.769	1.2094	391.777
37	420.7	1.43	-7.12	-1.92	420.613	0.34	7	1.15009	127.6242	2.33261	0.2808	2.0518	203.86	0.3419	-0.002	7	0.4228	0.7558	1.2481	298.7631
38	558.5	4.88	-7.79	-2.24	558.405	0.8739	6	1.38126	137.28	2.40125	0.312	2.0893	266.13	0.8777	-0.002	6	0.5093	0.7072	1.4708	371.6066
39	380.1	1.53	-5	-2.08	380.039	0.4026	7	1.2317	127.8714	2.46519	0.3432	2.122	177.93	0.4052	-0.002	6	0.4622	0.725	1.3427	258.6944
40	410.9	1.48	-4.51	-1.99	410.845	0.3602	7	1.1743	127.8183	2.5291	0.3744	2.1547	189.5	0.3625	-0.002	7	0.4413	0.7307	1.2835	281.9583
41	519.3	3.96	-4.02	-2	519.251	0.7626	6	1.34988	135.5909	2.59689	0.4056	2.1913	235.78	0.7665	-0.001	6	0.5067	0.6915	1.4514	337.6399
42	484.9	4.95	0.33	-1.73	484.904	1.0208	6	1.47126	137.0567	2.66542	0.4368	2.2286	216.38	1.0265	-9E-04	6	0.5579	0.66	1.5811	300.7804
43	322.1	1.1	-0.91	-1.96	322.089	0.3415	7	1.24134	125.0535	2.72795	0.468	2.26	141.31	0.3444	-0.002	6	0.4816	0.6939	1.376	209.4281
44	264.4	2.51	-0.82	-1.9	264.39	0.9494	6	1.60737	130.6084	2.79325	0.4992	2.2941	114.03	0.9595	-0.002	6	0.6301	0.6141	1.7623	151.8243
45	356.6	1.7	-6.31	-1.92	356.523	0.4768	7	1.30202	128.4865	2.85749	0.5304	2.3271	151.98	0.4807	-0.003	6	0.5083	0.6699	1.4379	223.9164
46	388.1	1.39	-6.48	-1.97	388.021	0.3582	7	1.19146	127.2199	2.9211	0.5616	2.3595	163.21	0.361	-0.003	7	0.4665	0.6879	1.3238	250.3683
47	408.2	1.19	-6.25	-2.01	408.124	0.2916	7	1.11798	126.2064	2.98421	0.5928	2.3914	169.41	0.2937	-0.003	7	0.4397	0.6987	1.2491	267.5365
48	300	2.83	-7.28	-1.88	299.911	0.9436	6	1.56937	131.7938	3.0501	0.624	2.4261	122.36	0.9533	-0.004	6	0.6241	0.5958	1.73	167.1498
49	305.5	0.96	-10.47	-2.1	305.372	0.3144	7	1.23864	123.9275	3.11207	0.6552	2.4569	123.03	0.3176	-0.005	6	0.4994	0.6566	1.3977	187.5633
50	422.2	0	-9.64	-2.3	422.082	0	0	0	120.9	3.17252	0.6864	2.4861	168.5	0	-0.003	0	1	0.4256	0	0



Depth (ft)	CPT-2 In situ data				Basic output data															
	qc (tsf)	fs (tsf)	u (psi)	Other	qt (tsf)	Rf(%)	SBT	Ic SBT	$\bar{a}$ (pcf)	$\acute{o},v$ (tsf)	u0 (tsf)	$\acute{o}',v\acute{o}$ (tsf)	Qt1	Fr (%)	Bq	SBTn	n	Cn	Ic	Qtn
1	152.4	2.94	0.3	-0.3	152.404	1.9291	6	1.99655	130.4218	0.06521	0	0.0652	2336.1	1.9299	0.0001	8	0.4894	3.911	1.6686	563.081
2	101.2	2.48	0.18	-0.15	101.202	2.4505	5	2.19268	128.1782	0.1293	0	0.1293	781.69	2.4537	0.0001	8	0.5722	3.3292	1.8782	318.0098
3	84.8	2.12	0.29	0.31	84.8036	2.4999	5	2.25175	126.5994	0.1926	0	0.1926	439.31	2.5056	0.0003	5	0.6087	2.8207	1.9667	225.5558
4	47.3	2.41	-0.63	0.51	47.2923	5.096	4	2.6506	126.1132	0.25566	0	0.2557	183.98	5.1237	-1E-03	9	0.7595	2.941	2.357	130.7361
5	23.4	1.12	-2.57	0.61	23.3685	4.7928	3	2.85161	118.7868	0.31505	0	0.3151	73.174	4.8583	-0.008	4	0.8357	2.7522	2.5491	59.96406
6	19	0.31	-0.4	0.65	18.9951	1.632	4	2.63872	108.8827	0.36949	0	0.3695	50.409	1.6644	-0.002	5	0.7674	2.2421	2.3639	39.46755
7	18.2	0.23	-0.47	0.67	18.1943	1.2641	4	2.59626	106.5935	0.42279	0	0.4228	42.034	1.2942	-0.002	5	0.766	2.0191	2.353	33.91196
8	27.8	0.54	-0.62	0.64	27.7924	1.943	4	2.54567	113.8718	0.47972	0	0.4797	56.934	1.9771	-0.002	5	0.7675	1.8351	2.3492	47.36789
9	21.4	0.63	-1.05	0.69	21.3872	2.9457	4	2.74552	114.3608	0.5369	0	0.5369	38.834	3.0216	-0.004	4	0.8535	1.7843	2.5676	35.16052
10	27.5	0.63	-3.09	0.73	27.4622	2.2941	4	2.59318	114.9706	0.59439	0	0.5944	45.202	2.3448	-0.008	5	0.811	1.5963	2.4487	40.53369
11	101.1	0.83	-1.07	0.81	101.087	0.8211	6	1.87255	120.1664	0.65447	0	0.6545	153.46	0.8264	-8E-04	6	0.5608	1.3092	1.7848	124.2674
12	126.4	0.9	-0.52	0.82	126.394	0.7121	6	1.7579	121.3037	0.71512	0	0.7151	175.74	0.7161	-3E-04	6	0.528	1.2298	1.6911	146.0745
13	147.2	0.99	-0.47	0.82	147.194	0.6726	6	1.69049	122.3727	0.77631	0	0.7763	188.61	0.6762	-2E-04	6	0.5116	1.1717	1.6403	162.133
14	172.7	1.11	-0.32	0.84	172.696	0.6428	6	1.62405	123.5995	0.83811	0	0.8381	205.05	0.6459	-1E-04	6	0.4948	1.1223	1.5886	182.2767
15	288.6	2.28	0.01	0.81	288.6	0.79	6	1.52275	130.1189	0.90317	0	0.9032	318.54	0.7925	0	6	0.4655	1.0765	1.5031	292.695
16	399.6	2.93	0.06	0.47	399.601	0.7332	6	1.40536	132.7479	0.96954	0	0.9695	411.15	0.735	1E-05	6	0.428	1.0381	1.3966	391.0998
17	348.3	2.35	0.58	0.67	348.307	0.6747	6	1.41704	130.7988	1.03494	0	1.0349	335.55	0.6767	0.0001	6	0.4384	1.0098	1.416	331.4017
18	331.5	1.02	0.55	0.63	331.507	0.3077	7	1.20423	124.5713	1.09723	0	1.0972	301.13	0.3087	0.0001	7	0.3632	0.9869	1.2109	308.1738
19	180.4	0.69	0.29	0.51	180.404	0.3825	6	1.47564	120.2274	1.15734	0	1.1573	154.88	0.385	0.0001	6	0.4744	0.9584	1.495	162.3497
20	99.7	1.02	-0.17	0.51	99.6979	1.0231	6	1.93655	121.6409	1.21816	0	1.2182	80.843	1.0358	-1E-04	6	0.6603	0.9112	1.9754	84.80513
21	73.1	0.69	-0.24	0.51	73.0971	0.944	6	2.0216	118.024	1.27718	0	1.2772	56.233	0.9607	-2E-04	5	0.7026	0.8762	2.0789	59.47017
22	197.5	1.45	-0.84	0.42	197.49	0.7342	6	1.61758	125.8819	1.34012	0	1.3401	146.37	0.7392	-3E-04	6	0.5473	0.8787	1.6638	162.8932
23	298.6	1.77	-0.84	0.18	298.59	0.5928	6	1.42307	128.3492	1.40429	0	1.4043	211.63	0.5956	-2E-04	6	0.4759	0.874	1.4684	245.4721
24	303.3	1.72	-0.73	-0.08	303.291	0.5671	6	1.40482	128.1777	1.46838	0	1.4684	205.55	0.5699	-2E-04	6	0.4746	0.856	1.4572	244.162
25	288.4	1.81	-0.69	-0.27	288.392	0.6276	6	1.4512	128.428	1.53259	0	1.5326	187.17	0.631	-2E-04	6	0.4988	0.8313	1.5127	225.3615
26	295.8	2.37	-0.63	-0.61	295.792	0.8012	6	1.52003	130.4622	1.59782	0	1.5978	184.12	0.8056	-2E-04	6	0.5309	0.8035	1.5889	223.3927
27	296.4	2.11	-0.62	-0.96	296.392	0.7119	6	1.48186	129.6169	1.66263	0	1.6626	177.27	0.7159	-2E-04	6	0.5222	0.7898	1.5578	219.9938
28	421.5	2.45	-4.54	-1.26	421.444	0.5813	7	1.31363	131.5686	1.72842	0	1.7284	242.83	0.5837	-8E-04	6	0.4586	0.7985	1.3828	316.7262
29	446.1	1.5	-8.9	-1.6	445.991	0.3363	7	1.12784	128.1168	1.79248	0.0312	1.7613	252.2	0.3377	-0.002	7	0.3892	0.8201	1.1962	344.2945
30	408.5	1.6	-8.83	-1.67	408.392	0.3918	7	1.20064	128.3742	1.85666	0.0624	1.7943	226.58	0.3936	-0.002	7	0.4212	0.8006	1.2762	307.5868
31	373.2	2.39	-8.75	-1.54	373.093	0.6406	6	1.38031	131.0899	1.92221	0.0936	1.8286	202.98	0.6439	-0.002	6	0.4946	0.763	1.4647	267.632
32	418.6	1.66	-8.85	-1.71	418.492	0.3967	7	1.19652	128.7031	1.98656	0.1248	1.8618	223.72	0.3986	-0.002	7	0.4249	0.7866	1.2775	309.6149
33	376.5	1.23	-6.49	-1.72	376.421	0.3268	7	1.17618	126.2511	2.04968	0.156	1.8937	197.69	0.3286	-0.002	7	0.4215	0.7824	1.2645	276.8362
34	221.4	2.32	0.55	-1.42	221.407	1.0479	6	1.69095	129.5997	2.11448	0.1872	1.9273	113.78	1.058	-7E-04	6	0.6319	0.6846	1.8127	141.8894
35	373	2.23	0.81	-1.25	373.01	0.5978	6	1.35822	130.5824	2.17978	0.2184	1.9614	189.07	0.6014	-4E-04	6	0.4975	0.7356	1.4557	257.8087
36	436.6	2.58	1.66	-1.33	436.62	0.5909	7	1.30887	132.0332	2.24579	0.2496	1.9962	217.6	0.594	-3E-04	6	0.4786	0.738	1.4017	302.9693
37	233.3	1.96	1.97	-1.18	233.324	0.84	6	1.60579	128.4938	2.31004	0.2808	2.0292	113.84	0.8484	-6E-04	6	0.6078	0.6731	1.7368	146.9658
38	337.2	1.22	2.7	-0.99	337.233	0.3618	7	1.24108	125.9232	2.373	0.312	2.061	162.47	0.3643	-4E-04	6	0.463	0.7344	1.3524	232.4168
39	391.1	2.48	1.44	-1.01	391.118	0.6341	6	1.36337	131.4755	2.43874	0.3432	2.0955	185.48	0.6381	-6E-04	6	0.51	0.7057	1.4718	259.2424
40	358.8	1.41	1.72	-1.64	358.821	0.393	7	1.24342	127.1336	2.50231	0.3744	2.1279	167.45	0.3957	-7E-04	6	0.4685	0.7209	1.3583	242.7557
41	582.3	1.97	2.02	-1.92	582.325	0.3383	7	1.04567	130.7617	2.56769	0.4056	2.1621	268.15	0.3398	-5E-04	7	0.385	0.7595	1.135	416.1358
42	525.8	3.1	0.19	-2.37	525.802	0.5896	7	1.2569	133.83	2.6346	0.4368	2.1978	238.04	0.5925	-8E-04	6	0.4712	0.7086	1.3572	350.3583
43	528.9	3.23	4.58	-2.61	528.956	0.6106	7	1.26736	134.1451	2.70167	0.468	2.2337	235.6	0.6138	-3E-04	6	0.478	0.6997	1.3704	347.9901
44	426.5	1.76	4.12	-2.98	426.55	0.4126	7	1.20233	129.1777	2.76626	0.4992	2.2671	186.93	0.4153	-5E-04	7	0.4606	0.704	1.3202	281.9634
45	399	0	4.79	-3.51	399.059	0	0	0	120.9	2.82671	0.5304	2.2963	172.55	0	-5E-04	0	1	0.4608	0	0

Depth (ft)	CPT-3 In situ data				Basic output data															
	qc (tsf)	fs (tsf)	u (psi)	Other	qt (tsf)	Rf(%)	SBT	Ic SBT	$\bar{a}$ (pcf)	$\acute{o},v$ (tsf)	u0 (tsf)	$\acute{o}',v\acute{o}$ (tsf)	Qt1	Fr (%)	Bq	SBTn	n	Cn	Ic	Qtn
1	66.2	1.98	-0.15	-0.15	66.1982	2.991	5	2.38265	125.4954	0.06275	0	0.0628	1054	2.9939	-2E-04	8	0.5939	5.354	1.9419	334.6433
2	55.5	0.6	-0.09	-0.32	55.4989	1.0811	5	2.15303	116.3296	0.12091	0	0.1209	458	1.0835	-1E-04	6	0.5326	3.1749	1.7708	166.1636
3	54	1.14	-0.18	-0.29	53.9978	2.1112	5	2.34324	120.9591	0.18139	0	0.1814	296.69	2.1183	-2E-04	5	0.625	3.0108	2.0103	153.1327
4	51.3	1.16	-0.13	-0.36	51.2984	2.2613	5	2.37966	120.9613	0.24187	0	0.2419	211.09	2.272	-2E-04	5	0.6548	2.6284	2.0864	126.8265
5	70.2	2.34	-0.27	-0.39	70.1967	3.3335	5	2.39881	126.8608	0.3053	0	0.3053	228.92	3.3481	-3E-04	8	0.688	2.3517	2.1632	155.3379
6	58	1.57	-6.64	-0.45	57.9187	2.7107	5	2.39405	123.4719	0.36704	0	0.367	156.8	2.728	-0.008	5	0.6965	2.0906	2.1776	113.7095
7	42.1	0.61	0.02	-0.47	42.1002	1.4489	5	2.32489	115.7766	0.42493	0	0.4249	98.076	1.4637	3E-05	5	0.6777	1.8557	2.1211	73.09097
8	26.7	0.41	-0.13	-0.45	26.6984	1.5357	5	2.5009	111.7587	0.48081	0	0.4808	54.528	1.5638	-4E-04	5	0.7503	1.8072	2.304	44.77831
9	31.7	0.4	-0.43	-0.39	31.6947	1.262	5	2.39154	111.9964	0.5368	0	0.5368	58.043	1.2838	-1E-03	5	0.7237	1.6342	2.2273	48.12068
10	105.5	0.86	-0.02	-0.36	105.5	0.8152	6	1.8559	120.5304	0.59707	0	0.5971	175.7	0.8198	-1E-05	6	0.5462	1.3669	1.7537	135.5162
11	134.2	0.92	0.06	-0.35	134.201	0.6855	6	1.72722	121.6107	0.65788	0	0.6579	202.99	0.6889	3E-05	6	0.509	1.2737	1.6484	160.7462
12	154.1	0.97	0.21	-0.36	154.103	0.6295	6	1.65705	122.3352	0.71904	0	0.719	213.32	0.6324	0.0001	6	0.4919	1.2093	1.5956	175.2951
13	183	1.43	0.29	-0.38	183.004	0.7814	6	1.66027	125.5944	0.78184	0	0.7818	233.07	0.7848	0.0001	6	0.5021	1.1641	1.6145	200.4689
14	218	1.97	0.4	-0.42	218.005	0.9037	6	1.64908	128.3654	0.84602	0	0.846	256.68	0.9072	0.0001	6	0.5062	1.1199	1.6174	229.8385
15	193.1	2.61	0.67	-0.43	193.108	1.3516	6	1.81268	130.128	0.91109	0	0.9111	210.95	1.358	0.0003	6	0.5755	1.0899	1.7909	197.9731
16	165.8	3.1	0.64	-0.41	165.808	1.8696	6	1.96234	131.0151	0.97659	0	0.9766	168.78	1.8807	0.0003	6	0.6397	1.0526	1.9516	163.9766
17	140.2	1.91	0.77	-0.39	140.209	1.3623	6	1.91061	127.0625	1.04013	0	1.0401	133.8	1.3724	0.0004	6	0.6276	1.0108	1.9119	132.9491
18	293.5	2.08	0.47	-0.87	293.506	0.7087	6	1.48338	129.4882	1.10487	0	1.1049	264.65	0.7114	0.0001	6	0.4706	0.9799	1.4918	270.776
19	385.2	2.52	0.4	-1.14	385.205	0.6542	6	1.37793	131.5554	1.17065	0	1.1707	328.05	0.6562	7E-05	6	0.4359	0.9569	1.3925	347.2998
20	393.2	1.51	0.47	-1.11	393.206	0.384	7	1.20699	127.8581	1.23458	0	1.2346	317.49	0.3852	9E-05	7	0.3761	0.9436	1.2278	349.5643
21	431.1	3.43	0.7	-0.96	431.109	0.7956	6	1.41262	134.0858	1.30162	0	1.3016	330.21	0.798	0.0001	6	0.4602	0.9091	1.44	369.2747
22	404.4	2.78	0.32	-1.79	404.404	0.6874	6	1.3805	132.3925	1.36782	0	1.3678	294.66	0.6898	6E-05	6	0.454	0.89	1.4157	338.9945
23	460.6	2.8	-0.1	-2.07	460.599	0.6079	7	1.3033	132.7623	1.4342	0	1.4342	320.15	0.6098	-2E-05	6	0.4291	0.8777	1.3421	380.8558
24	433.1	4.17	-0.43	-1.87	433.095	0.9628	6	1.47804	135.5265	1.50196	0	1.502	287.35	0.9662	-7E-05	6	0.5023	0.8387	1.5258	342.0793
25	276.7	2.35	-0.58	-1.67	276.693	0.8493	6	1.55826	130.2374	1.56708	0	1.5671	175.57	0.8542	-2E-04	6	0.5435	0.8078	1.6258	210.0375
26	216.9	1.02	-0.75	-1.71	216.891	0.4703	6	1.46217	123.5366	1.62885	0	1.6289	132.16	0.4738	-3E-04	6	0.5155	0.8006	1.5444	162.879
27	184.2	1.07	-1.11	-1.85	184.186	0.5809	6	1.57468	123.4881	1.69059	0	1.6906	107.95	0.5863	-4E-04	6	0.567	0.7667	1.6719	132.2319
28	82.4	1.54	-1.35	-1.86	82.3835	1.8693	5	2.17195	124.1901	1.75269	0	1.7527	46.004	1.9099	-0.001	5	0.8162	0.6624	2.3184	50.47598
29	69.3	0.73	-1.8	-2.42	69.278	1.0537	5	2.06879	118.3054	1.81184	0.0312	1.7806	37.889	1.082	-0.002	5	0.7834	0.6651	2.2289	42.40963
30	50.5	0.72	-6.39	-2.39	50.4218	1.428	5	2.25849	117.4296	1.87055	0.0624	1.8082	26.851	1.483	-0.011	5	0.8675	0.6282	2.4446	28.82692
31	197.3	1.68	-8.89	-2.45	197.191	0.852	6	1.66211	126.9555	1.93403	0.0936	1.8404	106.09	0.8604	-0.004	6	0.6144	0.7117	1.7777	131.3358
32	375.5	0.85	-7.18	-2.48	375.412	0.2264	7	1.08488	123.5406	1.9958	0.1248	1.871	199.58	0.2276	-0.002	7	0.3844	0.8032	1.1698	283.4645
33	455.5	1.62	-8.82	-2.56	455.392	0.3557	7	1.13744	128.7308	2.06017	0.156	1.9042	238.07	0.3574	-0.002	7	0.4043	0.7886	1.2181	337.845
34	539.7	3.46	-9.5	-2.39	539.584	0.6412	7	1.27911	134.697	2.12752	0.1872	1.9403	276.99	0.6438	-0.002	6	0.4589	0.7571	1.357	384.5682
35	500.4	2.08	-8.05	-1.82	500.301	0.4158	7	1.15591	130.789	2.19291	0.2184	1.9745	252.27	0.4176	-0.002	7	0.4155	0.7717	1.2388	363.26
36	427.7	1.53	-8.64	-1.59	427.594	0.3578	7	1.15939	128.1589	2.25699	0.2496	2.0074	211.89	0.3597	-0.002	7	0.4224	0.763	1.2526	306.7138
37	367.6	1.34	-6.35	-1.13	367.522	0.3646	7	1.21439	126.8195	2.3204	0.2808	2.0396	179.06	0.3669	-0.002	7	0.4492	0.7447	1.3188	257.0277
38	379	1.47	-2.16	-1.36	378.974	0.3879	7	1.22185	127.5718	2.38419	0.312	2.0722	181.74	0.3904	-0.001	6	0.4542	0.7369	1.328	262.269
39	347.1	2.64	-1.28	-1.39	347.084	0.7606	6	1.45701	131.6416	2.45001	0.3432	2.1068	163.58	0.766	-0.001	6	0.5494	0.685	1.5739	223.0978
40	332.8	2.29	-3.97	-1.39	332.751	0.6882	6	1.43678	130.4981	2.51526	0.3744	2.1409	154.25	0.6934	-0.002	6	0.5455	0.6808	1.5593	212.4869
41	354.2	3.72	5.31	-1.02	354.265	1.0501	6	1.56013	134.2009	2.58236	0.4056	2.1768	161.56	1.0578	-7E-05	6	0.5947	0.6512	1.6841	216.4308
42	522.9	5.52	-0.68	-0.47	522.892	1.0557	6	1.46585	137.28	2.651	0.4368	2.2142	234.96	1.0611	-9E-04	6	0.553	0.6648	1.5701	326.8375
43	538.7	3.24	-3.69	-0.71	538.655	0.6015	7	1.25737	134.2121	2.7181	0.468	2.2501	238.18	0.6046	-0.001	6	0.475	0.6988	1.3606	353.9425
44	381.1	1.59	-3.56	-0.64	381.056	0.4173	7	1.24131	128.1593	2.78218	0.4992	2.283	165.69	0.4203	-0.002	6	0.4796	0.6916	1.368	247.239
45	357.7	1.78	-3.67	-0.67	357.655	0.4977	7	1.31393	128.8307	2.8466	0.5304	2.3162	153.19	0.5017	-0.002	6	0.5119	0.6697	1.4487	224.5483
46	323.1	1.33	-3.74	-0.61	323.054	0.4117	7	1.29122	126.4501	2.90982	0.5616	2.3482	136.33	0.4154	-0.003	6	0.5085	0.6668	1.4356	201.7349
47	289.4	1.92	-3.82	-0.61	289.353	0.6636	6	1.46724	128.8678	2.97426	0.5928	2.3815	120.25	0.6704	-0.003	6	0.5819	0.6237	1.6245	168.8146
48	257.6	1.83	-4.04	-0.57	257.551	0.7105	6	1.52402	128.2325	3.03837	0.624	2.4144	105.42	0.719	-0.004	6	0.6098	0.6047	1.6936	145.4488
49	273.5	0.82	-3.98	-0.51	273.451	0.2999	7	1.26663	122.5048	3.09962	0.6552	2.4444	110.6	0.3033	-0.003	6	0.5121	0.6513	1.4326	166.4114
50	245.4	0	-5.59	-0.61	245.332	0	0	0	120.9	3.16007	0.6864	2.4737	97.9	0	-0.005	0	1	0.4278	0	0

Depth (ft)	CPT-4 In situ data				Basic output data															
	qc (tsf)	fs (tsf)	u (psi)	Other	qt (tsf)	Rf(%)	SBT	Ic SBT	$\bar{a}$ (pcf)	$\phi, \nu$ (tsf)	u0 (tsf)	$\phi', \nu_0$ (tsf)	Qt1	Fr (%)	Bq	SBTn	n	Cn	Ic	Qtn
1	132.5	1.98	0.4	0	132.505	1.4943	6	1.95644	127.188	0.06359	0	0.0636	2082.6	1.495	0.0002	6	0.4672	3.7198	1.6088	465.5981
2	104.2	1.84	0.78	0.2	104.21	1.7657	5	2.0814	126.0656	0.12663	0	0.1266	821.97	1.7678	0.0005	6	0.5307	3.0852	1.769	303.4774
3	157	2.06	0.67	0.4	157.008	1.312	6	1.86453	127.8917	0.19057	0	0.1906	822.88	1.3136	0.0003	6	0.4825	2.2867	1.6355	338.9041
4	40.8	0.77	0.85	0.52	40.8104	1.8868	5	2.40535	117.405	0.24928	0	0.2493	162.72	1.8984	0.0015	5	0.662	2.6041	2.0996	99.82365
5	35	1.11	0.91	0.56	35.0111	3.1704	4	2.60115	119.7072	0.30913	0	0.3091	112.26	3.1987	0.0019	5	0.7485	2.5119	2.3218	82.38144
6	78.7	2.9	-1.11	0.56	78.6864	3.6855	4	2.39733	128.7092	0.37348	0	0.3735	209.68	3.7031	-0.001	8	0.7057	2.0852	2.2003	154.3263
7	44.9	2.12	-0.6	0.59	44.8927	4.7224	4	2.64237	125.0481	0.43601	0	0.436	101.96	4.7687	-1E-03	9	0.8013	2.0349	2.4433	85.49549
8	142.5	2.76	-0.88	0.64	142.489	1.937	5	2.01719	129.7954	0.50091	0	0.5009	283.46	1.9438	-5E-04	6	0.596	1.5615	1.8962	209.5425
9	68.8	1.91	-1.11	0.58	68.7864	2.7767	5	2.34799	125.3256	0.56357	0	0.5636	121.06	2.7997	-0.001	5	0.7216	1.5755	2.2181	101.585
10	56.9	1.02	-1.11	0.61	56.8864	1.7931	5	2.27978	120.2724	0.6237	0	0.6237	90.207	1.8129	-0.001	5	0.7045	1.4512	2.1657	77.16377
11	88.1	0.57	-1.04	0.62	88.0873	0.6471	6	1.86123	117.081	0.68224	0	0.6822	128.11	0.6521	-9E-04	6	0.5596	1.2784	1.7781	105.5997
12	106.8	0.8	0.4	0.62	106.805	0.749	6	1.82945	120.0312	0.74226	0	0.7423	142.89	0.7543	0.0003	6	0.5577	1.2187	1.7657	122.1547
13	156.6	1	0.47	0.62	156.606	0.6386	6	1.65538	122.5974	0.80356	0	0.8036	193.89	0.6418	0.0002	6	0.5021	1.1482	1.6119	169.0621
14	183.8	1.45	0.63	0.62	183.808	0.7889	6	1.66163	125.7068	0.86641	0	0.8664	211.15	0.7926	0.0003	6	0.5127	1.1079	1.6319	191.551
15	197.2	1.13	0.85	0.64	197.21	0.573	6	1.54784	124.054	0.92844	0	0.9284	211.41	0.5757	0.0003	6	0.4769	1.0643	1.5298	197.436
16	160.9	1.36	0.85	0.6	160.91	0.8452	6	1.72462	124.9134	0.9909	0	0.9909	161.39	0.8504	0.0004	6	0.5509	1.0368	1.7167	156.7017
17	200.6	1.42	1.05	0.52	200.613	0.7078	6	1.60188	125.7672	1.05378	0	1.0538	189.37	0.7116	0.0004	6	0.5111	1.0021	1.6044	188.9954
18	141.4	1.9	0.93	0.5	141.411	1.3436	6	1.90376	127.0449	1.1173	0	1.1173	125.57	1.3543	0.0005	6	0.634	0.9661	1.9192	128.0915
19	262.6	1.36	1	0.49	262.612	0.5179	6	1.42438	126.1081	1.18036	0	1.1804	221.49	0.5202	0.0003	6	0.4559	0.9514	1.4436	235.062
20	293.6	2.43	1.08	0.46	293.613	0.8276	6	1.53261	130.6271	1.24567	0	1.2457	234.71	0.8312	0.0003	6	0.5031	0.9212	1.5593	254.5309
21	302.3	2.1	1	0.43	302.312	0.6947	6	1.46823	129.6304	1.31048	0	1.3105	229.69	0.6977	0.0002	6	0.4843	0.9016	1.5023	256.4749
22	365.4	2.86	1.15	0.41	365.414	0.7827	6	1.45197	132.3528	1.37666	0	1.3767	264.44	0.7856	0.0002	6	0.4829	0.8807	1.4903	302.988
23	381.4	2.68	1.15	0.52	381.414	0.7027	6	1.40419	131.9817	1.44265	0	1.4427	263.38	0.7053	0.0002	6	0.4701	0.8644	1.4485	310.4104
24	442.2	3.4	1.08	0.71	442.213	0.7689	6	1.3941	134.0836	1.50969	0	1.5097	291.92	0.7715	0.0002	6	0.4706	0.846	1.4416	352.3495
25	472.1	4.14	0.95	1.41	472.112	0.8769	6	1.42326	135.684	1.57754	0	1.5775	298.27	0.8799	0.0002	6	0.4868	0.8233	1.4756	366.1254
26	348.7	2.38	0.7	1.72	348.709	0.6825	6	1.42042	130.8944	1.64298	0	1.643	211.24	0.6858	0.0002	6	0.4948	0.8044	1.4884	263.8336
27	429.4	5.73	-0.11	1.87	429.399	1.3344	6	1.59759	137.28	1.71162	0	1.7116	249.87	1.3398	-2E-05	6	0.566	0.7617	1.6668	307.8789
28	480.9	2.21	-4.96	2.16	480.839	0.4596	7	1.19951	131.1358	1.77719	0	1.7772	269.56	0.4613	-8E-04	7	0.4169	0.8056	1.2673	364.7242
29	256.2	2.02	-7.8	2.38	256.105	0.7887	6	1.55794	128.9416	1.84166	0.0312	1.8105	140.44	0.7945	-0.002	6	0.5671	0.7374	1.6573	177.2028
30	202.1	1.32	-8.42	2.46	201.997	0.6535	6	1.57666	125.2496	1.90429	0.0624	1.8419	108.63	0.6597	-0.003	6	0.5813	0.7246	1.6905	137.0165
31	118.9	2.13	-8.71	2.56	118.793	1.793	5	2.04624	127.4559	1.96801	0.0936	1.8744	62.326	1.8232	-0.006	5	0.7747	0.6421	2.1944	70.89586
32	326.1	1.6	-7.66	2.69	326.006	0.4908	6	1.33891	127.8247	2.03193	0.1248	1.9071	169.88	0.4939	-0.002	6	0.4877	0.7503	1.4367	229.7206
33	549.9	6.38	1.23	2.43	549.915	1.1602	6	1.48959	137.28	2.10057	0.156	1.9446	281.72	1.1646	-1E-04	6	0.5398	0.72	1.569	372.7782
34	467.8	1.81	0.26	2.2	467.803	0.3869	7	1.15412	129.6078	2.16537	0.1872	1.9782	235.39	0.3887	-4E-04	7	0.4163	0.7707	1.2403	339.1524
35	472.1	2.68	-4.14	2.26	472.049	0.5677	7	1.27368	132.5017	2.23162	0.2184	2.0132	233.37	0.5704	-0.001	6	0.465	0.7415	1.3639	329.2292
36	440.4	2.96	-5.25	2.3	440.336	0.6722	6	1.34946	133.0592	2.29815	0.2496	2.0486	213.83	0.6757	-0.001	6	0.4984	0.7195	1.4471	297.8496
37	318.6	1.74	-6.11	2.76	318.525	0.5463	6	1.37821	128.3818	2.36234	0.2808	2.0815	151.89	0.5504	-0.002	6	0.5187	0.704	1.4962	210.3593
38	428.6	2.67	-6.55	2.82	428.52	0.6231	7	1.33165	132.2384	2.42846	0.312	2.1165	201.32	0.6266	-0.002	6	0.4977	0.7082	1.4368	285.19
39	372.5	1.85	-6.69	2.81	372.418	0.4968	7	1.30083	129.2116	2.49307	0.3432	2.1499	172.07	0.5001	-0.002	6	0.4916	0.7058	1.4164	246.7365
40	370.3	1.53	-6.72	2.84	370.218	0.4133	7	1.24776	127.8075	2.55697	0.3744	2.1826	168.45	0.4161	-0.002	6	0.4741	0.7095	1.3663	246.5128
41	444	1.92	-6.83	2.91	443.916	0.4325	7	1.20438	129.9117	2.62193	0.4056	2.2163	199.11	0.4351	-0.002	7	0.4562	0.7137	1.3152	297.6467
42	412.4	2.65	-7.96	3.14	412.303	0.6427	6	1.35279	132.0893	2.68797	0.4368	2.2512	181.96	0.647	-0.002	6	0.5179	0.6764	1.4729	261.8491
43	459.4	3.59	-8.14	3.24	459.3	0.7816	6	1.38986	134.5739	2.75526	0.468	2.2873	199.6	0.7863	-0.002	6	0.5326	0.6633	1.5071	286.1889
44	493.6	1.48	-8.79	3.48	493.492	0.2999	7	1.06197	128.2654	2.81939	0.4992	2.3202	211.48	0.3016	-0.002	7	0.4075	0.7262	1.1739	336.749
45	435.8	1.62	-8.71	3.71	435.693	0.3718	7	1.16458	128.6229	2.8837	0.5304	2.3533	183.92	0.3743	-0.003	7	0.4527	0.6964	1.2885	284.8497
46	358.2	1.16	-8.39	3.78	358.097	0.3239	7	1.19087	125.7006	2.94655	0.5616	2.385	148.91	0.3266	-0.003	6	0.4705	0.6823	1.3309	229.0007
47	364.4	1.38	-8.19	3.86	364.3	0.3788	7	1.22805	127.0132	3.01006	0.5928	2.4173	149.46	0.382	-0.003	6	0.4871	0.6687	1.3706	228.3346
48	362.6	2.48	-8.34	3.98	362.498	0.6841	6	1.40996	131.2901	3.0757	0.624	2.4517	146.6	0.69	-0.003	6	0.56	0.6247	1.5583	212.1833
49	91.4	0.37	-8.95	6.04	91.2905	0.4053	6	1.74318	114.0062	3.13271	0.6552	2.4775	35.583	0.4197	-0.015	6	0.7316	0.5366	2.0054	44.71095
50	75.3	0	-9.24	6.01	75.1869	0	0	0	120.9	3.19316	0.6864	2.5068	28.72	0	-0.019	0	1	0.4221	0	0

2900 Thurgood Marshall Dr  
Oxnard, CA

CPT Shear Wave Measurements

	Tip Depth (ft)	Geophone Depth (ft)	Travel Distance (ft)	S-Wave Arrival (msec)	S-Wave Velocity from Surface (ft/sec)	Interval S-Wave Velocity (ft/sec)
CPT-1	20.26	19.26	19.90	25.17	790.56	
	29.90	28.90	29.33	37.38	784.63	772.39
CPT-1B	50.36	49.36	49.61	62.35	795.71	

Shear Wave Source Offset = 5 ft

S-Wave Velocity from Surface = Travel Distance/S-Wave Arrival  
Interval S-Wave Velocity = (Travel Dist2-Travel Dist1)/(Time2-Time1)

Presented below is a list of formulas used for the estimation of various soil properties. The formulas are presented in SI unit system and assume that all components are expressed in the same units.

**:: Unit Weight,  $g$  (kN/m<sup>3</sup>) ::**

$$g = g_w \cdot \left( 0.27 \cdot \log(R_f) + 0.36 \cdot \log\left(\frac{q_t}{p_a}\right) + 1.236 \right)$$

where  $g_w$  = water unit weight

**:: Permeability,  $k$  (m/s) ::**

$$I_c < 3.27 \text{ and } I_c > 1.00 \text{ then } k = 10^{0.952-3.04 \cdot I_c}$$

$$I_c \leq 4.00 \text{ and } I_c > 3.27 \text{ then } k = 10^{-4.52-1.37 \cdot I_c}$$

**:: N<sub>SPT</sub> (blows per 30 cm) ::**

$$N_{60} = \left( \frac{q_c}{p_a} \right) \cdot \frac{1}{10^{1.1268-0.2817 \cdot I_c}}$$

$$N_{I(60)} = Q_{tn} \cdot \frac{1}{10^{1.1268-0.2817 \cdot I_c}}$$

**:: Young's Modulus,  $E_s$  (MPa) ::**

$$(q_t - \sigma_v) \cdot 0.015 \cdot 10^{0.55 \cdot I_c + 1.68}$$

(applicable only to  $I_c < I_{c\_cutoff}$ )

**:: Relative Density,  $D_r$  (%) ::**

$$100 \cdot \sqrt{\frac{Q_{tn}}{k_{DR}}} \quad \text{(applicable only to SBT}_n\text{: 5, 6, 7 and 8 or } I_c < I_{c\_cutoff}\text{)}$$

**:: State Parameter,  $\psi$  ::**

$$\psi = 0.56 - 0.33 \cdot \log(Q_{tn,CS})$$

**:: Peak drained friction angle,  $\phi$  (°) ::**

$$\phi = 17.60 + 11 \cdot \log(Q_{tn})$$

(applicable only to SBT<sub>n</sub>: 5, 6, 7 and 8)

**:: 1-D constrained modulus,  $M$  (MPa) ::**

If  $I_c > 2.20$

$$a = 14 \text{ for } Q_{tn} > 14$$

$$a = Q_{tn} \text{ for } Q_{tn} \leq 14$$

$$M_{CPT} = a \cdot (q_t - \sigma_v)$$

If  $I_c \leq 2.20$

$$M_{CPT} = (q_t - \sigma_v) \cdot 0.0188 \cdot 10^{0.55 \cdot I_c + 1.68}$$

**:: Small strain shear Modulus,  $G_0$  (MPa) ::**

$$G_0 = (q_t - \sigma_v) \cdot 0.0188 \cdot 10^{0.55 \cdot I_c + 1.68}$$

**:: Shear Wave Velocity,  $V_s$  (m/s) ::**

$$V_s = \left( \frac{G_0}{\rho} \right)^{0.50}$$

**:: Undrained peak shear strength,  $S_u$  (kPa) ::**

$$N_{kt} = 10.50 + 7 \cdot \log(F_r) \text{ or user defined}$$

$$S_u = \frac{(q_t - \sigma_v)}{N_{kt}}$$

(applicable only to SBT<sub>n</sub>: 1, 2, 3, 4 and 9 or  $I_c > I_{c\_cutoff}$ )

**:: Remolded undrained shear strength,  $S_{u(rem)}$  (kPa) ::**

$$S_{u(rem)} = f_s \quad \text{(applicable only to SBT}_n\text{: 1, 2, 3, 4 and 9 or } I_c > I_{c\_cutoff}\text{)}$$

**:: Overconsolidation Ratio, OCR ::**

$$k_{OCR} = \left[ \frac{Q_{tn}^{0.20}}{0.25 \cdot (10.50 + 7 \cdot \log(F_r))} \right]^{1.25} \text{ or user defined}$$

$$OCR = k_{OCR} \cdot Q_{tn}$$

(applicable only to SBT<sub>n</sub>: 1, 2, 3, 4 and 9 or  $I_c > I_{c\_cutoff}$ )

**:: In situ Stress Ratio,  $K_0$  ::**

$$K_0 = (1 - \sin \phi') \cdot OCR^{\sin \phi'}$$

(applicable only to SBT<sub>n</sub>: 1, 2, 3, 4 and 9 or  $I_c > I_{c\_cutoff}$ )

**:: Soil Sensitivity,  $S_t$  ::**

$$S_t = \frac{N_s}{F_r}$$

(applicable only to SBT<sub>n</sub>: 1, 2, 3, 4 and 9 or  $I_c > I_{c\_cutoff}$ )

**:: Effective Stress Friction Angle,  $\phi'$  (°) ::**

$$\phi' = 29.5^\circ \cdot B_q^{0.121} \cdot (0.256 + 0.336 \cdot B_q + \log Q_t)$$

(applicable for  $0.10 < B_q < 1.00$ )

**References**

- Robertson, P.K., Cabal K.L., Guide to Cone Penetration Testing for Geotechnical Engineering, Gregg Drilling & Testing, Inc., 5<sup>th</sup> Edition, November 2012
- Robertson, P.K., Interpretation of Cone Penetration Tests - a unified approach., Can. Geotech. J. 46(11): 1337–1355 (2009)

APPENDIX C

LABORATORY METHODS AND RESULTS

## LABORATORY TEST METHODS

### Laboratory Testing Program

Laboratory tests were performed on representative soil samples to detect their relative engineering properties. The following presents a brief description of the various test methods used.

### Classification

Soils were classified visually according to the Unified Soil Classification System. Visual classifications were supplemented by laboratory testing of selected samples according to ASTM D2487. The soil classifications are shown on the Exploration Logs in Appendix B.

### Moisture and Density Tests

Moisture content and unit dry density tests were performed on samples of undisturbed soil obtained in the borings. Dry density and field moisture information is useful in correlating field and laboratory data, and in providing a gross picture of the variations of soil characteristics. The results of the tests are presented on the boring logs in Appendix B.

### Particle-Size Analysis (#200 Wash)

Particle-size analyses were performed on selected representative samples according to ASTM D 422. The percentage of "fines" (percent passing the No. 200 sieve) of various samples were obtained. The results of these tests are presented in this appendix.

### Direct Shear

Direct shear tests were performed on either samples direct from the field or on samples recompacted to a specific density. Direct shear testing was performed in accordance with ASTM D 3080. The samples were inundated during shearing to represent adverse field conditions. The method of performing these tests is to contain the sample in testing rings, to apply a normal load, and to then allow sufficient time to elapse to dissipate any excess hydrostatic pressure which may have developed in applying the normal pressure.

The sample is then subjected to strain-controlled, double-plane shear tests. The method of applying the normal and shearing load is such as to allow the sample to change in volume during shear without producing an associated change in the normal stress. The shearing stress is measured at a constant rate of strain of approximately 0.02 inch per minute.

Selected samples of the soil were tested at confining pressures similar to those of the materials in-situ. Additional specimens, from the same sample, were also tested at increased normal pressures in order to determine the increase in shear strengths associated with increased intergranular pressures. Specimens were soaked for testing.

### Expansion Index Tests

Expansion Index tests provided an index to the expansion potential of soils when inundated with water. This test method controls variables that influence the expansive characteristics of soils. The tests were performed in accordance with the ASTM D 4829 method. The results are presented in the following table.

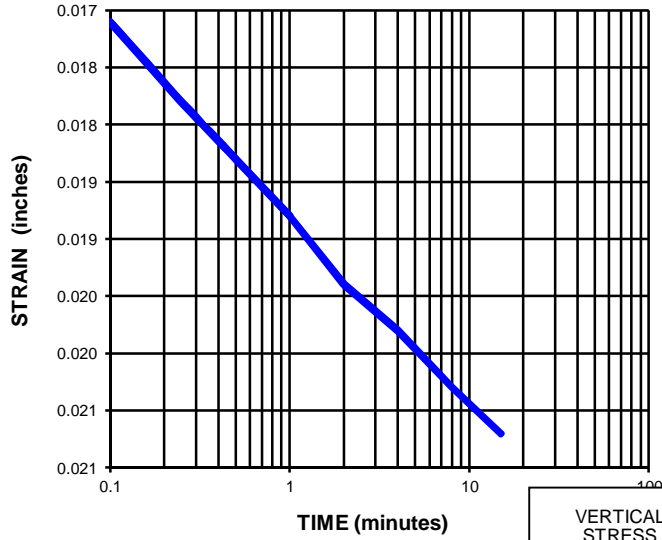
Sample ID	Soil Description	Expansion Index Expansion Potential
B-1 @ 2' to 3'	Clayey sandy silt (ML)	17 Very Low

### Chemical Analysis

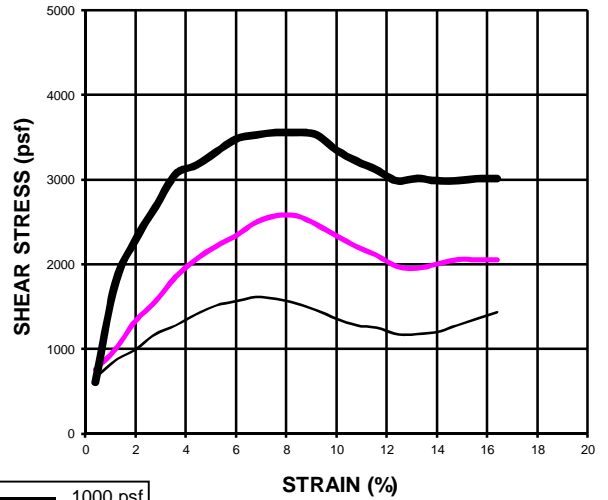
Soil materials were collected with sterile sampling equipment and sent to HDR & Schiff laboratory for the corrosion testing. Test results are presented in this Appendix.



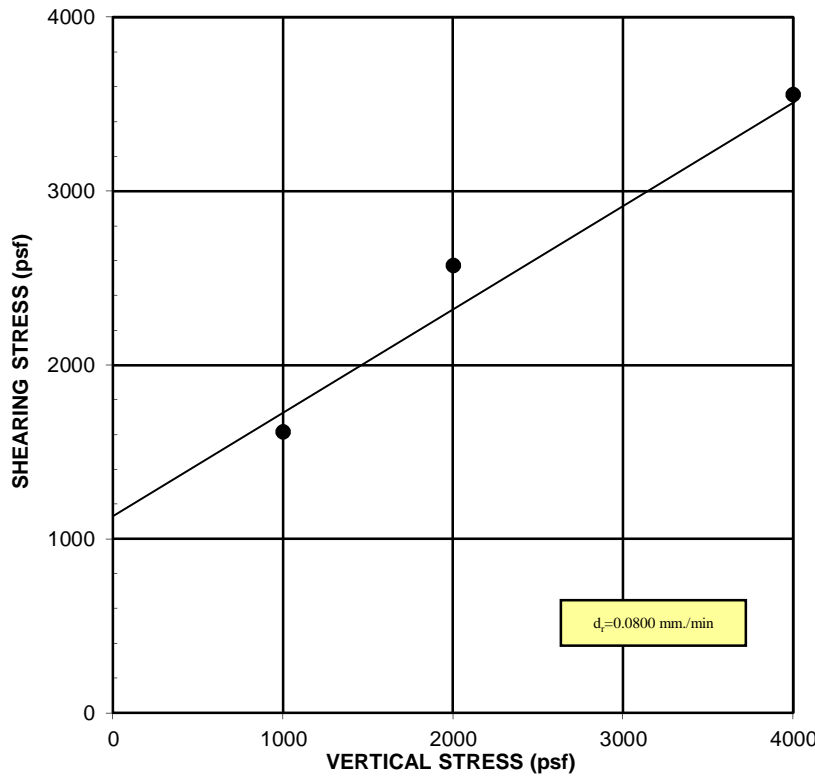
### PRECONSOLIDATION



### SHEARING DATA



### FAILURE ENVELOPE



## SHEAR STRENGTH TEST - ASTM D3080

Job Name: <u>Marshall Elementary School</u>	Initial Dry Density (pcf): <u>113.9</u>
Project Number: <u>30-1301G</u>	Sample Date: <u>9/26/2015</u>
Lab Number: <u>25719</u>	Test Date: <u>10/13/2015</u>
Sample Location: <u>B-2 @ 6.0' - 7.5'</u>	Tested by: <u>RJP</u>
Sample Description: <u>Dark Brown Clay</u>	Initial Moisture (%): <u>14.4</u>
	Final Moisture (%): <u>22.5</u>
	Cohesion: <u>1120 psf</u>
	Angle Of Friction: <u>32.0</u>



**TRANSMITTAL LETTER**

**DATE:** October 29, 2015

**ATTENTION:** Dharmesh Amin

**TO:** CTE South, Inc.  
14538 Meridian Pkwy, Ste. A  
Riverside, CA 92518

**SUBJECT:** Laboratory Test Data  
30-1301G  
Your #30-1301G, HDR Lab #15-0836LAB

**COMMENTS:** Enclosed are the results for the subject project.

A handwritten signature in black ink, appearing to read 'James T. Keegan', written over a horizontal line.

James T. Keegan  
Laboratory Services Manager



**Table 1 - Laboratory Tests on Soil Samples**

*CTE South, Inc.*

*30-1301G*

*Your #30-1301G, HDR Lab #15-0836LAB*

*23-Oct-15*

**Sample ID**

B-2 @ 0-5'  
SM

<b>Resistivity</b>	<b>Units</b>	
as-received	ohm-cm	100,000
minimum	ohm-cm	884
<b>pH</b>		7.6
<b>Electrical</b>		
<b>Conductivity</b>	mS/cm	0.51
<b>Chemical Analyses</b>		
<b>Cations</b>		
calcium	Ca <sup>2+</sup> mg/kg	246
magnesium	Mg <sup>2+</sup> mg/kg	41
sodium	Na <sup>1+</sup> mg/kg	196
potassium	K <sup>1+</sup> mg/kg	26
<b>Anions</b>		
carbonate	CO <sub>3</sub> <sup>2-</sup> mg/kg	ND
bicarbonate	HCO <sub>3</sub> <sup>1-</sup> mg/kg	186
fluoride	F <sup>1-</sup> mg/kg	ND
chloride	Cl <sup>1-</sup> mg/kg	129
sulfate	SO <sub>4</sub> <sup>2-</sup> mg/kg	827
phosphate	PO <sub>4</sub> <sup>3-</sup> mg/kg	ND
<b>Other Tests</b>		
ammonium	NH <sub>4</sub> <sup>1+</sup> mg/kg	0.2
nitrate	NO <sub>3</sub> <sup>1-</sup> mg/kg	38
sulfide	S <sup>2-</sup> qual	na
Redox	mV	na

Minimum resistivity per CTM 643, Chlorides per CTM 422, Sulfates per CTM 417

Electrical conductivity in millisiemens/cm and chemical analysis were made on a 1:5 soil-to-water extract.  
mg/kg = milligrams per kilogram (parts per million) of dry soil.

Redox = oxidation-reduction potential in millivolts

ND = not detected

na = not analyzed

APPENDIX D

STANDARD SPECIFICATIONS FOR GRADING

## **RECOMMENDED EARTHWORK SPECIFICATIONS**

The following specifications are recommended to provide a basis for quality control during the placement of compacted fill or backfill as applicable.

1. Areas that are to receive compacted fill shall be observed by Soil/Geotechnical Engineer (GE) or his/her representative prior to the placement of fill.
2. All drainage devices shall be properly installed and observed by GE and/or owner's representative(s) prior to placement of backfill.
3. Fill soils shall consist of imported soils or on-site soils free of organics, cobbles, and deleterious material provided each material is approved by GE. GE shall evaluate and/or test the import material for its conformance with the report recommendations prior to its delivery to the site. The contractor shall notify GE 72 hours prior to importing material to the site
4. Fill shall be placed in controlled layers (lifts), the thickness of which is compatible with the type of compaction equipment used. The fill materials shall be brought to optimum moisture content or above, thoroughly mixed during spreading to obtain a near uniform moisture condition and uniform blend of materials, and then placed in layers with a thickness (loose) not exceeding 8 inches. Each layer shall be compacted to a minimum compaction of 90% relative to the maximum dry density determined per the latest ASTM D1557 test. Density testing shall be performed by GE to verify relative compaction. The contractor shall provide proper access and level areas for testing.
5. Rocks or rock fragments less than eight (8) inches in the largest dimension may be utilized in the fill, provided they are not placed in concentrated pockets, except rocks larger than four (4) inches shall not be placed within three (3) feet of finish grade.
6. Rocks greater than eight (8) inches in largest dimension shall be taken offsite, or placed in accordance with the recommendation of the Soils Engineer in areas designated as suitable for rock disposal.
7. Where space limitations do not allow for conventional fill compaction operations, special backfill materials and procedures may be required. Pea gravel or other select fill can be used in areas of limited space. A sand and Portland cement slurry (2 sacks per cubic-yard mix) shall be used in limited space areas for shallow backfill near final pad grade, and pea gravel shall be placed in deeper backfill near drainage systems.

8. GE shall observe the placement of fill and conduct in-place field density tests on the compacted fill to check for adequate moisture content and the required relative compaction. Where less than specified relative compaction is indicated, additional compacting effort shall be applied and the soil moisture conditioned as necessary until adequate relative compaction is attained.
9. The Contractor shall comply with the minimum relative compaction out to the finish slope face of fill slopes, buttresses, and stabilization fills as set forth in the specifications for compacted fill. This may be achieved by either overbuilding the slope and cutting back as necessary, or by direct compaction of the slope face with suitable equipment, or by any other procedure that produces the required result.
10. Any abandoned underground structures such as cesspools, cisterns, mining shafts, tunnels, septic tanks, wells, pipelines or others not discovered prior to grading are to be removed or treated to the satisfaction of the Soils Engineer and/or the controlling agency for the project.
11. The Contractor shall have suitable and sufficient equipment during a particular operation to handle the volume of fill being placed. When necessary, fill placement equipment shall be shut down temporarily in order to permit proper compaction of fills, correction of deficient areas, or to facilitate required field-testing.
12. The Contractor shall be responsible for the satisfactory completion of all earthwork in accordance with the project plans and specifications.
13. Final reports shall be submitted after completion of earthwork and after the Soils Engineer and Engineering Geologist have finished their observations of the work. No additional excavation or filling shall be performed without prior notification to the Soils Engineer and/or Engineering Geologist.
14. Whenever the words "supervision", "inspection" or "control" are used, they shall mean observation of the work and/or testing of the compacted fill by GE to assess whether substantial compliance with plans, specifications and design concepts has been achieved, and does not include direction of the actual work of the contractor or the contractor's workmen.

**RECOMMENDED SPECIFICATIONS**  
**FOR PLACEMENT OF TRENCH BACKFILL**

1. Trench excavations to receive backfill shall be free of trash, debris or other unsatisfactory materials prior to backfill placement, and shall be observed by project soil/geotechnical engineer (GE) representative.
2. Except as stipulated herein, soils obtained from the excavation may be used as backfill if they are essentially free of organics and deleterious materials.
3. Rocks generated from the trench excavation not exceeding three (3) inches in largest dimension may be used as backfill material. However, such material may not be placed within 12 inches of the top of the pipeline. No more than 30 percent of the backfill volume shall contain particles larger than 1-½ inches in diameter, and rocks shall be well mixed with finer soil.
4. Soils (other than aggregates) with a Sand Equivalent (SE) greater than or equal to 30, as determined by ASTM D 2419 Standard Test Method or at the discretion of the engineer or representative in the field, may be used for bedding and shading material in the pipe zone areas.
5. No jetting will be permitted. Trench backfill other than bedding and shading shall be compacted by mechanical methods as tamping sheepsfoot, vibrating or pneumatic rollers or other mechanical tampers to achieve the density specified herein. The backfill materials shall be brought to optimum moisture content or above, thoroughly mixed during spreading to obtain a near uniform moisture condition and uniform blend of materials, and then placed in horizontal layers with a thickness (loose) not exceeding 8 inches. Trench backfills shall be compacted to a minimum compaction of 90 percent relative to the maximum dry density determined per the latest ASTM D1557 test.
6. The contractor shall select the equipment and process to be used to achieve the specified density without damage to the pipeline, the adjacent ground, existing improvements or completed work.
7. Observations and field tests shall be carried on during construction by GE to confirm that the required degree of compaction has been obtained. Where compaction is less than that specified, additional compaction effort shall be made with adjustment of the moisture content as necessary until the specified compaction is obtained. Field density tests may be omitted at the discretion of the engineer or his representative in the field.

8. Whenever, in the opinion of GE or the Owner's Representative(s), an unstable condition is being created, either by cutting or filling, the work shall not proceed until an investigation has been made and the excavation plan revised, if deemed necessary.
9. Fill material shall not be placed, spread, or rolled during unfavorable weather conditions. When the work is interrupted by heavy rain, fill operations shall not be resumed until field tests by GE indicate the moisture content and density of the fill are as specified.
10. Whenever the words "supervision", "inspection", or "control" are used, they shall mean observation of the work and/or testing of the compacted fill by GE to assess whether substantial compliance with plans, specifications and design concepts has been achieved.



APPENDIX E

GROUND MOTION ANALYSIS

SITE-SPECIFIC SEISMIC GROUND MOTION STUDY  
NEW CLASSROOM BUILDING AT MARSHALL ELEMENTARY SCHOOL  
OXNARD, CALIFORNIA

CTE South has conducted a site-specific ground motion analysis for the proposed New Classroom Building at Marshall Elementary School in Oxnard, CA. The analysis was performed in accordance with Chapter 21 of ASCE/SEI 7-10, Section 1613 of the 2013 California Building Code (CBC), and the 2008 USGS Ground Acceleration Maps.

The software package EZ-FRISK (version 7.65) was used to facilitate the seismic response analysis. This software enabled the use of all seismic sources within 200 kilometers of the site, as cataloged by the United States Geological Survey (USGS) 2008 National Seismic Hazard Map source model. Each seismic source is characterized by its location, fault mechanism, geometry, probability of activity, magnitude recurrence distribution, and deterministic magnitude. The maximum rotated component of ground motion was used in the site-specific probabilistic and deterministic analyses that incorporate the selected Next Generation Attenuation (NGA) relationships.

Equally weighted NGA relationships by Abrahamson and Silva (2008), Atkinson and Boore (2008), Campbell and Bozorgnia (2008), and Chiou and Youngs (2008) were used for the analysis. The resulting site specific spectral accelerations calculated from these NGA relationships were averaged for both the probabilistic and deterministic analyses. As required, the 84<sup>th</sup>-percentile spectral acceleration values were averaged to conservatively calculate the deterministic spectral accelerations (in lieu of 150 percent of the median spectral accelerations). Deterministic maximum considered earthquake (MCE) lower limit spectral response acceleration values have been determined from ASCE 7 Figure 21.2-1. The probabilistic analysis data represent a two-percent probability of exceedance in fifty years.

Each of the NGA relationships used for the response analysis account for site-specific soil affects using  $V_{s30}$ , the shear wave velocity averaged over the upper 30 meters. The site shear wave velocity value was obtained from regional and site resistance data. For the Campbell and Bozorgnia NGA, the depth to rock having a shear wave velocity of at least 2.5 kilometers per second ( $Z_{2.5}$ ) was estimated. Using regional geologic map relationships,  $Z_{2.5}$  appears to be on the order of 2.0 kilometers. The Abrahamson and Silva, and Chiou and Youngs NGA relationships require a similar parameter,  $Z_{1.0}$ , which is anticipated to be on the order of 475 meters. Based on soil conditions beneath the site area, and average shear wave velocity of 242.9 meters per second, Site Class D is considered to be appropriate for evaluation.

The site specific MCE spectral response acceleration at any period is taken as the lesser of the spectral response accelerations from the probabilistic MCE and the deterministic MCE. The design spectral response acceleration at any period is calculated as 2/3 of the corresponding ordinate from the site-specific MCE, which should not be less than 80 percent of the spectral response acceleration from the design response spectrum determined in accordance with ASCE 7 Section 11.4.5.

The probabilistic MCE, risk coefficient, and adjusted probabilistic spectral acceleration ordinates are shown on Figure E1. The site specific risk-based probabilistic  $MCE_R$  representing 1% probability of collapse in 50 years was calculated using ASCE 7-10 Section 21.2.1.1 Method 1: ( $C_R$ ) ( $S_a$  2% PE in 50 years). The deterministic MCE, and the deterministic lower limit on MCE response spectra are shown on Figure E2. The site-specific MCE response spectrum, 2/3 of site-specific MCE response spectrum and 80 percent of NEHRP/ASCE design response spectrum are shown on Figure E3. The site-specific design response spectrum is presented on Figure E4 and a summary of spectral acceleration data is shown on Figure E5.

In Accordance with section 21.4 of ASCE/SEI 7-10, the resulting site specific acceleration parameters are shown below. ASCE Section 21.4 requires that the parameter  $S_{DS}$  not be taken less than 90 percent of the peak spectral acceleration,  $S_a$ , at any period larger than 0.2s. In this case the value at 0.2s (1.357g) exceeded the 90 percent values at larger periods. In addition, Section 21.4 requires that  $S_{D1}$  be taken as the greater of the design spectral acceleration,  $S_a$ , at a period of 1 second (0.765g), or two times the spectral acceleration,  $S_a$ , at a period of 2 seconds (0.764g). In this case, the value at one second was higher than two times the spectral acceleration,  $S_a$ , at a period of 2 seconds.

Site-specific parameters are provided below.

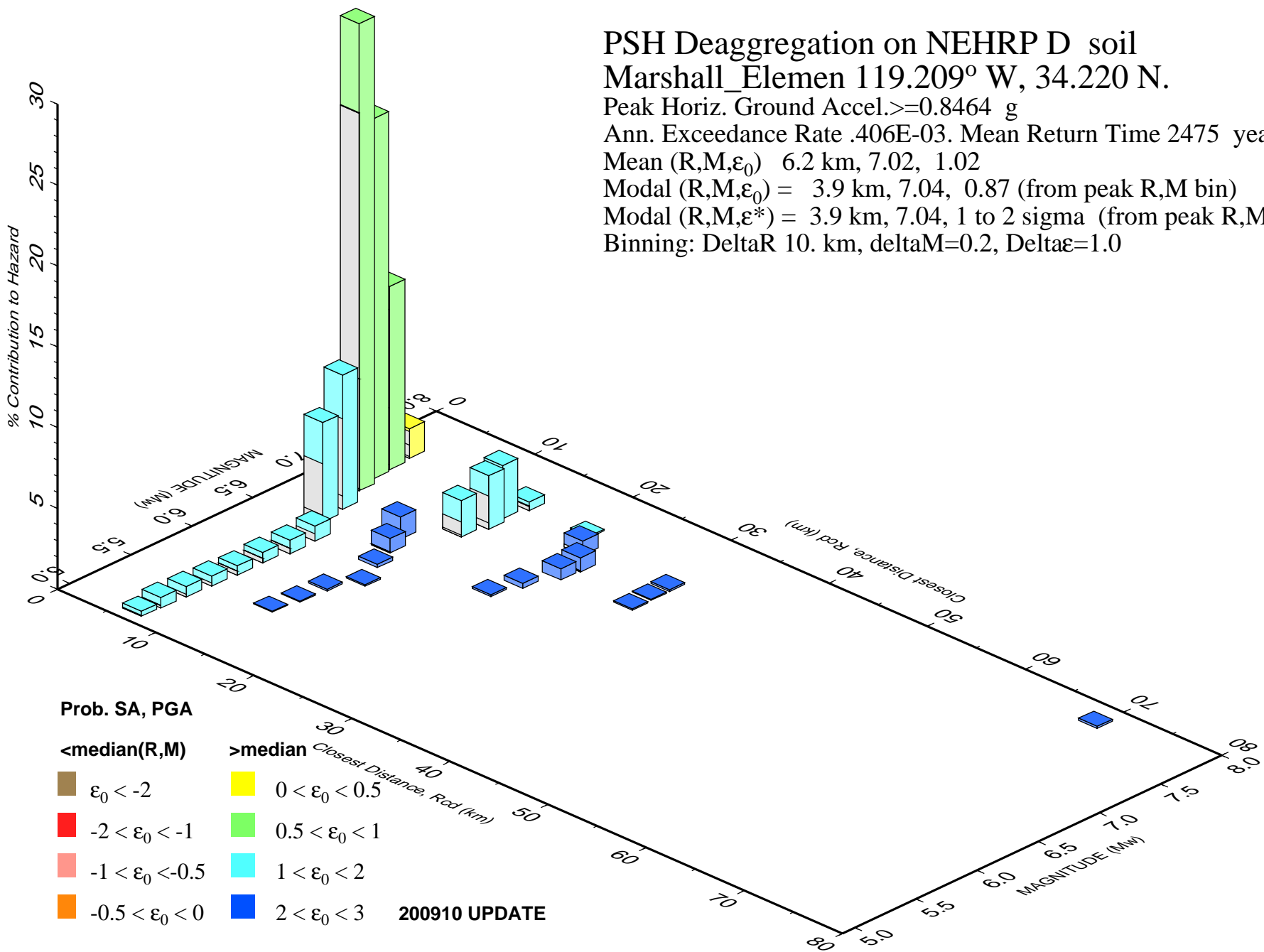
<u>Site-Specific Ground Motion Values</u>	<u>Code-Based Seismic Values (ASCE 7-10)</u>
$S_{DS} = 1.357g$	$S_{DS} = 1.696g$
$S_{D1} = 0.765g$	$S_{D1} = 0.956g$
$S_{MS} = 2.035g$	$S_{MS} = 2.544g$
$S_{M1} = 1.147g$	$S_{M1} = 1.435g$

Attachments:

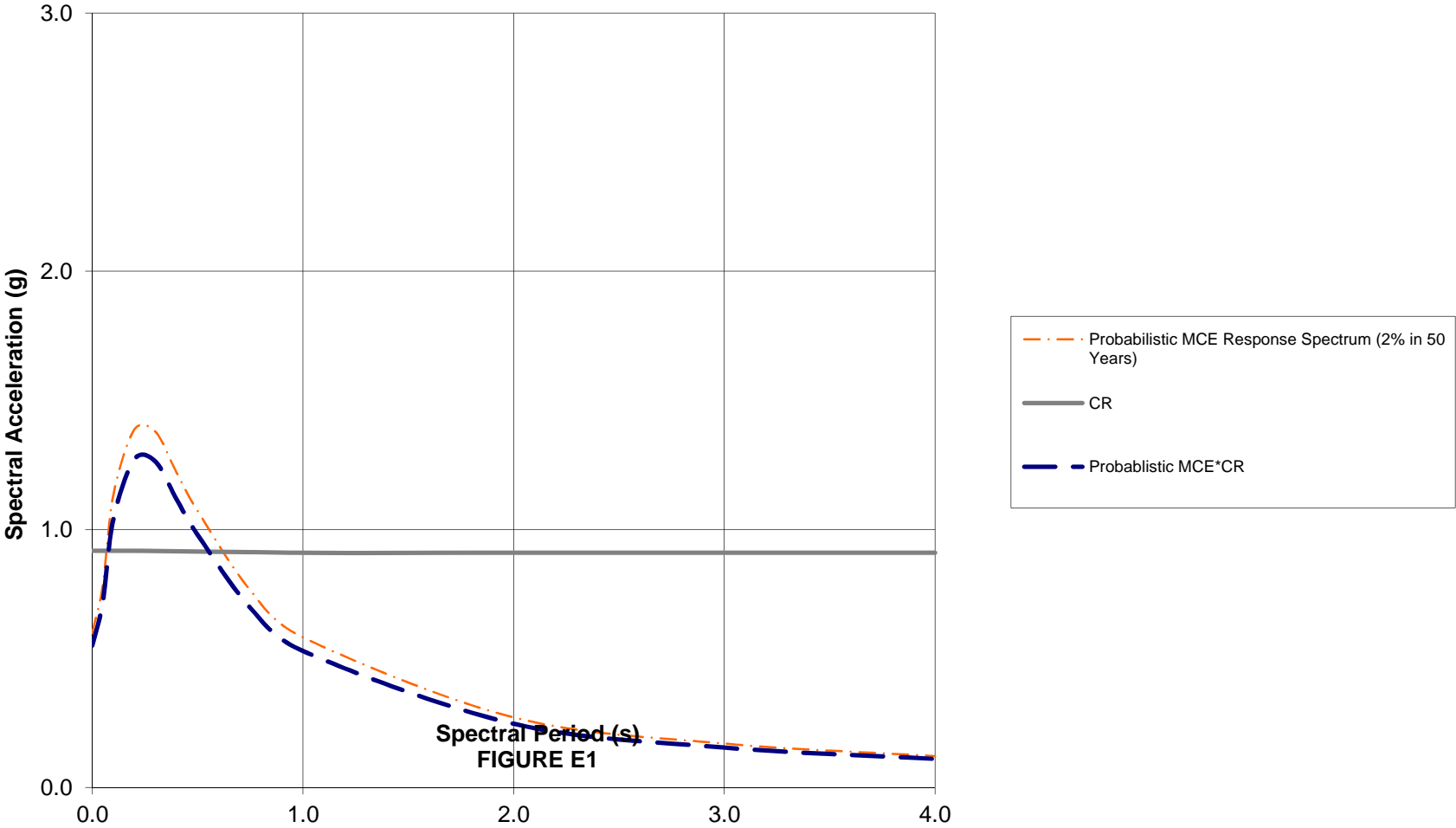
- Figure E1 Probabilistic MCE Response Spectra
- Figure E2 Deterministic MCE and Lower Limit Spectra
- Figure E3 Site-Specific MCE Response Spectra
- Figure E4 Design Response Spectrum
- Figure E5 Table of Spectral Acceleration Values"

PSH Deaggregation on NEHRP D soil  
 Marshall\_Elemen 119.209° W, 34.220 N.

Peak Horiz. Ground Accel.  $\geq 0.8464$  g  
 Ann. Exceedance Rate .406E-03. Mean Return Time 2475 years  
 Mean (R,M, $\epsilon_0$ ) 6.2 km, 7.02, 1.02  
 Modal (R,M, $\epsilon_0$ ) = 3.9 km, 7.04, 0.87 (from peak R,M bin)  
 Modal (R,M, $\epsilon^*$ ) = 3.9 km, 7.04, 1 to 2 sigma (from peak R,M, $\epsilon$  bin)  
 Binning: DeltaR 10. km, deltaM=0.2, Delta $\epsilon$ =1.0

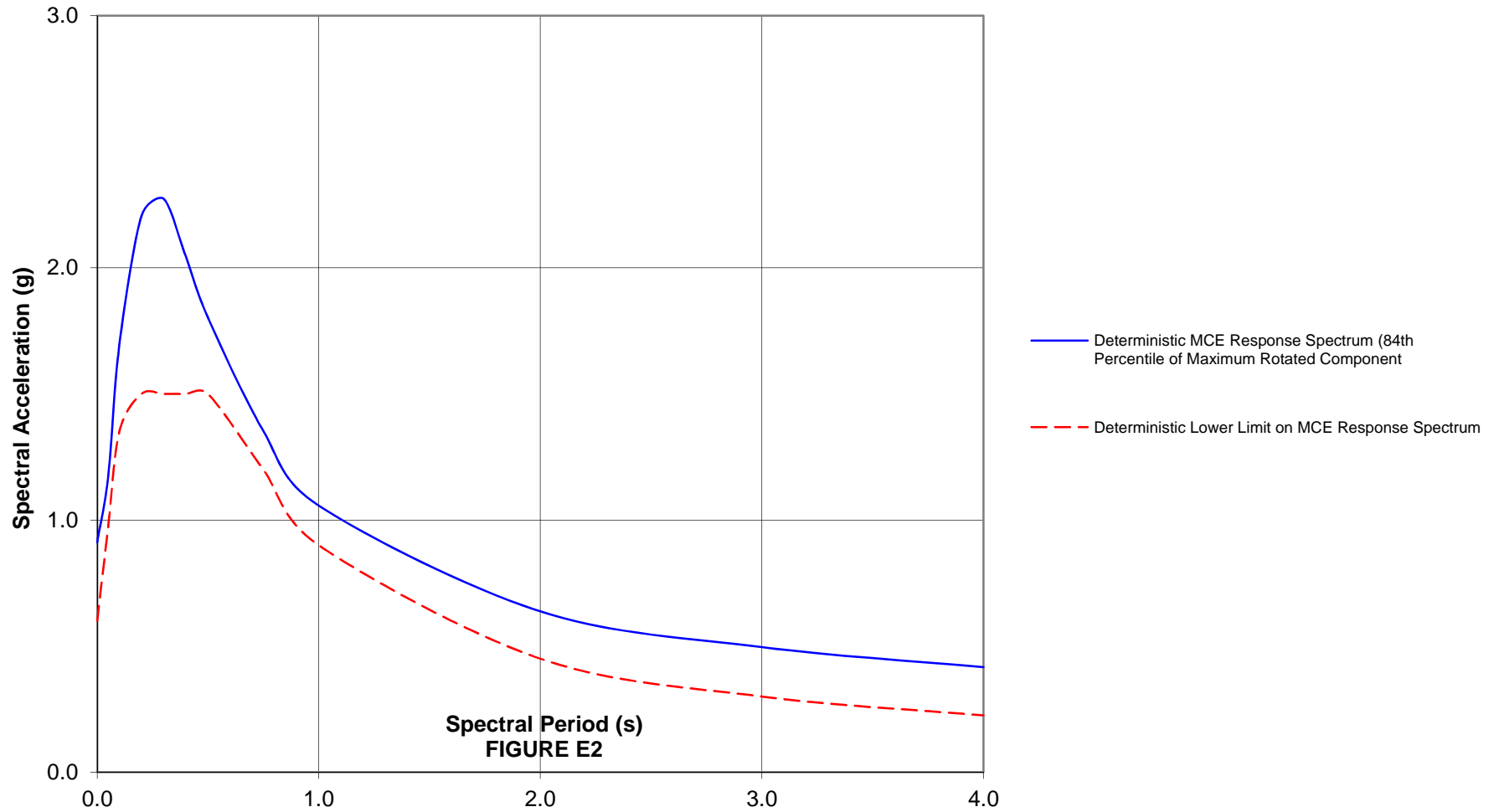


# New Classroom at Marshall Elementary School

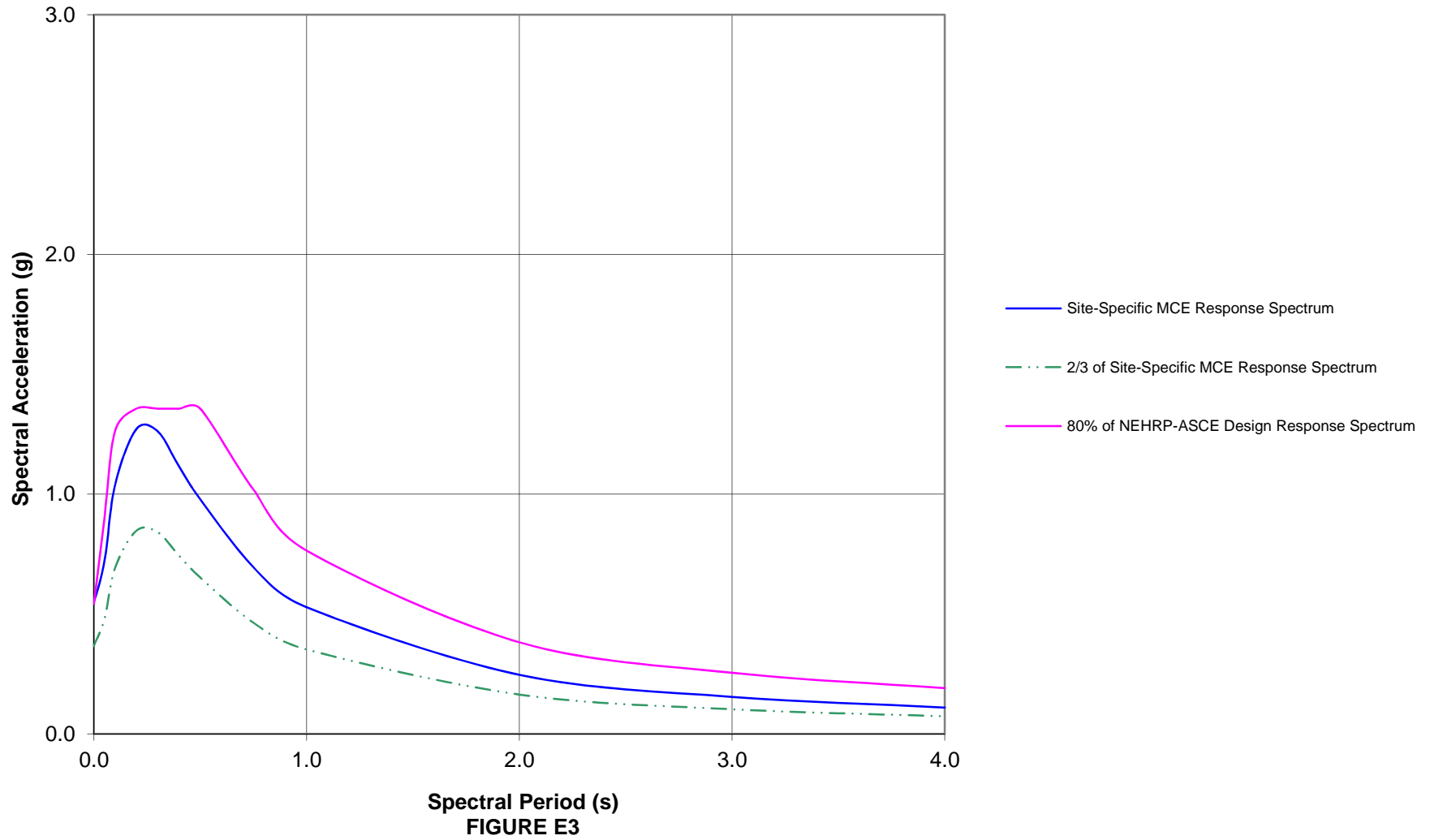


Spectral Period (s)  
FIGURE E1

# New Classroom at Marshall Elementary School

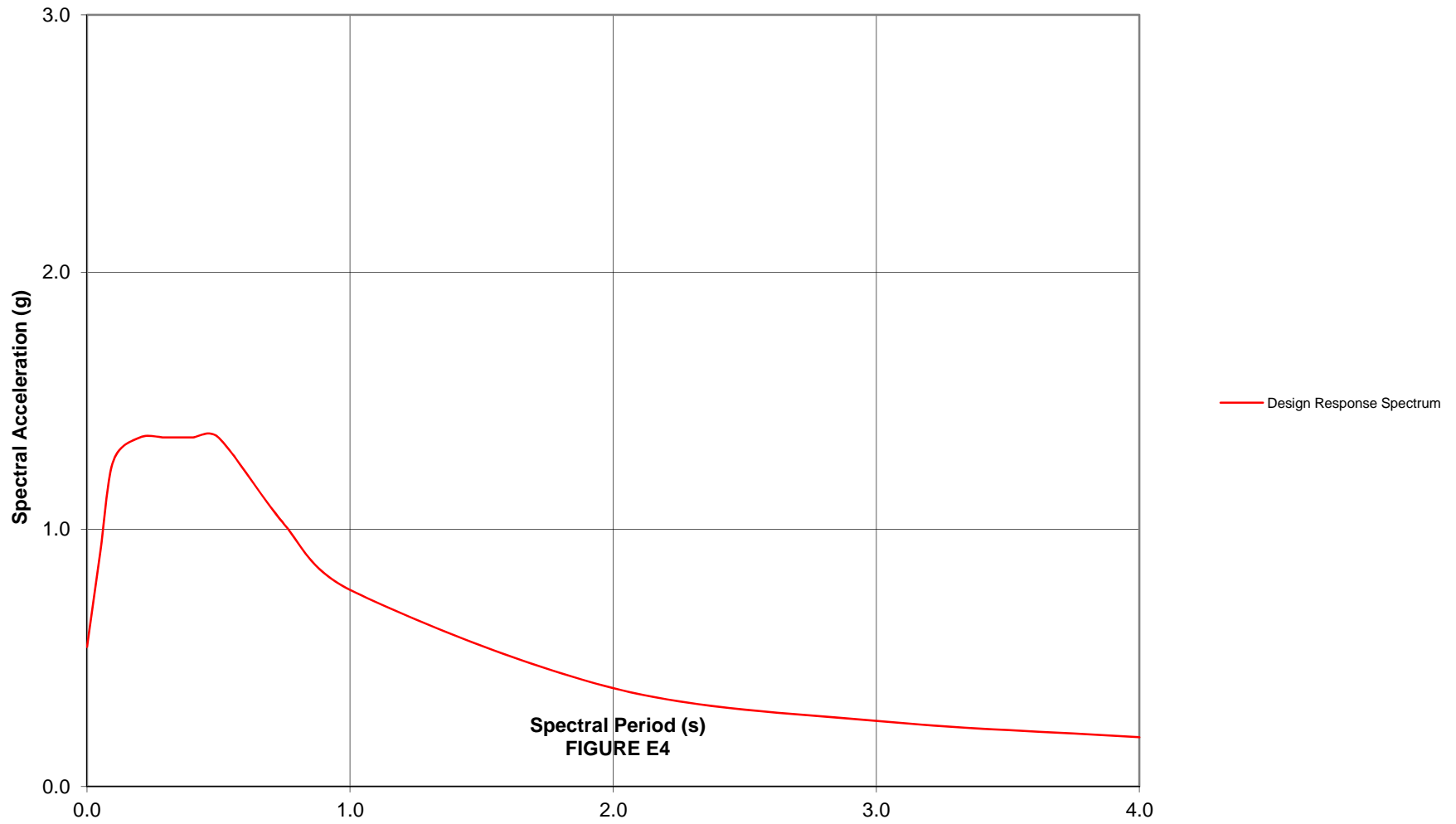


# New Classroom at Marshall Elementary School





### New Classroom at Marshall Elementary School



Spectral Period (s)  
FIGURE E4

New Classroom at Marshall Elementary School

Spectral Period (sec)	Spectral Acceleration (g)										0.9*DRS
	Probabilistic MCE Response Spectrum (2% in 50 Years)	C <sub>R</sub>	Probabilistic MCE*C <sub>R</sub>	Deterministic MCE Response Spectrum (84th Percentile of Maximum Rotated Component)	Deterministic Lower Limit on MCE Response Spectrum	Site-Specific MCE Response Spectrum	2/3 of Site-Specific MCE Response Spectrum	NEHRP-ASCE Design Response Spectrum	80% of NEHRP-ASCE Design Response Spectrum	Design Response Spectrum	
0.000	0.599	0.917	0.550	0.911	0.600	0.550	0.366	0.678	0.543	0.543	
0.050	0.784	0.917	0.719	1.175	0.975	0.719	0.479	1.130	0.904	0.904	
0.100	1.134	0.917	1.040	1.694	1.350	1.040	0.693	1.581	1.265	1.265	
0.200	1.387	0.917	1.272	2.206	1.500	1.272	0.848	1.696	1.357	1.357	
0.300	1.378	0.916	1.262	2.274	1.500	1.262	0.841	1.696	1.357	1.357	1.221
0.400	1.220	0.915	1.116	2.045	1.500	1.116	0.744	1.696	1.357	1.357	1.221
0.500	1.071	0.914	0.979	1.803	1.500	0.979	0.653	1.696	1.357	1.357	1.221
0.750	0.764	0.912	0.696	1.353	1.200	0.696	0.464	1.275	1.020	1.020	0.918
1.000	0.582	0.909	0.529	1.057	0.900	0.529	0.352	0.956	0.765	0.765	0.688
2.000	0.271	0.909	0.247	0.638	0.450	0.247	0.164	0.478	0.382	0.382	0.344
3.000	0.170	0.909	0.155	0.496	0.300	0.155	0.103	0.319	0.255	0.255	0.229
4.000	0.122	0.909	0.110	0.416	0.225	0.110	0.074	0.239	0.191	0.191	0.172

Figure E5



0.2  
0.3  
0.4  
0.5  
0.75  
1  
2  
3  
4

DETERMINISTIC FRACTILES

0.5  
0.84

PLOTTING PARAMETERS

Period at which to plot PGA: 0.005

CALCULATIONAL PARAMETERS

Fault Seismic Sources -  
Maximum inclusion distance : 200 km  
Down dip integration increment : 1 km  
Horizontal integration increment : 1 km  
Number rupture length per earthquake : 1  
Subduction Interface Seismic Sources -  
Maximum inclusion distance : 200 km  
Down dip integration increment : 5 km  
Horizontal integration increment : 5 km  
Number rupture length per earthquake : 1  
Subduction Slab Seismic Sources -  
Maximum inclusion distance : 200 km  
Down dip integration increment : 5 km  
Horizontal integration increment : 20 km  
Number rupture length per earthquake : 1  
Area Seismic Sources -  
Maximum inclusion distance : 200 km  
Vertical integration increment : 3 km  
Number of rupture azimuths : 3  
Minimum epicentral distance step : 0.5 km  
Maximum epicentral distance step : 10 km  
Gridded Seismic Sources -  
Maximum inclusion distance : 200 km  
Default number of rupture azimuths : 10  
Maximum distance for default azimuths : 20 km  
Minimum distance for one azimuth : 70  
Use binned calculations if possible : true  
Bins per decade in distance (km) : 20  
All Seismic Sources -  
Magnitude integration step : 0.1 M  
Apply magnitude scaling : NO  
Include near-source directivity : YES  
Method : Huang, Whittaker, and Luco (2008)  
Component : Maximum  
Hypocenter integration increment : 5 km

ATTENUATION EQUATIONS

Name: Abrahamson-Silva (2008) NGA

Database: C:\Program Files (x86)\EZ-FRISK 7.65\Files\standard.bin-attendb  
 Base: Abrahamson-Silva 2008 NGA  
 Truncation Type: No Truncation  
 Truncation Value: 0  
 Magnitude Scale: Moment Magnitude  
 Distance Type: Distance To Rupture

Name: Boore-Atkinson (2008) NGA  
 Database: C:\Program Files (x86)\EZ-FRISK 7.65\Files\standard.bin-attendb  
 Base: Boore-Atkinson 2007 NGA  
 Truncation Type: No Truncation  
 Truncation Value: 0  
 Magnitude Scale: Moment Magnitude  
 Distance Type: Horizontal Distance To Rupture

Name: Campbell-Bozorgnia (2008) NGA  
 Database: C:\Program Files (x86)\EZ-FRISK 7.65\Files\standard.bin-attendb  
 Base: Campbell-Bozorgnia 2008 NGA  
 Truncation Type: No Truncation  
 Truncation Value: 0  
 Magnitude Scale: Moment Magnitude  
 Distance Type: Distance To Rupture

Name: Chiou-Youngs (2008) NGA  
 Database: C:\Program Files (x86)\EZ-FRISK 7.65\Files\standard.bin-attendb  
 Base: Chiou-Youngs 2008 NGA  
 Truncation Type: No Truncation  
 Truncation Value: 0  
 Magnitude Scale: Moment Magnitude  
 Distance Type: Distance To Rupture

SEISMIC SOURCE SUMMARY TABLE

Deterministic Fault Source	Dip Dips Angle To	Site Region	Closest Distance
Imp Extensional Gridded, Char, Normal	90.0000 -- W	USGS 2008 California	146.42
7.0000 Normal	90.0000 -- W	USGS 2008 California	146.42
Imp Extensional Gridded, Char, Strike Slip	90.0000 -- W	USGS 2008 California	146.42
7.0000 Strike Slip	90.0000 -- W	USGS 2008 California	146.42
Imp Extensional Gridded, GR, Normal	90.0000 -- W	USGS 2008 California	146.42
7.0000 Normal	90.0000 -- W	USGS 2008 California	146.42
Imp Extensional Gridded, GR, Strike Slip	90.0000 -- W	USGS 2008 California	146.42
7.0000 Strike Slip	90.0000 -- W	USGS 2008 California	146.42
Mojave Shear Gridded	90.0000 -- SW	USGS 2008 California	161.71
7.6000 Strike Slip	90.0000 -- SW	USGS 2008 California	161.71
San Andreas Creeping Section Gridded	90.0000 -- SE	USGS 2008 California	197.36
6.0000 Strike Slip	90.0000 -- SE	USGS 2008 California	197.36
San Gorgornio Shear Gridded	90.0000 -- W	USGS 2008 California	194.40
7.6000 Strike Slip	90.0000 -- W	USGS 2008 California	194.40
Casmalia (Orcutt Frontal)	75.0000 SW SE	USGS 2008 California	125.54
6.7000 Reverse	75.0000 SW SE	USGS 2008 California	125.54
Channel Islands Thrust	20.0000 N NE	USGS 2008 California	15.79
7.3000 Reverse	20.0000 N NE	USGS 2008 California	15.79
Clamshell-Sawpit	50.0000 NW W	USGS 2008 California	105.62
6.7000 Reverse	50.0000 NW W	USGS 2008 California	105.62

Cleghorn			USGS 2008 California	160.55
6.8000 Strike Slip	90.0000 --	W	USGS 2008 California	158.68
Coronado Bank			USGS 2008 California	158.68
7.4000 Strike Slip	90.0000 --	NW	USGS 2008 California	133.29
Cucamonga			USGS 2008 California	133.29
6.7000 Reverse	45.0000 N	W	USGS 2008 California	84.79
Elysian Park (Upper)			USGS 2008 California	84.79
6.7000 Reverse	50.0000 N	W	USGS 2008 California	197.33
Gravel Hills-Harper Lk			USGS 2008 California	197.33
7.1000 Strike Slip	90.0000 --	SW	USGS 2008 California	191.35
Great Valley 14 (Kettleman Hills)			USGS 2008 California	191.35
7.2000 Reverse	22.0000 SW	SE	USGS 2008 California	177.36
Helendale-So Lockhart			USGS 2008 California	177.36
7.4000 Strike Slip	90.0000 --	SW	USGS 2008 California	73.52
Hollywood			USGS 2008 California	73.52
6.7000 Strike Slip	70.0000 N	W	USGS 2008 California	46.62
Holser, alt 1			USGS 2008 California	46.62
6.8000 Reverse	58.0000 S	SW	USGS 2008 California	156.75
Hosgri			USGS 2008 California	156.75
7.3000 Strike Slip	80.0000 NE	SE	USGS 2008 California	171.36
Lenwood-Lockhart-Old Woman Springs			USGS 2008 California	171.36
7.5000 Strike Slip	90.0000 --	SW	USGS 2008 California	107.95
Lions Head			USGS 2008 California	107.95
6.8000 Reverse	75.0000 NE	SE	USGS 2008 California	90.77
Los Alamos-West Baseline			USGS 2008 California	90.77
6.9000 Reverse	30.0000 SW	SE	USGS 2008 California	147.36
Los Osos			USGS 2008 California	147.36
7.0000 Reverse	45.0000 SW	SE	USGS 2008 California	22.90
Mission Ridge-Arroyo Parida-Santa Ana			USGS 2008 California	22.90
6.9000 Reverse	70.0000 S	S	USGS 2008 California	22.68
North Channel			USGS 2008 California	22.68
6.8000 Reverse	26.0000 N	SE	USGS 2008 California	178.49
North Frontal (West)			USGS 2008 California	178.49
7.2000 Reverse	49.0000 S	W	USGS 2008 California	46.98
Northridge			USGS 2008 California	46.98
6.9000 Reverse	35.0000 S	W	USGS 2008 California	5.32
Oak Ridge (Offshore)			USGS 2008 California	5.32
7.0000 Reverse	32.0000 S	E	USGS 2008 California	3.25
Oak Ridge (Onshore)			USGS 2008 California	3.25
7.2000 Reverse	65.0000 S	S	USGS 2008 California	2.83
Oak Ridge Connected			USGS 2008 California	2.83
7.4000 Reverse	53.1000 S	Above	USGS 2008 California	66.13
Palos Verdes			USGS 2008 California	66.13
7.3000 Strike Slip	90.0000 --	NW	USGS 2008 California	66.13
Palos Verdes Connected			USGS 2008 California	66.13
7.7000 Strike Slip	90.0000 --	NW	USGS 2008 California	25.28
Pitas Point (Lower)-Montalvo			USGS 2008 California	25.28
7.3000 Reverse	16.0000 N	E	USGS 2008 California	44.50
Pitas Point (Lower, West)			USGS 2008 California	44.50
7.3000 Reverse	13.0000 N	SE	USGS 2008 California	35.87
Pitas Point (Upper)			USGS 2008 California	35.87
6.9000 Reverse	42.0000 N	E	USGS 2008 California	8.06
Pitas Point Connected			USGS 2008 California	8.06
7.3000 Reverse	55.3000 N	S	USGS 2008 California	69.02
Pleito			USGS 2008 California	69.02
7.1000 Reverse	46.0000 S	S	USGS 2008 California	85.89
Puente Hills			USGS 2008 California	85.89

7.1000 Reverse	25.0000 N	W		
Puente Hills (Coyote Hills)			USGS 2008 California	113.29
6.9000 Reverse	26.0000 N	W		
Puente Hills (LA)			USGS 2008 California	83.10
7.0000 Reverse	27.0000 N	W		
Puente Hills (Santa Fe Springs)			USGS 2008 California	96.79
6.7000 Reverse	29.0000 N	W		
Raymond			USGS 2008 California	91.31
6.8000 Reverse	79.0000 N	W		
Red Mountain			USGS 2008 California	15.77
7.4000 Reverse	56.0000 N	SE		
Rinconada			USGS 2008 California	170.16
7.5000 Strike Slip	90.0000 --	SE		
San Cayetano			USGS 2008 California	25.50
7.2000 Reverse	42.0000 N	S		
San Gabriel			USGS 2008 California	59.82
7.3000 Strike Slip	61.0000 NE	SW		
San Joaquin Hills			USGS 2008 California	131.33
7.1000 Reverse	23.0000 SW	NW		
San Jose			USGS 2008 California	122.10
6.7000 Strike Slip	74.0000 NW	W		
San Juan			USGS 2008 California	123.84
7.1000 Strike Slip	90.0000 --	SE		
San Luis Range (So Margin)			USGS 2008 California	117.29
7.2000 Reverse	45.0000 NE	SE		
Santa Cruz Island			USGS 2008 California	26.82
7.2000 Strike Slip	90.0000 --	N		
Santa Rosa Island			USGS 2008 California	68.22
6.9000 Strike Slip	90.0000 --	E		
Santa Susana, alt 1			USGS 2008 California	43.41
6.9000 Reverse	55.0000 N	W		
Santa Ynez (East)			USGS 2008 California	31.39
7.2000 Strike Slip	70.0000 S	S		
Santa Ynez (West)			USGS 2008 California	49.46
7.0000 Strike Slip	70.0000 S	SE		
Santa Ynez Connected			USGS 2008 California	31.39
7.4000 Strike Slip	70.0000 S	S		
Sierra Madre			USGS 2008 California	84.64
7.2000 Reverse	53.0000 N	W		
Sierra Madre (San Fernando)			USGS 2008 California	67.78
6.7000 Reverse	45.0000 N	W		
Sierra Madre Connected			USGS 2008 California	67.78
7.3000 Reverse	51.0000 N	W		
Simi-Santa Rosa			USGS 2008 California	9.93
6.9000 Strike Slip	60.0000 N	W		
So Sierra Nevada			USGS 2008 California	161.15
7.5000 Normal	50.0000 E	SW		
Ventura-Pitas Point			USGS 2008 California	8.03
7.0000 Reverse	64.0000 N	S		
Verdugo			USGS 2008 California	72.58
6.9000 Reverse	55.0000 NE	W		
White Wolf			USGS 2008 California	90.23
7.2000 Reverse	75.0000 SE	S		
California Gridded			USGS 2008 California	0.00
7.0000 SS R	90.0000 --	Above		
Anacapa-Dume			USGS 2008 California	20.27
7.2000 Reverse	41-45 N	NW		

Chino			USGS 2008 California	130.34
6.8000 Strike Slip	50-65 SW	W	USGS 2008 California	109.73
Elsinore			USGS 2008 California	72.13
7.8490 Strike Slip	75-90 NE	W	USGS 2008 California	31.60
Garlock			USGS 2008 California	77.91
7.7230 Strike Slip	90.0000 --	S	USGS 2008 California	69.59
Malibu Coast			USGS 2008 California	151.23
7.0000 Strike Slip	74-75 N	NW	USGS 2008 California	20.90
Newport-Inglewood			USGS 2008 California	
7.5000 Strike Slip	88-90 NE	W	USGS 2008 California	
Southern San Andreas			USGS 2008 California	
8.2000 Strike Slip	58-90 N,NE	S	USGS 2008 California	
San Jacinto			USGS 2008 California	
7.8750 Strike Slip	90.0000 --	W	USGS 2008 California	
Santa Monica			USGS 2008 California	
7.4000 SS R	44-75 N	N	USGS 2008 California	

SEISMIC SOURCES

Name: Imp Extensional Gridded, Char, Normal  
 Region: USGS 2008 California  
 Category:Gridded  
 Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
 \USGS 2008 Lower 48.bin-ssdb  
 FileType: USGS2008  
 Data File (binary): USGS2008Test.bin-grid  
 Data File (binary): USGS2008Test.bin-grid

General Parameters

Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.3333  
 Latitude Increment, degrees: 0.1  
 Longitude Increment, degrees: 0.1  
 Magnitude Threshold for Weighting: 6.5

Earthquake Model Parameters (Varies point to point?)

Cell Weight: 1 Yes  
 Fault Mechanism: Normal  
 Depth to Top of Rupture, km: 5  
 Minimum Magnitude: 5  
 Maximum Magnitude: 7 Yes  
 Rate at Minimum Magnitude, events per year: 0 Yes  
 Beta: 1.84207  
 Horizontal Rupture Length, A parameter: -3.22  
 Horizontal Rupture Length, B parameter: 0.69  
 Rupture Strike Azimuth Model: Random Strike

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

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Name: Imp Extensional Gridded, Char, Strike Slip



Region: USGS 2008 California  
Category:Gridded  
Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
\USGS 2008 Lower 48.bin-ssdb  
FileType: USGS2008  
Data File (binary): USGS2008Test.bin-grid  
Data File (binary): USGS2008Test.bin-grid

General Parameters  
Magnitude Scale: Moment Magnitude  
Probability of Activity: 0.3333  
Latitude Increment, degrees: 0.1  
Longitude Increment, degrees: 0.1  
Magnitude Threshold for Weighting: 6.5

Earthquake Model Parameters (Varies point to point?)  
Cell Weight: 1 Yes  
Fault Mechanism: Strike Slip  
Depth to Top of Rupture, km: 5  
Minimum Magnitude: 5  
Maximum Magnitude: 7 Yes  
Rate at Minimum Magnitude, events per year: 0 Yes  
Beta: 1.84207  
Horizontal Rupture Length, A parameter: -3.22  
Horizontal Rupture Length, B parameter: 0.69  
Rupture Strike Azimuth Model: Random Strike

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: Imp Extensional Gridded, GR, Normal  
Region: USGS 2008 California  
Category:Gridded  
Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
\USGS 2008 Lower 48.bin-ssdb  
FileType: USGS2008  
Data File (binary): USGS2008Test.bin-grid  
Data File (binary): USGS2008Test.bin-grid

General Parameters  
Magnitude Scale: Moment Magnitude  
Probability of Activity: 0.1666  
Latitude Increment, degrees: 0.1  
Longitude Increment, degrees: 0.1  
Magnitude Threshold for Weighting: 6.5

Earthquake Model Parameters (Varies point to point?)  
Cell Weight: 1 Yes  
Fault Mechanism: Normal  
Depth to Top of Rupture, km: 5  
Minimum Magnitude: 5

Maximum Magnitude: 7 Yes  
Rate at Minimum Magnitude, events per year: 0 Yes  
Beta: 1.84207  
Horizontal Rupture Length, A parameter: -3.22  
Horizontal Rupture Length, B parameter: 0.69  
Rupture Strike Azimuth Model: Random Strike

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: Imp Extensional Gridded, GR, Strike Slip  
Region: USGS 2008 California  
Category:Gridded  
Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
\USGS 2008 Lower 48.bin-ssdb  
FileType: USGS2008  
Data File (binary): USGS2008Test.bin-grid  
Data File (binary): USGS2008Test.bin-grid

General Parameters

Magnitude Scale: Moment Magnitude  
Probability of Activity: 0.1666  
Latitude Increment, degrees: 0.1  
Longitude Increment, degrees: 0.1  
Magnitude Threshold for Weighting: 6.5

Earthquake Model Parameters (Varies point to point?)

Cell Weight: 1 Yes  
Fault Mechanism: Strike Slip  
Depth to Top of Rupture, km: 5  
Minimum Magnitude: 5  
Maximum Magnitude: 7 Yes  
Rate at Minimum Magnitude, events per year: 0 Yes  
Beta: 1.84207  
Horizontal Rupture Length, A parameter: -3.22  
Horizontal Rupture Length, B parameter: 0.69  
Rupture Strike Azimuth Model: Random Strike

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

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Name: Mojave Shear Gridded  
Region: USGS 2008 California  
Category:Gridded  
Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files

\USGS 2008 Lower 48.bin-ssdb  
FileType: USGS2008

General Parameters

Magnitude Scale: Moment Magnitude  
Probability of Activity: 1  
Latitude Increment, degrees: 0.1  
Longitude Increment, degrees: 0.1  
Magnitude Threshold for Weighting: 6.5

Earthquake Model Parameters (Varies point to point?)

Cell Weight: 1  
Fault Mechanism: Strike Slip  
Depth to Top of Rupture, km: 5  
Minimum Magnitude: 6.5  
Maximum Magnitude: 7.6  
Rate at Minimum Magnitude, events per year: 0 Yes  
Beta: 1.84207  
Horizontal Rupture Length, A parameter: -3.22  
Horizontal Rupture Length, B parameter: 0.69  
Rupture Strike Azimuth Model: Fixed Strike  
Rupture Strike Angle, degrees : -47

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

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Name: San Andreas Creeping Section Gridded

Region: USGS 2008 California

Category:Gridded

Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files

\USGS 2008 Lower 48.bin-ssdb

FileType: USGS2008

General Parameters

Magnitude Scale: Moment Magnitude  
Probability of Activity: 1  
Latitude Increment, degrees: 0.1  
Longitude Increment, degrees: 0.1  
Magnitude Threshold for Weighting: 6.5

Earthquake Model Parameters (Varies point to point?)

Cell Weight: 1  
Fault Mechanism: Strike Slip  
Depth to Top of Rupture, km: 5  
Minimum Magnitude: 5  
Maximum Magnitude: 6  
Rate at Minimum Magnitude, events per year: 0 Yes  
Beta: 2.07233  
Horizontal Rupture Length, A parameter: -3.22  
Horizontal Rupture Length, B parameter: 0.69  
Rupture Strike Azimuth Model: Fixed Strike  
Rupture Strike Angle, degrees : -42.5

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: San Gorgornio Shear Gridded  
Region: USGS 2008 California  
Category:Gridded  
Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
\USGS 2008 Lower 48.bin-ssdb  
FileType: USGS2008

General Parameters

Magnitude Scale: Moment Magnitude  
Probability of Activity: 1  
Latitude Increment, degrees: 0.1  
Longitude Increment, degrees: 0.1  
Magnitude Threshold for Weighting: 6.5

Earthquake Model Parameters (Varies point to point?)

Cell Weight: 1  
Fault Mechanism: Strike Slip  
Depth to Top of Rupture, km: 5  
Minimum Magnitude: 6.5  
Maximum Magnitude: 7.6  
Rate at Minimum Magnitude, events per year: 0 Yes  
Beta: 1.84207  
Horizontal Rupture Length, A parameter: -3.22  
Horizontal Rupture Length, B parameter: 0.69  
Rupture Strike Azimuth Model: Fixed Strike  
Rupture Strike Angle, degrees : -67

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

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Name: Casmalia (Orcutt Frontal)  
Region: USGS 2008 California  
Category:Fault  
Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
\USGS 2008 Lower 48.bin-ssdb  
Fault Mechanism: Reverse  
Magnitude Scale: Moment Magnitude  
Probability of Activity: 1.00000000  
Deterministic Magnitude: 6.7

Fault Profile Parameters:

Dipl	Dip2	Depth1	Depth2	Depth3
90	75	0	0.001	9.659

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
	Delta1	Delta2						
0.120000	Normal	0.041665	Activity	1.501e-004	6.460000	6.940000	2.300000	6.700000
0.120000	Normal	0.010000	Activity	2.994e-004	6.260000	6.740000	2.300000	6.500000
0.120000	Normal	0.041665	Activity	2.994e-004	6.260000	6.740000	2.300000	6.500000
0.120000	Exponential	0.041668	Activity	2.283e-004	6.500000	6.700000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	2.244e-004	6.500000	6.700000	0.000000	0.000000
0.000000	Exponential	0.041668	Activity	2.244e-004	6.500000	6.700000	0.000000	0.000000
0.000000	Characteristic	0.083335	Activity	3.217e-004	6.499000	6.501000	2.300000	0.000000
0.000000	Characteristic	0.010000	Activity	3.217e-004	6.499000	6.501000	2.300000	0.000000
0.120000	Normal	0.083335	Activity	1.501e-004	6.460000	6.940000	2.300000	6.700000
0.120000	Normal	0.083335	Activity	2.994e-004	6.260000	6.740000	2.300000	6.500000
0.120000	Normal	0.083335	Activity	2.994e-004	6.260000	6.740000	2.300000	6.500000
0.120000	Exponential	0.020833	Activity	2.283e-004	6.500000	6.700000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	2.244e-004	6.500000	6.700000	0.000000	0.000000
0.000000	Exponential	0.020833	Activity	2.244e-004	6.500000	6.700000	0.000000	0.000000
0.000000	Characteristic	0.041665	Activity	3.217e-004	6.499000	6.501000	2.300000	0.000000
0.000000	Characteristic	0.010000	Activity	3.217e-004	6.499000	6.501000	2.300000	0.000000
0.120000	Normal	0.083335	Activity	1.501e-004	6.460000	6.940000	2.300000	6.700000
0.120000	Normal	0.010000	Activity	2.994e-004	6.260000	6.740000	2.300000	6.500000
0.120000	Normal	0.083335	Activity	2.994e-004	6.260000	6.740000	2.300000	6.500000
0.120000	Exponential	0.020833	Activity	2.283e-004	6.500000	6.700000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	2.244e-004	6.500000	6.700000	0.000000	0.000000
0.000000	Exponential	0.020833	Activity	2.244e-004	6.500000	6.700000	0.000000	0.000000
0.000000	Characteristic	0.041665	Activity	3.217e-004	6.499000	6.501000	2.300000	0.000000
0.000000	Characteristic	0.010000	Activity	3.217e-004	6.499000	6.501000	2.300000	0.000000
0.120000	Normal	0.083335	Activity	1.501e-004	6.460000	6.940000	2.300000	6.700000
0.120000	Normal	0.083335	Activity	2.994e-004	6.260000	6.740000	2.300000	6.500000
0.120000	Normal	0.083335	Activity	2.994e-004	6.260000	6.740000	2.300000	6.500000
0.120000	Exponential	0.020833	Activity	2.283e-004	6.500000	6.700000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	2.244e-004	6.500000	6.700000	0.000000	0.000000
0.000000	Exponential	0.020833	Activity	2.244e-004	6.500000	6.700000	0.000000	0.000000
0.000000	Characteristic	0.041665	Activity	3.217e-004	6.499000	6.501000	2.300000	0.000000
0.000000	Characteristic	0.010000	Activity	3.217e-004	6.499000	6.501000	2.300000	0.000000

Rupture Length Parameters

Rupture Dimensioning		Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

```

--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Area              --          --          --          --          --          --      -4.153061
1.020408  0.240000
--      Area              --          --          --          --          --          --      -4.153061
1.020408  0.240000
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Area              --          --          --          --          --          --      -4.153061
1.020408  0.240000
--      Area              --          --          --          --          --          --      -4.153061
1.020408  0.240000
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Area              --          --          --          --          --          --      -4.153061
1.020408  0.240000
--      Area              --          --          --          --          --          --      -4.153061
1.020408  0.240000
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
    
```

Trace Coordinates:

Latitude	Longitude
34.9331	-120.6482
34.9147	-120.5746
34.8779	-120.5207
34.8472	-120.4520
34.8436	-120.3968
34.8215	-120.3699

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

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Name: Channel Islands Thrust  
 Region: USGS 2008 California  
 Category: Fault  
 Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
 \USGS 2008 Lower 48.bin-ssdb  
 Fault Mechanism: Reverse  
 Magnitude Scale: Moment Magnitude

Probability of Activity: 1.00000000  
 Deterministic Magnitude: 7.3

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	20	5	5.001	12.18

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.041665	Activity	4.761e-004	7.060000	7.540000	2.300000	7.300000
0.120000	Normal	0.041665	Activity	6.725e-004	6.960000	7.440000	2.300000	7.200000
0.000000	Exponential	0.041668	Activity	2.081e-003	6.500000	7.300000	1.842068	0.000000
0.000000	Exponential	0.041668	Activity	1.516e-003	6.500000	7.300000	0.000000	0.000000
0.000000	Exponential	0.041668	Activity	2.462e-003	6.500000	7.200000	1.842068	0.000000
0.000000	Exponential	0.041668	Activity	1.927e-003	6.500000	7.200000	0.000000	0.000000
0.120000	Normal	0.083335	Activity	4.761e-004	7.060000	7.540000	2.300000	7.300000
0.120000	Normal	0.083335	Activity	6.725e-004	6.960000	7.440000	2.300000	7.200000
0.000000	Exponential	0.020833	Activity	2.081e-003	6.500000	7.300000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	1.516e-003	6.500000	7.300000	0.000000	0.000000
0.000000	Exponential	0.020833	Activity	2.462e-003	6.500000	7.200000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	1.927e-003	6.500000	7.200000	0.000000	0.000000
0.120000	Normal	0.083335	Activity	4.761e-004	7.060000	7.540000	2.300000	7.300000
0.120000	Normal	0.083335	Activity	6.725e-004	6.960000	7.440000	2.300000	7.200000
0.000000	Exponential	0.020833	Activity	2.081e-003	6.500000	7.300000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	1.516e-003	6.500000	7.300000	0.000000	0.000000
0.000000	Exponential	0.020833	Activity	2.462e-003	6.500000	7.200000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	1.927e-003	6.500000	7.200000	0.000000	0.000000
0.120000	Normal	0.083335	Activity	4.761e-004	7.060000	7.540000	2.300000	7.300000
0.120000	Normal	0.083335	Activity	6.725e-004	6.960000	7.440000	2.300000	7.200000
0.000000	Exponential	0.020833	Activity	2.081e-003	6.500000	7.300000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	1.516e-003	6.500000	7.300000	0.000000	0.000000
0.000000	Exponential	0.020833	Activity	2.462e-003	6.500000	7.200000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	1.927e-003	6.500000	7.200000	0.000000	0.000000

0.000000 0.000000 0.000000

Rupture Length Parameters

Rupture Dimensioning		Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
1.020408	Area	--	--	--	--	--	--	-4.153061
	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
1.020408	Area	--	--	--	--	--	--	-4.153061
	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
1.020408	Area	--	--	--	--	--	--	-4.153061
	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061

Trace Coordinates:  
 Latitude Longitude  
 34.0258 -119.2630



34.0010 -119.3610  
 33.9884 -119.4660  
 33.9866 -119.5250  
 33.9612 -119.6330  
 33.9431 -119.6800  
 33.9431 -119.7570  
 33.9457 -119.8150  
 33.9745 -119.8820

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: Clamshell-Sawpit  
 Region: USGS 2008 California  
 Category: Fault  
 Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
 \USGS 2008 Lower 48.bin-ssdb  
 Fault Mechanism: Reverse  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 1.00000000  
 Deterministic Magnitude: 6.7

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	50	0	0.001	13.79

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.041665	Activity	2.927e-004	6.460000	6.940000	2.300000	6.700000
0.120000	Normal	0.010000	Activity	8.249e-004	6.160000	6.640000	2.300000	6.400000
0.120000	Exponential	0.041668	Activity	4.453e-004	6.500000	6.700000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	4.377e-004	6.500000	6.700000	0.000000	0.000000
0.000000	Characteristic	0.083335	Activity	8.863e-004	6.399000	6.401000	2.300000	0.000000
0.120000	Normal	0.083335	Activity	2.927e-004	6.460000	6.940000	2.300000	6.700000
0.120000	Normal	0.010000	Activity	8.249e-004	6.160000	6.640000	2.300000	6.400000
0.120000	Exponential	0.020833	Activity	4.453e-004	6.500000	6.700000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	4.377e-004	6.500000	6.700000	0.000000	0.000000
0.000000	Characteristic	0.041665	Activity	8.863e-004	6.399000	6.401000	2.300000	0.000000
0.120000	Normal	0.083335	Activity	2.927e-004	6.460000	6.940000	2.300000	6.700000

0.120000	Normal	0.083335	Activity	8.249e-004	6.160000	6.640000	2.300000	6.400000
0.000000	Exponential	0.020833	Activity	4.453e-004	6.500000	6.700000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	4.377e-004	6.500000	6.700000	0.000000	0.000000
0.000000	Characteristic	0.041665	Activity	8.863e-004	6.399000	6.401000	2.300000	0.000000
0.120000	Normal	0.083335	Activity	2.927e-004	6.460000	6.940000	2.300000	6.700000
0.120000	Normal	0.083335	Activity	8.249e-004	6.160000	6.640000	2.300000	6.400000
0.000000	Exponential	0.020833	Activity	4.453e-004	6.500000	6.700000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	4.377e-004	6.500000	6.700000	0.000000	0.000000
0.000000	Characteristic	0.041665	Activity	8.863e-004	6.399000	6.401000	2.300000	0.000000

Rupture Length Parameters

Rupture Dimensioning		Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--	--
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000	--	--	--	--	--	--	-4.153061
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--	--
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000	--	--	--	--	--	--	-4.153061
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--	--
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000	--	--	--	--	--	--	-4.153061
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--	--
--	Area	--	--	--	--	--	--	-4.153061

```

1.020408 0.240000
1.020408 0.240000 Area -- -- -- -- -- -- -4.153061
Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
-- --
    
```

Trace Coordinates:  
 Latitude Longitude  
 34.2402 -117.8458  
 34.2218 -117.8844  
 34.2181 -117.9279  
 34.1777 -117.9990

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: Cleghorn  
 Region: USGS 2008 California  
 Category: Fault  
 Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
 \USGS 2008 Lower 48.bin-ssdb  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 1.00000000  
 Deterministic Magnitude: 6.8

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	16

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.041665	Activity	1.661e-003	6.560000	7.040000	2.300000	6.800000
0.120000	Normal	0.010000	Activity	3.314e-003	6.360000	6.840000	2.300000	6.600000
0.120000	Normal	0.010000	Activity	3.314e-003	6.360000	6.840000	2.300000	6.600000
0.000000	Exponential	0.041668	Activity	3.009e-003	6.500000	6.800000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	2.881e-003	6.500000	6.800000	0.000000	0.000000
0.000000	Exponential	0.041668	Activity	2.881e-003	6.500000	6.800000	0.000000	0.000000
0.000000	Exponential	0.000000	Activity	4.239e-003	6.500000	6.600000	1.842068	0.000000
0.000000	Exponential	0.041668	Activity	4.233e-003	6.500000	6.600000	0.000000	0.000000
0.000000	Exponential	0.000000	Activity	4.233e-003	6.500000	6.600000	0.000000	0.000000
0.120000	Normal	0.083335	Activity	1.661e-003	6.560000	7.040000	2.300000	6.800000
0.120000	Normal	0.010000	Activity	3.314e-003	6.360000	6.840000	2.300000	6.600000
0.120000	Normal	0.083335	Activity	3.314e-003	6.360000	6.840000	2.300000	6.600000
0.120000	Normal	0.010000	Activity	3.314e-003	6.360000	6.840000	2.300000	6.600000
0.000000	Exponential	0.020833	Activity	3.009e-003	6.500000	6.800000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	3.009e-003	6.500000	6.800000	1.842068	0.000000

Exponential	0.020833	Activity	2.881e-003	6.500000	6.800000	0.000000	0.000000
0.000000	0.000000	0.000000					
Exponential	0.020833	Activity	4.239e-003	6.500000	6.600000	1.842068	0.000000
0.000000	0.000000	0.000000					
Exponential	0.020833	Activity	4.233e-003	6.500000	6.600000	0.000000	0.000000
0.000000	0.000000	0.000000					
Normal	0.083335	Activity	1.661e-003	6.560000	7.040000	2.300000	6.800000
0.120000	0.010000	10.000000					
Normal	0.083335	Activity	3.314e-003	6.360000	6.840000	2.300000	6.600000
0.120000	0.010000	10.000000					
Exponential	0.020833	Activity	3.009e-003	6.500000	6.800000	1.842068	0.000000
0.000000	0.000000	0.000000					
Exponential	0.020833	Activity	2.881e-003	6.500000	6.800000	0.000000	0.000000
0.000000	0.000000	0.000000					
Exponential	0.020833	Activity	4.239e-003	6.500000	6.600000	1.842068	0.000000
0.000000	0.000000	0.000000					
Exponential	0.020833	Activity	4.233e-003	6.500000	6.600000	0.000000	0.000000
0.000000	0.000000	0.000000					
Normal	0.083335	Activity	1.661e-003	6.560000	7.040000	2.300000	6.800000
0.120000	0.010000	10.000000					
Normal	0.083335	Activity	3.314e-003	6.360000	6.840000	2.300000	6.600000
0.120000	0.010000	10.000000					
Exponential	0.020833	Activity	3.009e-003	6.500000	6.800000	1.842068	0.000000
0.000000	0.000000	0.000000					
Exponential	0.020833	Activity	2.881e-003	6.500000	6.800000	0.000000	0.000000
0.000000	0.000000	0.000000					
Exponential	0.020833	Activity	4.239e-003	6.500000	6.600000	1.842068	0.000000
0.000000	0.000000	0.000000					
Exponential	0.020833	Activity	4.233e-003	6.500000	6.600000	0.000000	0.000000
0.000000	0.000000	0.000000					

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba Sigw							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Area	--	--	--	--	--	--	-4.153061

```

1.020408 0.240000
  Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--
  Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--
      Area -- -- -- -- -- -4.153061
1.020408 0.240000
      Area -- -- -- -- -- -4.153061
1.020408 0.240000
      Area -- -- -- -- -- -4.153061
1.020408 0.240000
      Area -- -- -- -- -- -4.153061
1.020408 0.240000
  Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--
  Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--
      Area -- -- -- -- -- -4.153061
1.020408 0.240000
      Area -- -- -- -- -- -4.153061
1.020408 0.240000
      Area -- -- -- -- -- -4.153061
1.020408 0.240000
      Area -- -- -- -- -- -4.153061
1.020408 0.240000
      Area -- -- -- -- -- -4.153061
1.020408 0.240000

```

Trace Coordinates:

```

Latitude Longitude
34.3113 -117.4644
34.2858 -117.3880
34.2943 -117.3455
34.2773 -117.3172
34.2745 -117.2577
34.2830 -117.2040

```

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: Coronado Bank  
 Region: USGS 2008 California  
 Category: Fault  
 Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
 \USGS 2008 Lower 48.bin-ssdb  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.50000000  
 Deterministic Magnitude: 7.4

Fault Profile Parameters:

Dipl	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	9

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
	Delta1	Delta2						
0.120000	Normal	0.08333	Activity	8.551e-004	7.160000	7.640000	2.300000	7.400000
0.120000	Normal	0.010000	Activity	1.208e-003	7.060000	7.540000	2.300000	7.300000
0.120000	Exponential	0.083335	Activity	4.466e-003	6.500000	7.400000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	3.004e-003	6.500000	7.400000	0.000000	0.000000
0.000000	Exponential	0.083335	Activity	5.280e-003	6.500000	7.300000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	3.847e-003	6.500000	7.300000	0.000000	0.000000
0.120000	Normal	0.166670	Activity	8.551e-004	7.160000	7.640000	2.300000	7.400000
0.120000	Normal	0.010000	Activity	1.208e-003	7.060000	7.540000	2.300000	7.300000
0.120000	Exponential	0.041665	Activity	4.466e-003	6.500000	7.400000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	3.004e-003	6.500000	7.400000	0.000000	0.000000
0.000000	Exponential	0.041665	Activity	5.280e-003	6.500000	7.300000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	3.847e-003	6.500000	7.300000	0.000000	0.000000

Rupture Length Parameters

Rupture	Dimensioning	A1	B1	Sig1	Aw	Bw	Sigw	Aa
Ba	Sigw							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061

Trace Coordinates:

Latitude	Longitude
33.2798	-117.9170
33.2066	-117.8380
33.0732	-117.7420
33.0269	-117.6870
32.9520	-117.6160
32.9251	-117.5740
32.8655	-117.5200
32.8085	-117.5070
32.7524	-117.4670
32.7235	-117.4330
32.6786	-117.4130
32.6238	-117.3440
32.5940	-117.3150
32.5519	-117.2980
32.4949	-117.2660
31.8900	-116.8400

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: Cucamonga

Region: USGS 2008 California

Category: Fault

Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files\USGS 2008 Lower 48.bin-ssdb

Fault Mechanism: Reverse

Magnitude Scale: Moment Magnitude

Probability of Activity: 1.00000000

Deterministic Magnitude: 6.7

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	45	0	0.001	7.778

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.041665	Activity	3.082e-003	6.460000	6.940000	2.300000	6.700000
0.120000	Normal	0.010000	Activity	6.150e-003	6.260000	6.740000	2.300000	6.500000
0.120000	Normal	0.041665	Activity	6.150e-003	6.260000	6.740000	2.300000	6.500000
0.000000	Exponential	0.041668	Activity	4.689e-003	6.500000	6.700000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	4.609e-003	6.500000	6.700000	0.000000	0.000000
0.000000	Exponential	0.041668	Activity	4.609e-003	6.500000	6.700000	0.000000	0.000000
0.000000	Characteristic	0.083335	Activity	6.608e-003	6.499000	6.501000	2.300000	0.000000
0.000000	Characteristic	0.010000	Activity	6.608e-003	6.499000	6.501000	2.300000	0.000000
0.120000	Normal	0.083335	Activity	3.082e-003	6.460000	6.940000	2.300000	6.700000
0.120000	Normal	0.010000	Activity	3.082e-003	6.460000	6.940000	2.300000	6.700000

0.120000	Normal	0.083335	Activity	6.150e-003	6.260000	6.740000	2.300000	6.500000
0.000000	Exponential	0.020833	Activity	4.689e-003	6.500000	6.700000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	4.609e-003	6.500000	6.700000	0.000000	0.000000
0.000000	Characteristic	0.041665	Activity	6.608e-003	6.499000	6.501000	2.300000	0.000000
0.120000	Normal	0.083335	Activity	3.082e-003	6.460000	6.940000	2.300000	6.700000
0.120000	Normal	0.083335	Activity	6.150e-003	6.260000	6.740000	2.300000	6.500000
0.000000	Exponential	0.020833	Activity	4.689e-003	6.500000	6.700000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	4.609e-003	6.500000	6.700000	0.000000	0.000000
0.000000	Characteristic	0.041665	Activity	6.608e-003	6.499000	6.501000	2.300000	0.000000
0.120000	Normal	0.083335	Activity	3.082e-003	6.460000	6.940000	2.300000	6.700000
0.120000	Normal	0.083335	Activity	6.150e-003	6.260000	6.740000	2.300000	6.500000
0.000000	Exponential	0.020833	Activity	4.689e-003	6.500000	6.700000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	4.609e-003	6.500000	6.700000	0.000000	0.000000
0.000000	Characteristic	0.041665	Activity	6.608e-003	6.499000	6.501000	2.300000	0.000000
0.000000	Normal	0.083335	Activity	3.082e-003	6.460000	6.940000	2.300000	6.700000

Rupture Length Parameters

Rupture	Dimensioning	Al	B1	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Area	--	--	--	--	--	--	-4.153061



```

1.020408 0.240000
      Area      --      --      --      --      --      --      -4.153061
1.020408 0.240000
      Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--      --
      Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--      --
      Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--      --
      Area      --      --      --      --      --      --      -4.153061
1.020408 0.240000
      Area      --      --      --      --      --      --      -4.153061
1.020408 0.240000
      Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--      --
    
```

Trace Coordinates:

```

Latitude Longitude
34.1804 -117.4415
34.1734 -117.4541
34.1670 -117.4772
34.1674 -117.4954
34.1683 -117.5205
34.1709 -117.5582
34.1718 -117.5688
34.1659 -117.5773
34.1629 -117.6331
34.1484 -117.6627
34.1253 -117.7288
    
```

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

```

Name: Elysian Park (Upper)
Region: USGS 2008 California
Category: Fault
Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files
\USGS 2008 Lower 48.bin-ssdb
Fault Mechanism: Reverse
Magnitude Scale: Moment Magnitude
Probability of Activity: 1.00000000
Deterministic Magnitude: 6.7
    
```

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	50	3	3.001	15.26

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
	Normal	0.041665	Activity	8.193e-004	6.460000	6.940000	2.300000	6.700000

0.120000	0.010000	10.000000							
	Normal	0.041665	Activity	1.635e-003	6.260000	6.740000	2.300000	6.500000	
0.120000	0.010000	10.000000							
	Exponential	0.041668	Activity	1.246e-003	6.500000	6.700000	1.842068	0.000000	
0.000000	0.000000	0.000000							
	Exponential	0.041668	Activity	1.225e-003	6.500000	6.700000	0.000000	0.000000	
0.000000	0.000000	0.000000							
	Characteristic	0.083335	Activity	1.756e-003	6.499000	6.501000	2.300000	0.000000	
0.000000	0.010000	10.000000							
	Normal	0.083335	Activity	8.193e-004	6.460000	6.940000	2.300000	6.700000	
0.120000	0.010000	10.000000							
	Normal	0.083335	Activity	1.635e-003	6.260000	6.740000	2.300000	6.500000	
0.120000	0.010000	10.000000							
	Exponential	0.020833	Activity	1.246e-003	6.500000	6.700000	1.842068	0.000000	
0.000000	0.000000	0.000000							
	Exponential	0.020833	Activity	1.225e-003	6.500000	6.700000	0.000000	0.000000	
0.000000	0.000000	0.000000							
	Characteristic	0.041665	Activity	1.756e-003	6.499000	6.501000	2.300000	0.000000	
0.000000	0.010000	10.000000							
	Normal	0.083335	Activity	8.193e-004	6.460000	6.940000	2.300000	6.700000	
0.120000	0.010000	10.000000							
	Normal	0.083335	Activity	1.635e-003	6.260000	6.740000	2.300000	6.500000	
0.120000	0.010000	10.000000							
	Exponential	0.020833	Activity	1.246e-003	6.500000	6.700000	1.842068	0.000000	
0.000000	0.000000	0.000000							
	Exponential	0.020833	Activity	1.225e-003	6.500000	6.700000	0.000000	0.000000	
0.000000	0.000000	0.000000							
	Characteristic	0.041665	Activity	1.756e-003	6.499000	6.501000	2.300000	0.000000	
0.000000	0.010000	10.000000							
	Normal	0.083335	Activity	8.193e-004	6.460000	6.940000	2.300000	6.700000	
0.120000	0.010000	10.000000							
	Normal	0.083335	Activity	1.635e-003	6.260000	6.740000	2.300000	6.500000	
0.120000	0.010000	10.000000							
	Exponential	0.020833	Activity	1.246e-003	6.500000	6.700000	1.842068	0.000000	
0.000000	0.000000	0.000000							
	Exponential	0.020833	Activity	1.225e-003	6.500000	6.700000	0.000000	0.000000	
0.000000	0.000000	0.000000							
	Characteristic	0.041665	Activity	1.756e-003	6.499000	6.501000	2.300000	0.000000	
0.000000	0.010000	10.000000							

Rupture Length Parameters

Rupture Dimensioning		Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							

```

        Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
        Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
    Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000      --
--      --
    Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000      --
--      --
    Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000      --
--      --
        Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
        Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
    Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000      --
--      --
    Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000      --
--      --
    Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000      --
--      --
        Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
        Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
    Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000      --
--      --
    
```

Trace Coordinates:

```

Latitude Longitude
34.0683 -118.0998
34.0612 -118.1304
34.0675 -118.2348
34.1126 -118.2968
    
```

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: Gravel Hills-Harper Lk

Region: USGS 2008 California

Category: Fault

Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files

\USGS 2008 Lower 48.bin-ssdb

Fault Mechanism: Strike Slip

Magnitude Scale: Moment Magnitude

Probability of Activity: 1.00000000

Deterministic Magnitude: 7.1

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	11

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.041665	Activity	2.604e-004	6.860000	7.340000	2.300000	7.100000
0.120000	Normal	0.010000	Activity	5.196e-004	6.660000	7.140000	2.300000	6.900000
0.120000	Normal	0.041665	Activity	2.604e-004	6.860000	7.340000	2.300000	7.100000
0.120000	Normal	0.010000	Activity	5.196e-004	6.660000	7.140000	2.300000	6.900000
0.000000	Exponential	0.041668	Activity	7.987e-004	6.500000	7.100000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	6.666e-004	6.500000	7.100000	0.000000	0.000000
0.000000	Exponential	0.041668	Activity	7.987e-004	6.500000	7.100000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	1.121e-003	6.500000	6.900000	1.842068	0.000000
0.000000	Exponential	0.041668	Activity	7.987e-004	6.500000	7.100000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	1.035e-003	6.500000	6.900000	0.000000	0.000000
0.120000	Normal	0.083335	Activity	2.604e-004	6.860000	7.340000	2.300000	7.100000
0.120000	Normal	0.010000	Activity	5.196e-004	6.660000	7.140000	2.300000	6.900000
0.120000	Normal	0.083335	Activity	2.604e-004	6.860000	7.340000	2.300000	7.100000
0.120000	Normal	0.010000	Activity	5.196e-004	6.660000	7.140000	2.300000	6.900000
0.000000	Exponential	0.020833	Activity	7.987e-004	6.500000	7.100000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	6.666e-004	6.500000	7.100000	0.000000	0.000000
0.000000	Exponential	0.020833	Activity	7.987e-004	6.500000	7.100000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	1.121e-003	6.500000	6.900000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	7.987e-004	6.500000	7.100000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	1.035e-003	6.500000	6.900000	0.000000	0.000000
0.120000	Normal	0.083335	Activity	2.604e-004	6.860000	7.340000	2.300000	7.100000
0.120000	Normal	0.010000	Activity	5.196e-004	6.660000	7.140000	2.300000	6.900000
0.120000	Normal	0.083335	Activity	2.604e-004	6.860000	7.340000	2.300000	7.100000
0.120000	Normal	0.010000	Activity	5.196e-004	6.660000	7.140000	2.300000	6.900000
0.000000	Exponential	0.020833	Activity	7.987e-004	6.500000	7.100000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	6.666e-004	6.500000	7.100000	0.000000	0.000000
0.000000	Exponential	0.020833	Activity	7.987e-004	6.500000	7.100000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	1.121e-003	6.500000	6.900000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	7.987e-004	6.500000	7.100000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	1.035e-003	6.500000	6.900000	0.000000	0.000000

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba Sigw							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--						

```

    Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--
    Area -- -- -- -- -- -- -4.153061
1.020408 0.240000
    Area -- -- -- -- -- -- -4.153061
1.020408 0.240000
    Area -- -- -- -- -- -- -4.153061
1.020408 0.240000
    Area -- -- -- -- -- -- -4.153061
1.020408 0.240000
    Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--
    Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--
    Area -- -- -- -- -- -- -4.153061
1.020408 0.240000
    Area -- -- -- -- -- -- -4.153061
1.020408 0.240000
    Area -- -- -- -- -- -- -4.153061
1.020408 0.240000
    Area -- -- -- -- -- -- -4.153061
1.020408 0.240000
    Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--
    Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--
    Area -- -- -- -- -- -- -4.153061
1.020408 0.240000
    Area -- -- -- -- -- -- -4.153061
1.020408 0.240000
    Area -- -- -- -- -- -- -4.153061
1.020408 0.240000
    Area -- -- -- -- -- -- -4.153061
1.020408 0.240000
    Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--
    Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--
    Area -- -- -- -- -- -- -4.153061
1.020408 0.240000
    Area -- -- -- -- -- -- -4.153061
1.020408 0.240000
    Area -- -- -- -- -- -- -4.153061
1.020408 0.240000
    Area -- -- -- -- -- -- -4.153061
1.020408 0.240000
    
```

Trace Coordinates:  
 Latitude Longitude  
 34.8724 -116.9185  
 34.8880 -116.9600  
 34.9489 -117.0171  
 35.1746 -117.3374  
 35.2563 -117.4541

Attenuation Equations for Source:  
 Raw Weight Normalized Weight Name

1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: Great Valley 14 (Kettleman Hills)  
 Region: USGS 2008 California  
 Category: Fault  
 Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
 \USGS 2008 Lower 48.bin-ssdb  
 Fault Mechanism: Reverse  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 1.00000000  
 Deterministic Magnitude: 7.2

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	22	8.1	8.101	22.34

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
	Delta1	Delta2						
0.120000	Normal	0.041665	Activity	4.910e-004	6.960000	7.440000	2.300000	7.200000
	0.010000	10.000000						
0.120000	Normal	0.041665	Activity	9.797e-004	6.760000	7.240000	2.300000	7.000000
	0.010000	10.000000						
0.000000	Exponential	0.041668	Activity	1.797e-003	6.500000	7.200000	1.842068	0.000000
	0.000000	0.000000						
0.000000	Exponential	0.041668	Activity	1.407e-003	6.500000	7.200000	0.000000	0.000000
	0.000000	0.000000						
0.000000	Exponential	0.041668	Activity	2.520e-003	6.500000	7.000000	1.842068	0.000000
	0.000000	0.000000						
0.000000	Exponential	0.041668	Activity	2.222e-003	6.500000	7.000000	0.000000	0.000000
	0.000000	0.000000						
0.120000	Normal	0.083335	Activity	4.910e-004	6.960000	7.440000	2.300000	7.200000
	0.010000	10.000000						
0.120000	Normal	0.083335	Activity	9.797e-004	6.760000	7.240000	2.300000	7.000000
	0.010000	10.000000						
0.000000	Exponential	0.020833	Activity	1.797e-003	6.500000	7.200000	1.842068	0.000000
	0.000000	0.000000						
0.000000	Exponential	0.020833	Activity	1.407e-003	6.500000	7.200000	0.000000	0.000000
	0.000000	0.000000						
0.000000	Exponential	0.020833	Activity	2.520e-003	6.500000	7.000000	1.842068	0.000000
	0.000000	0.000000						
0.000000	Exponential	0.020833	Activity	2.222e-003	6.500000	7.000000	0.000000	0.000000
	0.000000	0.000000						
0.120000	Normal	0.083335	Activity	4.910e-004	6.960000	7.440000	2.300000	7.200000
	0.010000	10.000000						
0.120000	Normal	0.083335	Activity	9.797e-004	6.760000	7.240000	2.300000	7.000000
	0.010000	10.000000						
0.000000	Exponential	0.020833	Activity	1.797e-003	6.500000	7.200000	1.842068	0.000000
	0.000000	0.000000						
0.000000	Exponential	0.020833	Activity	1.407e-003	6.500000	7.200000	0.000000	0.000000
	0.000000	0.000000						
0.000000	Exponential	0.020833	Activity	2.520e-003	6.500000	7.000000	1.842068	0.000000
	0.000000	0.000000						

```

0.000000 0.000000 0.000000
    Exponential 0.020833 Activity 2.222e-003 6.500000 7.000000 0.000000 0.000000
0.000000 0.000000 0.000000
    Normal 0.083335 Activity 4.910e-004 6.960000 7.440000 2.300000 7.200000
0.120000 0.010000 10.000000
    Normal 0.083335 Activity 9.797e-004 6.760000 7.240000 2.300000 7.000000
0.120000 0.010000 10.000000
    Exponential 0.020833 Activity 1.797e-003 6.500000 7.200000 1.842068 0.000000
0.000000 0.000000 0.000000
    Exponential 0.020833 Activity 1.407e-003 6.500000 7.200000 0.000000 0.000000
0.000000 0.000000 0.000000
    Exponential 0.020833 Activity 2.520e-003 6.500000 7.000000 1.842068 0.000000
0.000000 0.000000 0.000000
    Exponential 0.020833 Activity 2.222e-003 6.500000 7.000000 0.000000 0.000000
0.000000 0.000000 0.000000
    
```

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba Sigw							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--

```

Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
-- --
Area -- -- -- -- -- -- -4.153061
1.020408 0.240000
Area -- -- -- -- -- -- -4.153061
1.020408 0.240000
Area -- -- -- -- -- -- -4.153061
1.020408 0.240000
Area -- -- -- -- -- -- -4.153061
1.020408 0.240000

```

Trace Coordinates:

```

Latitude Longitude
36.1316 -120.1390
36.0909 -120.0680
36.0366 -119.9730
36.0068 -119.9210

```

Attenuation Equations for Source:

```

Raw Weight Normalized Weight Name
1 0.250000 Abrahamson-Silva (2008) NGA
1 0.250000 Boore-Atkinson (2008) NGA
1 0.250000 Campbell-Bozorgnia (2008) NGA
1 0.250000 Chiou-Youngs (2008) NGA

```

\*\*\*\*\*

```

Name: Helendale-So Lockhart
Region: USGS 2008 California
Category: Fault
Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files
\USGS 2008 Lower 48.bin-ssdb
Fault Mechanism: Strike Slip
Magnitude Scale: Moment Magnitude
Probability of Activity: 1.00000000
Deterministic Magnitude: 7.4

```

Fault Profile Parameters:

```

Dipl Dip2 Depth1 Depth2 Depth3
90 90 0 0.001 13

```

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.041665	Activity	1.558e-004	7.160000	7.640000	2.300000	7.400000
0.120000	Normal	0.041665	Activity	2.200e-004	7.060000	7.540000	2.300000	7.300000
0.000000	Exponential	0.041668	Activity	8.134e-004	6.500000	7.400000	1.842068	0.000000
0.000000	Exponential	0.041668	Activity	5.472e-004	6.500000	7.400000	0.000000	0.000000
0.000000	Exponential	0.041668	Activity	9.617e-004	6.500000	7.300000	1.842068	0.000000
0.000000	Exponential	0.041668	Activity	7.006e-004	6.500000	7.300000	0.000000	0.000000
0.000000	Normal	0.083335	Activity	1.558e-004	7.160000	7.640000	2.300000	7.400000



0.120000	0.010000	10.000000							
	Normal	0.083335	Activity	2.200e-004	7.060000	7.540000	2.300000	7.300000	
0.120000	0.010000	10.000000							
	Exponential	0.020833	Activity	8.134e-004	6.500000	7.400000	1.842068	0.000000	
0.000000	0.000000	0.000000							
	Exponential	0.020833	Activity	5.472e-004	6.500000	7.400000	0.000000	0.000000	
0.000000	0.000000	0.000000							
	Exponential	0.020833	Activity	9.617e-004	6.500000	7.300000	1.842068	0.000000	
0.000000	0.000000	0.000000							
	Exponential	0.020833	Activity	7.006e-004	6.500000	7.300000	0.000000	0.000000	
0.000000	0.000000	0.000000							
	Normal	0.083335	Activity	1.558e-004	7.160000	7.640000	2.300000	7.400000	
0.120000	0.010000	10.000000							
	Normal	0.083335	Activity	2.200e-004	7.060000	7.540000	2.300000	7.300000	
0.120000	0.010000	10.000000							
	Exponential	0.020833	Activity	8.134e-004	6.500000	7.400000	1.842068	0.000000	
0.000000	0.000000	0.000000							
	Exponential	0.020833	Activity	5.472e-004	6.500000	7.400000	0.000000	0.000000	
0.000000	0.000000	0.000000							
	Exponential	0.020833	Activity	9.617e-004	6.500000	7.300000	1.842068	0.000000	
0.000000	0.000000	0.000000							
	Exponential	0.020833	Activity	7.006e-004	6.500000	7.300000	0.000000	0.000000	
0.000000	0.000000	0.000000							
	Normal	0.083335	Activity	1.558e-004	7.160000	7.640000	2.300000	7.400000	
0.120000	0.010000	10.000000							
	Normal	0.083335	Activity	2.200e-004	7.060000	7.540000	2.300000	7.300000	
0.120000	0.010000	10.000000							
	Exponential	0.020833	Activity	8.134e-004	6.500000	7.400000	1.842068	0.000000	
0.000000	0.000000	0.000000							
	Exponential	0.020833	Activity	5.472e-004	6.500000	7.400000	0.000000	0.000000	
0.000000	0.000000	0.000000							
	Exponential	0.020833	Activity	9.617e-004	6.500000	7.300000	1.842068	0.000000	
0.000000	0.000000	0.000000							
	Exponential	0.020833	Activity	7.006e-004	6.500000	7.300000	0.000000	0.000000	
0.000000	0.000000	0.000000							

Rupture Length Parameters

Rupture Dimensioning		Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							

```

        Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
        Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
        Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
        Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--      --
        Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--      --
        Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
        Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
        Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
        Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
        Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--      --
        Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--      --
        Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
        Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
        Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
        Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
    
```

Trace Coordinates:

```

Latitude Longitude
34.3248 -116.8150
34.3757 -116.8570
34.4410 -116.9450
34.5394 -117.0640
34.6038 -117.1060
34.7868 -117.3280
34.9156 -117.4180
35.0428 -117.4970
35.1087 -117.5970
    
```

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

```

Name: Hollywood
Region: USGS 2008 California
Category: Fault
Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files
\USGS 2008 Lower 48.bin-ssdb
    
```

Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 1.00000000  
 Deterministic Magnitude: 6.7

Fault Profile Parameters:

Dipl	Dip2	Depth1	Depth2	Depth3
90	70	0	0.001	16.91

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
	Delta1	Delta2						
0.120000	Normal	0.041665	Activity	6.185e-004	6.460000	6.940000	2.300000	6.700000
0.120000	Normal	0.041665	Activity	1.234e-003	6.260000	6.740000	2.300000	6.500000
0.000000	Exponential	0.041668	Activity	9.410e-004	6.500000	6.700000	1.842068	0.000000
0.000000	Exponential	0.041668	Activity	9.249e-004	6.500000	6.700000	0.000000	0.000000
0.000000	Characteristic	0.083335	Activity	1.326e-003	6.499000	6.501000	2.300000	0.000000
0.120000	Normal	0.083335	Activity	6.185e-004	6.460000	6.940000	2.300000	6.700000
0.120000	Normal	0.083335	Activity	1.234e-003	6.260000	6.740000	2.300000	6.500000
0.000000	Exponential	0.020833	Activity	9.410e-004	6.500000	6.700000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	9.249e-004	6.500000	6.700000	0.000000	0.000000
0.000000	Characteristic	0.041665	Activity	1.326e-003	6.499000	6.501000	2.300000	0.000000
0.120000	Normal	0.083335	Activity	6.185e-004	6.460000	6.940000	2.300000	6.700000
0.120000	Normal	0.083335	Activity	1.234e-003	6.260000	6.740000	2.300000	6.500000
0.000000	Exponential	0.020833	Activity	9.410e-004	6.500000	6.700000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	9.249e-004	6.500000	6.700000	0.000000	0.000000
0.000000	Characteristic	0.041665	Activity	1.326e-003	6.499000	6.501000	2.300000	0.000000
0.120000	Normal	0.083335	Activity	6.185e-004	6.460000	6.940000	2.300000	6.700000
0.120000	Normal	0.083335	Activity	1.234e-003	6.260000	6.740000	2.300000	6.500000
0.000000	Exponential	0.020833	Activity	9.410e-004	6.500000	6.700000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	9.249e-004	6.500000	6.700000	0.000000	0.000000
0.000000	Characteristic	0.041665	Activity	1.326e-003	6.499000	6.501000	2.300000	0.000000

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sig1	Aw	Bw	Sigw	Aa
Ba Sigw Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

```

--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Area              --      --      --      --      --      --      -- -4.153061
1.020408  0.240000
--      Area              --      --      --      --      --      --      -- -4.153061
1.020408  0.240000
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Area              --      --      --      --      --      --      -- -4.153061
1.020408  0.240000
--      Area              --      --      --      --      --      --      -- -4.153061
1.020408  0.240000
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Area              --      --      --      --      --      --      -- -4.153061
1.020408  0.240000
--      Area              --      --      --      --      --      --      -- -4.153061
1.020408  0.240000
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Area              --      --      --      --      --      --      -- -4.153061
1.020408  0.240000
--      Area              --      --      --      --      --      --      -- -4.153061
1.020408  0.240000
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
    
```

Trace Coordinates:

```

Latitude Longitude
34.1192 -118.2302
34.1104 -118.3170
34.0991 -118.3723
34.0840 -118.4063
    
```

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: Holser, alt 1

Region: USGS 2008 California  
 Category: Fault  
 Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
 \USGS 2008 Lower 48.bin-ssdb  
 Fault Mechanism: Reverse  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.50000000  
 Deterministic Magnitude: 6.8

Fault Profile Parameters:

Dipl	Dip2	Depth1	Depth2	Depth3
90	58	0	0.001	18.66

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.08333	Activity	2.431e-004	6.560000	7.040000	2.300000	6.800000
0.120000	Normal	0.0833330	Activity	4.850e-004	6.360000	6.840000	2.300000	6.600000
0.000000	Exponential	0.083335	Activity	4.403e-004	6.500000	6.800000	1.842068	0.000000
0.000000	Exponential	0.083335	Activity	4.215e-004	6.500000	6.800000	0.000000	0.000000
0.000000	Exponential	0.083335	Activity	6.202e-004	6.500000	6.600000	1.842068	0.000000
0.000000	Exponential	0.083335	Activity	6.194e-004	6.500000	6.600000	0.000000	0.000000
0.120000	Normal	0.166670	Activity	2.431e-004	6.560000	7.040000	2.300000	6.800000
0.120000	Normal	0.166670	Activity	4.850e-004	6.360000	6.840000	2.300000	6.600000
0.000000	Exponential	0.041665	Activity	4.403e-004	6.500000	6.800000	1.842068	0.000000
0.000000	Exponential	0.041665	Activity	4.215e-004	6.500000	6.800000	0.000000	0.000000
0.000000	Exponential	0.041665	Activity	6.202e-004	6.500000	6.600000	1.842068	0.000000
0.000000	Exponential	0.041665	Activity	6.194e-004	6.500000	6.600000	0.000000	0.000000

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sigl	Aw	Bw	Sigw	Aa
Ba Sigw							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

```
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Area      --      --      --      --      --      --      --      -4.153061
1.020408  0.240000
--      Area      --      --      --      --      --      --      --      -4.153061
1.020408  0.240000
--      Area      --      --      --      --      --      --      --      -4.153061
1.020408  0.240000
--      Area      --      --      --      --      --      --      --      -4.153061
1.020408  0.240000
```

Trace Coordinates:

```
Latitude Longitude
34.4386 -118.7533
34.4386 -118.7345
34.4499 -118.6741
34.4487 -118.6427
34.4172 -118.5483
```

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: Hosgri  
 Region: USGS 2008 California  
 Category: Fault  
 Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
 \USGS 2008 Lower 48.bin-ssdb  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 1.00000000  
 Deterministic Magnitude: 7.3

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	80	0	0.001	6.894

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.041665	Activity	7.427e-004	7.060000	7.540000	2.300000	7.300000
0.120000	Normal	0.041665	Activity	1.049e-003	6.960000	7.440000	2.300000	7.200000
0.000000	Exponential	0.041668	Activity	3.246e-003	6.500000	7.300000	1.842068	0.000000
0.000000	Exponential	0.041668	Activity	2.365e-003	6.500000	7.300000	0.000000	0.000000
0.000000	Exponential	0.041668	Activity	3.840e-003	6.500000	7.200000	1.842068	0.000000
0.000000	Exponential	0.041668	Activity	3.007e-003	6.500000	7.200000	0.000000	0.000000

0.000000	0.000000	0.000000							
	Normal	0.083335	Activity	7.427e-004	7.060000	7.540000	2.300000	7.300000	
0.120000	0.010000	10.000000							
	Normal	0.083335	Activity	1.049e-003	6.960000	7.440000	2.300000	7.200000	
0.120000	0.010000	10.000000							
	Exponential	0.020833	Activity	3.246e-003	6.500000	7.300000	1.842068	0.000000	
0.000000	0.000000	0.000000							
	Exponential	0.020833	Activity	2.365e-003	6.500000	7.300000	0.000000	0.000000	
0.000000	0.000000	0.000000							
	Exponential	0.020833	Activity	3.840e-003	6.500000	7.200000	1.842068	0.000000	
0.000000	0.000000	0.000000							
	Exponential	0.020833	Activity	3.007e-003	6.500000	7.200000	0.000000	0.000000	
0.000000	0.000000	0.000000							
	Normal	0.083335	Activity	7.427e-004	7.060000	7.540000	2.300000	7.300000	
0.120000	0.010000	10.000000							
	Normal	0.083335	Activity	1.049e-003	6.960000	7.440000	2.300000	7.200000	
0.120000	0.010000	10.000000							
	Exponential	0.020833	Activity	3.246e-003	6.500000	7.300000	1.842068	0.000000	
0.000000	0.000000	0.000000							
	Exponential	0.020833	Activity	2.365e-003	6.500000	7.300000	0.000000	0.000000	
0.000000	0.000000	0.000000							
	Exponential	0.020833	Activity	3.840e-003	6.500000	7.200000	1.842068	0.000000	
0.000000	0.000000	0.000000							
	Exponential	0.020833	Activity	3.007e-003	6.500000	7.200000	0.000000	0.000000	
0.000000	0.000000	0.000000							
	Normal	0.083335	Activity	7.427e-004	7.060000	7.540000	2.300000	7.300000	
0.120000	0.010000	10.000000							
	Normal	0.083335	Activity	1.049e-003	6.960000	7.440000	2.300000	7.200000	
0.120000	0.010000	10.000000							
	Exponential	0.020833	Activity	3.246e-003	6.500000	7.300000	1.842068	0.000000	
0.000000	0.000000	0.000000							
	Exponential	0.020833	Activity	2.365e-003	6.500000	7.300000	0.000000	0.000000	
0.000000	0.000000	0.000000							
	Exponential	0.020833	Activity	3.840e-003	6.500000	7.200000	1.842068	0.000000	
0.000000	0.000000	0.000000							
	Exponential	0.020833	Activity	3.007e-003	6.500000	7.200000	0.000000	0.000000	

Rupture Length Parameters

Rupture Dimensioning		Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							

```

        Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
        Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
        Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
        Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
        Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--      --
        Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--      --
        Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
        Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
        Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
        Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
        Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--      --
        Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--      --
        Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
        Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
        Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
        Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
    
```

Trace Coordinates:

```

Latitude Longitude
34.8548 -120.7460
34.8931 -120.7660
34.9340 -120.7950
34.9754 -120.8050
35.0469 -120.8340
35.1085 -120.8660
35.1429 -120.8790
35.1919 -120.9160
35.2712 -120.9600
35.3547 -121.0020
35.4214 -121.0460
35.4542 -121.0640
35.5020 -121.0910
35.6027 -121.1580
35.6523 -121.1940
35.7005 -121.2410
35.7437 -121.2860
35.7685 -121.3190
35.7917 -121.3650
35.8356 -121.4180
35.8623 -121.4530
35.8946 -121.4940
    
```



35.9287 -121.5170  
 35.9680 -121.5610  
 36.1462 -121.7270

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: Lenwood-Lockhart-Old Woman Springs  
 Region: USGS 2008 California  
 Category: Fault  
 Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
 \USGS 2008 Lower 48.bin-ssdb  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 1.00000000  
 Deterministic Magnitude: 7.5

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	13

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.041665	Activity	2.172e-004	7.260000	7.740000	2.300000	7.500000
0.120000	Normal	0.010000	Activity	3.067e-004	7.160000	7.640000	2.300000	7.400000
0.120000	Normal	0.041665	Activity	3.067e-004	7.160000	7.640000	2.300000	7.400000
0.000000	Exponential	0.041668	Activity	1.356e-003	6.500000	7.500000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	8.363e-004	6.500000	7.500000	0.000000	0.000000
0.000000	Exponential	0.041668	Activity	1.602e-003	6.500000	7.400000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	1.078e-003	6.500000	7.400000	0.000000	0.000000
0.000000	Exponential	0.041668	Activity	1.078e-003	6.500000	7.400000	0.000000	0.000000
0.000000	Exponential	0.000000	Activity	1.078e-003	6.500000	7.400000	0.000000	0.000000
0.120000	Normal	0.083335	Activity	2.172e-004	7.260000	7.740000	2.300000	7.500000
0.120000	Normal	0.010000	Activity	3.067e-004	7.160000	7.640000	2.300000	7.400000
0.120000	Normal	0.083335	Activity	3.067e-004	7.160000	7.640000	2.300000	7.400000
0.000000	Exponential	0.020833	Activity	1.356e-003	6.500000	7.500000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	8.363e-004	6.500000	7.500000	0.000000	0.000000
0.000000	Exponential	0.020833	Activity	8.363e-004	6.500000	7.500000	0.000000	0.000000
0.000000	Exponential	0.000000	Activity	1.602e-003	6.500000	7.400000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	1.602e-003	6.500000	7.400000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	1.078e-003	6.500000	7.400000	0.000000	0.000000
0.000000	Exponential	0.020833	Activity	1.078e-003	6.500000	7.400000	0.000000	0.000000
0.000000	Exponential	0.000000	Activity	1.078e-003	6.500000	7.400000	0.000000	0.000000
0.120000	Normal	0.083335	Activity	2.172e-004	7.260000	7.740000	2.300000	7.500000
0.120000	Normal	0.010000	Activity	3.067e-004	7.160000	7.640000	2.300000	7.400000
0.120000	Normal	0.083335	Activity	3.067e-004	7.160000	7.640000	2.300000	7.400000

```

0.120000 0.010000 10.000000
    Exponential 0.020833 Activity 1.356e-003 6.500000 7.500000 1.842068 0.000000
0.000000 0.000000 0.000000
    Exponential 0.020833 Activity 8.363e-004 6.500000 7.500000 0.000000 0.000000
0.000000 0.000000 0.000000
    Exponential 0.020833 Activity 1.602e-003 6.500000 7.400000 1.842068 0.000000
0.000000 0.000000 0.000000
    Exponential 0.020833 Activity 1.078e-003 6.500000 7.400000 0.000000 0.000000
0.000000 0.000000 0.000000
    Normal 0.083335 Activity 2.172e-004 7.260000 7.740000 2.300000 7.500000
0.120000 0.010000 10.000000
    Normal 0.083335 Activity 3.067e-004 7.160000 7.640000 2.300000 7.400000
0.120000 0.010000 10.000000
    Exponential 0.020833 Activity 1.356e-003 6.500000 7.500000 1.842068 0.000000
0.000000 0.000000 0.000000
    Exponential 0.020833 Activity 8.363e-004 6.500000 7.500000 0.000000 0.000000
0.000000 0.000000 0.000000
    Exponential 0.020833 Activity 1.602e-003 6.500000 7.400000 1.842068 0.000000
0.000000 0.000000 0.000000
    Exponential 0.020833 Activity 1.078e-003 6.500000 7.400000 0.000000 0.000000
0.000000 0.000000 0.000000
    
```

Rupture Length Parameters

Rupture Dimensioning		Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061

```

                Area      --      --      --      --      --      --      --      -4.153061
1.020408  0.240000
                Area      --      --      --      --      --      --      --      -4.153061
1.020408  0.240000
    Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
    Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
                Area      --      --      --      --      --      --      --      -4.153061
1.020408  0.240000
                Area      --      --      --      --      --      --      --      -4.153061
1.020408  0.240000
                Area      --      --      --      --      --      --      --      -4.153061
1.020408  0.240000
                Area      --      --      --      --      --      --      --      -4.153061
1.020408  0.240000
    
```

Trace Coordinates:

```

Latitude  Longitude
34.3498   -116.6430
34.4631   -116.6960
34.5527   -116.7670
34.6451   -116.8420
34.7504   -116.9260
34.8715   -117.0850
34.9536   -117.2480
35.0523   -117.4740
35.2155   -117.7760
    
```

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: Lions Head

Region: USGS 2008 California

Category: Fault

Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files\USGS 2008 Lower 48.bin-ssdb

Fault Mechanism: Reverse

Magnitude Scale: Moment Magnitude

Probability of Activity: 1.0000000

Deterministic Magnitude: 6.8

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	75	0	0.001	9.659

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.041665	Activity	1.210e-005	6.560000	7.040000	2.300000	6.800000
0.010000	Delta2	10.000000						

0.120000	Normal	0.041665	Activity	2.415e-005	6.360000	6.840000	2.300000	6.600000
0.000000	Exponential	0.041668	Activity	2.192e-005	6.500000	6.800000	1.842068	0.000000
0.000000	Exponential	0.041668	Activity	2.099e-005	6.500000	6.800000	0.000000	0.000000
0.000000	Exponential	0.041668	Activity	3.088e-005	6.500000	6.600000	1.842068	0.000000
0.000000	Exponential	0.041668	Activity	3.084e-005	6.500000	6.600000	0.000000	0.000000
0.120000	Normal	0.083335	Activity	1.210e-005	6.560000	7.040000	2.300000	6.800000
0.120000	Normal	0.083335	Activity	2.415e-005	6.360000	6.840000	2.300000	6.600000
0.000000	Exponential	0.020833	Activity	2.192e-005	6.500000	6.800000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	2.099e-005	6.500000	6.800000	0.000000	0.000000
0.000000	Exponential	0.020833	Activity	3.088e-005	6.500000	6.600000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	3.084e-005	6.500000	6.600000	0.000000	0.000000
0.120000	Normal	0.083335	Activity	1.210e-005	6.560000	7.040000	2.300000	6.800000
0.120000	Normal	0.083335	Activity	2.415e-005	6.360000	6.840000	2.300000	6.600000
0.000000	Exponential	0.020833	Activity	2.192e-005	6.500000	6.800000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	2.099e-005	6.500000	6.800000	0.000000	0.000000
0.000000	Exponential	0.020833	Activity	3.088e-005	6.500000	6.600000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	3.084e-005	6.500000	6.600000	0.000000	0.000000
0.120000	Normal	0.083335	Activity	1.210e-005	6.560000	7.040000	2.300000	6.800000
0.120000	Normal	0.083335	Activity	2.415e-005	6.360000	6.840000	2.300000	6.600000
0.000000	Exponential	0.020833	Activity	2.192e-005	6.500000	6.800000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	2.099e-005	6.500000	6.800000	0.000000	0.000000
0.000000	Exponential	0.020833	Activity	3.088e-005	6.500000	6.600000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	3.084e-005	6.500000	6.600000	0.000000	0.000000

Rupture Length Parameters

Rupture Dimensioning		Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
1.020408	Area	--	--	--	--	--	--	-4.153061
0.240000	Area	--	--	--	--	--	--	-4.153061

```

1.020408 0.240000
          Area      --      --      --      --      --      --      -4.153061
1.020408 0.240000
          Area      --      --      --      --      --      --      -4.153061
1.020408 0.240000
          Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
          --
          Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
          --
          Area      --      --      --      --      --      --      -4.153061
1.020408 0.240000
          Area      --      --      --      --      --      --      -4.153061
1.020408 0.240000
          Area      --      --      --      --      --      --      -4.153061
1.020408 0.240000
          Area      --      --      --      --      --      --      -4.153061
1.020408 0.240000
          Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
          --
          Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
          --
          Area      --      --      --      --      --      --      -4.153061
1.020408 0.240000
          Area      --      --      --      --      --      --      -4.153061
1.020408 0.240000
          Area      --      --      --      --      --      --      -4.153061
1.020408 0.240000
          Area      --      --      --      --      --      --      -4.153061
1.020408 0.240000
          Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
          --
          Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
          --
          Area      --      --      --      --      --      --      -4.153061
1.020408 0.240000
          Area      --      --      --      --      --      --      -4.153061
1.020408 0.240000
          Area      --      --      --      --      --      --      -4.153061
1.020408 0.240000
          Area      --      --      --      --      --      --      -4.153061
1.020408 0.240000
    
```

Trace Coordinates:

```

Latitude Longitude
34.6977 -120.2350
34.7124 -120.3343
34.7160 -120.4067
34.7295 -120.4410
34.8423 -120.5562
34.8681 -120.6102
    
```

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: Los Alamos-West Baseline  
 Region: USGS 2008 California  
 Category: Fault  
 Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
 \USGS 2008 Lower 48.bin-ssdb  
 Fault Mechanism: Reverse  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 1.00000000  
 Deterministic Magnitude: 6.9

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	30	0	0.001	10

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
	Delta1	Delta2						
0.120000	Normal	0.041665	Activity	3.890e-004	6.660000	7.140000	2.300000	6.900000
	0.010000	10.000000						
0.120000	Normal	0.041665	Activity	7.761e-004	6.460000	6.940000	2.300000	6.700000
	0.010000	10.000000						
0.000000	Exponential	0.041668	Activity	8.392e-004	6.500000	6.900000	1.842068	0.000000
	0.000000	0.000000						
0.000000	Exponential	0.041668	Activity	7.749e-004	6.500000	6.900000	0.000000	0.000000
	0.000000	0.000000						
0.000000	Exponential	0.041668	Activity	1.181e-003	6.500000	6.700000	1.842068	0.000000
	0.000000	0.000000						
0.000000	Exponential	0.041668	Activity	1.161e-003	6.500000	6.700000	0.000000	0.000000
	0.000000	0.000000						
0.120000	Normal	0.083335	Activity	3.890e-004	6.660000	7.140000	2.300000	6.900000
	0.010000	10.000000						
0.120000	Normal	0.083335	Activity	7.761e-004	6.460000	6.940000	2.300000	6.700000
	0.010000	10.000000						
0.000000	Exponential	0.020833	Activity	8.392e-004	6.500000	6.900000	1.842068	0.000000
	0.000000	0.000000						
0.000000	Exponential	0.020833	Activity	7.749e-004	6.500000	6.900000	0.000000	0.000000
	0.000000	0.000000						
0.000000	Exponential	0.020833	Activity	1.181e-003	6.500000	6.700000	1.842068	0.000000
	0.000000	0.000000						
0.000000	Exponential	0.020833	Activity	1.161e-003	6.500000	6.700000	0.000000	0.000000
	0.000000	0.000000						
0.120000	Normal	0.083335	Activity	3.890e-004	6.660000	7.140000	2.300000	6.900000
	0.010000	10.000000						
0.120000	Normal	0.083335	Activity	7.761e-004	6.460000	6.940000	2.300000	6.700000
	0.010000	10.000000						
0.000000	Exponential	0.020833	Activity	8.392e-004	6.500000	6.900000	1.842068	0.000000
	0.000000	0.000000						
0.000000	Exponential	0.020833	Activity	7.749e-004	6.500000	6.900000	0.000000	0.000000
	0.000000	0.000000						
0.000000	Exponential	0.020833	Activity	1.181e-003	6.500000	6.700000	1.842068	0.000000
	0.000000	0.000000						
0.000000	Exponential	0.020833	Activity	1.161e-003	6.500000	6.700000	0.000000	0.000000
	0.000000	0.000000						
0.000000	Normal	0.083335	Activity	3.890e-004	6.660000	7.140000	2.300000	6.900000

```

0.120000 0.010000 10.000000
      Normal 0.083335 Activity 7.761e-004 6.460000 6.940000 2.300000 6.700000
0.120000 0.010000 10.000000
      Exponential 0.020833 Activity 8.392e-004 6.500000 6.900000 1.842068 0.000000
0.000000 0.000000 0.000000
      Exponential 0.020833 Activity 7.749e-004 6.500000 6.900000 0.000000 0.000000
0.000000 0.000000 0.000000
      Exponential 0.020833 Activity 1.181e-003 6.500000 6.700000 1.842068 0.000000
0.000000 0.000000 0.000000
      Exponential 0.020833 Activity 1.161e-003 6.500000 6.700000 0.000000 0.000000
0.000000 0.000000 0.000000
    
```

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba Sigw							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							

```

                Area      --      --      --      --      --      --      -- -4.153061
1.020408  0.240000
                Area      --      --      --      --      --      --      -- -4.153061
1.020408  0.240000
                Area      --      --      --      --      --      --      -- -4.153061
1.020408  0.240000
    
```

Trace Coordinates:

```

Latitude  Longitude
 34.7589  -120.3184
 34.7308  -120.2117
 34.6719  -120.1443
 34.6315  -120.0646
    
```

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: Los Osos

Region: USGS 2008 California

Category: Fault

Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files\USGS 2008 Lower 48.bin-ssdb

Fault Mechanism: Reverse

Magnitude Scale: Moment Magnitude

Probability of Activity: 1.00000000

Deterministic Magnitude: 7

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	45	0	0.001	9.899

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.041665	Activity	2.224e-004	6.760000	7.240000	2.300000	7.000000
0.120000	Normal	0.041665	Activity	4.436e-004	6.560000	7.040000	2.300000	6.800000
0.000000	Exponential	0.041668	Activity	5.718e-004	6.500000	7.000000	1.842068	0.000000
0.000000	Exponential	0.041668	Activity	5.043e-004	6.500000	7.000000	0.000000	0.000000
0.000000	Exponential	0.041668	Activity	8.035e-004	6.500000	6.800000	1.842068	0.000000
0.000000	Exponential	0.041668	Activity	7.694e-004	6.500000	6.800000	0.000000	0.000000
0.120000	Normal	0.083335	Activity	2.224e-004	6.760000	7.240000	2.300000	7.000000
0.120000	Normal	0.083335	Activity	4.436e-004	6.560000	7.040000	2.300000	6.800000
0.120000	Exponential	0.020833	Activity	5.718e-004	6.500000	7.000000	1.842068	0.000000



0.000000	0.000000	0.000000							
	Exponential	0.020833	Activity	5.043e-004	6.500000	7.000000	0.000000	0.000000	
0.000000	0.000000	0.000000							
	Exponential	0.020833	Activity	8.035e-004	6.500000	6.800000	1.842068	0.000000	
0.000000	0.000000	0.000000							
	Exponential	0.020833	Activity	7.694e-004	6.500000	6.800000	0.000000	0.000000	
0.000000	0.000000	0.000000							
	Normal	0.083335	Activity	2.224e-004	6.760000	7.240000	2.300000	7.000000	
0.120000	0.010000	10.000000							
	Normal	0.083335	Activity	4.436e-004	6.560000	7.040000	2.300000	6.800000	
0.120000	0.010000	10.000000							
	Exponential	0.020833	Activity	5.718e-004	6.500000	7.000000	1.842068	0.000000	
0.000000	0.000000	0.000000							
	Exponential	0.020833	Activity	5.043e-004	6.500000	7.000000	0.000000	0.000000	
0.000000	0.000000	0.000000							
	Exponential	0.020833	Activity	8.035e-004	6.500000	6.800000	1.842068	0.000000	
0.000000	0.000000	0.000000							
	Exponential	0.020833	Activity	7.694e-004	6.500000	6.800000	0.000000	0.000000	
0.000000	0.000000	0.000000							
	Normal	0.083335	Activity	2.224e-004	6.760000	7.240000	2.300000	7.000000	
0.120000	0.010000	10.000000							
	Normal	0.083335	Activity	4.436e-004	6.560000	7.040000	2.300000	6.800000	
0.120000	0.010000	10.000000							
	Exponential	0.020833	Activity	5.718e-004	6.500000	7.000000	1.842068	0.000000	
0.000000	0.000000	0.000000							
	Exponential	0.020833	Activity	5.043e-004	6.500000	7.000000	0.000000	0.000000	
0.000000	0.000000	0.000000							
	Exponential	0.020833	Activity	8.035e-004	6.500000	6.800000	1.842068	0.000000	
0.000000	0.000000	0.000000							
	Exponential	0.020833	Activity	7.694e-004	6.500000	6.800000	0.000000	0.000000	
0.000000	0.000000	0.000000							

Rupture Length Parameters

Rupture Dimensioning		Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							

```

                Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
    Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--      --
    Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--      --
                Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
                Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
                Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
                Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
    Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--      --
    Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--      --
                Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
                Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
                Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
                Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
    
```

Trace Coordinates:

```

Latitude Longitude
35.3021 -120.8664
35.2996 -120.7818
35.2849 -120.7352
35.2457 -120.6837
35.2089 -120.6543
35.1697 -120.5317
35.1255 -120.4814
35.1219 -120.4569
    
```

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

```

Name: Mission Ridge-Arroyo Parida-Santa Ana
Region: USGS 2008 California
Category: Fault
Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files
\USGS 2008 Lower 48.bin-ssdb
Fault Mechanism: Reverse
Magnitude Scale: Moment Magnitude
Probability of Activity: 0.58330000
Deterministic Magnitude: 6.9
    
```

**Fault Profile Parameters:**

Dip1	Dip2	Depth1	Depth2	Depth3
90	70	0	0.001	7.518

**Magnitude Recurrence Distributions:**

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.041666	Activity	2.228e-004	6.660000	7.140000	2.300000	6.900000
0.120000	Normal	0.041666	Activity	4.445e-004	6.460000	6.940000	2.300000	6.700000
0.120000	Normal	0.083333	Activity	2.228e-004	6.660000	7.140000	2.300000	6.900000
0.120000	Normal	0.083333	Activity	4.445e-004	6.460000	6.940000	2.300000	6.700000
0.120000	Normal	0.083333	Activity	2.228e-004	6.660000	7.140000	2.300000	6.900000
0.120000	Normal	0.083333	Activity	4.445e-004	6.460000	6.940000	2.300000	6.700000
0.120000	Normal	0.083333	Activity	2.228e-004	6.660000	7.140000	2.300000	6.900000
0.120000	Normal	0.083333	Activity	4.445e-004	6.460000	6.940000	2.300000	6.700000
0.120000	Normal	0.083333	Activity	2.228e-004	6.660000	7.140000	2.300000	6.900000
0.000000	Exponential	0.041666	Activity	4.806e-004	6.500000	6.900000	1.842100	0.000000
0.000000	Exponential	0.041666	Activity	4.438e-004	6.500000	6.900000	0.000000	0.000000
0.000000	Exponential	0.041666	Activity	6.763e-004	6.500000	6.700000	1.842100	0.000000
0.000000	Exponential	0.041666	Activity	6.647e-004	6.500000	6.700000	0.000000	0.000000
0.000000	Exponential	0.020833	Activity	4.806e-004	6.500000	6.900000	1.842100	0.000000
0.000000	Exponential	0.020833	Activity	4.438e-004	6.500000	6.900000	0.000000	0.000000
0.000000	Exponential	0.020833	Activity	6.763e-004	6.500000	6.700000	1.842100	0.000000
0.000000	Exponential	0.020833	Activity	6.647e-004	6.500000	6.700000	0.000000	0.000000
0.000000	Exponential	0.020833	Activity	4.806e-004	6.500000	6.900000	1.842100	0.000000
0.000000	Exponential	0.020833	Activity	4.438e-004	6.500000	6.900000	0.000000	0.000000
0.000000	Exponential	0.020833	Activity	6.763e-004	6.500000	6.700000	1.842100	0.000000
0.000000	Exponential	0.020833	Activity	6.647e-004	6.500000	6.700000	0.000000	0.000000
0.000000	Exponential	0.020833	Activity	4.806e-004	6.500000	6.900000	1.842100	0.000000
0.000000	Exponential	0.020833	Activity	4.438e-004	6.500000	6.900000	0.000000	0.000000
0.000000	Exponential	0.020833	Activity	6.763e-004	6.500000	6.700000	1.842100	0.000000
0.000000	Exponential	0.020833	Activity	6.647e-004	6.500000	6.700000	0.000000	0.000000

**Rupture Length Parameters**

Rupture Dimensioning		Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
1.020400	Area	--	--	--	--	--	--	-4.153100
1.020400	0.240000							
1.020400	Area	--	--	--	--	--	--	-4.153100
1.020400	0.240000							
1.020400	Area	--	--	--	--	--	--	-4.153100
1.020400	0.240000							
1.020400	Area	--	--	--	--	--	--	-4.153100
1.020400	0.240000							
1.020400	Area	--	--	--	--	--	--	-4.153100
1.020400	0.240000							
1.020400	Area	--	--	--	--	--	--	-4.153100
1.020400	0.240000							
1.020400	Area	--	--	--	--	--	--	-4.153100
1.020400	0.240000							
1.020400	Area	--	--	--	--	--	--	-4.153100
1.020400	0.240000							
1.020400	Area	--	--	--	--	--	--	-4.153100
1.020400	0.240000							
1.020400	Area	--	--	--	--	--	--	-4.153100
1.020400	0.240000							
1.020400	Area	--	--	--	--	--	--	-4.153100
1.020400	0.240000							
1.020400	Area	--	--	--	--	--	--	-4.153100
1.020400	0.240000							
1.020400	Area	--	--	--	--	--	--	-4.153100
1.020400	0.240000							
1.020400	Area	--	--	--	--	--	--	-4.153100
1.020400	0.240000							
1.020400	Area	--	--	--	--	--	--	-4.153100
1.020400	0.240000							

Trace Coordinates:  
 Latitude Longitude  
 34.4298 -119.8977  
 34.4248 -119.8688  
 34.4336 -119.8071  
 34.4336 -119.7857

34.4411 -119.7506  
 34.4424 -119.7430  
 34.4499 -119.6914  
 34.4411 -119.6110  
 34.4311 -119.5104  
 34.4273 -119.4714  
 34.4160 -119.4261  
 34.4235 -119.3456  
 34.4298 -119.2878  
 34.4499 -119.2023  
 34.4701 -119.1658

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: North Channel  
 Region: USGS 2008 California  
 Category: Fault  
 Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
 \USGS 2008 Lower 48.bin-ssdb  
 Fault Mechanism: Reverse  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.50000000  
 Deterministic Magnitude: 6.8

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	26	1.1	1.101	4.607

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
	Delta1	Delta2						
0.120000	Normal	0.16667	Activity	5.550e-004	6.560000	7.040000	2.300000	6.800000
0.120000	Normal	0.166670	Activity	1.107e-003	6.360000	6.840000	2.300000	6.600000
0.000000	Exponential	0.041665	Activity	1.005e-003	6.500000	6.800000	1.842068	0.000000
0.000000	Exponential	0.041665	Activity	9.625e-004	6.500000	6.800000	0.000000	0.000000
0.000000	Exponential	0.041665	Activity	1.416e-003	6.500000	6.600000	1.842068	0.000000
0.000000	Exponential	0.041665	Activity	1.414e-003	6.500000	6.600000	0.000000	0.000000
0.120000	Normal	0.166670	Activity	5.550e-004	6.560000	7.040000	2.300000	6.800000
0.120000	Normal	0.166670	Activity	1.107e-003	6.360000	6.840000	2.300000	6.600000
0.000000	Exponential	0.041665	Activity	1.005e-003	6.500000	6.800000	1.842068	0.000000
0.000000	Exponential	0.041665	Activity	9.625e-004	6.500000	6.800000	0.000000	0.000000

```

0.000000 0.000000 0.000000
    Exponential 0.041665 Activity 1.416e-003 6.500000 6.600000 1.842068 0.000000
0.000000 0.000000 0.000000
    Exponential 0.041665 Activity 1.414e-003 6.500000 6.600000 0.000000 0.000000
0.000000 0.000000 0.000000
    
```

Rupture Length Parameters

Rupture Dimensioning		Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061

Trace Coordinates:

Latitude	Longitude
34.3188	-119.4251
34.3013	-119.4755
34.2974	-119.5097
34.3002	-119.5593
34.2981	-119.6047
34.2940	-119.6437
34.3111	-119.7172
34.3336	-119.7885
34.3537	-119.9095
34.3914	-119.9346

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: North Frontal (West)

Region: USGS 2008 California  
 Category: Fault  
 Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
 \USGS 2008 Lower 48.bin-ssdb  
 Fault Mechanism: Reverse  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 1.00000000  
 Deterministic Magnitude: 7.2

Fault Profile Parameters:

Dipl	Dip2	Depth1	Depth2	Depth3
90	49	0	0.001	15.85

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
	Delta1	Delta2						
0.120000	Normal	0.041665	Activity	3.702e-004	6.960000	7.440000	2.300000	7.200000
0.120000	Normal	0.041665	Activity	5.229e-004	6.860000	7.340000	2.300000	7.100000
0.000000	Exponential	0.041668	Activity	1.355e-003	6.500000	7.200000	1.842068	0.000000
0.000000	Exponential	0.041668	Activity	1.061e-003	6.500000	7.200000	0.000000	0.000000
0.000000	Exponential	0.041668	Activity	1.604e-003	6.500000	7.100000	1.842068	0.000000
0.000000	Exponential	0.041668	Activity	1.339e-003	6.500000	7.100000	0.000000	0.000000
0.120000	Normal	0.083335	Activity	3.702e-004	6.960000	7.440000	2.300000	7.200000
0.120000	Normal	0.083335	Activity	5.229e-004	6.860000	7.340000	2.300000	7.100000
0.000000	Exponential	0.020833	Activity	1.355e-003	6.500000	7.200000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	1.061e-003	6.500000	7.200000	0.000000	0.000000
0.000000	Exponential	0.020833	Activity	1.604e-003	6.500000	7.100000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	1.339e-003	6.500000	7.100000	0.000000	0.000000
0.120000	Normal	0.083335	Activity	3.702e-004	6.960000	7.440000	2.300000	7.200000
0.120000	Normal	0.083335	Activity	5.229e-004	6.860000	7.340000	2.300000	7.100000
0.000000	Exponential	0.020833	Activity	1.355e-003	6.500000	7.200000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	1.061e-003	6.500000	7.200000	0.000000	0.000000
0.000000	Exponential	0.020833	Activity	1.604e-003	6.500000	7.100000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	1.339e-003	6.500000	7.100000	0.000000	0.000000
0.120000	Normal	0.083335	Activity	3.702e-004	6.960000	7.440000	2.300000	7.200000
0.120000	Normal	0.083335	Activity	5.229e-004	6.860000	7.340000	2.300000	7.100000
0.000000	Exponential	0.020833	Activity	1.355e-003	6.500000	7.200000	1.842068	0.000000

```

0.000000 0.000000 0.000000
    Exponential 0.020833 Activity 1.061e-003 6.500000 7.200000 0.000000 0.000000
0.000000 0.000000 0.000000
    Exponential 0.020833 Activity 1.604e-003 6.500000 7.100000 1.842068 0.000000
0.000000 0.000000 0.000000
    Exponential 0.020833 Activity 1.339e-003 6.500000 7.100000 0.000000 0.000000
0.000000 0.000000 0.000000
    
```

Rupture Length Parameters

Rupture Dimensioning		Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061



Area -- -- -- -- -- -- -4.153061  
 1.020408 0.240000

Trace Coordinates:

Latitude	Longitude
34.3169	-117.2691
34.3452	-117.2266
34.3707	-117.2238
34.3707	-117.2011
34.4047	-117.2011
34.4387	-117.1672
34.4443	-117.1445
34.4415	-117.1077
34.4217	-117.0596
34.3962	-117.0030
34.3820	-116.9888
34.3650	-116.9379
34.3707	-116.8501

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: Northridge  
 Region: USGS 2008 California  
 Category: Fault  
 Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
 \USGS 2008 Lower 48.bin-ssdb  
 Fault Mechanism: Reverse  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 1.00000000  
 Deterministic Magnitude: 6.9

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	35	7.4	7.401	16.58

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.041665	Activity	8.199e-004	6.660000	7.140000	2.300000	6.900000
0.120000	Normal	0.010000	Activity	1.636e-003	6.460000	6.940000	2.300000	6.700000
0.000000	Exponential	0.041668	Activity	1.769e-003	6.500000	6.900000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	1.634e-003	6.500000	6.900000	0.000000	0.000000
0.000000	Exponential	0.041668	Activity	2.489e-003	6.500000	6.700000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	2.446e-003	6.500000	6.700000	0.000000	0.000000

0.120000	Normal	0.083335	Activity	8.199e-004	6.660000	7.140000	2.300000	6.900000
0.120000	Normal	0.010000	Activity	1.636e-003	6.460000	6.940000	2.300000	6.700000
0.120000	Normal	0.083335	Activity	1.636e-003	6.460000	6.940000	2.300000	6.700000
0.000000	Exponential	0.020833	Activity	1.769e-003	6.500000	6.900000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	1.634e-003	6.500000	6.900000	0.000000	0.000000
0.000000	Exponential	0.020833	Activity	1.634e-003	6.500000	6.900000	0.000000	0.000000
0.000000	Exponential	0.000000	Activity	2.489e-003	6.500000	6.700000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	2.489e-003	6.500000	6.700000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	2.446e-003	6.500000	6.700000	0.000000	0.000000
0.000000	Exponential	0.000000	Activity	2.446e-003	6.500000	6.700000	0.000000	0.000000
0.120000	Normal	0.083335	Activity	8.199e-004	6.660000	7.140000	2.300000	6.900000
0.120000	Normal	0.010000	Activity	1.636e-003	6.460000	6.940000	2.300000	6.700000
0.120000	Normal	0.083335	Activity	1.636e-003	6.460000	6.940000	2.300000	6.700000
0.000000	Exponential	0.020833	Activity	1.769e-003	6.500000	6.900000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	1.634e-003	6.500000	6.900000	0.000000	0.000000
0.000000	Exponential	0.020833	Activity	1.634e-003	6.500000	6.900000	0.000000	0.000000
0.000000	Exponential	0.000000	Activity	2.489e-003	6.500000	6.700000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	2.489e-003	6.500000	6.700000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	2.446e-003	6.500000	6.700000	0.000000	0.000000
0.000000	Exponential	0.000000	Activity	2.446e-003	6.500000	6.700000	0.000000	0.000000

Rupture Length Parameters

Rupture Dimensioning		Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Area	--	--	--	--	--	--	-4.153061

```

1.020408 0.240000
          Area      --      --      --      --      --      -- -4.153061
1.020408 0.240000
          Area      --      --      --      --      --      -- -4.153061
1.020408 0.240000
          Area      --      --      --      --      --      -- -4.153061
1.020408 0.240000
          Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--      --
          Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--      --
          Area      --      --      --      --      --      -- -4.153061
1.020408 0.240000
          Area      --      --      --      --      --      -- -4.153061
1.020408 0.240000
          Area      --      --      --      --      --      -- -4.153061
1.020408 0.240000
          Area      --      --      --      --      --      -- -4.153061
1.020408 0.240000
          Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--      --
          Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--      --
          Area      --      --      --      --      --      -- -4.153061
1.020408 0.240000
          Area      --      --      --      --      --      -- -4.153061
1.020408 0.240000
          Area      --      --      --      --      --      -- -4.153061
1.020408 0.240000
          Area      --      --      --      --      --      -- -4.153061
1.020408 0.240000
    
```

Trace Coordinates:

```

Latitude Longitude
34.4172 -118.7120
34.4040 -118.6340
34.3837 -118.5960
34.3541 -118.5450
34.3421 -118.4780
34.3282 -118.4240
34.3097 -118.3780
    
```

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: Oak Ridge (Offshore)

Region: USGS 2008 California

Category: Fault

Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
 \USGS 2008 Lower 48.bin-ssdb

Fault Mechanism: Reverse

Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.25000000  
 Deterministic Magnitude: 7

Fault Profile Parameters:

Dipl	Dip2	Depth1	Depth2	Depth3
90	32	0	0.001	7.949

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.33334	Activity	1.201e-003	6.760000	7.240000	2.300000	7.000000
0.120000	Normal	0.333340	Activity	3.386e-003	6.460000	6.940000	2.300000	6.700000
0.000000	Exponential	0.083330	Activity	3.089e-003	6.500000	7.000000	1.842068	0.000000
0.000000	Exponential	0.083330	Activity	2.725e-003	6.500000	7.000000	0.000000	0.000000
0.000000	Exponential	0.083330	Activity	5.151e-003	6.500000	6.700000	1.842068	0.000000
0.000000	Exponential	0.083330	Activity	5.063e-003	6.500000	6.700000	0.000000	0.000000

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sig1	Aw	Bw	Sigw	Aa
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Area	--	--	--	--	--	--	-4.153061
Area	--	--	--	--	--	--	-4.153061
Area	--	--	--	--	--	--	-4.153061
Area	--	--	--	--	--	--	-4.153061

Trace Coordinates:

Latitude	Longitude
34.2523	-119.6780
34.2614	-119.6060
34.2504	-119.5150
34.2338	-119.4320
34.2315	-119.3510
34.2515	-119.2730

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: Oak Ridge (Onshore)  
 Region: USGS 2008 California  
 Category: Fault  
 Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
 \USGS 2008 Lower 48.bin-ssdb  
 Fault Mechanism: Reverse  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.75000000  
 Deterministic Magnitude: 7.2

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	65	1	1.001	19.13

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.0555533	Activity	1.422e-003	6.960000	7.440000	2.300000	7.200000
0.120000	Normal	0.0555533	Activity	2.008e-003	6.860000	7.340000	2.300000	7.100000
0.000000	Exponential	0.0555557	Activity	5.205e-003	6.500000	7.200000	1.842068	0.000000
0.000000	Exponential	0.0555557	Activity	4.075e-003	6.500000	7.200000	0.000000	0.000000
0.000000	Exponential	0.0555557	Activity	6.160e-003	6.500000	7.100000	1.842068	0.000000
0.000000	Exponential	0.0555557	Activity	5.142e-003	6.500000	7.100000	0.000000	0.000000
0.120000	Normal	0.111113	Activity	1.422e-003	6.960000	7.440000	2.300000	7.200000
0.120000	Normal	0.111113	Activity	2.008e-003	6.860000	7.340000	2.300000	7.100000
0.000000	Exponential	0.027777	Activity	5.205e-003	6.500000	7.200000	1.842068	0.000000
0.000000	Exponential	0.027777	Activity	4.075e-003	6.500000	7.200000	0.000000	0.000000
0.000000	Exponential	0.027777	Activity	6.160e-003	6.500000	7.100000	1.842068	0.000000
0.000000	Exponential	0.027777	Activity	5.142e-003	6.500000	7.100000	0.000000	0.000000
0.120000	Normal	0.111113	Activity	1.422e-003	6.960000	7.440000	2.300000	7.200000
0.120000	Normal	0.111113	Activity	2.008e-003	6.860000	7.340000	2.300000	7.100000
0.000000	Exponential	0.027777	Activity	5.205e-003	6.500000	7.200000	1.842068	0.000000
0.000000	Exponential	0.027777	Activity	4.075e-003	6.500000	7.200000	0.000000	0.000000
0.000000	Exponential	0.027777	Activity	6.160e-003	6.500000	7.100000	1.842068	0.000000
0.000000	Exponential	0.027777	Activity	5.142e-003	6.500000	7.100000	0.000000	0.000000

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sig1	Aw	Bw	Sigw	Aa
----------------------	----	----	------	----	----	------	----

Ba	Sigw								
--	--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
1.020408	0.240000	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
1.020408	0.240000	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
1.020408	0.240000	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000	Area	--	--	--	--	--	--	-4.153061

Trace Coordinates:

Latitude	Longitude
34.2481	-119.2050
34.2631	-119.1582
34.3165	-119.0974
34.3522	-119.0402
34.3631	-118.9589
34.3813	-118.8805
34.3850	-118.8104
34.4013	-118.7742
34.3978	-118.7227

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: Oak Ridge Connected  
 Region: USGS 2008 California  
 Category: Fault  
 Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
 \USGS 2008 Lower 48.bin-ssdb  
 Fault Mechanism: Reverse  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.2500000  
 Deterministic Magnitude: 7.4

Fault Profile Parameters:  
 Dip1 Dip2 Depth1 Depth2 Depth3  
 90 53.1 0.6 0.601 14.99

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.33334	Activity	1.014e-003	7.160000	7.640000	2.300000	7.400000
0.120000	Normal	0.33334	Activity	1.433e-003	7.060000	7.540000	2.300000	7.300000
0.000000	Exponential	0.083330	Activity	5.297e-003	6.500000	7.400000	1.842068	0.000000
0.000000	Exponential	0.083330	Activity	3.564e-003	6.500000	7.400000	0.000000	0.000000
0.000000	Exponential	0.083330	Activity	6.263e-003	6.500000	7.300000	1.842068	0.000000
0.000000	Exponential	0.083330	Activity	4.563e-003	6.500000	7.300000	0.000000	0.000000

Rupture Length Parameters

Rupture Dimensioning	Al	B1	Sigl	Aw	Bw	Sigw	Aa
Ba Sigw							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Area	--	--	--	--	--	--	-4.153061
Area	--	--	--	--	--	--	-4.153061
Area	--	--	--	--	--	--	-4.153061
Area	--	--	--	--	--	--	-4.153061

Trace Coordinates:

Latitude	Longitude
34.2523	-119.6780
34.2614	-119.6060
34.2504	-119.5150
34.2338	-119.4320
34.2315	-119.3510
34.2515	-119.2730
34.2481	-119.2050

34.2631 -119.1582  
 34.3165 -119.0974  
 34.3522 -119.0402  
 34.3631 -118.9589  
 34.3813 -118.8805  
 34.3850 -118.8104  
 34.4013 -118.7742  
 34.3978 -118.7227

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: Palos Verdes  
 Region: USGS 2008 California  
 Category: Fault  
 Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
 \USGS 2008 Lower 48.bin-ssdb  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.50000000  
 Deterministic Magnitude: 7.3

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	14

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.083333	Activity	1.016e-003	7.060000	7.540000	2.300000	7.300000
0.120000	Normal	0.083333	Activity	1.435e-003	6.960000	7.440000	2.300000	7.200000
0.000000	Exponential	0.083335	Activity	4.442e-003	6.500000	7.300000	1.842068	0.000000
0.000000	Exponential	0.083335	Activity	3.236e-003	6.500000	7.300000	0.000000	0.000000
0.000000	Exponential	0.083335	Activity	5.254e-003	6.500000	7.200000	1.842068	0.000000
0.000000	Exponential	0.083335	Activity	4.114e-003	6.500000	7.200000	0.000000	0.000000
0.120000	Normal	0.166670	Activity	1.016e-003	7.060000	7.540000	2.300000	7.300000
0.120000	Normal	0.166670	Activity	1.435e-003	6.960000	7.440000	2.300000	7.200000
0.000000	Exponential	0.041665	Activity	4.442e-003	6.500000	7.300000	1.842068	0.000000
0.000000	Exponential	0.041665	Activity	3.236e-003	6.500000	7.300000	0.000000	0.000000
0.000000	Exponential	0.041665	Activity	5.254e-003	6.500000	7.200000	1.842068	0.000000



Exponential 0.041665 Activity 4.114e-003 6.500000 7.200000 0.000000 0.000000  
 0.000000 0.000000 0.000000

Rupture Length Parameters

Rupture Dimensioning		Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							

Trace Coordinates:

Latitude	Longitude
33.2798	-117.9170
33.3184	-117.9430
33.3546	-117.9860
33.4428	-118.0600
33.4816	-118.0800
33.5449	-118.1190
33.5835	-118.1460
33.6919	-118.2330
33.7472	-118.2540
33.7895	-118.3340
33.8175	-118.4000
33.8637	-118.4390
33.9021	-118.4960
33.9702	-118.5570

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: Palos Verdes Connected  
 Region: USGS 2008 California  
 Category: Fault  
 Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
 \USGS 2008 Lower 48.bin-ssdb  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.5000000  
 Deterministic Magnitude: 7.7

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	10

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.16667	Activity	5.586e-004	7.460000	7.940000	2.300000	7.700000
0.120000	Normal	0.166670	Activity	5.586e-004	7.460000	7.940000	2.300000	7.700000
0.000000	Exponential	0.041665	Activity	4.991e-003	6.500000	7.700000	1.842068	0.000000
0.000000	Exponential	0.041665	Activity	2.540e-003	6.500000	7.700000	0.000000	0.000000
0.000000	Exponential	0.041665	Activity	4.991e-003	6.500000	7.700000	1.842068	0.000000
0.000000	Exponential	0.041665	Activity	2.540e-003	6.500000	7.700000	0.000000	0.000000
0.120000	Normal	0.166670	Activity	5.586e-004	7.460000	7.940000	2.300000	7.700000
0.120000	Normal	0.166670	Activity	5.586e-004	7.460000	7.940000	2.300000	7.700000
0.000000	Exponential	0.041665	Activity	4.991e-003	6.500000	7.700000	1.842068	0.000000
0.000000	Exponential	0.041665	Activity	2.540e-003	6.500000	7.700000	0.000000	0.000000
0.000000	Exponential	0.041665	Activity	4.991e-003	6.500000	7.700000	1.842068	0.000000
0.000000	Exponential	0.041665	Activity	2.540e-003	6.500000	7.700000	0.000000	0.000000

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Area	--	--	--	--	--	--	-4.153061
Area	--	--	--	--	--	--	-4.153061
Area	--	--	--	--	--	--	-4.153061
Area	--	--	--	--	--	--	-4.153061

```

        Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--      --
        Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--      --
                Area      --      --      --      --      --      -- -4.153061
1.020408  0.240000
                Area      --      --      --      --      --      -- -4.153061
1.020408  0.240000
                Area      --      --      --      --      --      -- -4.153061
1.020408  0.240000
                Area      --      --      --      --      --      -- -4.153061
1.020408  0.240000
    
```

Trace Coordinates:

```

Latitude  Longitude
33.9702   -118.5570
33.9021   -118.4960
33.8637   -118.4390
33.8175   -118.4000
33.7895   -118.3340
33.7472   -118.2540
33.6919   -118.2330
33.5835   -118.1460
33.5449   -118.1190
33.4816   -118.0800
33.4428   -118.0600
33.3546   -117.9860
33.3184   -117.9430
33.2798   -117.9170
33.2066   -117.8380
33.0732   -117.7420
33.0269   -117.6870
32.9520   -117.6160
32.9251   -117.5740
32.8655   -117.5200
32.8085   -117.5070
32.7524   -117.4670
32.7235   -117.4330
32.6786   -117.4130
32.6238   -117.3440
32.5940   -117.3150
32.5519   -117.2980
32.4949   -117.2660
31.8900   -116.8400
    
```

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: Pitas Point (Lower)-Montalvo  
 Region: USGS 2008 California  
 Category:Fault

Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
 \USGS 2008 Lower 48.bin-ssdb  
 Fault Mechanism: Reverse  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.50000000  
 Deterministic Magnitude: 7.3

Fault Profile Parameters:

Dipl	Dip2	Depth1	Depth2	Depth3
90	16	0.4	0.401	12.8

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.083333	Activity	8.476e-004	7.060000	7.540000	2.300000	7.300000
0.120000	Normal	0.083333	Activity	1.197e-003	6.960000	7.440000	2.300000	7.200000
0.000000	Exponential	0.083335	Activity	3.705e-003	6.500000	7.300000	1.842068	0.000000
0.000000	Exponential	0.083335	Activity	2.699e-003	6.500000	7.300000	0.000000	0.000000
0.000000	Exponential	0.083335	Activity	4.382e-003	6.500000	7.200000	1.842068	0.000000
0.000000	Exponential	0.083335	Activity	3.431e-003	6.500000	7.200000	0.000000	0.000000
0.120000	Normal	0.166670	Activity	8.476e-004	7.060000	7.540000	2.300000	7.300000
0.120000	Normal	0.166670	Activity	1.197e-003	6.960000	7.440000	2.300000	7.200000
0.000000	Exponential	0.041665	Activity	3.705e-003	6.500000	7.300000	1.842068	0.000000
0.000000	Exponential	0.041665	Activity	2.699e-003	6.500000	7.300000	0.000000	0.000000
0.000000	Exponential	0.041665	Activity	4.382e-003	6.500000	7.200000	1.842068	0.000000
0.000000	Exponential	0.041665	Activity	3.431e-003	6.500000	7.200000	0.000000	0.000000

Rupture Length Parameters

Rupture Dimensioning	Al	B1	Sigl	Aw	Bw	Sigw	Aa
Ba							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Area	--	--	--	--	--	--	-4.153061
Area	--	--	--	--	--	--	-4.153061
Area	--	--	--	--	--	--	-4.153061
Area	--	--	--	--	--	--	-4.153061
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

```
--      --
1.020408 0.240000 Area -- -- -- -- -- -4.153061
1.020408 0.240000 Area -- -- -- -- -- -4.153061
1.020408 0.240000 Area -- -- -- -- -- -4.153061
1.020408 0.240000 Area -- -- -- -- -- -4.153061
```

Trace Coordinates:

```
Latitude Longitude
34.1716 -119.4775
34.1545 -119.5721
34.1503 -119.6394
34.1555 -119.6834
34.1679 -119.8025
```

Attenuation Equations for Source:

```
Raw Weight Normalized Weight Name
1 0.250000 Abrahamson-Silva (2008) NGA
1 0.250000 Boore-Atkinson (2008) NGA
1 0.250000 Campbell-Bozorgnia (2008) NGA
1 0.250000 Chiou-Youngs (2008) NGA
```

\*\*\*\*\*

Name: Pitas Point (Lower, West)

Region: USGS 2008 California

Category: Fault

Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files\USGS 2008 Lower 48.bin-ssdb

Fault Mechanism: Reverse

Magnitude Scale: Moment Magnitude

Probability of Activity: 0.50000000

Deterministic Magnitude: 7.3

Fault Profile Parameters:

```
Dip1 Dip2 Depth1 Depth2 Depth3
90 13 1.5 1.501 8.698
```

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.08333	Activity	7.081e-004	7.060000	7.540000	2.300000	7.300000
0.120000	Normal	0.083330	Activity	1.413e-003	6.860000	7.340000	2.300000	7.100000
0.000000	Exponential	0.083335	Activity	3.095e-003	6.500000	7.300000	1.842068	0.000000
0.000000	Exponential	0.083335	Activity	2.255e-003	6.500000	7.300000	0.000000	0.000000
0.000000	Exponential	0.083335	Activity	4.334e-003	6.500000	7.100000	1.842068	0.000000
0.000000	Exponential	0.083335	Activity	3.617e-003	6.500000	7.100000	0.000000	0.000000
0.000000	Normal	0.166670	Activity	7.081e-004	7.060000	7.540000	2.300000	7.300000

```

0.120000 0.010000 10.000000
      Normal 0.166670 Activity 1.413e-003 6.860000 7.340000 2.300000 7.100000
0.120000 0.010000 10.000000
      Exponential 0.041665 Activity 3.095e-003 6.500000 7.300000 1.842068 0.000000
0.000000 0.000000 0.000000
      Exponential 0.041665 Activity 2.255e-003 6.500000 7.300000 0.000000 0.000000
0.000000 0.000000 0.000000
      Exponential 0.041665 Activity 4.334e-003 6.500000 7.100000 1.842068 0.000000
0.000000 0.000000 0.000000
      Exponential 0.041665 Activity 3.617e-003 6.500000 7.100000 0.000000 0.000000
0.000000 0.000000 0.000000
    
```

Rupture Length Parameters

Rupture Dimensioning	Al	B1	Sig1	Aw	Bw	Sigw	Aa
Ba Sigw							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Area	--	--	--	--	--	--	-4.153061

Trace Coordinates:

Latitude	Longitude
34.2338	-119.7757
34.2654	-119.8320
34.2877	-119.9117
34.3044	-119.9784
34.2755	-120.0602
34.2488	-120.1194

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: Pitas Point (Upper)  
 Region: USGS 2008 California  
 Category: Fault  
 Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
 \USGS 2008 Lower 48.bin-ssdb  
 Fault Mechanism: Reverse  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.25000000  
 Deterministic Magnitude: 6.9

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	42	1.4	1.401	10.1

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.333334	Activity	4.492e-004	6.660000	7.140000	2.300000	6.900000
0.120000	Normal	0.333340	Activity	1.266e-003	6.360000	6.840000	2.300000	6.600000
0.000000	Exponential	0.083330	Activity	9.691e-004	6.500000	6.900000	1.842068	0.000000
0.000000	Exponential	0.083330	Activity	8.949e-004	6.500000	6.900000	0.000000	0.000000
0.000000	Exponential	0.083330	Activity	1.619e-003	6.500000	6.600000	1.842068	0.000000
0.000000	Exponential	0.083330	Activity	1.617e-003	6.500000	6.600000	0.000000	0.000000

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Area	--	--	--	--	--	--	-4.153061
Area	--	--	--	--	--	--	-4.153061
Area	--	--	--	--	--	--	-4.153061
Area	--	--	--	--	--	--	-4.153061

Trace Coordinates:

Latitude	Longitude
34.2919	-119.5895
34.3024	-119.6884
34.3111	-119.7172
34.3167	-119.7447
34.3345	-119.8394
34.3434	-119.9011
34.3694	-119.9548

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: Pitas Point Connected  
 Region: USGS 2008 California  
 Category: Fault  
 Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
 \USGS 2008 Lower 48.bin-ssdb  
 Fault Mechanism: Reverse  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.25000000  
 Deterministic Magnitude: 7.3

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	55.3	1.2	1.201	12.71

Magnitude Recurrence Distributions:

Sigma	ModelType	Delta1	Weight	Delta2	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.010000	0.33334	10.000000	Activity	2.842e-004	7.060000	7.540000	2.300000	7.300000
0.120000	Normal	0.010000	0.333340	10.000000	Activity	5.670e-004	6.860000	7.340000	2.300000	7.100000
0.000000	Exponential	0.000000	0.083330	0.000000	Activity	1.242e-003	6.500000	7.300000	1.842068	0.000000
0.000000	Exponential	0.000000	0.083330	0.000000	Activity	9.049e-004	6.500000	7.300000	0.000000	0.000000
0.000000	Exponential	0.000000	0.083330	0.000000	Activity	1.739e-003	6.500000	7.100000	1.842068	0.000000
0.000000	Exponential	0.000000	0.083330	0.000000	Activity	1.451e-003	6.500000	7.100000	0.000000	0.000000

Rupture Length Parameters

Rupture Dimensioning	Al	B1	Sigl	Aw	Bw	Sigw	Aa
Ba							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							

Trace Coordinates:

Latitude Longitude



34.3435 -119.1410  
 34.2910 -119.2240  
 34.2874 -119.3030  
 34.3077 -119.4130  
 34.3027 -119.4630  
 34.2919 -119.5895  
 34.3024 -119.6884  
 34.3111 -119.7172  
 34.3167 -119.7447  
 34.3345 -119.8394  
 34.3434 -119.9011  
 34.3694 -119.9548

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: Pleito  
 Region: USGS 2008 California  
 Category: Fault  
 Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
 \USGS 2008 Lower 48.bin-ssdb  
 Fault Mechanism: Reverse  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 1.00000000  
 Deterministic Magnitude: 7.1

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	46	0	0.001	13.67

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.041665	Activity	8.261e-004	6.860000	7.340000	2.300000	7.100000
0.120000	Normal	0.010000	Activity	1.167e-003	6.760000	7.240000	2.300000	7.000000
0.120000	Normal	0.010000	Activity	1.167e-003	6.760000	7.240000	2.300000	7.000000
0.000000	Exponential	0.041668	Activity	2.534e-003	6.500000	7.100000	1.842068	0.000000
0.000000	Exponential	0.041668	Activity	2.115e-003	6.500000	7.100000	0.000000	0.000000
0.000000	Exponential	0.041668	Activity	3.001e-003	6.500000	7.000000	1.842068	0.000000
0.000000	Exponential	0.041668	Activity	2.647e-003	6.500000	7.000000	0.000000	0.000000
0.120000	Normal	0.083335	Activity	8.261e-004	6.860000	7.340000	2.300000	7.100000
0.120000	Normal	0.083335	Activity	1.167e-003	6.760000	7.240000	2.300000	7.000000
0.120000	Normal	0.010000	Activity	1.167e-003	6.760000	7.240000	2.300000	7.000000
0.000000	Exponential	0.020833	Activity	2.534e-003	6.500000	7.100000	1.842068	0.000000

Exponential	0.020833	Activity	2.115e-003	6.500000	7.100000	0.000000	0.000000
0.000000	0.000000						
Exponential	0.020833	Activity	3.001e-003	6.500000	7.000000	1.842068	0.000000
0.000000	0.000000						
Exponential	0.020833	Activity	2.647e-003	6.500000	7.000000	0.000000	0.000000
0.000000	0.000000						
Normal	0.083335	Activity	8.261e-004	6.860000	7.340000	2.300000	7.100000
0.120000	0.010000						
Normal	0.083335	Activity	1.167e-003	6.760000	7.240000	2.300000	7.000000
0.120000	0.010000						
Exponential	0.020833	Activity	2.534e-003	6.500000	7.100000	1.842068	0.000000
0.000000	0.000000						
Exponential	0.020833	Activity	2.115e-003	6.500000	7.100000	0.000000	0.000000
0.000000	0.000000						
Exponential	0.020833	Activity	3.001e-003	6.500000	7.000000	1.842068	0.000000
0.000000	0.000000						
Exponential	0.020833	Activity	2.647e-003	6.500000	7.000000	0.000000	0.000000
0.000000	0.000000						
Normal	0.083335	Activity	8.261e-004	6.860000	7.340000	2.300000	7.100000
0.120000	0.010000						
Normal	0.083335	Activity	1.167e-003	6.760000	7.240000	2.300000	7.000000
0.120000	0.010000						
Exponential	0.020833	Activity	2.534e-003	6.500000	7.100000	1.842068	0.000000
0.000000	0.000000						
Exponential	0.020833	Activity	2.115e-003	6.500000	7.100000	0.000000	0.000000
0.000000	0.000000						
Exponential	0.020833	Activity	3.001e-003	6.500000	7.000000	1.842068	0.000000
0.000000	0.000000						
Exponential	0.020833	Activity	2.647e-003	6.500000	7.000000	0.000000	0.000000
0.000000	0.000000						

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba							
Sigw							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Area	--	--	--	--	--	--	-4.153061

```

1.020408 0.240000
  Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--
  Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--
      Area -- -- -- -- -- -4.153061
1.020408 0.240000
      Area -- -- -- -- -- -4.153061
1.020408 0.240000
      Area -- -- -- -- -- -4.153061
1.020408 0.240000
      Area -- -- -- -- -- -4.153061
1.020408 0.240000
  Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--
  Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--
      Area -- -- -- -- -- -4.153061
1.020408 0.240000
      Area -- -- -- -- -- -4.153061
1.020408 0.240000
      Area -- -- -- -- -- -4.153061
1.020408 0.240000
      Area -- -- -- -- -- -4.153061
1.020408 0.240000
      Area -- -- -- -- -- -4.153061
1.020408 0.240000

```

Trace Coordinates:

```

Latitude Longitude
34.9415 -119.2959
34.9562 -119.2371
34.9556 -119.2062
34.9869 -119.1282
35.0071 -119.0809
35.0075 -119.0505
34.9917 -119.0361
34.9783 -119.0129
34.9684 -118.9941
34.9439 -118.9795
34.9350 -118.9687
34.9315 -118.9486
34.9327 -118.9278
34.9391 -118.9107
34.9350 -118.8790

```

Attenuation Equations for Source:

```

Raw Weight Normalized Weight Name
1 0.250000 Abrahamson-Silva (2008) NGA
1 0.250000 Boore-Atkinson (2008) NGA
1 0.250000 Campbell-Bozorgnia (2008) NGA
1 0.250000 Chiou-Youngs (2008) NGA

```

\*\*\*\*\*

```

Name: Puente Hills
Region: USGS 2008 California
Category: Fault
Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files

```

\USGS 2008 Lower 48.bin-ssdb  
 Fault Mechanism: Reverse  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.50000000  
 Deterministic Magnitude: 7.1

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	25	5	5.001	13.03

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.083333	Activity	2.933e-004	6.860000	7.340000	2.300000	7.100000
0.120000	Normal	0.083330	Activity	4.143e-004	6.760000	7.240000	2.300000	7.000000
0.000000	Exponential	0.083335	Activity	8.996e-004	6.500000	7.100000	1.842068	0.000000
0.000000	Exponential	0.083335	Activity	7.508e-004	6.500000	7.100000	0.000000	0.000000
0.000000	Exponential	0.083335	Activity	1.065e-003	6.500000	7.000000	1.842068	0.000000
0.000000	Exponential	0.083335	Activity	9.397e-004	6.500000	7.000000	0.000000	0.000000
0.120000	Normal	0.166670	Activity	2.933e-004	6.860000	7.340000	2.300000	7.100000
0.120000	Normal	0.166670	Activity	4.143e-004	6.760000	7.240000	2.300000	7.000000
0.000000	Exponential	0.041665	Activity	8.996e-004	6.500000	7.100000	1.842068	0.000000
0.000000	Exponential	0.041665	Activity	7.508e-004	6.500000	7.100000	0.000000	0.000000
0.000000	Exponential	0.041665	Activity	1.065e-003	6.500000	7.000000	1.842068	0.000000
0.000000	Exponential	0.041665	Activity	9.397e-004	6.500000	7.000000	0.000000	0.000000

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Area	--	--	--	--	--	--	-4.153061
Area	--	--	--	--	--	--	-4.153061
Area	--	--	--	--	--	--	-4.153061
Area	--	--	--	--	--	--	-4.153061
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

```

                Area      --      --      --      --      --      --      --      -4.153061
1.020408  0.240000
                Area      --      --      --      --      --      --      --      -4.153061
1.020408  0.240000
                Area      --      --      --      --      --      --      --      -4.153061
1.020408  0.240000
                Area      --      --      --      --      --      --      --      -4.153061
1.020408  0.240000
    
```

Trace Coordinates:

```

Latitude  Longitude
  33.9269  -117.8673
  33.9315  -118.0432
  33.9541  -118.1435
  34.0586  -118.2976
    
```

Attenuation Equations for Source:

```

Raw Weight  Normalized Weight  Name
      1         0.250000    Abrahamson-Silva (2008) NGA
      1         0.250000    Boore-Atkinson (2008) NGA
      1         0.250000    Campbell-Bozorgnia (2008) NGA
      1         0.250000    Chiou-Youngs (2008) NGA
    
```

\*\*\*\*\*

Name: Puente Hills (Coyote Hills)

Region: USGS 2008 California

Category: Fault

Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
 \USGS 2008 Lower 48.bin-ssdb

Fault Mechanism: Reverse

Magnitude Scale: Moment Magnitude

Probability of Activity: 0.50000000

Deterministic Magnitude: 6.9

Fault Profile Parameters:

```

Dipl    Dip2    Depth1    Depth2    Depth3
  90      26      2.8      2.801     14.64
    
```

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.16667	Activity	3.273e-004	6.660000	7.140000	2.300000	6.900000
0.120000	Normal	0.166670	Activity	9.225e-004	6.360000	6.840000	2.300000	6.600000
0.000000	Exponential	0.041665	Activity	7.061e-004	6.500000	6.900000	1.842068	0.000000
0.000000	Exponential	0.041665	Activity	6.521e-004	6.500000	6.900000	0.000000	0.000000
0.000000	Exponential	0.041665	Activity	1.180e-003	6.500000	6.600000	1.842068	0.000000
0.000000	Exponential	0.041665	Activity	1.178e-003	6.500000	6.600000	0.000000	0.000000
0.120000	Normal	0.166670	Activity	3.273e-004	6.660000	7.140000	2.300000	6.900000
0.120000	Normal	0.166670	Activity	9.225e-004	6.360000	6.840000	2.300000	6.600000

```

0.120000 0.010000 10.000000
    Exponential 0.041665 Activity 7.061e-004 6.500000 6.900000 1.842068 0.000000
0.000000 0.000000 0.000000
    Exponential 0.041665 Activity 6.521e-004 6.500000 6.900000 0.000000 0.000000
0.000000 0.000000 0.000000
    Exponential 0.041665 Activity 1.180e-003 6.500000 6.600000 1.842068 0.000000
0.000000 0.000000 0.000000
    Exponential 0.041665 Activity 1.178e-003 6.500000 6.600000 0.000000 0.000000
0.000000 0.000000 0.000000
    
```

Rupture Length Parameters

Rupture Dimensioning		A1	B1	Sig1	Aw	Bw	Sigw	Aa
Ba	Sigw							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--	--
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--	--
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061

Trace Coordinates:

Latitude	Longitude
33.8977	-117.8673
33.8715	-117.9206
33.8741	-117.9664
33.8928	-118.0435

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: Puente Hills (LA)  
 Region: USGS 2008 California  
 Category: Fault

Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
 \USGS 2008 Lower 48.bin-ssdb  
 Fault Mechanism: Reverse  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.50000000  
 Deterministic Magnitude: 7

Fault Profile Parameters:

Dipl	Dip2	Depth1	Depth2	Depth3
90	27	2.1	2.101	14.81

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.16667	Activity	3.084e-004	6.760000	7.240000	2.300000	7.000000
0.120000	Normal	0.166670	Activity	6.153e-004	6.560000	7.040000	2.300000	6.800000
0.000000	Exponential	0.041665	Activity	7.930e-004	6.500000	7.000000	1.842068	0.000000
0.000000	Exponential	0.041665	Activity	6.994e-004	6.500000	7.000000	0.000000	0.000000
0.000000	Exponential	0.041665	Activity	1.114e-003	6.500000	6.800000	1.842068	0.000000
0.000000	Exponential	0.041665	Activity	1.067e-003	6.500000	6.800000	0.000000	0.000000
0.120000	Normal	0.166670	Activity	3.084e-004	6.760000	7.240000	2.300000	7.000000
0.120000	Normal	0.166670	Activity	6.153e-004	6.560000	7.040000	2.300000	6.800000
0.000000	Exponential	0.041665	Activity	7.930e-004	6.500000	7.000000	1.842068	0.000000
0.000000	Exponential	0.041665	Activity	6.994e-004	6.500000	7.000000	0.000000	0.000000
0.000000	Exponential	0.041665	Activity	1.114e-003	6.500000	6.800000	1.842068	0.000000
0.000000	Exponential	0.041665	Activity	1.067e-003	6.500000	6.800000	0.000000	0.000000

Rupture Length Parameters

Rupture Dimensioning	Al	B1	Sigl	Aw	Bw	Sigw	Aa
Ba							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Area	--	--	--	--	--	--	-4.153061
Area	--	--	--	--	--	--	-4.153061
Area	--	--	--	--	--	--	-4.153061
Area	--	--	--	--	--	--	-4.153061
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

```
--      --
1.020408 0.240000 Area -- -- -- -- -- -4.153061
1.020408 0.240000 Area -- -- -- -- -- -4.153061
1.020408 0.240000 Area -- -- -- -- -- -4.153061
1.020408 0.240000 Area -- -- -- -- -- -4.153061
```

Trace Coordinates:  
 Latitude Longitude  
 33.9690 -118.1260  
 33.9579 -118.2006  
 34.0326 -118.3350

Attenuation Equations for Source:  
 Raw Weight Normalized Weight Name  
 1 0.250000 Abrahamson-Silva (2008) NGA  
 1 0.250000 Boore-Atkinson (2008) NGA  
 1 0.250000 Campbell-Bozorgnia (2008) NGA  
 1 0.250000 Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: Puente Hills (Santa Fe Springs)  
 Region: USGS 2008 California  
 Category: Fault  
 Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
 \USGS 2008 Lower 48.bin-ssdb  
 Fault Mechanism: Reverse  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.50000000  
 Deterministic Magnitude: 6.7

Fault Profile Parameters:  
 Dipl Dip2 Depth1 Depth2 Depth3  
 90 29 2.8 2.801 14.92

Magnitude Recurrence Distributions:  

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.16667	Activity	4.024e-004	6.460000	6.940000	2.300000	6.700000
0.120000	Normal	0.166670	Activity	1.134e-003	6.160000	6.640000	2.300000	6.400000
0.000000	Exponential	0.041665	Activity	6.122e-004	6.500000	6.700000	1.842068	0.000000
0.000000	Exponential	0.041665	Activity	6.018e-004	6.500000	6.700000	0.000000	0.000000
0.000000	Characteristic	0.083330	Activity	1.219e-003	6.399000	6.401000	2.300000	0.000000
0.120000	Normal	0.166670	Activity	4.024e-004	6.460000	6.940000	2.300000	6.700000
0.120000	Normal	0.166670	Activity	1.134e-003	6.160000	6.640000	2.300000	6.400000
0.120000	Exponential	0.041665	Activity	6.122e-004	6.500000	6.700000	1.842068	0.000000



0.000000 0.000000 0.000000  
 Exponential 0.041665 Activity 6.018e-004 6.500000 6.700000 0.000000 0.000000  
 0.000000 0.000000 0.000000  
 Characteristic 0.083330 Activity 1.219e-003 6.399000 6.401000 2.300000 0.000000  
 0.000000 0.010000 10.000000

Rupture Length Parameters

Rupture Dimensioning		Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

Trace Coordinates:

Latitude	Longitude
33.9311	-118.0178
33.9157	-118.0790
33.9071	-118.1383

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: Raymond

Region: USGS 2008 California

Category: Fault

Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files\USGS 2008 Lower 48.bin-ssdb

Fault Mechanism: Reverse

Magnitude Scale: Moment Magnitude

Probability of Activity: 1.00000000

Deterministic Magnitude: 6.8

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3

Magnitude Recurrence Distributions:								
Sigma	ModelType Delta1	Weight Delta2	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.041665	Activity	7.572e-004	6.560000	7.040000	2.300000	6.800000
0.120000	Normal	0.041665	Activity	2.134e-003	6.260000	6.740000	2.300000	6.500000
0.000000	Exponential	0.041668	Activity	1.371e-003	6.500000	6.800000	1.842068	0.000000
0.000000	Exponential	0.041668	Activity	1.313e-003	6.500000	6.800000	0.000000	0.000000
0.000000	Characteristic	0.083335	Activity	2.293e-003	6.499000	6.501000	2.300000	0.000000
0.120000	Normal	0.083335	Activity	7.572e-004	6.560000	7.040000	2.300000	6.800000
0.120000	Normal	0.083335	Activity	2.134e-003	6.260000	6.740000	2.300000	6.500000
0.000000	Exponential	0.020833	Activity	1.371e-003	6.500000	6.800000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	1.313e-003	6.500000	6.800000	0.000000	0.000000
0.000000	Characteristic	0.041665	Activity	2.293e-003	6.499000	6.501000	2.300000	0.000000
0.120000	Normal	0.083335	Activity	7.572e-004	6.560000	7.040000	2.300000	6.800000
0.120000	Normal	0.083335	Activity	2.134e-003	6.260000	6.740000	2.300000	6.500000
0.000000	Exponential	0.020833	Activity	1.371e-003	6.500000	6.800000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	1.313e-003	6.500000	6.800000	0.000000	0.000000
0.000000	Characteristic	0.041665	Activity	2.293e-003	6.499000	6.501000	2.300000	0.000000
0.120000	Normal	0.083335	Activity	7.572e-004	6.560000	7.040000	2.300000	6.800000
0.120000	Normal	0.083335	Activity	2.134e-003	6.260000	6.740000	2.300000	6.500000
0.000000	Exponential	0.020833	Activity	1.371e-003	6.500000	6.800000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	1.313e-003	6.500000	6.800000	0.000000	0.000000
0.000000	Characteristic	0.041665	Activity	2.293e-003	6.499000	6.501000	2.300000	0.000000
0.000000	Characteristic	0.041665	Activity	2.293e-003	6.499000	6.501000	2.300000	0.000000

Rupture Length Parameters								
Ba	Rupture Dimensioning Sigw	Al	B1	Sigl	Aw	Bw	Sigw	Aa
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--	--
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061

```

--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--      --
--      Area              --          --          --          --          --          -- -4.153061
1.020408  0.240000
--      Area              --          --          --          --          --          -- -4.153061
1.020408  0.240000
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--      --
--      Area              --          --          --          --          --          -- -4.153061
1.020408  0.240000
--      Area              --          --          --          --          --          -- -4.153061
1.020408  0.240000
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--      --
--      Area              --          --          --          --          --          -- -4.153061
1.020408  0.240000
--      Area              --          --          --          --          --          -- -4.153061
1.020408  0.240000
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--      --
    
```

Trace Coordinates:

Latitude	Longitude
34.1630	-117.9901
34.1609	-118.0025
34.1555	-118.0150
34.1507	-118.0292
34.1409	-118.0493
34.1391	-118.0575
34.1296	-118.0805
34.1229	-118.1151
34.1213	-118.1231
34.1183	-118.1290
34.1217	-118.2230

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: Red Mountain

Region: USGS 2008 California  
 Category: Fault  
 Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
 \USGS 2008 Lower 48.bin-ssdb  
 Fault Mechanism: Reverse  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 1.00000000  
 Deterministic Magnitude: 7.4

Fault Profile Parameters:

Dipl	Dip2	Depth1	Depth2	Depth3
90	56	0	0.001	14.09

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
	Delta1	Delta2						
0.120000	Normal	0.041665	Activity	6.083e-004	7.160000	7.640000	2.300000	7.400000
0.120000	Normal	0.041665	Activity	6.083e-004	7.160000	7.640000	2.300000	7.400000
0.000000	Exponential	0.041668	Activity	3.177e-003	6.500000	7.400000	1.842068	0.000000
0.000000	Exponential	0.041668	Activity	2.137e-003	6.500000	7.400000	0.000000	0.000000
0.000000	Exponential	0.041668	Activity	3.177e-003	6.500000	7.400000	1.842068	0.000000
0.000000	Exponential	0.041668	Activity	2.137e-003	6.500000	7.400000	0.000000	0.000000
0.120000	Normal	0.083335	Activity	6.083e-004	7.160000	7.640000	2.300000	7.400000
0.120000	Normal	0.083335	Activity	6.083e-004	7.160000	7.640000	2.300000	7.400000
0.000000	Exponential	0.020833	Activity	3.177e-003	6.500000	7.400000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	2.137e-003	6.500000	7.400000	0.000000	0.000000
0.000000	Exponential	0.020833	Activity	3.177e-003	6.500000	7.400000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	2.137e-003	6.500000	7.400000	0.000000	0.000000
0.120000	Normal	0.083335	Activity	6.083e-004	7.160000	7.640000	2.300000	7.400000
0.120000	Normal	0.083335	Activity	6.083e-004	7.160000	7.640000	2.300000	7.400000
0.000000	Exponential	0.020833	Activity	3.177e-003	6.500000	7.400000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	2.137e-003	6.500000	7.400000	0.000000	0.000000
0.000000	Exponential	0.020833	Activity	3.177e-003	6.500000	7.400000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	2.137e-003	6.500000	7.400000	0.000000	0.000000
0.120000	Normal	0.083335	Activity	6.083e-004	7.160000	7.640000	2.300000	7.400000
0.120000	Normal	0.083335	Activity	6.083e-004	7.160000	7.640000	2.300000	7.400000
0.000000	Exponential	0.020833	Activity	3.177e-003	6.500000	7.400000	1.842068	0.000000

```

0.000000 0.000000 0.000000
    Exponential 0.020833 Activity 2.137e-003 6.500000 7.400000 0.000000 0.000000
0.000000 0.000000 0.000000
    Exponential 0.020833 Activity 3.177e-003 6.500000 7.400000 1.842068 0.000000
0.000000 0.000000 0.000000
    Exponential 0.020833 Activity 2.137e-003 6.500000 7.400000 0.000000 0.000000
0.000000 0.000000 0.000000
    
```

Rupture Length Parameters

Rupture Dimensioning		Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061

Area -- -- -- -- -- -- -4.153061  
 1.020408 0.240000

Trace Coordinates:

Latitude	Longitude
34.3386	-119.3040
34.3370	-119.3800
34.3560	-119.4240
34.3573	-119.4700
34.3572	-119.5310
34.3582	-119.6310
34.3617	-119.7490
34.3822	-119.8610
34.3991	-119.9390
34.3573	-120.3860

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: Rinconada

Region: USGS 2008 California

Category: Fault

Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
 \USGS 2008 Lower 48.bin-ssdb

Fault Mechanism: Strike Slip

Magnitude Scale: Moment Magnitude

Probability of Activity: 1.00000000

Deterministic Magnitude: 7.5

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	10

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.041665	Activity	2.403e-004	7.260000	7.740000	2.300000	7.500000
0.120000	Normal	0.041665	Activity	3.394e-004	7.160000	7.640000	2.300000	7.400000
0.000000	Exponential	0.041668	Activity	1.500e-003	6.500000	7.500000	1.842068	0.000000
0.000000	Exponential	0.041668	Activity	9.253e-004	6.500000	7.500000	0.000000	0.000000
0.000000	Exponential	0.041668	Activity	1.772e-003	6.500000	7.400000	1.842068	0.000000
0.000000	Exponential	0.041668	Activity	1.192e-003	6.500000	7.400000	0.000000	0.000000
0.120000	Normal	0.083335	Activity	2.403e-004	7.260000	7.740000	2.300000	7.500000
0.120000	Normal	0.083335	Activity	3.394e-004	7.160000	7.640000	2.300000	7.400000

0.120000	0.010000	10.000000							
	Exponential	0.020833	Activity	1.500e-003	6.500000	7.500000	1.842068	0.000000	
0.000000	0.000000	0.000000							
	Exponential	0.020833	Activity	9.253e-004	6.500000	7.500000	0.000000	0.000000	
0.000000	0.000000	0.000000							
	Exponential	0.020833	Activity	1.772e-003	6.500000	7.400000	1.842068	0.000000	
0.000000	0.000000	0.000000							
	Exponential	0.020833	Activity	1.192e-003	6.500000	7.400000	0.000000	0.000000	
0.000000	0.000000	0.000000							
	Normal	0.083335	Activity	2.403e-004	7.260000	7.740000	2.300000	7.500000	
0.120000	0.010000	10.000000							
	Normal	0.083335	Activity	3.394e-004	7.160000	7.640000	2.300000	7.400000	
0.120000	0.010000	10.000000							
	Exponential	0.020833	Activity	1.500e-003	6.500000	7.500000	1.842068	0.000000	
0.000000	0.000000	0.000000							
	Exponential	0.020833	Activity	9.253e-004	6.500000	7.500000	0.000000	0.000000	
0.000000	0.000000	0.000000							
	Exponential	0.020833	Activity	1.772e-003	6.500000	7.400000	1.842068	0.000000	
0.000000	0.000000	0.000000							
	Exponential	0.020833	Activity	1.192e-003	6.500000	7.400000	0.000000	0.000000	
0.000000	0.000000	0.000000							
	Normal	0.083335	Activity	2.403e-004	7.260000	7.740000	2.300000	7.500000	
0.120000	0.010000	10.000000							
	Normal	0.083335	Activity	3.394e-004	7.160000	7.640000	2.300000	7.400000	
0.120000	0.010000	10.000000							
	Exponential	0.020833	Activity	1.500e-003	6.500000	7.500000	1.842068	0.000000	
0.000000	0.000000	0.000000							
	Exponential	0.020833	Activity	9.253e-004	6.500000	7.500000	0.000000	0.000000	
0.000000	0.000000	0.000000							
	Exponential	0.020833	Activity	1.772e-003	6.500000	7.400000	1.842068	0.000000	
0.000000	0.000000	0.000000							
	Exponential	0.020833	Activity	1.192e-003	6.500000	7.400000	0.000000	0.000000	
0.000000	0.000000	0.000000							

Rupture Length Parameters

Rupture Dimensioning		Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							

```

        Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
        Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
    Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--      --
    Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--      --
        Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
        Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
        Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
        Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
    Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--      --
    Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--      --
        Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
        Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
        Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
        Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
    
```

Trace Coordinates:

```

Latitude Longitude
36.6752 -121.7565
36.4520 -121.4629
35.6109 -120.7024
35.4455 -120.6620
35.4022 -120.6150
35.3530 -120.5830
35.3112 -120.5170
    
```

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

```

Name: San Cayetano
Region: USGS 2008 California
Category: Fault
Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files
\USGS 2008 Lower 48.bin-ssdb
Fault Mechanism: Reverse
Magnitude Scale: Moment Magnitude
Probability of Activity: 1.00000000
Deterministic Magnitude: 7.2
    
```



Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	42	0	0.001	16.06

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
	Delta1	Delta2						
0.120000	Normal	0.041665	Activity	2.140e-003	6.960000	7.440000	2.300000	7.200000
0.120000	Normal	0.010000	Activity	3.023e-003	6.860000	7.340000	2.300000	7.100000
0.120000	Normal	10.000000	Activity	7.835e-003	6.500000	7.200000	1.842068	0.000000
0.000000	Exponential	0.041668	Activity	6.135e-003	6.500000	7.200000	0.000000	0.000000
0.000000	Exponential	0.000000	Activity	9.274e-003	6.500000	7.100000	1.842068	0.000000
0.000000	Exponential	0.041668	Activity	7.740e-003	6.500000	7.100000	0.000000	0.000000
0.000000	Exponential	0.000000	Activity	2.140e-003	6.960000	7.440000	2.300000	7.200000
0.120000	Normal	0.083335	Activity	3.023e-003	6.860000	7.340000	2.300000	7.100000
0.120000	Normal	10.000000	Activity	7.835e-003	6.500000	7.200000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	6.135e-003	6.500000	7.200000	0.000000	0.000000
0.000000	Exponential	0.000000	Activity	9.274e-003	6.500000	7.100000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	7.740e-003	6.500000	7.100000	0.000000	0.000000
0.000000	Exponential	0.000000	Activity	2.140e-003	6.960000	7.440000	2.300000	7.200000
0.120000	Normal	0.083335	Activity	3.023e-003	6.860000	7.340000	2.300000	7.100000
0.120000	Normal	10.000000	Activity	7.835e-003	6.500000	7.200000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	6.135e-003	6.500000	7.200000	0.000000	0.000000
0.000000	Exponential	0.000000	Activity	9.274e-003	6.500000	7.100000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	7.740e-003	6.500000	7.100000	0.000000	0.000000
0.000000	Exponential	0.000000	Activity	2.140e-003	6.960000	7.440000	2.300000	7.200000
0.120000	Normal	0.083335	Activity	3.023e-003	6.860000	7.340000	2.300000	7.100000
0.120000	Normal	10.000000	Activity	7.835e-003	6.500000	7.200000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	6.135e-003	6.500000	7.200000	0.000000	0.000000
0.000000	Exponential	0.000000	Activity	9.274e-003	6.500000	7.100000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	7.740e-003	6.500000	7.100000	0.000000	0.000000
0.000000	Exponential	0.000000	Activity	2.140e-003	6.960000	7.440000	2.300000	7.200000
0.120000	Normal	0.083335	Activity	3.023e-003	6.860000	7.340000	2.300000	7.100000
0.120000	Normal	10.000000	Activity	7.835e-003	6.500000	7.200000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	6.135e-003	6.500000	7.200000	0.000000	0.000000
0.000000	Exponential	0.000000	Activity	9.274e-003	6.500000	7.100000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	7.740e-003	6.500000	7.100000	0.000000	0.000000
0.000000	Exponential	0.000000	Activity	2.140e-003	6.960000	7.440000	2.300000	7.200000

Rupture Length Parameters

Rupture Dimensioning		Al	B1	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							

Trace Coordinates:

Latitude	Longitude
34.4361	-118.7620
34.4047	-118.8310
34.4021	-118.8650

34.4173 -118.9130  
 34.4270 -118.9239  
 34.4495 -118.9279  
 34.4484 -118.9436  
 34.4221 -118.9769  
 34.4218 -119.0075  
 34.4229 -119.0367  
 34.4357 -119.0818  
 34.4329 -119.1038  
 34.4500 -119.1591

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: San Gabriel  
 Region: USGS 2008 California  
 Category: Fault  
 Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
 \USGS 2008 Lower 48.bin-ssdb  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 1.00000000  
 Deterministic Magnitude: 7.3

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	61	0	0.001	14.87

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.041665	Activity	3.012e-004	7.060000	7.540000	2.300000	7.300000
0.120000	Normal	0.010000	Activity	4.255e-004	6.960000	7.440000	2.300000	7.200000
0.120000	Normal	0.041665	Activity	3.012e-004	7.060000	7.540000	2.300000	7.300000
0.120000	Normal	0.010000	Activity	4.255e-004	6.960000	7.440000	2.300000	7.200000
0.000000	Exponential	0.041668	Activity	1.317e-003	6.500000	7.300000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	9.592e-004	6.500000	7.300000	0.000000	0.000000
0.000000	Exponential	0.041668	Activity	1.317e-003	6.500000	7.300000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	9.592e-004	6.500000	7.300000	0.000000	0.000000
0.000000	Exponential	0.041668	Activity	1.317e-003	6.500000	7.300000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	9.592e-004	6.500000	7.300000	0.000000	0.000000
0.120000	Normal	0.083335	Activity	3.012e-004	7.060000	7.540000	2.300000	7.300000
0.120000	Normal	0.010000	Activity	4.255e-004	6.960000	7.440000	2.300000	7.200000
0.120000	Normal	0.083335	Activity	3.012e-004	7.060000	7.540000	2.300000	7.300000
0.120000	Normal	0.010000	Activity	4.255e-004	6.960000	7.440000	2.300000	7.200000
0.000000	Exponential	0.020833	Activity	1.317e-003	6.500000	7.300000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	9.592e-004	6.500000	7.300000	0.000000	0.000000
0.000000	Exponential	0.020833	Activity	1.317e-003	6.500000	7.300000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	9.592e-004	6.500000	7.300000	0.000000	0.000000



```

--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Area              --      --      --      --      --      --      -- -4.153061
1.020408  0.240000
--      Area              --      --      --      --      --      --      -- -4.153061
1.020408  0.240000
--      Area              --      --      --      --      --      --      -- -4.153061
1.020408  0.240000
--      Area              --      --      --      --      --      --      -- -4.153061
1.020408  0.240000
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Area              --      --      --      --      --      --      -- -4.153061
1.020408  0.240000
--      Area              --      --      --      --      --      --      -- -4.153061
1.020408  0.240000
--      Area              --      --      --      --      --      --      -- -4.153061
1.020408  0.240000
--      Area              --      --      --      --      --      --      -- -4.153061
1.020408  0.240000
    
```

Trace Coordinates:

```

Latitude Longitude
34.3178 -118.2800
34.3311 -118.3010
34.3705 -118.4280
34.3947 -118.4890
34.4363 -118.5610
34.5142 -118.6440
34.5606 -118.6960
34.6203 -118.7720
34.6621 -118.8160
34.7140 -118.8750
    
```

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

```

Name: San Joaquin Hills
Region: USGS 2008 California
Category: Fault
Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files
\USGS 2008 Lower 48.bin-ssdb
Fault Mechanism: Reverse
Magnitude Scale: Moment Magnitude
Probability of Activity: 1.00000000
Deterministic Magnitude: 7.1
    
```

Fault Profile Parameters:

Dip1      Dip2      Depth1      Depth2      Depth3  
 90          23            2            2.001       12.55

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.041665	Activity	1.830e-004	6.860000	7.340000	2.300000	7.100000
0.120000	Normal	0.041665	Activity	3.652e-004	6.660000	7.140000	2.300000	6.900000
0.000000	Exponential	0.041668	Activity	5.614e-004	6.500000	7.100000	1.842068	0.000000
0.000000	Exponential	0.041668	Activity	4.686e-004	6.500000	7.100000	0.000000	0.000000
0.000000	Exponential	0.041668	Activity	7.879e-004	6.500000	6.900000	1.842068	0.000000
0.000000	Exponential	0.041668	Activity	7.276e-004	6.500000	6.900000	0.000000	0.000000
0.120000	Normal	0.083335	Activity	1.830e-004	6.860000	7.340000	2.300000	7.100000
0.120000	Normal	0.083335	Activity	3.652e-004	6.660000	7.140000	2.300000	6.900000
0.120000	Exponential	0.020833	Activity	5.614e-004	6.500000	7.100000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	4.686e-004	6.500000	7.100000	0.000000	0.000000
0.000000	Exponential	0.020833	Activity	7.879e-004	6.500000	6.900000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	7.276e-004	6.500000	6.900000	0.000000	0.000000
0.120000	Normal	0.083335	Activity	1.830e-004	6.860000	7.340000	2.300000	7.100000
0.120000	Normal	0.083335	Activity	3.652e-004	6.660000	7.140000	2.300000	6.900000
0.000000	Exponential	0.020833	Activity	5.614e-004	6.500000	7.100000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	4.686e-004	6.500000	7.100000	0.000000	0.000000
0.000000	Exponential	0.020833	Activity	7.879e-004	6.500000	6.900000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	7.276e-004	6.500000	6.900000	0.000000	0.000000
0.120000	Normal	0.083335	Activity	1.830e-004	6.860000	7.340000	2.300000	7.100000
0.120000	Normal	0.083335	Activity	3.652e-004	6.660000	7.140000	2.300000	6.900000
0.000000	Exponential	0.020833	Activity	5.614e-004	6.500000	7.100000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	4.686e-004	6.500000	7.100000	0.000000	0.000000
0.000000	Exponential	0.020833	Activity	7.879e-004	6.500000	6.900000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	7.276e-004	6.500000	6.900000	0.000000	0.000000

Rupture Length Parameters

Rupture Dimensioning      A1      B1      Sig1      Aw      Bw      Sigw      Aa

Ba	Sigw							
--	--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000
--	--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000
1.020408	0.240000	Area	--	--	--	--	--	-- -4.153061
1.020408	0.240000	Area	--	--	--	--	--	-- -4.153061
1.020408	0.240000	Area	--	--	--	--	--	-- -4.153061
1.020408	0.240000	Area	--	--	--	--	--	-- -4.153061
1.020408	0.240000	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000
--	--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000
1.020408	0.240000	Area	--	--	--	--	--	-- -4.153061
1.020408	0.240000	Area	--	--	--	--	--	-- -4.153061
1.020408	0.240000	Area	--	--	--	--	--	-- -4.153061
1.020408	0.240000	Area	--	--	--	--	--	-- -4.153061
1.020408	0.240000	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000
--	--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000
1.020408	0.240000	Area	--	--	--	--	--	-- -4.153061
1.020408	0.240000	Area	--	--	--	--	--	-- -4.153061
1.020408	0.240000	Area	--	--	--	--	--	-- -4.153061
1.020408	0.240000	Area	--	--	--	--	--	-- -4.153061
1.020408	0.240000	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000
--	--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000
1.020408	0.240000	Area	--	--	--	--	--	-- -4.153061
1.020408	0.240000	Area	--	--	--	--	--	-- -4.153061
1.020408	0.240000	Area	--	--	--	--	--	-- -4.153061
1.020408	0.240000	Area	--	--	--	--	--	-- -4.153061

Trace Coordinates:  
 Latitude Longitude  
 33.6950 -117.9330  
 33.6880 -117.8230  
 33.6470 -117.7360  
 33.5970 -117.6740

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: San Jose  
 Region: USGS 2008 California  
 Category: Fault  
 Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
 \USGS 2008 Lower 48.bin-ssdb  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 1.00000000  
 Deterministic Magnitude: 6.7

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	74	0	0.001	15.38

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.041665	Activity	3.221e-004	6.460000	6.940000	2.300000	6.700000
0.120000	Normal	0.041665	Activity	6.427e-004	6.260000	6.740000	2.300000	6.500000
0.000000	Exponential	0.041668	Activity	4.901e-004	6.500000	6.700000	1.842068	0.000000
0.000000	Exponential	0.041668	Activity	4.817e-004	6.500000	6.700000	0.000000	0.000000
0.000000	Characteristic	0.083335	Activity	6.906e-004	6.499000	6.501000	2.300000	0.000000
0.120000	Normal	0.083335	Activity	3.221e-004	6.460000	6.940000	2.300000	6.700000
0.120000	Normal	0.083335	Activity	6.427e-004	6.260000	6.740000	2.300000	6.500000
0.000000	Exponential	0.020833	Activity	4.901e-004	6.500000	6.700000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	4.817e-004	6.500000	6.700000	0.000000	0.000000
0.000000	Characteristic	0.041665	Activity	6.906e-004	6.499000	6.501000	2.300000	0.000000
0.120000	Normal	0.083335	Activity	3.221e-004	6.460000	6.940000	2.300000	6.700000
0.120000	Normal	0.083335	Activity	6.427e-004	6.260000	6.740000	2.300000	6.500000
0.000000	Exponential	0.020833	Activity	4.901e-004	6.500000	6.700000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	4.817e-004	6.500000	6.700000	0.000000	0.000000
0.000000	Characteristic	0.041665	Activity	6.906e-004	6.499000	6.501000	2.300000	0.000000
0.000000	Characteristic	0.041665	Activity	6.906e-004	6.499000	6.501000	2.300000	0.000000
0.120000	Normal	0.083335	Activity	3.221e-004	6.460000	6.940000	2.300000	6.700000



```

0.120000 0.010000 10.000000
      Normal 0.083335 Activity 6.427e-004 6.260000 6.740000 2.300000 6.500000
0.120000 0.010000 10.000000
      Exponential 0.020833 Activity 4.901e-004 6.500000 6.700000 1.842068 0.000000
0.000000 0.000000 0.000000
      Exponential 0.020833 Activity 4.817e-004 6.500000 6.700000 0.000000 0.000000
0.000000 0.000000 0.000000
      Characteristic 0.041665 Activity 6.906e-004 6.499000 6.501000 2.300000 0.000000
0.000000 0.010000 10.000000
    
```

Rupture Length Parameters

Rupture Dimensioning		Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
--	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
--	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
--	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
--	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

Trace Coordinates:  
 Latitude Longitude  
 34.1141 -117.6901

34.0846 -117.7305  
 34.0601 -117.8384  
 34.0393 -117.8789

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: San Juan

Region: USGS 2008 California

Category: Fault

Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
 \USGS 2008 Lower 48.bin-ssdb

Fault Mechanism: Strike Slip

Magnitude Scale: Moment Magnitude

Probability of Activity: 1.00000000

Deterministic Magnitude: 7.1

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	13

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
	Delta1	Delta2						
0.120000	Normal	0.041665	Activity	4.414e-004	6.860000	7.340000	2.300000	7.100000
0.120000	Normal	0.010000	Activity	6.234e-004	6.760000	7.240000	2.300000	7.000000
0.120000	Normal	0.041665	Activity	6.234e-004	6.760000	7.240000	2.300000	7.000000
0.120000	Exponential	0.041668	Activity	1.354e-003	6.500000	7.100000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	1.130e-003	6.500000	7.100000	0.000000	0.000000
0.000000	Exponential	0.041668	Activity	1.130e-003	6.500000	7.100000	0.000000	0.000000
0.000000	Exponential	0.000000	Activity	1.603e-003	6.500000	7.000000	1.842068	0.000000
0.000000	Exponential	0.041668	Activity	1.603e-003	6.500000	7.000000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	1.414e-003	6.500000	7.000000	0.000000	0.000000
0.000000	Exponential	0.041668	Activity	1.414e-003	6.500000	7.000000	0.000000	0.000000
0.120000	Normal	0.083335	Activity	4.414e-004	6.860000	7.340000	2.300000	7.100000
0.120000	Normal	0.010000	Activity	6.234e-004	6.760000	7.240000	2.300000	7.000000
0.120000	Normal	0.083335	Activity	6.234e-004	6.760000	7.240000	2.300000	7.000000
0.120000	Exponential	0.020833	Activity	1.354e-003	6.500000	7.100000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	1.130e-003	6.500000	7.100000	0.000000	0.000000
0.000000	Exponential	0.020833	Activity	1.130e-003	6.500000	7.100000	0.000000	0.000000
0.000000	Exponential	0.000000	Activity	1.603e-003	6.500000	7.000000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	1.603e-003	6.500000	7.000000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	1.414e-003	6.500000	7.000000	0.000000	0.000000
0.000000	Exponential	0.020833	Activity	1.414e-003	6.500000	7.000000	0.000000	0.000000
0.120000	Normal	0.083335	Activity	4.414e-004	6.860000	7.340000	2.300000	7.100000
0.120000	Normal	0.010000	Activity	6.234e-004	6.760000	7.240000	2.300000	7.000000
0.120000	Normal	0.083335	Activity	6.234e-004	6.760000	7.240000	2.300000	7.000000

```

0.120000 0.010000 10.000000
    Exponential 0.020833 Activity 1.354e-003 6.500000 7.100000 1.842068 0.000000
0.000000 0.000000 0.000000
    Exponential 0.020833 Activity 1.130e-003 6.500000 7.100000 0.000000 0.000000
0.000000 0.000000 0.000000
    Exponential 0.020833 Activity 1.603e-003 6.500000 7.000000 1.842068 0.000000
0.000000 0.000000 0.000000
    Exponential 0.020833 Activity 1.414e-003 6.500000 7.000000 0.000000 0.000000
0.000000 0.000000 0.000000
    Normal 0.083335 Activity 4.414e-004 6.860000 7.340000 2.300000 7.100000
0.120000 0.010000 10.000000
    Normal 0.083335 Activity 6.234e-004 6.760000 7.240000 2.300000 7.000000
0.120000 0.010000 10.000000
    Exponential 0.020833 Activity 1.354e-003 6.500000 7.100000 1.842068 0.000000
0.000000 0.000000 0.000000
    Exponential 0.020833 Activity 1.130e-003 6.500000 7.100000 0.000000 0.000000
0.000000 0.000000 0.000000
    Exponential 0.020833 Activity 1.603e-003 6.500000 7.000000 1.842068 0.000000
0.000000 0.000000 0.000000
    Exponential 0.020833 Activity 1.414e-003 6.500000 7.000000 0.000000 0.000000
0.000000 0.000000 0.000000
    
```

Rupture Length Parameters

Rupture Dimensioning		Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061

```

                Area      --      --      --      --      --      --      -- -4.153061
1.020408  0.240000
                Area      --      --      --      --      --      --      -- -4.153061
1.020408  0.240000
    Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
    Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
                Area      --      --      --      --      --      --      -- -4.153061
1.020408  0.240000
                Area      --      --      --      --      --      --      -- -4.153061
1.020408  0.240000
                Area      --      --      --      --      --      --      -- -4.153061
1.020408  0.240000
                Area      --      --      --      --      --      --      -- -4.153061
1.020408  0.240000
    
```

Trace Coordinates:

```

Latitude  Longitude
35.6797   -120.2954
35.5019   -120.2292
35.3045   -120.1250
35.2825   -120.0821
35.1476   -119.9607
    
```

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: San Luis Range (So Margin)  
 Region: USGS 2008 California  
 Category: Fault  
 Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
 \USGS 2008 Lower 48.bin-ssdb  
 Fault Mechanism: Reverse  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 1.00000000  
 Deterministic Magnitude: 7.2

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	45	0	0.001	9.899

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.041665	Activity	6.401e-005	6.960000	7.440000	2.300000	7.200000
0.120000	Normal	0.041665	Activity	1.277e-004	6.760000	7.240000	2.300000	7.000000
0.000000	Exponential	0.041668	Activity	2.343e-004	6.500000	7.200000	1.842068	0.000000

Exponential	0.041668	Activity	1.834e-004	6.500000	7.200000	0.000000	0.000000
0.000000	0.000000						
Exponential	0.041668	Activity	3.284e-004	6.500000	7.000000	1.842068	0.000000
0.000000	0.000000						
Exponential	0.041668	Activity	2.897e-004	6.500000	7.000000	0.000000	0.000000
0.000000	0.000000						
Normal	0.083335	Activity	6.401e-005	6.960000	7.440000	2.300000	7.200000
0.120000	0.010000						
Normal	0.083335	Activity	1.277e-004	6.760000	7.240000	2.300000	7.000000
0.120000	0.010000						
Exponential	0.020833	Activity	2.343e-004	6.500000	7.200000	1.842068	0.000000
0.000000	0.000000						
Exponential	0.020833	Activity	1.834e-004	6.500000	7.200000	0.000000	0.000000
0.000000	0.000000						
Exponential	0.020833	Activity	3.284e-004	6.500000	7.000000	1.842068	0.000000
0.000000	0.000000						
Exponential	0.020833	Activity	2.897e-004	6.500000	7.000000	0.000000	0.000000
0.000000	0.000000						
Normal	0.083335	Activity	6.401e-005	6.960000	7.440000	2.300000	7.200000
0.120000	0.010000						
Normal	0.083335	Activity	1.277e-004	6.760000	7.240000	2.300000	7.000000
0.120000	0.010000						
Exponential	0.020833	Activity	2.343e-004	6.500000	7.200000	1.842068	0.000000
0.000000	0.000000						
Exponential	0.020833	Activity	1.834e-004	6.500000	7.200000	0.000000	0.000000
0.000000	0.000000						
Exponential	0.020833	Activity	3.284e-004	6.500000	7.000000	1.842068	0.000000
0.000000	0.000000						
Exponential	0.020833	Activity	2.897e-004	6.500000	7.000000	0.000000	0.000000
0.000000	0.000000						
Normal	0.083335	Activity	6.401e-005	6.960000	7.440000	2.300000	7.200000
0.120000	0.010000						
Normal	0.083335	Activity	1.277e-004	6.760000	7.240000	2.300000	7.000000
0.120000	0.010000						
Exponential	0.020833	Activity	2.343e-004	6.500000	7.200000	1.842068	0.000000
0.000000	0.000000						
Exponential	0.020833	Activity	1.834e-004	6.500000	7.200000	0.000000	0.000000
0.000000	0.000000						
Exponential	0.020833	Activity	3.284e-004	6.500000	7.000000	1.842068	0.000000
0.000000	0.000000						
Exponential	0.020833	Activity	2.897e-004	6.500000	7.000000	0.000000	0.000000
0.000000	0.000000						

Rupture Length Parameters

Rupture Dimensioning		Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
1.020408	0.240000	Area	--	--	--	--	--	-4.153061
		Area	--	--	--	--	--	-4.153061
1.020408	0.240000	Area	--	--	--	--	--	-4.153061
		Area	--	--	--	--	--	-4.153061
1.020408	0.240000	Area	--	--	--	--	--	-4.153061
		Area	--	--	--	--	--	-4.153061

```

1.020408 0.240000
  Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--
  Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--
      Area -- -- -- -- -- -4.153061
1.020408 0.240000
      Area -- -- -- -- -- -4.153061
1.020408 0.240000
      Area -- -- -- -- -- -4.153061
1.020408 0.240000
      Area -- -- -- -- -- -4.153061
1.020408 0.240000
  Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--
  Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--
      Area -- -- -- -- -- -4.153061
1.020408 0.240000
      Area -- -- -- -- -- -4.153061
1.020408 0.240000
      Area -- -- -- -- -- -4.153061
1.020408 0.240000
      Area -- -- -- -- -- -4.153061
1.020408 0.240000
  Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--
  Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--
      Area -- -- -- -- -- -4.153061
1.020408 0.240000
      Area -- -- -- -- -- -4.153061
1.020408 0.240000
      Area -- -- -- -- -- -4.153061
1.020408 0.240000
      Area -- -- -- -- -- -4.153061
1.020408 0.240000

```

Trace Coordinates:

Latitude	Longitude
34.8497	-120.2375
34.8644	-120.2693
34.9110	-120.3098
34.9760	-120.4140
35.1084	-120.5636
35.1415	-120.6445
35.1685	-120.7131
35.1819	-120.7880

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: Santa Cruz Island  
 Region: USGS 2008 California  
 Category: Fault  
 Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
 \USGS 2008 Lower 48.bin-ssdb  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 1.00000000  
 Deterministic Magnitude: 7.2

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	13

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.041665	Activity	3.262e-004	6.960000	7.440000	2.300000	7.200000
0.120000	Normal	0.010000	Activity	6.509e-004	6.760000	7.240000	2.300000	7.000000
0.000000	Exponential	0.041668	Activity	1.194e-003	6.500000	7.200000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	9.350e-004	6.500000	7.200000	0.000000	0.000000
0.000000	Exponential	0.041668	Activity	1.674e-003	6.500000	7.000000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	1.476e-003	6.500000	7.000000	0.000000	0.000000
0.120000	Normal	0.083335	Activity	3.262e-004	6.960000	7.440000	2.300000	7.200000
0.120000	Normal	0.010000	Activity	6.509e-004	6.760000	7.240000	2.300000	7.000000
0.000000	Exponential	0.020833	Activity	1.194e-003	6.500000	7.200000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	9.350e-004	6.500000	7.200000	0.000000	0.000000
0.000000	Exponential	0.020833	Activity	1.674e-003	6.500000	7.000000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	1.476e-003	6.500000	7.000000	0.000000	0.000000
0.120000	Normal	0.083335	Activity	3.262e-004	6.960000	7.440000	2.300000	7.200000
0.120000	Normal	0.010000	Activity	6.509e-004	6.760000	7.240000	2.300000	7.000000
0.000000	Exponential	0.020833	Activity	1.194e-003	6.500000	7.200000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	9.350e-004	6.500000	7.200000	0.000000	0.000000
0.000000	Exponential	0.020833	Activity	1.674e-003	6.500000	7.000000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	1.476e-003	6.500000	7.000000	0.000000	0.000000
0.120000	Normal	0.083335	Activity	3.262e-004	6.960000	7.440000	2.300000	7.200000
0.120000	Normal	0.010000	Activity	6.509e-004	6.760000	7.240000	2.300000	7.000000

```

0.120000 0.010000 10.000000
    Exponential 0.020833 Activity 1.194e-003 6.500000 7.200000 1.842068 0.000000
0.000000 0.000000 0.000000
    Exponential 0.020833 Activity 9.350e-004 6.500000 7.200000 0.000000 0.000000
0.000000 0.000000 0.000000
    Exponential 0.020833 Activity 1.674e-003 6.500000 7.000000 1.842068 0.000000
0.000000 0.000000 0.000000
    Exponential 0.020833 Activity 1.476e-003 6.500000 7.000000 0.000000 0.000000
0.000000 0.000000 0.000000
    
```

Rupture Length Parameters

Rupture Dimensioning		Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061



```

                Area      --      --      --      --      --      --      -- -4.153061
1.020408  0.240000
                Area      --      --      --      --      --      --      -- -4.153061
1.020408  0.240000
    
```

Trace Coordinates:

```

Latitude  Longitude
 34.0727  -119.9940
 34.0314  -119.8740
 34.0155  -119.7780
 34.0048  -119.7250
 33.9857  -119.6120
 33.9871  -119.5150
 33.9785  -119.3470
 33.9828  -119.2600
    
```

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: Santa Rosa Island  
 Region: USGS 2008 California  
 Category: Fault  
 Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
 \USGS 2008 Lower 48.bin-ssdb  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 1.00000000  
 Deterministic Magnitude: 6.9

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	9

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.041665	Activity	5.007e-004	6.660000	7.140000	2.300000	6.900000
0.120000	Normal	0.010000	Activity	9.991e-004	6.460000	6.940000	2.300000	6.700000
0.000000	Exponential	0.041668	Activity	1.080e-003	6.500000	6.900000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	9.976e-004	6.500000	6.900000	0.000000	0.000000
0.000000	Exponential	0.041668	Activity	1.520e-003	6.500000	6.700000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	1.494e-003	6.500000	6.700000	0.000000	0.000000
0.000000	Exponential	0.041668	Activity	5.007e-004	6.660000	7.140000	2.300000	6.900000
0.120000	Normal	0.083335	Activity	9.991e-004	6.460000	6.940000	2.300000	6.700000

0.120000	0.010000	10.000000							
	Exponential	0.020833	Activity	1.080e-003	6.500000	6.900000	1.842068	0.000000	
0.000000	0.000000	0.000000							
	Exponential	0.020833	Activity	9.976e-004	6.500000	6.900000	0.000000	0.000000	
0.000000	0.000000	0.000000							
	Exponential	0.020833	Activity	1.520e-003	6.500000	6.700000	1.842068	0.000000	
0.000000	0.000000	0.000000							
	Exponential	0.020833	Activity	1.494e-003	6.500000	6.700000	0.000000	0.000000	
0.000000	0.000000	0.000000							
	Normal	0.083335	Activity	5.007e-004	6.660000	7.140000	2.300000	6.900000	
0.120000	0.010000	10.000000							
	Normal	0.083335	Activity	9.991e-004	6.460000	6.940000	2.300000	6.700000	
0.120000	0.010000	10.000000							
	Exponential	0.020833	Activity	1.080e-003	6.500000	6.900000	1.842068	0.000000	
0.000000	0.000000	0.000000							
	Exponential	0.020833	Activity	9.976e-004	6.500000	6.900000	0.000000	0.000000	
0.000000	0.000000	0.000000							
	Exponential	0.020833	Activity	1.520e-003	6.500000	6.700000	1.842068	0.000000	
0.000000	0.000000	0.000000							
	Exponential	0.020833	Activity	1.494e-003	6.500000	6.700000	0.000000	0.000000	
0.000000	0.000000	0.000000							
	Normal	0.083335	Activity	5.007e-004	6.660000	7.140000	2.300000	6.900000	
0.120000	0.010000	10.000000							
	Normal	0.083335	Activity	9.991e-004	6.460000	6.940000	2.300000	6.700000	
0.120000	0.010000	10.000000							
	Exponential	0.020833	Activity	1.080e-003	6.500000	6.900000	1.842068	0.000000	
0.000000	0.000000	0.000000							
	Exponential	0.020833	Activity	9.976e-004	6.500000	6.900000	0.000000	0.000000	
0.000000	0.000000	0.000000							
	Exponential	0.020833	Activity	1.520e-003	6.500000	6.700000	1.842068	0.000000	
0.000000	0.000000	0.000000							
	Exponential	0.020833	Activity	1.494e-003	6.500000	6.700000	0.000000	0.000000	
0.000000	0.000000	0.000000							

Rupture Length Parameters

Rupture Dimensioning		Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							

```

        Area      --      --      --      --      --      --      --      -4.153061
1.020408 0.240000
        Area      --      --      --      --      --      --      --      -4.153061
1.020408 0.240000
    Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000      --
--      --
    Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000      --
--      --
        Area      --      --      --      --      --      --      --      -4.153061
1.020408 0.240000
        Area      --      --      --      --      --      --      --      -4.153061
1.020408 0.240000
        Area      --      --      --      --      --      --      --      -4.153061
1.020408 0.240000
        Area      --      --      --      --      --      --      --      -4.153061
1.020408 0.240000
    Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000      --
--      --
    Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000      --
--      --
        Area      --      --      --      --      --      --      --      -4.153061
1.020408 0.240000
        Area      --      --      --      --      --      --      --      -4.153061
1.020408 0.240000
        Area      --      --      --      --      --      --      --      -4.153061
1.020408 0.240000
        Area      --      --      --      --      --      --      --      -4.153061
1.020408 0.240000
    
```

Trace Coordinates:

```

Latitude Longitude
34.0112 -119.9060
33.9855 -119.9660
33.9714 -120.1110
33.9722 -120.1800
33.9833 -120.2300
33.9844 -120.3000
33.9873 -120.3580
33.9873 -120.4300
34.0199 -120.5110
    
```

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

```

Name: Santa Susana, alt 1
Region: USGS 2008 California
Category: Fault
Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files
\USGS 2008 Lower 48.bin-ssdb
Fault Mechanism: Reverse
Magnitude Scale: Moment Magnitude
    
```

Probability of Activity: 0.50000000  
 Deterministic Magnitude: 6.9

Fault Profile Parameters:

Dipl	Dip2	Depth1	Depth2	Depth3
90	55	0	0.001	16.38

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.083333	Activity	2.704e-003	6.660000	7.140000	2.300000	6.900000
0.120000	Normal	0.083333	Activity	5.396e-003	6.460000	6.940000	2.300000	6.700000
0.000000	Exponential	0.083335	Activity	5.835e-003	6.500000	6.900000	1.842068	0.000000
0.000000	Exponential	0.083335	Activity	5.388e-003	6.500000	6.900000	0.000000	0.000000
0.000000	Exponential	0.083335	Activity	8.209e-003	6.500000	6.700000	1.842068	0.000000
0.000000	Exponential	0.083335	Activity	8.069e-003	6.500000	6.700000	0.000000	0.000000
0.120000	Normal	0.166670	Activity	2.704e-003	6.660000	7.140000	2.300000	6.900000
0.120000	Normal	0.166670	Activity	5.396e-003	6.460000	6.940000	2.300000	6.700000
0.000000	Exponential	0.041665	Activity	5.835e-003	6.500000	6.900000	1.842068	0.000000
0.000000	Exponential	0.041665	Activity	5.388e-003	6.500000	6.900000	0.000000	0.000000
0.000000	Exponential	0.041665	Activity	8.209e-003	6.500000	6.700000	1.842068	0.000000
0.000000	Exponential	0.041665	Activity	8.069e-003	6.500000	6.700000	0.000000	0.000000

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Area	--	--	--	--	--	--	-4.153061
Area	--	--	--	--	--	--	-4.153061
Area	--	--	--	--	--	--	-4.153061
Area	--	--	--	--	--	--	-4.153061
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Area	--	--	--	--	--	--	-4.153061
Area	--	--	--	--	--	--	-4.153061

```

1.020408  0.240000
           Area      --      --      --      --      --      -- -4.153061
1.020408  0.240000
           Area      --      --      --      --      --      -- -4.153061
1.020408  0.240000
    
```

Trace Coordinates:

```

Latitude  Longitude
34.3242   -118.4955
34.3053   -118.5232
34.3003   -118.5458
34.3204   -118.5811
34.3229   -118.6163
34.3330   -118.6339
34.3506   -118.7081
34.3594   -118.7672
    
```

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: Santa Ynez (East)  
 Region: USGS 2008 California  
 Category: Fault  
 Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
 \USGS 2008 Lower 48.bin-ssdb  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.50000000  
 Deterministic Magnitude: 7.2

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	70	0	0.001	13.16

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.08333	Activity	6.868e-004	6.960000	7.440000	2.300000	7.200000
0.120000	Normal	0.010000	Activity	9.702e-004	6.860000	7.340000	2.300000	7.100000
0.120000	Normal	0.010000	Activity	9.702e-004	6.860000	7.340000	2.300000	7.100000
0.000000	Exponential	0.083335	Activity	2.514e-003	6.500000	7.200000	1.842068	0.000000
0.000000	Exponential	0.083335	Activity	1.968e-003	6.500000	7.200000	0.000000	0.000000
0.000000	Exponential	0.083335	Activity	2.976e-003	6.500000	7.100000	1.842068	0.000000
0.000000	Exponential	0.083335	Activity	2.484e-003	6.500000	7.100000	0.000000	0.000000
0.120000	Normal	0.166670	Activity	6.868e-004	6.960000	7.440000	2.300000	7.200000

0.120000	Normal	0.166670	Activity	9.702e-004	6.860000	7.340000	2.300000	7.100000
0.000000	Exponential	0.041665	Activity	2.514e-003	6.500000	7.200000	1.842068	0.000000
0.000000	Exponential	0.041665	Activity	1.968e-003	6.500000	7.200000	0.000000	0.000000
0.000000	Exponential	0.041665	Activity	2.976e-003	6.500000	7.100000	1.842068	0.000000
0.000000	Exponential	0.041665	Activity	2.484e-003	6.500000	7.100000	0.000000	0.000000

Rupture Length Parameters

Rupture Dimensioning		Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061

Trace Coordinates:

Latitude	Longitude
34.4992	-119.6360
34.4880	-119.5530
34.4888	-119.5010
34.4987	-119.4350
34.5067	-119.3200
34.5293	-119.2300
34.5315	-119.1640
34.5697	-118.9540
34.5839	-118.9040

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: Santa Ynez (West)  
 Region: USGS 2008 California  
 Category: Fault  
 Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
 \USGS 2008 Lower 48.bin-ssdb  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.50000000  
 Deterministic Magnitude: 7

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	70	0	0.001	9.397

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
	Delta1	Delta2						
0.120000	Normal	0.083333	Activity	8.796e-004	6.760000	7.240000	2.300000	7.000000
	0.010000	10.000000						
0.120000	Normal	0.083333	Activity	1.755e-003	6.560000	7.040000	2.300000	6.800000
	0.010000	10.000000						
0.000000	Exponential	0.083335	Activity	2.262e-003	6.500000	7.000000	1.842068	0.000000
	0.000000	0.000000						
0.000000	Exponential	0.083335	Activity	1.995e-003	6.500000	7.000000	0.000000	0.000000
	0.000000	0.000000						
0.000000	Exponential	0.083335	Activity	3.178e-003	6.500000	6.800000	1.842068	0.000000
	0.000000	0.000000						
0.000000	Exponential	0.083335	Activity	3.043e-003	6.500000	6.800000	0.000000	0.000000
	0.000000	0.000000						
0.120000	Normal	0.166670	Activity	8.796e-004	6.760000	7.240000	2.300000	7.000000
	0.010000	10.000000						
0.120000	Normal	0.166670	Activity	1.755e-003	6.560000	7.040000	2.300000	6.800000
	0.010000	10.000000						
0.000000	Exponential	0.041665	Activity	2.262e-003	6.500000	7.000000	1.842068	0.000000
	0.000000	0.000000						
0.000000	Exponential	0.041665	Activity	1.995e-003	6.500000	7.000000	0.000000	0.000000
	0.000000	0.000000						
0.000000	Exponential	0.041665	Activity	3.178e-003	6.500000	6.800000	1.842068	0.000000
	0.000000	0.000000						
0.000000	Exponential	0.041665	Activity	3.043e-003	6.500000	6.800000	0.000000	0.000000
	0.000000	0.000000						

Rupture Length Parameters

Rupture Dimensioning		A1	B1	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
1.020408	Area	--	--	--	--	--	--	-4.153061
	0.240000							
1.020408	Area	--	--	--	--	--	--	-4.153061
	0.240000							
	Area	--	--	--	--	--	--	-4.153061

```

1.020408 0.240000
          Area          --          --          --          --          --          -- -4.153061
1.020408 0.240000
    Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--          --
    Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--          --
          Area          --          --          --          --          --          -- -4.153061
1.020408 0.240000
          Area          --          --          --          --          --          -- -4.153061
1.020408 0.240000
          Area          --          --          --          --          --          -- -4.153061
1.020408 0.240000
          Area          --          --          --          --          --          -- -4.153061
1.020408 0.240000
          Area          --          --          --          --          --          -- -4.153061
    
```

Trace Coordinates:

```

Latitude Longitude
34.5121 -120.3070
34.5147 -120.2630
34.5239 -120.2080
34.5442 -120.1200
34.5618 -120.0310
34.5603 -119.9770
34.5474 -119.9350
34.5533 -119.8670
34.5484 -119.8060
34.5205 -119.7320
34.4992 -119.6355
    
```

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

```

Name: Santa Ynez Connected
Region: USGS 2008 California
Category: Fault
Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files
\USGS 2008 Lower 48.bin-ssdb
Fault Mechanism: Strike Slip
Magnitude Scale: Moment Magnitude
Probability of Activity: 0.50000000
Deterministic Magnitude: 7.4
    
```

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	70	0	0.001	11.28

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
	Normal	0.16667	Activity	5.652e-004	7.160000	7.640000	2.300000	7.400000



```

0.120000 0.010000 10.000000
      Normal 0.166670 Activity 7.983e-004 7.060000 7.540000 2.300000 7.300000
0.120000 0.010000 10.000000
      Exponential 0.041665 Activity 2.951e-003 6.500000 7.400000 1.842068 0.000000
0.000000 0.000000 0.000000
      Exponential 0.041665 Activity 1.986e-003 6.500000 7.400000 0.000000 0.000000
0.000000 0.000000 0.000000
      Exponential 0.041665 Activity 3.489e-003 6.500000 7.300000 1.842068 0.000000
0.000000 0.000000 0.000000
      Exponential 0.041665 Activity 2.542e-003 6.500000 7.300000 0.000000 0.000000
0.000000 0.000000 0.000000
      Normal 0.166670 Activity 5.652e-004 7.160000 7.640000 2.300000 7.400000
0.120000 0.010000 10.000000
      Normal 0.166670 Activity 7.983e-004 7.060000 7.540000 2.300000 7.300000
0.120000 0.010000 10.000000
      Exponential 0.041665 Activity 2.951e-003 6.500000 7.400000 1.842068 0.000000
0.000000 0.000000 0.000000
      Exponential 0.041665 Activity 1.986e-003 6.500000 7.400000 0.000000 0.000000
0.000000 0.000000 0.000000
      Exponential 0.041665 Activity 3.489e-003 6.500000 7.300000 1.842068 0.000000
0.000000 0.000000 0.000000
      Exponential 0.041665 Activity 2.542e-003 6.500000 7.300000 0.000000 0.000000
0.000000 0.000000 0.000000
    
```

Rupture Length Parameters

Rupture Dimensioning		Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061

Trace Coordinates:

Latitude	Longitude
34.5121	-120.3070
34.5147	-120.2630
34.5239	-120.2080

34.5442 -120.1200  
 34.5618 -120.0310  
 34.5603 -119.9770  
 34.5474 -119.9350  
 34.5533 -119.8670  
 34.5484 -119.8060  
 34.5205 -119.7320  
 34.4992 -119.6355  
 34.4880 -119.5530  
 34.4888 -119.5010  
 34.4987 -119.4350  
 34.5067 -119.3200  
 34.5293 -119.2300  
 34.5315 -119.1640  
 34.5697 -118.9540  
 34.5839 -118.9040

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: Sierra Madre  
 Region: USGS 2008 California  
 Category: Fault  
 Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
 \USGS 2008 Lower 48.bin-ssdb  
 Fault Mechanism: Reverse  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.50000000  
 Deterministic Magnitude: 7.2

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	53	0	0.001	14.38

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.08333	Activity	7.184e-004	6.960000	7.440000	2.300000	7.200000
0.120000	Normal	0.010000	Activity	1.015e-003	6.860000	7.340000	2.300000	7.100000
0.120000	Normal	0.010000	Activity	1.015e-003	6.860000	7.340000	2.300000	7.100000
0.000000	Exponential	0.083335	Activity	2.630e-003	6.500000	7.200000	1.842068	0.000000
0.000000	Exponential	0.083335	Activity	2.059e-003	6.500000	7.200000	0.000000	0.000000
0.000000	Exponential	0.083335	Activity	3.113e-003	6.500000	7.100000	1.842068	0.000000
0.000000	Exponential	0.083335	Activity	2.598e-003	6.500000	7.100000	0.000000	0.000000
0.120000	Normal	0.166670	Activity	7.184e-004	6.960000	7.440000	2.300000	7.200000

0.120000	Normal	0.166670	Activity	1.015e-003	6.860000	7.340000	2.300000	7.100000
0.000000	Exponential	0.041665	Activity	2.630e-003	6.500000	7.200000	1.842068	0.000000
0.000000	Exponential	0.041665	Activity	2.059e-003	6.500000	7.200000	0.000000	0.000000
0.000000	Exponential	0.041665	Activity	3.113e-003	6.500000	7.100000	1.842068	0.000000
0.000000	Exponential	0.041665	Activity	2.598e-003	6.500000	7.100000	0.000000	0.000000

Rupture Length Parameters

Rupture Dimensioning		Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061

Trace Coordinates:

Latitude	Longitude
34.1231	-117.7400
34.1219	-117.7550
34.1317	-117.7690
34.1305	-117.8070
34.1323	-117.8180
34.1587	-117.8600
34.1470	-117.8810
34.1501	-117.9400
34.1611	-117.9850
34.1752	-118.0030
34.1758	-118.0680
34.2010	-118.1120
34.2028	-118.1490
34.2107	-118.1890
34.2349	-118.2227
34.2495	-118.2623

34.2585 -118.2793  
 34.2751 -118.2900

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: Sierra Madre (San Fernando)  
 Region: USGS 2008 California  
 Category: Fault  
 Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
 \USGS 2008 Lower 48.bin-ssdb  
 Fault Mechanism: Reverse  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.50000000  
 Deterministic Magnitude: 6.7

Fault Profile Parameters:

Dipl	Dip2	Depth1	Depth2	Depth3
90	45	0	0.001	12.73

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.083333	Activity	1.328e-003	6.460000	6.940000	2.300000	6.700000
0.120000	Normal	0.083330	Activity	2.649e-003	6.260000	6.740000	2.300000	6.500000
0.000000	Exponential	0.083335	Activity	2.020e-003	6.500000	6.700000	1.842068	0.000000
0.000000	Exponential	0.083335	Activity	1.985e-003	6.500000	6.700000	0.000000	0.000000
0.000000	Characteristic	0.166670	Activity	2.846e-003	6.499000	6.501000	2.300000	0.000000
0.120000	Normal	0.166670	Activity	1.328e-003	6.460000	6.940000	2.300000	6.700000
0.120000	Normal	0.166670	Activity	2.649e-003	6.260000	6.740000	2.300000	6.500000
0.000000	Exponential	0.041665	Activity	2.020e-003	6.500000	6.700000	1.842068	0.000000
0.000000	Exponential	0.041665	Activity	1.985e-003	6.500000	6.700000	0.000000	0.000000
0.000000	Characteristic	0.083330	Activity	2.846e-003	6.499000	6.501000	2.300000	0.000000

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
-- Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
-- --	--	--	--	--	--	--	--

```

        Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
        Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
    Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--      --
    Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--      --
    Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--      --
        Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
        Area      --      --      --      --      --      --      -- -4.153061
1.020408 0.240000
    Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--      --
    
```

Trace Coordinates:

```

Latitude Longitude
34.2782 -118.2951
34.2745 -118.3196
34.2905 -118.3956
34.3039 -118.4189
34.3027 -118.4337
34.2929 -118.4619
34.3027 -118.4778
    
```

Attenuation Equations for Source:

```

Raw Weight Normalized Weight Name
1 0.250000 Abrahamson-Silva (2008) NGA
1 0.250000 Boore-Atkinson (2008) NGA
1 0.250000 Campbell-Bozorgnia (2008) NGA
1 0.250000 Chiou-Youngs (2008) NGA
    
```

\*\*\*\*\*

```

Name: Sierra Madre Connected
Region: USGS 2008 California
Category: Fault
Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files
\USGS 2008 Lower 48.bin-ssdb
Fault Mechanism: Reverse
Magnitude Scale: Moment Magnitude
Probability of Activity: 0.5000000
Deterministic Magnitude: 7.3
    
```

Fault Profile Parameters:

```

Dipl Dip2 Depth1 Depth2 Depth3
90 51 0 0.001 13.99
    
```

Magnitude Recurrence Distributions:

```

ModelType Weight RateType Rate MinMag MaxMag Beta Mean
Sigma Deltal Delta2
0.120000 Normal 0.16667 Activity 6.757e-004 7.060000 7.540000 2.300000 7.300000
0.120000 Normal 0.166670 Activity 9.545e-004 6.960000 7.440000 2.300000 7.200000
0.120000 0.010000 10.000000
    
```

```

    Exponential 0.041665 Activity 2.954e-003 6.500000 7.300000 1.842068 0.000000
0.000000 0.000000 0.000000
    Exponential 0.041665 Activity 2.152e-003 6.500000 7.300000 0.000000 0.000000
0.000000 0.000000 0.000000
    Exponential 0.041665 Activity 3.494e-003 6.500000 7.200000 1.842068 0.000000
0.000000 0.000000 0.000000
    Exponential 0.041665 Activity 2.736e-003 6.500000 7.200000 0.000000 0.000000
0.000000 0.000000 0.000000
    Normal 0.166670 Activity 6.757e-004 7.060000 7.540000 2.300000 7.300000
0.120000 0.010000 10.000000
    Normal 0.166670 Activity 9.545e-004 6.960000 7.440000 2.300000 7.200000
0.120000 0.010000 10.000000
    Exponential 0.041665 Activity 2.954e-003 6.500000 7.300000 1.842068 0.000000
0.000000 0.000000 0.000000
    Exponential 0.041665 Activity 2.152e-003 6.500000 7.300000 0.000000 0.000000
0.000000 0.000000 0.000000
    Exponential 0.041665 Activity 3.494e-003 6.500000 7.200000 1.842068 0.000000
0.000000 0.000000 0.000000
    Exponential 0.041665 Activity 2.736e-003 6.500000 7.200000 0.000000 0.000000
0.000000 0.000000 0.000000
    
```

Rupture Length Parameters

Rupture Dimensioning		Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
1.020408	Area	--	--	--	--	--	--	-4.153061
	0.240000							
1.020408	Area	--	--	--	--	--	--	-4.153061
	0.240000							
1.020408	Area	--	--	--	--	--	--	-4.153061
	0.240000							
1.020408	Area	--	--	--	--	--	--	-4.153061
	0.240000							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
1.020408	Area	--	--	--	--	--	--	-4.153061
	0.240000							
1.020408	Area	--	--	--	--	--	--	-4.153061
	0.240000							
1.020408	Area	--	--	--	--	--	--	-4.153061
	0.240000							
1.020408	Area	--	--	--	--	--	--	-4.153061
	0.240000							

Trace Coordinates:

Latitude	Longitude
34.1231	-117.7400
34.1219	-117.7550
34.1317	-117.7690
34.1305	-117.8070
34.1323	-117.8180
34.1587	-117.8600

34.1470 -117.8810  
 34.1501 -117.9400  
 34.1611 -117.9850  
 34.1752 -118.0030  
 34.1758 -118.0680  
 34.2010 -118.1120  
 34.2028 -118.1490  
 34.2107 -118.1890  
 34.2349 -118.2227  
 34.2495 -118.2623  
 34.2585 -118.2793  
 34.2782 -118.2951  
 34.2745 -118.3196  
 34.2905 -118.3956  
 34.3039 -118.4189  
 34.3027 -118.4337  
 34.2929 -118.4619  
 34.3027 -118.4778

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: Simi-Santa Rosa  
 Region: USGS 2008 California  
 Category: Fault  
 Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
 \USGS 2008 Lower 48.bin-ssdb  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 1.00000000  
 Deterministic Magnitude: 6.9

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	60	1	1.001	12.26

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.041665	Activity	5.020e-004	6.660000	7.140000	2.300000	6.900000
0.120000	Normal	0.010000	Activity	1.002e-003	6.460000	6.940000	2.300000	6.700000
0.000000	Exponential	0.041668	Activity	1.083e-003	6.500000	6.900000	1.842068	0.000000
0.000000	Exponential	0.010000	Activity	1.000e-003	6.500000	6.900000	0.000000	0.000000
0.000000	Exponential	0.041668	Activity	1.524e-003	6.500000	6.700000	1.842068	0.000000
0.000000	Exponential	0.010000	Activity	1.498e-003	6.500000	6.700000	0.000000	0.000000

0.120000	Normal	0.083335	Activity	5.020e-004	6.660000	7.140000	2.300000	6.900000
0.120000	Normal	0.010000	Activity	1.002e-003	6.460000	6.940000	2.300000	6.700000
0.000000	Exponential	0.020833	Activity	1.083e-003	6.500000	6.900000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	1.000e-003	6.500000	6.900000	0.000000	0.000000
0.000000	Exponential	0.020833	Activity	1.524e-003	6.500000	6.700000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	1.498e-003	6.500000	6.700000	0.000000	0.000000
0.120000	Normal	0.083335	Activity	5.020e-004	6.660000	7.140000	2.300000	6.900000
0.120000	Normal	0.010000	Activity	1.002e-003	6.460000	6.940000	2.300000	6.700000
0.000000	Exponential	0.020833	Activity	1.083e-003	6.500000	6.900000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	1.000e-003	6.500000	6.900000	0.000000	0.000000
0.000000	Exponential	0.020833	Activity	1.524e-003	6.500000	6.700000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	1.498e-003	6.500000	6.700000	0.000000	0.000000
0.120000	Normal	0.083335	Activity	5.020e-004	6.660000	7.140000	2.300000	6.900000
0.120000	Normal	0.010000	Activity	1.002e-003	6.460000	6.940000	2.300000	6.700000
0.000000	Exponential	0.020833	Activity	1.083e-003	6.500000	6.900000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	1.000e-003	6.500000	6.900000	0.000000	0.000000
0.000000	Exponential	0.020833	Activity	1.524e-003	6.500000	6.700000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	1.498e-003	6.500000	6.700000	0.000000	0.000000

Rupture Length Parameters

Rupture Dimensioning		Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Area	--	--	--	--	--	--	-4.153061



```

1.020408 0.240000
          Area      --      --      --      --      --      --      -4.153061
1.020408 0.240000
          Area      --      --      --      --      --      --      -4.153061
1.020408 0.240000
          Area      --      --      --      --      --      --      -4.153061
1.020408 0.240000
          Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--      --
          Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--      --
          Area      --      --      --      --      --      --      -4.153061
1.020408 0.240000
          Area      --      --      --      --      --      --      -4.153061
1.020408 0.240000
          Area      --      --      --      --      --      --      -4.153061
1.020408 0.240000
          Area      --      --      --      --      --      --      -4.153061
1.020408 0.240000
          Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--      --
          Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--      --
          Area      --      --      --      --      --      --      -4.153061
1.020408 0.240000
          Area      --      --      --      --      --      --      -4.153061
1.020408 0.240000
          Area      --      --      --      --      --      --      -4.153061
1.020408 0.240000
          Area      --      --      --      --      --      --      -4.153061
1.020408 0.240000
    
```

Trace Coordinates:

Latitude	Longitude
34.3038	-118.6960
34.2835	-118.7580
34.2708	-118.8360
34.2523	-118.8850
34.2468	-118.9510
34.2346	-119.0000
34.2422	-119.0430
34.2168	-119.1000

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: So Sierra Nevada  
 Region: USGS 2008 California  
 Category: Fault  
 Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
 \USGS 2008 Lower 48.bin-ssdb

Fault Mechanism: Normal  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 1.00000000  
 Deterministic Magnitude: 7.5

Fault Profile Parameters:

Dipl	Dip2	Depth1	Depth2	Depth3
90	50	0	0.001	13.79

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
	Delta1	Delta2						
0.120000	Normal	0.041665	Activity	2.514e-005	7.260000	7.740000	2.300000	7.500000
	0.010000	10.000000						
0.120000	Normal	0.041665	Activity	2.514e-005	7.260000	7.740000	2.300000	7.500000
	0.010000	10.000000						
0.000000	Exponential	0.041668	Activity	1.570e-004	6.500000	7.500000	1.842068	0.000000
	0.000000	0.000000						
0.000000	Exponential	0.041668	Activity	9.683e-005	6.500000	7.500000	0.000000	0.000000
	0.000000	0.000000						
0.000000	Exponential	0.041668	Activity	1.570e-004	6.500000	7.500000	1.842068	0.000000
	0.000000	0.000000						
0.000000	Exponential	0.041668	Activity	9.683e-005	6.500000	7.500000	0.000000	0.000000
	0.000000	0.000000						
0.120000	Normal	0.083335	Activity	2.514e-005	7.260000	7.740000	2.300000	7.500000
	0.010000	10.000000						
0.120000	Normal	0.083335	Activity	2.514e-005	7.260000	7.740000	2.300000	7.500000
	0.010000	10.000000						
0.000000	Exponential	0.020833	Activity	1.570e-004	6.500000	7.500000	1.842068	0.000000
	0.000000	0.000000						
0.000000	Exponential	0.020833	Activity	9.683e-005	6.500000	7.500000	0.000000	0.000000
	0.000000	0.000000						
0.000000	Exponential	0.020833	Activity	1.570e-004	6.500000	7.500000	1.842068	0.000000
	0.000000	0.000000						
0.000000	Exponential	0.020833	Activity	9.683e-005	6.500000	7.500000	0.000000	0.000000
	0.000000	0.000000						
0.120000	Normal	0.083335	Activity	2.514e-005	7.260000	7.740000	2.300000	7.500000
	0.010000	10.000000						
0.120000	Normal	0.083335	Activity	2.514e-005	7.260000	7.740000	2.300000	7.500000
	0.010000	10.000000						
0.000000	Exponential	0.020833	Activity	1.570e-004	6.500000	7.500000	1.842068	0.000000
	0.000000	0.000000						
0.000000	Exponential	0.020833	Activity	9.683e-005	6.500000	7.500000	0.000000	0.000000
	0.000000	0.000000						
0.000000	Exponential	0.020833	Activity	1.570e-004	6.500000	7.500000	1.842068	0.000000
	0.000000	0.000000						
0.000000	Exponential	0.020833	Activity	9.683e-005	6.500000	7.500000	0.000000	0.000000
	0.000000	0.000000						
0.120000	Normal	0.083335	Activity	2.514e-005	7.260000	7.740000	2.300000	7.500000
	0.010000	10.000000						
0.120000	Normal	0.083335	Activity	2.514e-005	7.260000	7.740000	2.300000	7.500000
	0.010000	10.000000						
0.000000	Exponential	0.020833	Activity	1.570e-004	6.500000	7.500000	1.842068	0.000000
	0.000000	0.000000						
0.000000	Exponential	0.020833	Activity	9.683e-005	6.500000	7.500000	0.000000	0.000000
	0.000000	0.000000						
0.000000	Exponential	0.020833	Activity	1.570e-004	6.500000	7.500000	1.842068	0.000000
	0.000000	0.000000						

0.000000 0.000000 0.000000  
 Exponential 0.020833 Activity 9.683e-005 6.500000 7.500000 0.000000 0.000000  
 0.000000 0.000000 0.000000

Rupture Length Parameters

Rupture Dimensioning		Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061

Trace Coordinates:

Latitude	Longitude
35.2943	-118.0230
35.3470	-118.0400
35.4261	-118.0510
35.5384	-118.0340
35.5680	-118.0040
35.6100	-117.9090
35.6839	-117.8690
35.7583	-117.8960
35.9341	-117.9120
35.9726	-117.9459
36.0800	-117.9850
36.1240	-118.0090
36.2193	-117.9900

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: Ventura-Pitas Point  
 Region: USGS 2008 California  
 Category: Fault  
 Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
 \USGS 2008 Lower 48.bin-ssdb  
 Fault Mechanism: Reverse  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.75000000  
 Deterministic Magnitude: 7

Fault Profile Parameters:

Dipl	Dip2	Depth1	Depth2	Depth3
90	64	1	1.001	15.38

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.0555533	Activity	4.829e-004	6.760000	7.240000	2.300000	7.000000
0.120000	Normal	0.0100000	Activity	9.635e-004	6.560000	7.040000	2.300000	6.800000
0.120000	Normal	0.0555553	Activity	1.242e-003	6.500000	7.000000	1.842068	0.000000
0.120000	Normal	0.0100000	Activity	1.095e-003	6.500000	7.000000	0.000000	0.000000
0.120000	Normal	0.055557	Activity	1.745e-003	6.500000	6.800000	1.842068	0.000000
0.120000	Normal	0.0100000	Activity	1.671e-003	6.500000	6.800000	0.000000	0.000000
0.120000	Normal	0.055557	Activity	4.829e-004	6.760000	7.240000	2.300000	7.000000
0.120000	Normal	0.0100000	Activity	9.635e-004	6.560000	7.040000	2.300000	6.800000
0.120000	Normal	0.111113	Activity	4.829e-004	6.760000	7.240000	2.300000	7.000000
0.120000	Normal	0.0100000	Activity	9.635e-004	6.560000	7.040000	2.300000	6.800000
0.120000	Normal	0.111113	Activity	4.829e-004	6.760000	7.240000	2.300000	7.000000
0.120000	Normal	0.0100000	Activity	9.635e-004	6.560000	7.040000	2.300000	6.800000

Exponential	0.027777	Activity	1.242e-003	6.500000	7.000000	1.842068	0.000000
0.000000	0.000000	0.000000					
Exponential	0.027777	Activity	1.095e-003	6.500000	7.000000	0.000000	0.000000
0.000000	0.000000	0.000000					
Exponential	0.027777	Activity	1.745e-003	6.500000	6.800000	1.842068	0.000000
0.000000	0.000000	0.000000					
Exponential	0.027777	Activity	1.671e-003	6.500000	6.800000	0.000000	0.000000
0.000000	0.000000	0.000000					
Normal	0.111113	Activity	4.829e-004	6.760000	7.240000	2.300000	7.000000
0.120000	0.010000	10.000000					
Normal	0.111113	Activity	9.635e-004	6.560000	7.040000	2.300000	6.800000
0.120000	0.010000	10.000000					
Exponential	0.027777	Activity	1.242e-003	6.500000	7.000000	1.842068	0.000000
0.000000	0.000000	0.000000					
Exponential	0.027777	Activity	1.095e-003	6.500000	7.000000	0.000000	0.000000
0.000000	0.000000	0.000000					
Exponential	0.027777	Activity	1.745e-003	6.500000	6.800000	1.842068	0.000000
0.000000	0.000000	0.000000					
Exponential	0.027777	Activity	1.671e-003	6.500000	6.800000	0.000000	0.000000
0.000000	0.000000	0.000000					

Rupture Length Parameters

Rupture Dimensioning		Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
1.020408	Area	--	--	--	--	--	--	-4.153061
	0.240000							
1.020408	Area	--	--	--	--	--	--	-4.153061
	0.240000							
1.020408	Area	--	--	--	--	--	--	-4.153061
	0.240000							
1.020408	Area	--	--	--	--	--	--	-4.153061
	0.240000							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
1.020408	Area	--	--	--	--	--	--	-4.153061
	0.240000							
1.020408	Area	--	--	--	--	--	--	-4.153061
	0.240000							
1.020408	Area	--	--	--	--	--	--	-4.153061
	0.240000							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
1.020408	Area	--	--	--	--	--	--	-4.153061
	0.240000							
1.020408	Area	--	--	--	--	--	--	-4.153061
	0.240000							
1.020408	Area	--	--	--	--	--	--	-4.153061
	0.240000							

1.020408 0.240000  
 Area -- -- -- -- -- -4.153061  
 1.020408 0.240000

Trace Coordinates:

Latitude	Longitude
34.3435	-119.1410
34.2910	-119.2240
34.2874	-119.3030
34.3077	-119.4130
34.3027	-119.4630
34.2974	-119.5930

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

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Name: Verdugo  
 Region: USGS 2008 California  
 Category: Fault  
 Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
 \USGS 2008 Lower 48.bin-ssdb  
 Fault Mechanism: Reverse  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 1.00000000  
 Deterministic Magnitude: 6.9

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	55	0	0.001	14.74

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.041665	Activity	2.568e-004	6.660000	7.140000	2.300000	6.900000
0.120000	Normal	0.010000	Activity	5.125e-004	6.460000	6.940000	2.300000	6.700000
0.120000	Normal	0.010000	Activity	5.125e-004	6.460000	6.940000	2.300000	6.700000
0.000000	Exponential	0.041668	Activity	5.541e-004	6.500000	6.900000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	5.117e-004	6.500000	6.900000	0.000000	0.000000
0.000000	Exponential	0.041668	Activity	5.117e-004	6.500000	6.900000	0.000000	0.000000
0.000000	Exponential	0.000000	Activity	7.797e-004	6.500000	6.700000	1.842068	0.000000
0.000000	Exponential	0.041668	Activity	7.797e-004	6.500000	6.700000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	7.663e-004	6.500000	6.700000	0.000000	0.000000
0.000000	Exponential	0.000000	Activity	7.663e-004	6.500000	6.700000	0.000000	0.000000
0.120000	Normal	0.083335	Activity	2.568e-004	6.660000	7.140000	2.300000	6.900000
0.120000	Normal	0.010000	Activity	5.125e-004	6.460000	6.940000	2.300000	6.700000
0.120000	Normal	0.083335	Activity	5.125e-004	6.460000	6.940000	2.300000	6.700000
0.120000	Normal	0.010000	Activity	5.125e-004	6.460000	6.940000	2.300000	6.700000
0.000000	Exponential	0.020833	Activity	5.541e-004	6.500000	6.900000	1.842068	0.000000
0.000000	Exponential	0.000000	Activity	5.541e-004	6.500000	6.900000	1.842068	0.000000

Exponential	0.020833	Activity	5.117e-004	6.500000	6.900000	0.000000	0.000000
0.000000	0.000000						
Exponential	0.020833	Activity	7.797e-004	6.500000	6.700000	1.842068	0.000000
0.000000	0.000000						
Exponential	0.020833	Activity	7.663e-004	6.500000	6.700000	0.000000	0.000000
0.000000	0.000000						
Normal	0.083335	Activity	2.568e-004	6.660000	7.140000	2.300000	6.900000
0.120000	0.010000						
Normal	0.083335	Activity	5.125e-004	6.460000	6.940000	2.300000	6.700000
0.120000	0.010000						
Exponential	0.020833	Activity	5.541e-004	6.500000	6.900000	1.842068	0.000000
0.000000	0.000000						
Exponential	0.020833	Activity	5.117e-004	6.500000	6.900000	0.000000	0.000000
0.000000	0.000000						
Exponential	0.020833	Activity	7.797e-004	6.500000	6.700000	1.842068	0.000000
0.000000	0.000000						
Exponential	0.020833	Activity	7.663e-004	6.500000	6.700000	0.000000	0.000000
0.000000	0.000000						
Normal	0.083335	Activity	2.568e-004	6.660000	7.140000	2.300000	6.900000
0.120000	0.010000						
Normal	0.083335	Activity	5.125e-004	6.460000	6.940000	2.300000	6.700000
0.120000	0.010000						
Exponential	0.020833	Activity	5.541e-004	6.500000	6.900000	1.842068	0.000000
0.000000	0.000000						
Exponential	0.020833	Activity	5.117e-004	6.500000	6.900000	0.000000	0.000000
0.000000	0.000000						
Exponential	0.020833	Activity	7.797e-004	6.500000	6.700000	1.842068	0.000000
0.000000	0.000000						
Exponential	0.020833	Activity	7.663e-004	6.500000	6.700000	0.000000	0.000000
0.000000	0.000000						

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba Sigw							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Area	--	--	--	--	--	--	-4.153061

```

1.020408 0.240000
  Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--
  Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--
      Area -- -- -- -- -- -4.153061
1.020408 0.240000
      Area -- -- -- -- -- -4.153061
1.020408 0.240000
      Area -- -- -- -- -- -4.153061
1.020408 0.240000
      Area -- -- -- -- -- -4.153061
1.020408 0.240000
  Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--
  Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--
      Area -- -- -- -- -- -4.153061
1.020408 0.240000
      Area -- -- -- -- -- -4.153061
1.020408 0.240000
      Area -- -- -- -- -- -4.153061
1.020408 0.240000
      Area -- -- -- -- -- -4.153061
1.020408 0.240000

```

Trace Coordinates:

```

Latitude Longitude
34.1313 -118.1536
34.1496 -118.1865
34.1551 -118.2285
34.1971 -118.2907
34.2227 -118.3657
34.2538 -118.4077
34.2612 -118.4206

```

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

```

Name: White Wolf
Region: USGS 2008 California
Category: Fault
Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files
\USGS 2008 Lower 48.bin-ssdb
Fault Mechanism: Reverse
Magnitude Scale: Moment Magnitude
Probability of Activity: 1.00000000
Deterministic Magnitude: 7.2

```

Fault Profile Parameters:

```

Dipl    Dip2    Depth1    Depth2    Depth3

```



Magnitude Recurrence Distributions:								
Sigma	ModelType Delta1	Weight Delta2	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.041665	Activity	6.798e-004	6.960000	7.440000	2.300000	7.200000
0.120000	Normal	0.041665	Activity	1.356e-003	6.760000	7.240000	2.300000	7.000000
0.000000	Exponential	0.041668	Activity	2.489e-003	6.500000	7.200000	1.842068	0.000000
0.000000	Exponential	0.041668	Activity	1.948e-003	6.500000	7.200000	0.000000	0.000000
0.000000	Exponential	0.041668	Activity	3.488e-003	6.500000	7.000000	1.842068	0.000000
0.000000	Exponential	0.041668	Activity	3.077e-003	6.500000	7.000000	0.000000	0.000000
0.120000	Normal	0.083335	Activity	6.798e-004	6.960000	7.440000	2.300000	7.200000
0.120000	Normal	0.083335	Activity	1.356e-003	6.760000	7.240000	2.300000	7.000000
0.000000	Exponential	0.020833	Activity	2.489e-003	6.500000	7.200000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	1.948e-003	6.500000	7.200000	0.000000	0.000000
0.000000	Exponential	0.020833	Activity	3.488e-003	6.500000	7.000000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	3.077e-003	6.500000	7.000000	0.000000	0.000000
0.120000	Normal	0.083335	Activity	6.798e-004	6.960000	7.440000	2.300000	7.200000
0.120000	Normal	0.083335	Activity	1.356e-003	6.760000	7.240000	2.300000	7.000000
0.000000	Exponential	0.020833	Activity	2.489e-003	6.500000	7.200000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	1.948e-003	6.500000	7.200000	0.000000	0.000000
0.000000	Exponential	0.020833	Activity	3.488e-003	6.500000	7.000000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	3.077e-003	6.500000	7.000000	0.000000	0.000000
0.120000	Normal	0.083335	Activity	6.798e-004	6.960000	7.440000	2.300000	7.200000
0.120000	Normal	0.083335	Activity	1.356e-003	6.760000	7.240000	2.300000	7.000000
0.000000	Exponential	0.020833	Activity	2.489e-003	6.500000	7.200000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	1.948e-003	6.500000	7.200000	0.000000	0.000000
0.000000	Exponential	0.020833	Activity	3.488e-003	6.500000	7.000000	1.842068	0.000000
0.000000	Exponential	0.020833	Activity	3.077e-003	6.500000	7.000000	0.000000	0.000000

Rupture Length Parameters								
Rupture Dimensioning		Al	B1	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							

```

--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--      --
--      Area              --      --      --      --      --      --      -4.153061
1.020408  0.240000
--      Area              --      --      --      --      --      --      -4.153061
1.020408  0.240000
--      Area              --      --      --      --      --      --      -4.153061
1.020408  0.240000
--      Area              --      --      --      --      --      --      -4.153061
1.020408  0.240000
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--      --
--      Area              --      --      --      --      --      --      -4.153061
1.020408  0.240000
--      Area              --      --      --      --      --      --      -4.153061
1.020408  0.240000
--      Area              --      --      --      --      --      --      -4.153061
1.020408  0.240000
--      Area              --      --      --      --      --      --      -4.153061
1.020408  0.240000
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--      --
--      Area              --      --      --      --      --      --      -4.153061
1.020408  0.240000
--      Area              --      --      --      --      --      --      -4.153061
1.020408  0.240000
--      Area              --      --      --      --      --      --      -4.153061
1.020408  0.240000
--      Area              --      --      --      --      --      --      -4.153061
1.020408  0.240000
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--      --
--      Area              --      --      --      --      --      --      -4.153061
1.020408  0.240000
--      Area              --      --      --      --      --      --      -4.153061
1.020408  0.240000
--      Area              --      --      --      --      --      --      -4.153061
1.020408  0.240000
--      Area              --      --      --      --      --      --      -4.153061
1.020408  0.240000

```

Trace Coordinates:  
 Latitude Longitude  
 35.0276 -119.0070  
 35.1464 -118.8110  
 35.1776 -118.7790  
 35.2097 -118.7350  
 35.2322 -118.6720  
 35.2673 -118.6020

35.3204 -118.5380  
35.3711 -118.4870  
35.3839 -118.4708

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: California Gridded  
Region: USGS 2008 California  
Category:Composite Seismic Source  
Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
\USGS 2008 Lower 48.bin-ssdb  
Magnitude Scale: Moment Magnitude  
Probability of Activity: 1  
----- Start Nested Sources forCalifornia Gridded -----  
Name: California Gridded, Char, 2.1, Reverse  
Region: USGS 2008 California  
Category:Gridded  
FileType: USGS2008

General Parameters  
Magnitude Scale: Moment Magnitude  
Probability of Activity: 0.1666  
Latitude Increment, degrees: 0.1  
Longitude Increment, degrees: 0.1  
Magnitude Threshold for Weighting: 6.5

Earthquake Model Parameters (Varies point to point?)  
Cell Weight: 1 Yes  
Fault Mechanism: Reverse  
Depth to Top of Rupture, km: 5  
Minimum Magnitude: 5  
Maximum Magnitude: 7 Yes  
Rate at Minimum Magnitude, events per year: 0 Yes  
Beta: 1.84207  
Horizontal Rupture Length, A parameter: -3.22  
Horizontal Rupture Length, B parameter: 0.69  
Rupture Strike Azimuth Model: Random Strike

Name: California Gridded, Char, 2.1, Strike Slip  
Region: USGS 2008 California  
Category:Gridded  
FileType: USGS2008

General Parameters  
Magnitude Scale: Moment Magnitude  
Probability of Activity: 0.1666  
Latitude Increment, degrees: 0.1  
Longitude Increment, degrees: 0.1  
Magnitude Threshold for Weighting: 6.5

Earthquake Model Parameters (Varies point to point?)  
Cell Weight: 1 Yes  
Fault Mechanism: Strike Slip  
Depth to Top of Rupture, km: 5  
Minimum Magnitude: 5  
Maximum Magnitude: 7 Yes  
Rate at Minimum Magnitude, events per year: 0 Yes  
Beta: 1.84207  
Horizontal Rupture Length, A parameter: -3.22  
Horizontal Rupture Length, B parameter: 0.69  
Rupture Strike Azimuth Model: Random Strike

Name: California Gridded, Char, 2.4, Reverse  
Region: USGS 2008 California  
Category:Gridded  
FileType: USGS2008

General Parameters  
Magnitude Scale: Moment Magnitude  
Probability of Activity: 0.1666  
Latitude Increment, degrees: 0.1  
Longitude Increment, degrees: 0.1  
Magnitude Threshold for Weighting: 6.5

Earthquake Model Parameters (Varies point to point?)  
Cell Weight: 1 Yes  
Fault Mechanism: Reverse  
Depth to Top of Rupture, km: 5  
Minimum Magnitude: 5  
Maximum Magnitude: 7 Yes  
Rate at Minimum Magnitude, events per year: 0 Yes  
Beta: 1.84207  
Horizontal Rupture Length, A parameter: -3.22  
Horizontal Rupture Length, B parameter: 0.69  
Rupture Strike Azimuth Model: Random Strike

Name: California Gridded, Char, 2.4, Strike Slip  
Region: USGS 2008 California  
Category:Gridded  
FileType: USGS2008

General Parameters  
Magnitude Scale: Moment Magnitude  
Probability of Activity: 0.1666  
Latitude Increment, degrees: 0.1  
Longitude Increment, degrees: 0.1  
Magnitude Threshold for Weighting: 6.5

Earthquake Model Parameters (Varies point to point?)  
Cell Weight: 1 Yes  
Fault Mechanism: Strike Slip  
Depth to Top of Rupture, km: 5  
Minimum Magnitude: 5  
Maximum Magnitude: 7 Yes  
Rate at Minimum Magnitude, events per year: 0 Yes  
Beta: 1.84207  
Horizontal Rupture Length, A parameter: -3.22

Horizontal Rupture Length, B parameter: 0.69  
Rupture Strike Azimuth Model: Random Strike

Name: California Gridded, GR, 2.1, Reverse  
Region: USGS 2008 California  
Category:Gridded  
FileType: USGS2008

General Parameters

Magnitude Scale: Moment Magnitude  
Probability of Activity: 0.0833  
Latitude Increment, degrees: 0.1  
Longitude Increment, degrees: 0.1  
Magnitude Threshold for Weighting: 6.5

Earthquake Model Parameters (Varies point to point?)

Cell Weight: 1 Yes  
Fault Mechanism: Reverse  
Depth to Top of Rupture, km: 5  
Minimum Magnitude: 5  
Maximum Magnitude: 7 Yes  
Rate at Minimum Magnitude, events per year: 0 Yes  
Beta: 1.84207  
Horizontal Rupture Length, A parameter: -3.22  
Horizontal Rupture Length, B parameter: 0.69  
Rupture Strike Azimuth Model: Random Strike

Name: California Gridded, GR, 2.1, Strike Slip  
Region: USGS 2008 California  
Category:Gridded  
FileType: USGS2008

General Parameters

Magnitude Scale: Moment Magnitude  
Probability of Activity: 0.0833  
Latitude Increment, degrees: 0.1  
Longitude Increment, degrees: 0.1  
Magnitude Threshold for Weighting: 6.5

Earthquake Model Parameters (Varies point to point?)

Cell Weight: 1 Yes  
Fault Mechanism: Strike Slip  
Depth to Top of Rupture, km: 5  
Minimum Magnitude: 5  
Maximum Magnitude: 7 Yes  
Rate at Minimum Magnitude, events per year: 0 Yes  
Beta: 1.84207  
Horizontal Rupture Length, A parameter: -3.22  
Horizontal Rupture Length, B parameter: 0.69  
Rupture Strike Azimuth Model: Random Strike

Name: California Gridded, GR, 2.4, Reverse  
Region: USGS 2008 California  
Category:Gridded  
FileType: USGS2008

General Parameters

Magnitude Scale: Moment Magnitude  
Probability of Activity: 0.0833  
Latitude Increment, degrees: 0.1  
Longitude Increment, degrees: 0.1  
Magnitude Threshold for Weighting: 6.5

Earthquake Model Parameters (Varies point to point?)  
Cell Weight: 1 Yes  
Fault Mechanism: Reverse  
Depth to Top of Rupture, km: 5  
Minimum Magnitude: 5  
Maximum Magnitude: 7 Yes  
Rate at Minimum Magnitude, events per year: 0 Yes  
Beta: 1.84207  
Horizontal Rupture Length, A parameter: -3.22  
Horizontal Rupture Length, B parameter: 0.69  
Rupture Strike Azimuth Model: Random Strike

Name: California Gridded, GR, 2.4, Strike Slip  
Region: USGS 2008 California  
Category:Gridded  
FileType: USGS2008

General Parameters  
Magnitude Scale: Moment Magnitude  
Probability of Activity: 0.0833  
Latitude Increment, degrees: 0.1  
Longitude Increment, degrees: 0.1  
Magnitude Threshold for Weighting: 6.5

Earthquake Model Parameters (Varies point to point?)  
Cell Weight: 1 Yes  
Fault Mechanism: Strike Slip  
Depth to Top of Rupture, km: 5  
Minimum Magnitude: 5  
Maximum Magnitude: 7 Yes  
Rate at Minimum Magnitude, events per year: 0 Yes  
Beta: 1.84207  
Horizontal Rupture Length, A parameter: -3.22  
Horizontal Rupture Length, B parameter: 0.69  
Rupture Strike Azimuth Model: Random Strike

----- End Nested Sources for California Gridded -----

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: Anacapa-Dume  
Region: USGS 2008 California  
Category:Composite Seismic Source  
Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files

\USGS 2008 Lower 48.bin-ssdb  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 1  
 ----- Start Nested Sources forAnacapa-Dume -----  
 Name: Anacapa-Dume, alt 1  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Reverse  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.25000000  
 Deterministic Magnitude: 7.2

Fault Profile Parameters:  
 Dip1 Dip2 Depth1 Depth2 Depth3  
 90 45 0 0.001 15.56

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.166666	Activity	1.188e-003	6.960000	7.440000	2.300000	7.200000
0.120000	Normal	0.166660	Activity	1.678e-003	6.860000	7.340000	2.300000	7.100000
0.000000	Exponential	0.166670	Activity	4.349e-003	6.500000	7.200000	1.842068	0.000000
0.000000	Exponential	0.166670	Activity	3.405e-003	6.500000	7.200000	0.000000	0.000000
0.000000	Exponential	0.166670	Activity	5.148e-003	6.500000	7.100000	1.842068	0.000000
0.000000	Exponential	0.166670	Activity	4.297e-003	6.500000	7.100000	0.000000	0.000000

Rupture Length Parameters

Rupture Dimensioning	Al	B1	Sigl	Aw	Bw	Sigw	Aa
Ba Sigw							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Area	--	--	--	--	--	--	-4.153061
Area	--	--	--	--	--	--	-4.153061
Area	--	--	--	--	--	--	-4.153061
Area	--	--	--	--	--	--	-4.153061

Trace Coordinates:

Latitude	Longitude
33.9832	-118.6950
33.9731	-118.7430
33.9581	-118.8190
33.9474	-118.9350
33.9698	-119.0200
33.9748	-119.1450
33.9388	-119.2280

Name: Anacapa-Dume, alt 2  
 Region: USGS 2008 California  
 Category: Fault  
 Fault Mechanism: Reverse  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.25000000  
 Deterministic Magnitude: 7.2

Fault Profile Parameters:

Dipl	Dip2	Depth1	Depth2	Depth3
90	41	1.2	1.201	11.7

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.33334	Activity	1.072e-003	6.960000	7.440000	2.300000	7.200000
0.120000	Normal	0.333340	Activity	1.513e-003	6.860000	7.340000	2.300000	7.100000
0.000000	Exponential	0.083330	Activity	3.922e-003	6.500000	7.200000	1.842068	0.000000
0.000000	Exponential	0.083330	Activity	3.071e-003	6.500000	7.200000	0.000000	0.000000
0.000000	Exponential	0.083330	Activity	4.642e-003	6.500000	7.100000	1.842068	0.000000
0.000000	Exponential	0.083330	Activity	3.875e-003	6.500000	7.100000	0.000000	0.000000

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sig1	Aw	Bw	Sigw	Aa
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Area	--	--	--	--	--	--	-4.153061
Area	--	--	--	--	--	--	-4.153061
Area	--	--	--	--	--	--	-4.153061
Area	--	--	--	--	--	--	-4.153061

Trace Coordinates:

Latitude	Longitude
34.0202	-118.5520
33.9919	-118.6492
33.9731	-118.7430
33.9581	-118.8190
33.9474	-118.9350
33.9698	-119.0200
33.9748	-119.1450
33.9388	-119.2280

----- End Nested Sources for Anacapa-Dume -----



Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: Chino  
 Region: USGS 2008 California  
 Category:Composite Seismic Source  
 Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
 \USGS 2008 Lower 48.bin-ssdb  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 1  
 ----- Start Nested Sources forChino -----

Name: Chino, alt 1  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.50000000  
 Deterministic Magnitude: 6.7

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	50	0	0.001	9.193

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.083333	Activity	5.706e-004	6.460000	6.940000	2.300000	6.700000
0.120000	Normal	0.083333	Activity	1.608e-003	6.160000	6.640000	2.300000	6.400000
0.000000	Exponential	0.083335	Activity	8.682e-004	6.500000	6.700000	1.842068	0.000000
0.000000	Exponential	0.083335	Activity	8.533e-004	6.500000	6.700000	0.000000	0.000000
0.000000	Characteristic	0.166670	Activity	1.728e-003	6.399000	6.401000	2.300000	0.000000
0.120000	Normal	0.166670	Activity	5.706e-004	6.460000	6.940000	2.300000	6.700000
0.120000	Normal	0.166670	Activity	1.608e-003	6.160000	6.640000	2.300000	6.400000
0.000000	Exponential	0.041665	Activity	8.682e-004	6.500000	6.700000	1.842068	0.000000
0.000000	Exponential	0.041665	Activity	8.533e-004	6.500000	6.700000	0.000000	0.000000
0.000000	Characteristic	0.083330	Activity	1.728e-003	6.399000	6.401000	2.300000	0.000000

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sig1	Aw	Bw	Sigw	Aa
Ba Sigw							

```

        Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--      --
        Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--      --
        Area -- -- -- -- -- -4.153061
1.020408 0.240000
        Area -- -- -- -- -- -4.153061
1.020408 0.240000
        Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--      --
        Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--      --
        Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--      --
        Area -- -- -- -- -- -4.153061
1.020408 0.240000
        Area -- -- -- -- -- -4.153061
1.020408 0.240000
        Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--      --
    
```

Trace Coordinates:

```

Latitude Longitude
34.0314 -117.7450
33.9655 -117.7080
33.9073 -117.6480
33.8519 -117.5970
    
```

Name: Chino, alt 2  
 Region: USGS 2008 California  
 Category: Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.50000000  
 Deterministic Magnitude: 6.8

Fault Profile Parameters:

```

Dip1 Dip2 Depth1 Depth2 Depth3
90 65 0 0.001 13.59
    
```

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.16667	Activity	5.992e-004	6.560000	7.040000	2.300000	6.800000
	Delta1	Delta2						
	0.010000	10.000000						
0.120000	Normal	0.166670	Activity	1.196e-003	6.360000	6.840000	2.300000	6.600000
	0.010000	10.000000						
0.000000	Exponential	0.041665	Activity	1.085e-003	6.500000	6.800000	1.842068	0.000000
	0.000000	0.000000						
0.000000	Exponential	0.041665	Activity	1.039e-003	6.500000	6.800000	0.000000	0.000000
	0.000000	0.000000						
0.000000	Exponential	0.041665	Activity	1.529e-003	6.500000	6.600000	1.842068	0.000000
	0.000000	0.000000						
0.000000	Exponential	0.041665	Activity	1.527e-003	6.500000	6.600000	0.000000	0.000000
	0.000000	0.000000						
0.120000	Normal	0.166670	Activity	5.992e-004	6.560000	7.040000	2.300000	6.800000
	0.010000	10.000000						

0.120000	Normal	0.166670	Activity	1.196e-003	6.360000	6.840000	2.300000	6.600000
0.000000	Exponential	0.041665	Activity	1.085e-003	6.500000	6.800000	1.842068	0.000000
0.000000	Exponential	0.041665	Activity	1.039e-003	6.500000	6.800000	0.000000	0.000000
0.000000	Exponential	0.041665	Activity	1.529e-003	6.500000	6.600000	1.842068	0.000000
0.000000	Exponential	0.041665	Activity	1.527e-003	6.500000	6.600000	0.000000	0.000000

Rupture Length Parameters

Rupture Dimensioning		Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
1.020408	0.240000	--	--	--	--	--	--	-4.153061
1.020408	0.240000	--	--	--	--	--	--	-4.153061
1.020408	0.240000	--	--	--	--	--	--	-4.153061
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
1.020408	0.240000	--	--	--	--	--	--	-4.153061
1.020408	0.240000	--	--	--	--	--	--	-4.153061
1.020408	0.240000	--	--	--	--	--	--	-4.153061

Trace Coordinates:

Latitude	Longitude
34.0332	-117.7455
33.9724	-117.7103
33.8857	-117.6286
33.8242	-117.5658

----- End Nested Sources for Chino -----

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: Elsinore  
 Region: USGS 2008 California  
 Category:Composite Seismic Source  
 Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
 \USGS 2008 Lower 48.bin-ssdb  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 1  
 ----- Start Nested Sources forElsinore -----

Name: Elsinore  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.05000000  
 Deterministic Magnitude: 7.8

Fault Profile Parameters:  

Dipl	Dip2	Depth1	Depth2	Depth3
90	83.8	0	0.001	14.91

Magnitude Recurrence Distributions:  

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
Delta1	Delta2							
0.000000	Exponential	0.5	Activity	3.558e-003	6.500000	7.800000	0.000000	0.000000
0.000000	Exponential	0.200000	Activity	3.558e-003	6.500000	7.800000	0.000000	0.000000
0.000000	Exponential	0.300000	Activity	3.558e-003	6.500000	7.800000	0.000000	0.000000

Rupture Length Parameters  

Rupture Dimensioning	Al	B1	Sigl	Aw	Bw	Sigw	Aa
Ba Sigw							
1.020408 0.240000	--	--	--	--	--	--	-4.153061
1.020408 0.240000	--	--	--	--	--	--	-4.153061
1.020408 0.240000	--	--	--	--	--	--	-4.153061

Trace Coordinates:  

Latitude	Longitude
32.7790	-116.0060
32.8144	-116.0990
32.8377	-116.1780
32.8892	-116.2302
32.9308	-116.2644
32.9748	-116.3367
32.9496	-116.3557
32.9826	-116.4070
33.0109	-116.4602
33.0493	-116.5192
33.1225	-116.6280
33.1781	-116.6903
33.2087	-116.7292
33.2465	-116.7910
33.2790	-116.8440

33.3320 -116.9520  
 33.3409 -117.0082  
 33.3703 -117.0152  
 33.3914 -117.0309  
 33.4230 -117.0533  
 33.4975 -117.1417  
 33.5289 -117.1721  
 33.5590 -117.2045  
 33.6116 -117.2810  
 33.6852 -117.3727  
 33.7045 -117.4026  
 33.7185 -117.4242  
 33.7318 -117.4457  
 33.7451 -117.4633  
 33.8129 -117.5480  
 33.8289 -117.5900  
 33.8511 -117.6360  
 33.8733 -117.7170  
 33.9074 -117.7920  
 33.9297 -117.8520  
 33.9712 -117.9920  
 33.9950 -118.0480

Name: Elsinore HB M(A)  
 Region: USGS 2008 California  
 Category: Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.05000000  
 Deterministic Magnitude: 7.8

Fault Profile Parameters:

Dipl	Dip2	Depth1	Depth2	Depth3
90	83.8	0	0.001	14.91

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
	Deltal	Delta2						
0.000000	Exponential	0.5	Activity	3.558e-003	6.500000	7.800000	0.000000	0.000000
0.000000	Exponential	0.200000	Activity	3.558e-003	6.500000	7.800000	0.000000	0.000000
0.000000	Exponential	0.300000	Activity	3.558e-003	6.500000	7.800000	0.000000	0.000000

Rupture Length Parameters

Rupture Dimensioning		A1	B1	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061

Trace Coordinates:

Latitude	Longitude
----------	-----------

32.7790 -116.0060  
 32.8144 -116.0990  
 32.8377 -116.1780  
 32.8892 -116.2302  
 32.9308 -116.2644  
 32.9748 -116.3367  
 32.9496 -116.3557  
 32.9826 -116.4070  
 33.0109 -116.4602  
 33.0493 -116.5192  
 33.1225 -116.6280  
 33.1781 -116.6903  
 33.2087 -116.7292  
 33.2465 -116.7910  
 33.2790 -116.8440  
 33.3320 -116.9520  
 33.3409 -117.0082  
 33.3703 -117.0152  
 33.3914 -117.0309  
 33.4230 -117.0533  
 33.4975 -117.1417  
 33.5289 -117.1721  
 33.5590 -117.2045  
 33.6116 -117.2810  
 33.6852 -117.3727  
 33.7045 -117.4026  
 33.7185 -117.4242  
 33.7318 -117.4457  
 33.7451 -117.4633  
 33.8129 -117.5480  
 33.8289 -117.5900  
 33.8511 -117.6360  
 33.8733 -117.7170  
 33.9074 -117.7920  
 33.9297 -117.8520  
 33.9712 -117.9920  
 33.9950 -118.0480

Name: Elsinore;CM  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 6.914

**Fault Profile Parameters:**

Dip1	Dip2	Depth1	Depth2	Depth3
90	82	0	0.001	12.87

**Magnitude Recurrence Distributions:**

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
	Delta1	Delta2						
0.120000	Normal	0.25	Activity	5.752e-004	6.674000	7.154000	2.300000	6.914000
0.120000	Normal	0.250000	Activity	5.752e-004	6.454000	6.934000	2.300000	6.694000
0.120000	Normal	10.000000						

	Normal	0.125000	Activity	2.123e-003	6.454000	6.934000	2.300000	6.694000
0.120000	0.010000	10.000000						
	Normal	0.050000	Activity	2.123e-003	6.454000	6.934000	2.300000	6.694000
0.120000	0.010000	10.000000						
	Normal	0.075000	Activity	2.123e-003	6.454000	6.934000	2.300000	6.694000
0.120000	0.010000	10.000000						
	Normal	0.125000	Activity	1.040e-003	6.674000	7.154000	2.300000	6.914000
0.120000	0.010000	10.000000						
	Normal	0.050000	Activity	1.040e-003	6.674000	7.154000	2.300000	6.914000
0.120000	0.010000	10.000000						
	Normal	0.075000	Activity	1.040e-003	6.674000	7.154000	2.300000	6.914000
0.120000	0.010000	10.000000						

Rupture Length Parameters

Rupture Dimensioning		Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							

Trace Coordinates:

Latitude	Longitude
32.7790	-116.0060
32.8144	-116.0990
32.8377	-116.1780
32.8892	-116.2302
32.9308	-116.2644
32.9748	-116.3367

Name: Elsinore;GI  
 Region: USGS 2008 California  
 Category: Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 6.889

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	13

Magnitude Recurrence Distributions:

ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
Sigma	Delta1	Delta2					

0.120000	Normal	0.25	Activity	2.567e-003	6.649000	7.129000	2.300000	6.889000
	0.010000	10.000000						
	Normal	0.250000	Activity	2.567e-003	6.429000	6.909000	2.300000	6.669000
0.120000	0.010000	10.000000						
	Normal	0.125000	Activity	2.226e-003	6.429000	6.909000	2.300000	6.669000
0.120000	0.010000	10.000000						
	Normal	0.050000	Activity	2.226e-003	6.429000	6.909000	2.300000	6.669000
0.120000	0.010000	10.000000						
	Normal	0.075000	Activity	2.226e-003	6.429000	6.909000	2.300000	6.669000
0.120000	0.010000	10.000000						
	Normal	0.125000	Activity	1.197e-003	6.649000	7.129000	2.300000	6.889000
0.120000	0.010000	10.000000						
	Normal	0.050000	Activity	1.197e-003	6.649000	7.129000	2.300000	6.889000
0.120000	0.010000	10.000000						
	Normal	0.075000	Activity	1.197e-003	6.649000	7.129000	2.300000	6.889000
0.120000	0.010000	10.000000						

Rupture Length Parameters

Rupture Dimensioning		Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							

Trace Coordinates:

Latitude	Longitude
33.8289	-117.5900
33.8129	-117.5480
33.7451	-117.4633
33.7318	-117.4457
33.7185	-117.4242
33.7045	-117.4026
33.6852	-117.3727
33.6265	-117.2744

Name: Elsinore;GI+T  
 Region: USGS 2008 California  
 Category: Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 7.288

Fault Profile Parameters:



Dip1      Dip2      Depth1      Depth2      Depth3  
 90          90            0            0.001        14

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	8.957e-004	7.048000	7.528000	2.300000	7.288000
0.120000	Normal	0.250000	Activity	8.957e-004	6.947000	7.427000	2.300000	7.187000
0.120000	Normal	0.125000	Activity	1.258e-004	6.947000	7.427000	2.300000	7.187000
0.120000	Normal	0.050000	Activity	1.258e-004	6.947000	7.427000	2.300000	7.187000
0.120000	Normal	0.075000	Activity	1.258e-004	6.947000	7.427000	2.300000	7.187000
0.120000	Normal	0.125000	Activity	1.258e-004	7.048000	7.528000	2.300000	7.288000
0.120000	Normal	0.050000	Activity	1.258e-004	7.048000	7.528000	2.300000	7.288000
0.120000	Normal	0.075000	Activity	1.258e-004	7.048000	7.528000	2.300000	7.288000
0.120000	Normal	0.075000	Activity	1.258e-004	7.048000	7.528000	2.300000	7.288000

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sigl	Aw	Bw	Sigw	Aa
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

Trace Coordinates:

Latitude	Longitude
33.8289	-117.5900
33.8129	-117.5480
33.7451	-117.4633
33.7318	-117.4457
33.7185	-117.4242
33.7045	-117.4026
33.6852	-117.3727
33.6116	-117.2810
33.5590	-117.2045
33.5289	-117.1721
33.4975	-117.1417
33.4230	-117.0533

33.3914 -117.0309  
 33.3703 -117.0152  
 33.3409 -117.0082

Name: Elsinore;GI+T+J  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.45000000  
 Deterministic Magnitude: 7.634

Fault Profile Parameters:

Dipl	Dip2	Depth1	Depth2	Depth3
90	86.3	0	0.001	16.96

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
	Delta1	Delta2						
0.120000	Normal	0.25	Activity	1.258e-004	7.394000	7.874000	2.300000	7.634000
	Normal	0.100000	Activity	1.258e-004	7.394000	7.874000	2.300000	7.634000
0.120000	Normal	0.150000	Activity	1.258e-004	7.394000	7.874000	2.300000	7.634000
	Normal	0.250000	Activity	1.258e-004	7.383000	7.863000	2.300000	7.623000
0.120000	Normal	0.100000	Activity	1.258e-004	7.383000	7.863000	2.300000	7.623000
	Normal	0.150000	Activity	1.258e-004	7.383000	7.863000	2.300000	7.623000
0.120000	Normal	0.100000	Activity	1.258e-004	7.383000	7.863000	2.300000	7.623000
	Normal	0.150000	Activity	1.258e-004	7.383000	7.863000	2.300000	7.623000

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sigl	Aw	Bw	Sigw	Aa
Ba Sigw							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							

Trace Coordinates:

Latitude	Longitude
32.9496	-116.3557
32.9826	-116.4070
33.0109	-116.4602
33.0493	-116.5192
33.1225	-116.6280
33.1781	-116.6903
33.2087	-116.7292

33.2465 -116.7910  
 33.2790 -116.8440  
 33.3320 -116.9520  
 33.3409 -117.0082  
 33.3703 -117.0152  
 33.3914 -117.0309  
 33.4230 -117.0533  
 33.4975 -117.1417  
 33.5289 -117.1721  
 33.5590 -117.2045  
 33.6116 -117.2810  
 33.6852 -117.3727  
 33.7045 -117.4026  
 33.7185 -117.4242  
 33.7318 -117.4457  
 33.7451 -117.4633  
 33.8129 -117.5480  
 33.8289 -117.5900

Name: Elsinore;GI+T+J+CM  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 7.737

**Fault Profile Parameters:**

Dip1	Dip2	Depth1	Depth2	Depth3
90	85.5	0	0.001	15.95

**Magnitude Recurrence Distributions:**

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
	Delta1	Delta2						
0.120000	Normal	0.25	Activity	2.516e-004	7.461000	7.941000	2.300000	7.701000
0.120000	Normal	0.250000	Activity	2.516e-004	7.497000	7.977000	2.300000	7.737000
0.120000	Normal	0.125000	Activity	1.258e-004	7.497000	7.977000	2.300000	7.737000
0.120000	Normal	0.050000	Activity	1.258e-004	7.497000	7.977000	2.300000	7.737000
0.120000	Normal	0.075000	Activity	1.258e-004	7.497000	7.977000	2.300000	7.737000
0.120000	Normal	0.125000	Activity	1.846e-004	7.461000	7.941000	2.300000	7.701000
0.120000	Normal	0.050000	Activity	1.846e-004	7.461000	7.941000	2.300000	7.701000
0.120000	Normal	0.075000	Activity	1.846e-004	7.461000	7.941000	2.300000	7.701000

**Rupture Length Parameters**

Rupture Dimensioning	A1	B1	Sig1	Aw	Bw	Sigw	Aa
Ba							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

```
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
```

Trace Coordinates:

Latitude	Longitude
32.7790	-116.0060
32.8144	-116.0990
32.8377	-116.1780
32.8892	-116.2302
32.9308	-116.2644
32.9748	-116.3367
32.9496	-116.3557
32.9826	-116.4070
33.0109	-116.4602
33.0493	-116.5192
33.1225	-116.6280
33.1781	-116.6903
33.2087	-116.7292
33.2465	-116.7910
33.2790	-116.8440
33.3320	-116.9520
33.3409	-117.0082
33.3703	-117.0152
33.3914	-117.0309
33.4230	-117.0533
33.4975	-117.1417
33.5289	-117.1721
33.5590	-117.2045
33.6116	-117.2810
33.6852	-117.3727
33.7045	-117.4026
33.7185	-117.4242
33.7318	-117.4457
33.7451	-117.4633
33.8129	-117.5480
33.8289	-117.5900

Name: Elsinore;J  
Region: USGS 2008 California  
Category: Fault  
Fault Mechanism: Strike Slip  
Magnitude Scale: Moment Magnitude  
Probability of Activity: 0.4500000  
Deterministic Magnitude: 7.354

Fault Profile Parameters:

Dip1      Dip2      Depth1      Depth2      Depth3  
 90          84          0          0.001      18.9

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	2.516e-005	7.036000	7.516000	2.300000	7.276000
0.120000	Normal	0.100000	Activity	2.516e-005	7.036000	7.516000	2.300000	7.276000
0.120000	Normal	0.150000	Activity	2.516e-005	7.036000	7.516000	2.300000	7.276000
0.120000	Normal	0.250000	Activity	3.828e-005	7.114000	7.594000	2.300000	7.354000
0.120000	Normal	0.100000	Activity	3.828e-005	7.114000	7.594000	2.300000	7.354000
0.120000	Normal	0.150000	Activity	3.828e-005	7.114000	7.594000	2.300000	7.354000
0.120000	Normal	0.100000	Activity	3.828e-005	7.114000	7.594000	2.300000	7.354000

Rupture Length Parameters

Rupture Dimensioning	Al	B1	Sigl	Aw	Bw	Sigw	Aa
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

Trace Coordinates:

Latitude	Longitude
32.9496	-116.3557
32.9826	-116.4070
33.0109	-116.4602
33.0493	-116.5192
33.1225	-116.6280
33.1781	-116.6903
33.2087	-116.7292
33.2465	-116.7910
33.2790	-116.8440
33.3320	-116.9520
33.3409	-117.0082

Name: Elsinore;J+CM  
 Region: USGS 2008 California  
 Category: Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.45000000  
 Deterministic Magnitude: 7.489

**Fault Profile Parameters:**

Dipl	Dip2	Depth1	Depth2	Depth3
90	83.5	0	0.001	16.89

**Magnitude Recurrence Distributions:**

Sigma	ModelType	Delta1	Weight	Delta2	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.010000	0.25	10.000000	Activity	2.902e-004	7.215000	7.695000	2.300000	7.455000
0.120000	Normal	0.010000	0.100000	10.000000	Activity	2.902e-004	7.215000	7.695000	2.300000	7.455000
0.120000	Normal	0.010000	0.150000	10.000000	Activity	2.902e-004	7.215000	7.695000	2.300000	7.455000
0.120000	Normal	0.010000	0.250000	10.000000	Activity	1.756e-004	7.249000	7.729000	2.300000	7.489000
0.120000	Normal	0.010000	0.100000	10.000000	Activity	1.756e-004	7.249000	7.729000	2.300000	7.489000
0.120000	Normal	0.010000	0.150000	10.000000	Activity	1.756e-004	7.249000	7.729000	2.300000	7.489000
0.120000	Normal	0.010000	0.250000	10.000000	Activity	1.756e-004	7.249000	7.729000	2.300000	7.489000

**Rupture Length Parameters**

Rupture Dimensioning	Al	B1	Sigl	Aw	Bw	Sigw	Aa
Ba Sigw							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							

**Trace Coordinates:**

Latitude	Longitude
32.7790	-116.0060
32.8144	-116.0990
32.8377	-116.1780
32.8892	-116.2302
32.9308	-116.2644
32.9748	-116.3367
32.9496	-116.3557
32.9826	-116.4070
33.0109	-116.4602
33.0493	-116.5192
33.1225	-116.6280
33.1781	-116.6903
33.2087	-116.7292
33.2465	-116.7910
33.2790	-116.8440
33.3320	-116.9520
33.3409	-117.0082

Name: Elsinore;T

Region: USGS 2008 California  
 Category: Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 7.066

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	14

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	6.142e-004	6.826000	7.306000	2.300000	7.066000
0.120000	Normal	0.250000	Activity	6.142e-004	6.652000	7.132000	2.300000	6.892000
0.120000	Normal	0.125000	Activity	3.494e-004	6.652000	7.132000	2.300000	6.892000
0.120000	Normal	0.050000	Activity	3.494e-004	6.652000	7.132000	2.300000	6.892000
0.120000	Normal	0.075000	Activity	3.494e-004	6.652000	7.132000	2.300000	6.892000
0.120000	Normal	0.125000	Activity	1.258e-004	6.826000	7.306000	2.300000	7.066000
0.120000	Normal	0.050000	Activity	1.258e-004	6.826000	7.306000	2.300000	7.066000
0.120000	Normal	0.075000	Activity	1.258e-004	6.826000	7.306000	2.300000	7.066000
0.120000	Normal	0.050000	Activity	1.258e-004	6.826000	7.306000	2.300000	7.066000

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sig1	Aw	Bw	Sigw	Aa
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

Trace Coordinates:

Latitude	Longitude
33.6677	-117.3890
33.6310	-117.3157
33.6116	-117.2810
33.5590	-117.2045

33.5289 -117.1721  
 33.4975 -117.1417  
 33.4230 -117.0533  
 33.3914 -117.0309  
 33.3703 -117.0152  
 33.3409 -117.0082

Name: Elsinore;T+J  
 Region: USGS 2008 California  
 Category: Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.45000000  
 Deterministic Magnitude: 7.535

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	86	0	0.001	16.96

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	1.258e-004	7.276000	7.756000	2.300000	7.516000
0.120000	Normal	0.100000	Activity	1.258e-004	7.276000	7.756000	2.300000	7.516000
0.120000	Normal	0.150000	Activity	1.258e-004	7.276000	7.756000	2.300000	7.516000
0.120000	Normal	0.250000	Activity	1.258e-004	7.295000	7.775000	2.300000	7.535000
0.120000	Normal	0.100000	Activity	1.258e-004	7.295000	7.775000	2.300000	7.535000
0.120000	Normal	0.150000	Activity	1.258e-004	7.295000	7.775000	2.300000	7.535000

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sig1	Aw	Bw	Sigw	Aa
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

Trace Coordinates:

Latitude	Longitude
32.9496	-116.3557
32.9826	-116.4070
33.0109	-116.4602
33.0493	-116.5192



33.1225 -116.6280  
 33.1781 -116.6903  
 33.2087 -116.7292  
 33.2465 -116.7910  
 33.2790 -116.8440  
 33.3320 -116.9520  
 33.3409 -117.0082  
 33.3703 -117.0152  
 33.3914 -117.0309  
 33.4230 -117.0533  
 33.4975 -117.1417  
 33.5289 -117.1721  
 33.5590 -117.2045  
 33.6116 -117.2810  
 33.6310 -117.3157  
 33.6677 -117.3890

Name: Elsinore;T+J+CM  
 Region: USGS 2008 California  
 Category: Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 7.64

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	85.3	0	0.001	15.95

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	2.516e-004	7.388000	7.868000	2.300000	7.628000
0.120000	Normal	0.250000	Activity	2.516e-004	7.400000	7.880000	2.300000	7.640000
0.120000	Normal	0.125000	Activity	2.552e-004	7.400000	7.880000	2.300000	7.640000
0.120000	Normal	0.050000	Activity	2.552e-004	7.400000	7.880000	2.300000	7.640000
0.120000	Normal	0.075000	Activity	2.552e-004	7.400000	7.880000	2.300000	7.640000
0.120000	Normal	0.125000	Activity	2.819e-004	7.388000	7.868000	2.300000	7.628000
0.120000	Normal	0.050000	Activity	2.819e-004	7.388000	7.868000	2.300000	7.628000
0.120000	Normal	0.075000	Activity	2.819e-004	7.388000	7.868000	2.300000	7.628000
0.120000	Normal	0.075000	Activity	2.819e-004	7.388000	7.868000	2.300000	7.628000

Rupture Length Parameters

Rupture Dimensioning	Al	B1	Sigl	Aw	Bw	Sigw	Aa
Ba Sigw							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

```
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
```

Trace Coordinates:

Latitude	Longitude
32.7790	-116.0060
32.8144	-116.0990
32.8377	-116.1780
32.8892	-116.2302
32.9308	-116.2644
32.9748	-116.3367
32.9496	-116.3557
32.9826	-116.4070
33.0109	-116.4602
33.0493	-116.5192
33.1225	-116.6280
33.1781	-116.6903
33.2087	-116.7292
33.2465	-116.7910
33.2790	-116.8440
33.3320	-116.9520
33.3409	-117.0082
33.3703	-117.0152
33.3914	-117.0309
33.4230	-117.0533
33.4975	-117.1417
33.5289	-117.1721
33.5590	-117.2045
33.6116	-117.2810
33.6310	-117.3157
33.6677	-117.3890

Name: Elsinore;W  
 Region: USGS 2008 California  
 Category: Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 7.029

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	75	0	0.001	14.49

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
	Delta1	Delta2						
	Normal	0.25	Activity	7.190e-004	6.789000	7.269000	2.300000	7.029000

0.120000	0.010000	10.000000							
	Normal	0.250000	Activity	7.190e-004	6.602000	7.082000	2.300000	6.842000	
0.120000	0.010000	10.000000							
	Normal	0.125000	Activity	1.377e-003	6.602000	7.082000	2.300000	6.842000	
0.120000	0.010000	10.000000							
	Normal	0.050000	Activity	1.377e-003	6.602000	7.082000	2.300000	6.842000	
0.120000	0.010000	10.000000							
	Normal	0.075000	Activity	1.377e-003	6.602000	7.082000	2.300000	6.842000	
0.120000	0.010000	10.000000							
	Normal	0.125000	Activity	9.239e-004	6.789000	7.269000	2.300000	7.029000	
0.120000	0.010000	10.000000							
	Normal	0.050000	Activity	9.239e-004	6.789000	7.269000	2.300000	7.029000	
0.120000	0.010000	10.000000							
	Normal	0.075000	Activity	9.239e-004	6.789000	7.269000	2.300000	7.029000	
0.120000	0.010000	10.000000							

Rupture Length Parameters

Rupture	Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							

Trace Coordinates:

Latitude	Longitude
33.8289	-117.5900
33.8511	-117.6360
33.8733	-117.7170
33.9074	-117.7920
33.9297	-117.8520
33.9712	-117.9920
33.9950	-118.0480

Name: Elsinore;W+GI  
 Region: USGS 2008 California  
 Category: Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.45000000  
 Deterministic Magnitude: 7.266

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	81.3	0	0.001	13.84

Magnitude Recurrence Distributions:

Sigma	ModelType Delta1	Weight Delta2	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	1.411e-004	6.918000	7.398000	2.300000	7.158000
0.120000	Normal	0.100000	Activity	1.411e-004	6.918000	7.398000	2.300000	7.158000
0.120000	Normal	0.150000	Activity	1.411e-004	6.918000	7.398000	2.300000	7.158000
0.120000	Normal	0.250000	Activity	2.516e-005	7.026000	7.506000	2.300000	7.266000
0.120000	Normal	0.100000	Activity	2.516e-005	7.026000	7.506000	2.300000	7.266000
0.120000	Normal	0.150000	Activity	2.516e-005	7.026000	7.506000	2.300000	7.266000
0.120000	Normal	0.100000	Activity	2.516e-005	7.026000	7.506000	2.300000	7.266000

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sigl	Aw	Bw	Sigw	Aa
Ba Sigw Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
-- Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
-- Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
-- Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
-- Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
-- Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
-- Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

Trace Coordinates:

Latitude	Longitude
33.6265	-117.2744
33.6852	-117.3727
33.7045	-117.4026
33.7185	-117.4242
33.7318	-117.4457
33.7451	-117.4633
33.8129	-117.5480
33.8289	-117.5900
33.8511	-117.6360
33.8733	-117.7170
33.9074	-117.7920
33.9297	-117.8520
33.9712	-117.9920
33.9950	-118.0480

Name: Elsinore;W+GI+T  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.45000000  
 Deterministic Magnitude: 7.478

**Fault Profile Parameters:**

Dip1	Dip2	Depth1	Depth2	Depth3
90	83.6	0	0.001	13.91

**Magnitude Recurrence Distributions:**

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
	Delta1	Delta2						
0.120000	Normal	0.25	Activity	9.100e-005	7.201000	7.681000	2.300000	7.441000
0.120000	Normal	0.100000	Activity	9.100e-005	7.201000	7.681000	2.300000	7.441000
0.120000	Normal	0.150000	Activity	9.100e-005	7.201000	7.681000	2.300000	7.441000
0.120000	Normal	0.250000	Activity	2.516e-005	7.238000	7.718000	2.300000	7.478000
0.120000	Normal	0.100000	Activity	2.516e-005	7.238000	7.718000	2.300000	7.478000
0.120000	Normal	0.150000	Activity	2.516e-005	7.238000	7.718000	2.300000	7.478000
0.120000	Normal	0.100000	Activity	2.516e-005	7.238000	7.718000	2.300000	7.478000

**Rupture Length Parameters**

Rupture Dimensioning		A1	B1	Sig1	Aw	Bw	Sigw	Aa
Ba	Sigw							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

**Trace Coordinates:**

Latitude	Longitude
33.3409	-117.0082
33.3703	-117.0152
33.3914	-117.0309
33.4230	-117.0533
33.4975	-117.1417
33.5289	-117.1721
33.5590	-117.2045
33.6116	-117.2810
33.6852	-117.3727
33.7045	-117.4026
33.7185	-117.4242
33.7318	-117.4457
33.7451	-117.4633
33.8129	-117.5480
33.8289	-117.5900
33.8511	-117.6360
33.8733	-117.7170
33.9074	-117.7920

33.9297 -117.8520  
 33.9712 -117.9920  
 33.9950 -118.0480

Name: Elsinore;W+GI+T+J  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.45000000  
 Deterministic Magnitude: 7.766

Fault Profile Parameters:

Dipl	Dip2	Depth1	Depth2	Depth3
90	83.8	0	0.001	15.91

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
	Deltal	Delta2						
0.120000	Normal	0.25	Activity	2.516e-005	7.526000	8.006000	2.300000	7.766000
0.120000	Normal	0.100000	Activity	2.516e-005	7.526000	8.006000	2.300000	7.766000
0.120000	Normal	0.150000	Activity	2.516e-005	7.526000	8.006000	2.300000	7.766000
0.120000	Normal	0.250000	Activity	2.516e-005	7.482000	7.962000	2.300000	7.722000
0.120000	Normal	0.100000	Activity	2.516e-005	7.482000	7.962000	2.300000	7.722000
0.120000	Normal	0.150000	Activity	2.516e-005	7.482000	7.962000	2.300000	7.722000
0.120000	Normal	0.100000	Activity	2.516e-005	7.482000	7.962000	2.300000	7.722000

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sigl	Aw	Bw	Sigw	Aa
Ba Sigw							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							

Trace Coordinates:

Latitude	Longitude
32.9496	-116.3557
32.9826	-116.4070
33.0109	-116.4602
33.0493	-116.5192
33.1225	-116.6280
33.1781	-116.6903
33.2087	-116.7292

33.2465 -116.7910  
 33.2790 -116.8440  
 33.3320 -116.9520  
 33.3409 -117.0082  
 33.3703 -117.0152  
 33.3914 -117.0309  
 33.4230 -117.0533  
 33.4975 -117.1417  
 33.5289 -117.1721  
 33.5590 -117.2045  
 33.6116 -117.2810  
 33.6852 -117.3727  
 33.7045 -117.4026  
 33.7185 -117.4242  
 33.7318 -117.4457  
 33.7451 -117.4633  
 33.8129 -117.5480  
 33.8289 -117.5900  
 33.8511 -117.6360  
 33.8733 -117.7170  
 33.9074 -117.7920  
 33.9297 -117.8520  
 33.9712 -117.9920  
 33.9950 -118.0480

Name: Elsinore;W+GI+T+J+CM  
 Region: USGS 2008 California  
 Category: Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.4500000  
 Deterministic Magnitude: 7.849

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	83.5	0	0.001	15.9

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	2.516e-005	7.609000	8.089000	2.300000	7.849000
0.120000	Normal	0.100000	Activity	2.516e-005	7.609000	8.089000	2.300000	7.849000
0.120000	Normal	0.150000	Activity	2.516e-005	7.609000	8.089000	2.300000	7.849000
0.120000	Normal	0.250000	Activity	2.516e-005	7.545000	8.025000	2.300000	7.785000
0.120000	Normal	0.100000	Activity	2.516e-005	7.545000	8.025000	2.300000	7.785000
0.120000	Normal	0.150000	Activity	2.516e-005	7.545000	8.025000	2.300000	7.785000
0.120000	Normal	0.100000	Activity	2.516e-005	7.545000	8.025000	2.300000	7.785000
0.120000	Normal	0.150000	Activity	2.516e-005	7.545000	8.025000	2.300000	7.785000

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sig1	Aw	Bw	Sigw	Aa
Ba Sigw Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

```
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
```

Trace Coordinates:

Latitude	Longitude
32.7790	-116.0060
32.8144	-116.0990
32.8377	-116.1780
32.8892	-116.2302
32.9308	-116.2644
32.9748	-116.3367
32.9496	-116.3557
32.9826	-116.4070
33.0109	-116.4602
33.0493	-116.5192
33.1225	-116.6280
33.1781	-116.6903
33.2087	-116.7292
33.2465	-116.7910
33.2790	-116.8440
33.3320	-116.9520
33.3409	-117.0082
33.3703	-117.0152
33.3914	-117.0309
33.4230	-117.0533
33.4975	-117.1417
33.5289	-117.1721
33.5590	-117.2045
33.6116	-117.2810
33.6852	-117.3727
33.7045	-117.4026
33.7185	-117.4242
33.7318	-117.4457
33.7451	-117.4633
33.8129	-117.5480
33.8289	-117.5900
33.8511	-117.6360
33.8733	-117.7170
33.9074	-117.7920
33.9297	-117.8520
33.9712	-117.9920
33.9950	-118.0480

----- End Nested Sources for Elsinore -----

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA



1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: Garlock  
 Region: USGS 2008 California  
 Category: Composite Seismic Source  
 Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
 \USGS 2008 Lower 48.bin-ssdb  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 1  
 ----- Start Nested Sources for Garlock -----

Name: Garlock  
 Region: USGS 2008 California  
 Category: Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.1000000  
 Deterministic Magnitude: 7.7

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0.3	0.301	12.3

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.000000	Exponential	0.25	Activity	5.235e-003	6.500000	7.700000	0.000000	0.000000
0.000000	Exponential	0.100000	Activity	5.235e-003	6.500000	7.700000	0.000000	0.000000
0.000000	Exponential	0.150000	Activity	5.235e-003	6.500000	7.700000	0.000000	0.000000
0.000000	Exponential	0.250000	Activity	5.235e-003	6.500000	7.700000	0.000000	0.000000
0.000000	Exponential	0.100000	Activity	5.235e-003	6.500000	7.700000	0.000000	0.000000
0.000000	Exponential	0.150000	Activity	5.235e-003	6.500000	7.700000	0.000000	0.000000

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sig1	Aw	Bw	Sigw	Aa
Ba Sigw Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000 Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000 Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000 Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000 Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000 Area	--	--	--	--	--	--	-4.153061

Trace Coordinates:

Latitude	Longitude
35.5904	-116.3797
35.5864	-116.4670
35.5936	-116.5908
35.5967	-116.8180
35.5983	-116.8789
35.6018	-117.0107
35.5676	-117.1579
35.4972	-117.4869
35.4232	-117.7493
35.2835	-118.0240
35.2713	-118.0103
35.2233	-118.0613
35.1865	-118.1191
35.0788	-118.3326
35.0477	-118.3754
34.9958	-118.4747
34.9314	-118.6670
34.8822	-118.7708
34.8492	-118.8228
34.8284	-118.8712
34.8236	-118.9183

Name: Garlock;GC  
 Region: USGS 2008 California  
 Category: Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 7.306

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	12

Magnitude Recurrence Distributions:

Sigma	ModelType	Delta1	Delta2	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.010000	0.25	10.000000	Activity	7.888e-005	7.066000	7.546000	2.300000	7.306000
0.120000	Normal	0.010000	0.250000	10.000000	Activity	7.888e-005	6.971000	7.451000	2.300000	7.211000
0.120000	Normal	0.010000	0.125000	10.000000	Activity	8.351e-005	6.971000	7.451000	2.300000	7.211000
0.120000	Normal	0.010000	0.050000	10.000000	Activity	8.351e-005	6.971000	7.451000	2.300000	7.211000
0.120000	Normal	0.010000	0.075000	10.000000	Activity	8.351e-005	6.971000	7.451000	2.300000	7.211000
0.120000	Normal	0.010000	0.125000	10.000000	Activity	9.306e-005	7.066000	7.546000	2.300000	7.306000
0.120000	Normal	0.010000	0.050000	10.000000	Activity	9.306e-005	7.066000	7.546000	2.300000	7.306000
0.120000	Normal	0.010000	0.075000	10.000000	Activity	9.306e-005	7.066000	7.546000	2.300000	7.306000
0.120000	Normal	0.010000	0.075000	10.000000	Activity	9.306e-005	7.066000	7.546000	2.300000	7.306000

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sigl	Aw	Bw	Sigw	Aa
Ba							
Sigw							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							

Trace Coordinates:

Latitude	Longitude
35.2835	-118.0240
35.4232	-117.7493
35.4972	-117.4869
35.5676	-117.1579
35.6018	-117.0107
35.5983	-116.8789

Name: Garlock;GC+GW  
 Region: USGS 2008 California  
 Category: Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 7.616

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0.4	0.401	12.4

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	3.155e-004	7.369000	7.849000	2.300000	7.609000
0.120000	Normal	0.250000	Activity	3.155e-004	7.376000	7.856000	2.300000	7.616000
0.120000	Normal	0.125000	Activity	5.506e-004	7.376000	7.856000	2.300000	7.616000
0.120000	Normal	0.050000	Activity	5.506e-004	7.376000	7.856000	2.300000	7.616000
0.120000	Normal	0.075000	Activity	5.506e-004	7.376000	7.856000	2.300000	7.616000
0.120000	Normal	0.125000	Activity	6.016e-004	7.369000	7.849000	2.300000	7.609000
0.120000	Normal	0.050000	Activity	6.016e-004	7.369000	7.849000	2.300000	7.609000

0.120000 0.010000 10.000000  
 Normal 0.075000 Activity 6.016e-004 7.369000 7.849000 2.300000 7.609000  
 0.120000 0.010000 10.000000

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba							
Sigw							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--

Trace Coordinates:

Latitude	Longitude
34.8236	-118.9183
34.8284	-118.8712
34.8492	-118.8228
34.8822	-118.7708
34.9314	-118.6670
34.9958	-118.4747
35.0477	-118.3754
35.0788	-118.3326
35.1865	-118.1191
35.2233	-118.0613
35.2713	-118.0103
35.2835	-118.0240
35.4232	-117.7493
35.4972	-117.4869
35.5676	-117.1579
35.6018	-117.0107
35.5983	-116.8789

Name: Garlock;GE  
 Region: USGS 2008 California  
 Category: Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 6.915

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	12

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
	Normal	0.25	Activity	6.840e-004	6.675000	7.155000	2.300000	6.915000
0.120000	0.010000	10.000000	Activity	6.840e-004	6.455000	6.935000	2.300000	6.695000
	Normal	0.250000	Activity	6.840e-004	6.455000	6.935000	2.300000	6.695000
0.120000	0.010000	10.000000	Activity	6.258e-004	6.455000	6.935000	2.300000	6.695000
	Normal	0.125000	Activity	6.258e-004	6.455000	6.935000	2.300000	6.695000
0.120000	0.010000	10.000000	Activity	6.258e-004	6.455000	6.935000	2.300000	6.695000
	Normal	0.050000	Activity	6.258e-004	6.455000	6.935000	2.300000	6.695000
0.120000	0.010000	10.000000	Activity	6.258e-004	6.455000	6.935000	2.300000	6.695000
	Normal	0.075000	Activity	6.258e-004	6.455000	6.935000	2.300000	6.695000
0.120000	0.010000	10.000000	Activity	3.614e-004	6.675000	7.155000	2.300000	6.915000
	Normal	0.125000	Activity	3.614e-004	6.675000	7.155000	2.300000	6.915000
0.120000	0.010000	10.000000	Activity	3.614e-004	6.675000	7.155000	2.300000	6.915000
	Normal	0.050000	Activity	3.614e-004	6.675000	7.155000	2.300000	6.915000
0.120000	0.010000	10.000000	Activity	3.614e-004	6.675000	7.155000	2.300000	6.915000
	Normal	0.075000	Activity	3.614e-004	6.675000	7.155000	2.300000	6.915000
0.120000	0.010000	10.000000	Activity	3.614e-004	6.675000	7.155000	2.300000	6.915000

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba Sigw							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							

Trace Coordinates:

Latitude	Longitude
35.5983	-116.8789
35.5967	-116.8180
35.5936	-116.5908
35.5864	-116.4670
35.5904	-116.3797

Name: Garlock;GE+GC  
 Region: USGS 2008 California  
 Category: Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 7.454

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3

90 90 0 0.001 12

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
	Delta1	Delta2						
0.120000	Normal	0.25	Activity	7.888e-005	7.214000	7.694000	2.300000	7.454000
	0.010000	10.000000						
0.120000	Normal	0.250000	Activity	7.888e-005	7.169000	7.649000	2.300000	7.409000
	0.010000	10.000000						
0.120000	Normal	0.125000	Activity	8.357e-005	7.169000	7.649000	2.300000	7.409000
	0.010000	10.000000						
0.120000	Normal	0.050000	Activity	8.357e-005	7.169000	7.649000	2.300000	7.409000
	0.010000	10.000000						
0.120000	Normal	0.075000	Activity	8.357e-005	7.169000	7.649000	2.300000	7.409000
	0.010000	10.000000						
0.120000	Normal	0.125000	Activity	8.999e-005	7.214000	7.694000	2.300000	7.454000
	0.010000	10.000000						
0.120000	Normal	0.050000	Activity	8.999e-005	7.214000	7.694000	2.300000	7.454000
	0.010000	10.000000						
0.120000	Normal	0.075000	Activity	8.999e-005	7.214000	7.694000	2.300000	7.454000
	0.010000	10.000000						

Rupture Length Parameters

Rupture Dimensioning		Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							

Trace Coordinates:

Latitude	Longitude
35.5904	-116.3797
35.5864	-116.4670
35.5936	-116.5908
35.5967	-116.8180
35.5983	-116.8789
35.6018	-117.0107
35.5676	-117.1579
35.4972	-117.4869
35.4232	-117.7493
35.2835	-118.0240

Name: Garlock;GE+GC+GW  
 Region: USGS 2008 California

Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 7.723

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0.3	0.301	12.3

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	3.155e-004	7.449000	7.929000	2.300000	7.689000
0.120000	Normal	0.250000	Activity	3.155e-004	7.483000	7.963000	2.300000	7.723000
0.120000	Normal	0.125000	Activity	5.775e-004	7.483000	7.963000	2.300000	7.723000
0.120000	Normal	0.050000	Activity	5.775e-004	7.483000	7.963000	2.300000	7.723000
0.120000	Normal	0.075000	Activity	5.775e-004	7.483000	7.963000	2.300000	7.723000
0.120000	Normal	0.125000	Activity	5.885e-004	7.449000	7.929000	2.300000	7.689000
0.120000	Normal	0.050000	Activity	5.885e-004	7.449000	7.929000	2.300000	7.689000
0.120000	Normal	0.075000	Activity	5.885e-004	7.449000	7.929000	2.300000	7.689000
0.120000	Normal	0.075000	Activity	5.885e-004	7.449000	7.929000	2.300000	7.689000

Rupture Length Parameters

Ba	Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

Trace Coordinates:

Latitude	Longitude
35.5904	-116.3797
35.5864	-116.4670
35.5936	-116.5908
35.5967	-116.8180
35.5983	-116.8789

35.6018 -117.0107  
 35.5676 -117.1579  
 35.4972 -117.4869  
 35.4232 -117.7493  
 35.2835 -118.0240  
 35.2713 -118.0103  
 35.2233 -118.0613  
 35.1865 -118.1191  
 35.0788 -118.3326  
 35.0477 -118.3754  
 34.9958 -118.4747  
 34.9314 -118.6670  
 34.8822 -118.7708  
 34.8492 -118.8228  
 34.8284 -118.8712  
 34.8236 -118.9183

Name: Garlock;GW  
 Region: USGS 2008 California  
 Category: Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 7.311

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0.7	0.701	13.7

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	2.374e-004	7.071000	7.551000	2.300000	7.311000
0.120000	Normal	0.250000	Activity	2.374e-004	6.978000	7.458000	2.300000	7.218000
0.120000	Normal	0.125000	Activity	2.614e-004	6.978000	7.458000	2.300000	7.218000
0.120000	Normal	0.050000	Activity	2.614e-004	6.978000	7.458000	2.300000	7.218000
0.120000	Normal	0.075000	Activity	2.614e-004	6.978000	7.458000	2.300000	7.218000
0.120000	Normal	0.125000	Activity	2.195e-004	7.071000	7.551000	2.300000	7.311000
0.120000	Normal	0.050000	Activity	2.195e-004	7.071000	7.551000	2.300000	7.311000
0.120000	Normal	0.075000	Activity	2.195e-004	7.071000	7.551000	2.300000	7.311000
0.120000	Normal	0.075000	Activity	2.195e-004	7.071000	7.551000	2.300000	7.311000

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sig1	Aw	Bw	Sigw	Aa
Ba Sigw Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
-- --	--	--	--	--	--	--	--
-- Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
-- --	--	--	--	--	--	--	--
-- Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--



```
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
```

Trace Coordinates:

Latitude	Longitude
34.8236	-118.9183
34.8284	-118.8712
34.8492	-118.8228
34.8822	-118.7708
34.9314	-118.6670
34.9958	-118.4747
35.0477	-118.3754
35.0788	-118.3326
35.1865	-118.1191
35.2233	-118.0613
35.2713	-118.0103

----- End Nested Sources for Garlock -----

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: Malibu Coast  
 Region: USGS 2008 California  
 Category:Composite Seismic Source  
 Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
 \USGS 2008 Lower 48.bin-ssdb  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 1  
 ----- Start Nested Sources forMalibu Coast -----

Name: Malibu Coast, alt 1  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.50000000  
 Deterministic Magnitude: 6.7

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	75	0	0.001	7.727

Magnitude Recurrence Distributions:

Sigma	ModelType	Delta1	Weight	Delta2	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.010000	0.083333	10.000000	Activity	1.827e-004	6.460000	6.940000	2.300000	6.700000
0.120000	Normal	0.010000	0.083330	10.000000	Activity	3.645e-004	6.260000	6.740000	2.300000	6.500000
0.000000	Exponential	0.000000	0.083335	0.000000	Activity	2.779e-004	6.500000	6.700000	1.842068	0.000000
0.000000	Exponential	0.000000	0.083335	0.000000	Activity	2.732e-004	6.500000	6.700000	0.000000	0.000000
0.000000	Characteristic	0.010000	0.166670	10.000000	Activity	3.917e-004	6.499000	6.501000	2.300000	0.000000
0.120000	Normal	0.010000	0.166670	10.000000	Activity	1.827e-004	6.460000	6.940000	2.300000	6.700000
0.120000	Normal	0.010000	0.166670	10.000000	Activity	3.645e-004	6.260000	6.740000	2.300000	6.500000
0.000000	Exponential	0.000000	0.041665	0.000000	Activity	2.779e-004	6.500000	6.700000	1.842068	0.000000
0.000000	Exponential	0.000000	0.041665	0.000000	Activity	2.732e-004	6.500000	6.700000	0.000000	0.000000
0.000000	Characteristic	0.010000	0.083330	10.000000	Activity	3.917e-004	6.499000	6.501000	2.300000	0.000000

Rupture Length Parameters

Rupture	Dimensioning	A1	B1	Sig1	Aw	Bw	Sigw	Aa
Ba	Sigw							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

Trace Coordinates:

Latitude	Longitude
34.0287	-118.5250
34.0374	-118.6200
34.0392	-118.6800
34.0323	-118.7270
34.0330	-118.7980
34.0464	-118.9330

Name: Malibu Coast, alt 2  
 Region: USGS 2008 California  
 Category: Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.50000000  
 Deterministic Magnitude: 7

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	74	0	0.001	16.34

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.16667	Activity	1.386e-004	6.760000	7.240000	2.300000	7.000000
0.120000	Normal	0.166670	Activity	2.766e-004	6.560000	7.040000	2.300000	6.800000
0.000000	Exponential	0.041665	Activity	3.565e-004	6.500000	7.000000	1.842068	0.000000
0.000000	Exponential	0.041665	Activity	3.144e-004	6.500000	7.000000	0.000000	0.000000
0.000000	Exponential	0.041665	Activity	5.009e-004	6.500000	6.800000	1.842068	0.000000
0.000000	Exponential	0.041665	Activity	4.796e-004	6.500000	6.800000	0.000000	0.000000
0.120000	Normal	0.166670	Activity	1.386e-004	6.760000	7.240000	2.300000	7.000000
0.120000	Normal	0.166670	Activity	2.766e-004	6.560000	7.040000	2.300000	6.800000
0.000000	Exponential	0.041665	Activity	3.565e-004	6.500000	7.000000	1.842068	0.000000
0.000000	Exponential	0.041665	Activity	3.144e-004	6.500000	7.000000	0.000000	0.000000
0.000000	Exponential	0.041665	Activity	5.009e-004	6.500000	6.800000	1.842068	0.000000
0.000000	Exponential	0.041665	Activity	4.796e-004	6.500000	6.800000	0.000000	0.000000

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Area	--	--	--	--	--	--	-4.153061
Area	--	--	--	--	--	--	-4.153061
Area	--	--	--	--	--	--	-4.153061
Area	--	--	--	--	--	--	-4.153061
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

```

    Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--
    Area -- -- -- -- -- -- -4.153061
1.020408 0.240000
    Area -- -- -- -- -- -- -4.153061
1.020408 0.240000
    Area -- -- -- -- -- -- -4.153061
1.020408 0.240000
    Area -- -- -- -- -- -- -4.153061
1.020408 0.240000
    
```

Trace Coordinates:

```

Latitude Longitude
34.0287 -118.5250
34.0374 -118.6200
34.0392 -118.6800
34.0323 -118.7270
34.0330 -118.7980
34.0464 -118.9330
    
```

----- End Nested Sources for Malibu Coast -----

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: Newport-Inglewood  
 Region: USGS 2008 California  
 Category:Composite Seismic Source  
 Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
 \USGS 2008 Lower 48.bin-ssdb  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 1

----- Start Nested Sources forNewport-Inglewood -----

Name: Newport Inglewood Connected al  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.16660000  
 Deterministic Magnitude: 7.5

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	11

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.000000	Exponential	0.125	Activity	2.205e-003	6.500000	7.500000	1.842068	0.000000
0.000000	Exponential	0.125000	Activity	1.360e-003	6.500000	7.500000	1.842068	0.000000

```

0.000000 0.000000 0.000000
    Exponential 0.125000 Activity 2.205e-003 6.500000 7.500000 1.842068 0.000000
0.000000 0.000000 0.000000
    Exponential 0.125000 Activity 1.360e-003 6.500000 7.500000 1.842068 0.000000
0.000000 0.000000 0.000000
    Exponential 0.125000 Activity 2.213e-003 6.500000 7.500000 1.842068 0.000000
0.000000 0.000000 0.000000
    Exponential 0.125000 Activity 1.366e-003 6.500000 7.500000 1.842068 0.000000
0.000000 0.000000 0.000000
    Exponential 0.125000 Activity 2.213e-003 6.500000 7.500000 1.842068 0.000000
0.000000 0.000000 0.000000
    Exponential 0.125000 Activity 1.366e-003 6.500000 7.500000 1.842068 0.000000
0.000000 0.000000 0.000000
    
```

Rupture Length Parameters

Rupture Dimensioning		A1	B1	Sig1	Aw	Bw	Sigw	Aa
Ba	Sigw							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061

Trace Coordinates:

Latitude	Longitude
32.5603	-117.1473
32.6033	-117.1505
32.6478	-117.1654
32.7099	-117.1621
32.7290	-117.1704
32.7595	-117.1976
32.8011	-117.2100
32.8355	-117.2413
32.8545	-117.2636
33.0189	-117.3251
33.0858	-117.3769
33.0971	-117.3961
33.1082	-117.4110
33.1225	-117.4234
33.1559	-117.4291
33.2163	-117.4870
33.2515	-117.5473
33.4024	-117.6882
33.5080	-117.7989
33.5910	-117.9146
33.6127	-117.9340

33.6745 -117.9930  
 33.7045 -118.0436  
 33.7179 -118.0630  
 33.7355 -118.0757  
 33.7649 -118.1138  
 33.7887 -118.1504  
 33.8267 -118.2057  
 33.8321 -118.2128  
 33.8438 -118.2322  
 33.8847 -118.2643  
 33.9115 -118.2881  
 33.9306 -118.3038  
 33.9333 -118.3182  
 33.9479 -118.3288  
 33.9616 -118.3531  
 33.9888 -118.3603  
 34.0024 -118.3672  
 34.0433 -118.3896

Name: Newport Inglewood Connected alt 1  
 Region: USGS 2008 California  
 Category: Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.16667000  
 Deterministic Magnitude: 7.5

**Fault Profile Parameters:**

Dip1	Dip2	Depth1	Depth2	Depth3
90	89.1	0	0.001	11

**Magnitude Recurrence Distributions:**

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.5	Activity	3.531e-004	7.260000	7.740000	2.300000	7.500000
0.120000	Normal	0.500000	Activity	3.531e-004	7.260000	7.740000	2.300000	7.500000

**Rupture Length Parameters**

Rupture Dimensioning	A1	B1	Sig1	Aw	Bw	Sigw	Aa
Ba							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							

**Trace Coordinates:**

Latitude	Longitude
32.5603	-117.1473
32.6033	-117.1505
32.6478	-117.1654
32.7099	-117.1621
32.7290	-117.1704
32.7595	-117.1976
32.8011	-117.2100
32.8355	-117.2413

32.8545 -117.2636  
 33.0189 -117.3251  
 33.0858 -117.3769  
 33.0971 -117.3961  
 33.1082 -117.4110  
 33.1225 -117.4234  
 33.1559 -117.4291  
 33.2163 -117.4870  
 33.2515 -117.5473  
 33.4024 -117.6882  
 33.5080 -117.7989  
 33.5910 -117.9146  
 33.6127 -117.9340  
 33.6745 -117.9930  
 33.7045 -118.0436  
 33.7179 -118.0630  
 33.7355 -118.0757  
 33.7649 -118.1138  
 33.7887 -118.1504  
 33.8267 -118.2057  
 33.8321 -118.2128  
 33.8438 -118.2322  
 33.8847 -118.2643  
 33.9115 -118.2881  
 33.9306 -118.3038  
 33.9333 -118.3182  
 33.9479 -118.3288  
 33.9616 -118.3531  
 33.9888 -118.3603  
 34.0024 -118.3672  
 34.0433 -118.3896

Name: Newport Inglewood Connected alt 2  
 Region: USGS 2008 California  
 Category: Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.16667000  
 Deterministic Magnitude: 7.5

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	11

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.5	Activity	3.546e-004	7.260000	7.740000	2.300000	7.500000
0.120000	Normal	0.500000	Activity	3.546e-004	7.260000	7.740000	2.300000	7.500000

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sig1	Aw	Bw	Sigw	Aa
Ba							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--						

Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --  
 -- --

Trace Coordinates:

Latitude	Longitude
32.5603	-117.1473
32.6033	-117.1505
32.6478	-117.1654
32.7099	-117.1621
32.7290	-117.1704
32.7595	-117.1976
32.8011	-117.2100
32.8355	-117.2413
32.8545	-117.2636
33.0189	-117.3251
33.0858	-117.3769
33.0971	-117.3961
33.1082	-117.4110
33.1225	-117.4234
33.1559	-117.4291
33.2163	-117.4870
33.2515	-117.5473
33.4024	-117.6882
33.5080	-117.7989
33.5910	-117.9146
33.6060	-117.9247
33.6780	-117.9949
33.6954	-118.0326
33.7512	-118.0927
33.8204	-118.1951
33.8503	-118.2157
33.8715	-118.2479
33.9132	-118.2811
33.9566	-118.3315
34.0433	-118.3896

Name: Newport-Inglewood (Offshore)  
 Region: USGS 2008 California  
 Category: Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.50000000  
 Deterministic Magnitude: 7

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	10

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.08333	Activity	7.198e-004	6.760000	7.240000	2.300000	7.000000
0.120000	Normal	0.083330	Activity	1.436e-003	6.560000	7.040000	2.300000	6.800000
0.000000	Exponential	0.083335	Activity	1.851e-003	6.500000	7.000000	1.842068	0.000000



```

    Exponential 0.083335 Activity 1.632e-003 6.500000 7.000000 0.000000 0.000000
0.000000 0.000000 0.000000
    Exponential 0.083335 Activity 2.601e-003 6.500000 6.800000 1.842068 0.000000
0.000000 0.000000 0.000000
    Exponential 0.083335 Activity 2.490e-003 6.500000 6.800000 0.000000 0.000000
0.000000 0.000000 0.000000
    Normal 0.166670 Activity 7.198e-004 6.760000 7.240000 2.300000 7.000000
0.120000 0.010000 10.000000
    Normal 0.166670 Activity 1.436e-003 6.560000 7.040000 2.300000 6.800000
0.120000 0.010000 10.000000
    Exponential 0.041665 Activity 1.851e-003 6.500000 7.000000 1.842068 0.000000
0.000000 0.000000 0.000000
    Exponential 0.041665 Activity 1.632e-003 6.500000 7.000000 0.000000 0.000000
0.000000 0.000000 0.000000
    Exponential 0.041665 Activity 2.601e-003 6.500000 6.800000 1.842068 0.000000
0.000000 0.000000 0.000000
    Exponential 0.041665 Activity 2.490e-003 6.500000 6.800000 0.000000 0.000000
0.000000 0.000000 0.000000
    
```

Rupture Length Parameters

Rupture Dimensioning		Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							
	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000							

Trace Coordinates:

Latitude	Longitude
33.5910	-117.9146
33.5080	-117.7989
33.4024	-117.6882
33.2515	-117.5473
33.2163	-117.4870
33.1559	-117.4291

Name: Newport-Inglewood, alt 1

Region: USGS 2008 California  
 Category: Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.25000000  
 Deterministic Magnitude: 7.2

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	88	0	0.001	14.99

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.166666	Activity	3.481e-004	6.960000	7.440000	2.300000	7.200000
0.120000	Normal	0.166666	Activity	4.916e-004	6.860000	7.340000	2.300000	7.100000
0.000000	Exponential	0.166670	Activity	1.274e-003	6.500000	7.200000	1.842068	0.000000
0.000000	Exponential	0.166670	Activity	9.976e-004	6.500000	7.200000	0.000000	0.000000
0.000000	Exponential	0.166670	Activity	1.508e-003	6.500000	7.100000	1.842068	0.000000
0.000000	Exponential	0.166670	Activity	1.259e-003	6.500000	7.100000	0.000000	0.000000

Rupture Length Parameters

Rupture Dimensioning	Al	B1	Sig1	Aw	Bw	Sigw	Aa
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Area	--	--	--	--	--	--	-4.153061
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Area	--	--	--	--	--	--	-4.153061
Area	--	--	--	--	--	--	-4.153061
Area	--	--	--	--	--	--	-4.153061

Trace Coordinates:

Latitude	Longitude
33.6127	-117.9340
33.6745	-117.9930
33.7045	-118.0436
33.7179	-118.0630
33.7355	-118.0757
33.7649	-118.1138
33.7887	-118.1504
33.8267	-118.2057
33.8321	-118.2128
33.8438	-118.2322
33.8847	-118.2643
33.9115	-118.2881

33.9306 -118.3038  
 33.9333 -118.3182  
 33.9479 -118.3288  
 33.9616 -118.3531  
 33.9888 -118.3603  
 34.0024 -118.3672  
 34.0433 -118.3896

Name: Newport-Inglewood, alt 2  
 Region: USGS 2008 California  
 Category: Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.25000000  
 Deterministic Magnitude: 7.2

Fault Profile Parameters:  

Dipl	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	15

Magnitude Recurrence Distributions:  

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.33334	Activity	3.521e-004	6.960000	7.440000	2.300000	7.200000
0.120000	Normal	0.333340	Activity	4.973e-004	6.860000	7.340000	2.300000	7.100000
0.000000	Exponential	0.083330	Activity	1.289e-003	6.500000	7.200000	1.842068	0.000000
0.000000	Exponential	0.083330	Activity	1.009e-003	6.500000	7.200000	0.000000	0.000000
0.000000	Exponential	0.083330	Activity	1.525e-003	6.500000	7.100000	1.842068	0.000000
0.000000	Exponential	0.083330	Activity	1.273e-003	6.500000	7.100000	0.000000	0.000000

Rupture Length Parameters  

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Area	--	--	--	--	--	--	-4.153061
Area	--	--	--	--	--	--	-4.153061
Area	--	--	--	--	--	--	-4.153061
Area	--	--	--	--	--	--	-4.153061

Trace Coordinates:  

Latitude	Longitude
33.6060	-117.9247
33.6780	-117.9949
33.6954	-118.0326

33.7512 -118.0927  
 33.8204 -118.1951  
 33.8503 -118.2157  
 33.8715 -118.2479  
 33.9132 -118.2811  
 33.9566 -118.3315  
 34.0433 -118.3896

----- End Nested Sources for Newport-Inglewood -----

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

Name: Southern San Andreas  
 Region: USGS 2008 California  
 Category:Composite Seismic Source  
 Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files  
 \USGS 2008 Lower 48.bin-ssdb  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 1

----- Start Nested Sources for Southern San Andreas -----

Name: S. San Andreas  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.10000000  
 Deterministic Magnitude: 8.2

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	86.1	0.1	0.101	13.07

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
Delta1	Delta2							
0.000000	Exponential	0.25	Activity	2.233e-002	6.500000	8.000000	0.000000	0.000000
0.000000	Exponential	0.100000	Activity	2.080e-002	6.500000	8.000000	0.000000	0.000000
0.000000	Exponential	0.150000	Activity	2.296e-002	6.500000	8.000000	0.000000	0.000000
0.000000	Exponential	0.250000	Activity	1.265e-002	6.500000	8.200000	0.000000	0.000000
0.000000	Exponential	0.100000	Activity	1.178e-002	6.500000	8.200000	0.000000	0.000000
0.000000	Exponential	0.150000	Activity	1.300e-002	6.500000	8.200000	0.000000	0.000000

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sig1	Aw	Bw	Sigw	Aa
----------------------	----	----	------	----	----	------	----

Ba	Sigw	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000	Area	--	--	--	--	--	--	-4.153061
1.020408	0.240000	Area	--	--	--	--	--	--	-4.153061

Trace Coordinates:

Latitude	Longitude
33.3501	-115.7119
33.7882	-116.2463
33.8485	-116.3830
33.8481	-116.4265
33.8847	-116.5169
33.9070	-116.5849
33.9176	-116.6239
33.9442	-116.6858
33.9374	-116.7786
33.9532	-116.8014
33.9591	-116.8198
34.0114	-116.8735
34.0338	-116.9024
34.0738	-117.0139
34.0928	-117.0677
34.1500	-117.2220
34.1731	-117.2742
34.2328	-117.3887
34.2709	-117.4510
34.3163	-117.5490
34.4029	-117.7536
34.5478	-118.1039
34.6985	-118.5090
34.7732	-118.7673
34.8072	-118.8876
34.8076	-118.8901
34.8290	-119.0301
34.8639	-119.2100
34.9157	-119.3629
34.9441	-119.4029
34.9878	-119.4711
35.0475	-119.5583
35.1607	-119.7068
35.3142	-119.8660
35.4139	-119.9703
35.5333	-120.0867
35.7520	-120.3001
36.0027	-120.5609

Name: S. San Andreas;BB  
Region: USGS 2008 California

Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 7.076

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	15

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	3.020e-004	6.836000	7.316000	2.300000	7.076000
0.120000	Normal	0.250000	Activity	3.020e-004	6.664000	7.144000	2.300000	6.904000
0.120000	Normal	0.125000	Activity	5.293e-004	6.664000	7.144000	2.300000	6.904000
0.120000	Normal	0.050000	Activity	5.399e-004	6.664000	7.144000	2.300000	6.904000
0.120000	Normal	0.075000	Activity	5.158e-004	6.664000	7.144000	2.300000	6.904000
0.120000	Normal	0.125000	Activity	5.762e-004	6.836000	7.316000	2.300000	7.076000
0.120000	Normal	0.050000	Activity	5.818e-004	6.836000	7.316000	2.300000	7.076000
0.120000	Normal	0.075000	Activity	5.644e-004	6.836000	7.316000	2.300000	7.076000

Rupture Length Parameters

Ba	Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

Trace Coordinates:

Latitude	Longitude
34.9441	-119.4029
34.9157	-119.3629
34.8639	-119.2100
34.8290	-119.0301
34.8076	-118.8901

Name: S. San Andreas;BB+NM  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.45000000  
 Deterministic Magnitude: 7.316

Fault Profile Parameters:

Dipl	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	15

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	1.007e-006	6.985000	7.465000	2.300000	7.225000
0.120000	Normal	0.100000	Activity	1.007e-006	6.985000	7.465000	2.300000	7.225000
0.120000	Normal	0.150000	Activity	1.007e-006	6.985000	7.465000	2.300000	7.225000
0.120000	Normal	0.250000	Activity	1.007e-006	7.076000	7.556000	2.300000	7.316000
0.120000	Normal	0.100000	Activity	1.007e-006	7.076000	7.556000	2.300000	7.316000
0.120000	Normal	0.150000	Activity	1.007e-006	7.076000	7.556000	2.300000	7.316000
0.120000	Normal	0.100000	Activity	1.007e-006	7.076000	7.556000	2.300000	7.316000

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sig1	Aw	Bw	Sigw	Aa
Ba							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

Trace Coordinates:

Latitude	Longitude
34.9441	-119.4029
34.9157	-119.3629
34.8639	-119.2100
34.8290	-119.0301
34.8076	-118.8901
34.8072	-118.8876
34.7732	-118.7673
34.6985	-118.5090

Name: S. San Andreas;BB+NM+SM

Region: USGS 2008 California  
 Category: Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 7.62

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	14

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	2.516e-004	7.373000	7.853000	2.300000	7.613000
0.120000	Normal	0.250000	Activity	2.516e-004	7.380000	7.860000	2.300000	7.620000
0.120000	Normal	0.125000	Activity	2.670e-004	7.380000	7.860000	2.300000	7.620000
0.120000	Normal	0.050000	Activity	2.691e-004	7.380000	7.860000	2.300000	7.620000
0.120000	Normal	0.075000	Activity	2.424e-004	7.380000	7.860000	2.300000	7.620000
0.120000	Normal	0.125000	Activity	1.888e-004	7.373000	7.853000	2.300000	7.613000
0.120000	Normal	0.050000	Activity	1.909e-004	7.373000	7.853000	2.300000	7.613000
0.120000	Normal	0.075000	Activity	1.787e-004	7.373000	7.853000	2.300000	7.613000

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sig1	Aw	Bw	Sigw	Aa
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

Trace Coordinates:

Latitude	Longitude
34.9441	-119.4029
34.9157	-119.3629
34.8639	-119.2100
34.8290	-119.0301



34.8076 -118.8901  
 34.8072 -118.8876  
 34.7732 -118.7673  
 34.6985 -118.5090  
 34.5478 -118.1039  
 34.4029 -117.7536  
 34.3163 -117.5490

Name: S. San Andreas;BB+NM+SM+NSB  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.45000000  
 Deterministic Magnitude: 7.714

Fault Profile Parameters:

Dipl	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	14

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
	Delta1	Delta2						
0.120000	Normal	0.25	Activity	1.007e-006	7.474000	7.954000	2.300000	7.714000
	Normal	0.100000	Activity	1.007e-006	7.474000	7.954000	2.300000	7.714000
0.120000	Normal	0.150000	Activity	1.007e-006	7.474000	7.954000	2.300000	7.714000
0.120000	Normal	0.100000	Activity	1.007e-006	7.443000	7.923000	2.300000	7.683000
0.120000	Normal	0.250000	Activity	1.007e-006	7.443000	7.923000	2.300000	7.683000
0.120000	Normal	0.100000	Activity	1.007e-006	7.443000	7.923000	2.300000	7.683000
0.120000	Normal	0.100000	Activity	1.007e-006	7.443000	7.923000	2.300000	7.683000
0.120000	Normal	0.150000	Activity	1.007e-006	7.443000	7.923000	2.300000	7.683000
0.120000	Normal	0.100000	Activity	1.007e-006	7.443000	7.923000	2.300000	7.683000

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sigl	Aw	Bw	Sigw	Aa
Ba							
Sigw							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--

Trace Coordinates:

Latitude	Longitude
34.9441	-119.4029
34.9157	-119.3629
34.8639	-119.2100

34.8290 -119.0301  
 34.8076 -118.8901  
 34.8072 -118.8876  
 34.7732 -118.7673  
 34.6985 -118.5090  
 34.5478 -118.1039  
 34.4029 -117.7536  
 34.3163 -117.5490  
 34.2709 -117.4510  
 34.2328 -117.3887  
 34.1731 -117.2742  
 34.1500 -117.2220

Name: S. San Andreas;BB+NM+SM+NSB+SSB  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 7.811

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	14

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	5.033e-005	7.516000	7.996000	2.300000	7.756000
0.120000	Normal	0.250000	Activity	5.033e-005	7.571000	8.051000	2.300000	7.811000
0.120000	Normal	0.125000	Activity	5.437e-005	7.571000	8.051000	2.300000	7.811000
0.120000	Normal	0.050000	Activity	5.262e-005	7.571000	8.051000	2.300000	7.811000
0.120000	Normal	0.075000	Activity	5.845e-005	7.571000	8.051000	2.300000	7.811000
0.120000	Normal	0.125000	Activity	4.893e-005	7.516000	7.996000	2.300000	7.756000
0.120000	Normal	0.050000	Activity	4.812e-005	7.516000	7.996000	2.300000	7.756000
0.120000	Normal	0.075000	Activity	5.158e-005	7.516000	7.996000	2.300000	7.756000

Rupture Length Parameters

Rupture Dimensioning		A1	B1	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

```
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--      --
```

Trace Coordinates:

Latitude	Longitude
34.9441	-119.4029
34.9157	-119.3629
34.8639	-119.2100
34.8290	-119.0301
34.8076	-118.8901
34.8072	-118.8876
34.7732	-118.7673
34.6985	-118.5090
34.5478	-118.1039
34.4029	-117.7536
34.3163	-117.5490
34.2709	-117.4510
34.2328	-117.3887
34.1731	-117.2742
34.1500	-117.2220
34.0928	-117.0677
34.0738	-117.0139
34.0338	-116.9024
34.0114	-116.8735
33.9591	-116.8198

Name: S. San Andreas;BB+NM+SM+NSB+SSB+BG  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.45000000  
 Deterministic Magnitude: 7.933

Fault Profile Parameters:

Dipl	Dip2	Depth1	Depth2	Depth3
90	83.9	0	0.001	13.92

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	1.007e-006	7.693000	8.173000	2.300000	7.933000
0.120000	Normal	0.100000	Activity	1.007e-006	7.693000	8.173000	2.300000	7.933000
0.120000	Normal	0.150000	Activity	1.007e-006	7.693000	8.173000	2.300000	7.933000
0.120000	Normal	0.010000	Activity	1.007e-006	7.607000	8.087000	2.300000	7.847000
0.120000	Normal	0.250000	Activity	1.007e-006	7.607000	8.087000	2.300000	7.847000
0.120000	Normal	0.100000	Activity	1.007e-006	7.607000	8.087000	2.300000	7.847000
0.120000	Normal	0.010000	Activity	1.007e-006	7.607000	8.087000	2.300000	7.847000
0.120000	Normal	0.150000	Activity	1.007e-006	7.607000	8.087000	2.300000	7.847000

0.120000 0.010000 10.000000

Rupture Length Parameters

Rupture Dimensioning		Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							

Trace Coordinates:

Latitude	Longitude
33.7882	-116.2463
33.8485	-116.3830
33.8481	-116.4265
33.8847	-116.5169
33.9070	-116.5849
33.9176	-116.6239
33.9442	-116.6858
33.9374	-116.7786
33.9532	-116.8014
33.9591	-116.8198
34.0114	-116.8735
34.0338	-116.9024
34.0738	-117.0139
34.0928	-117.0677
34.1500	-117.2220
34.1731	-117.2742
34.2328	-117.3887
34.2709	-117.4510
34.3163	-117.5490
34.4029	-117.7536
34.5478	-118.1039
34.6985	-118.5090
34.7732	-118.7673
34.8072	-118.8876
34.8076	-118.8901
34.8290	-119.0301
34.8639	-119.2100
34.9157	-119.3629
34.9441	-119.4029

Name: S. San Andreas;BB+NM+SM+NSB+SSB+BG+CO  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 8.017

**Fault Profile Parameters:**

Dip1	Dip2	Depth1	Depth2	Depth3
90	84.7	0.1	0.101	13.04

**Magnitude Recurrence Distributions:**

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
	Delta1	Delta2						
0.120000	Normal	0.25	Activity	5.033e-005	7.670000	8.150000	2.300000	7.910000
0.120000	Normal	0.250000	Activity	5.033e-005	7.777000	8.257000	2.300000	8.017000
0.120000	Normal	0.125000	Activity	4.709e-005	7.777000	8.257000	2.300000	8.017000
0.120000	Normal	0.050000	Activity	3.995e-005	7.777000	8.257000	2.300000	8.017000
0.120000	Normal	0.075000	Activity	5.133e-005	7.777000	8.257000	2.300000	8.017000
0.120000	Normal	0.125000	Activity	4.511e-005	7.670000	8.150000	2.300000	7.910000
0.120000	Normal	0.050000	Activity	4.111e-005	7.670000	8.150000	2.300000	7.910000
0.120000	Normal	0.075000	Activity	4.745e-005	7.670000	8.150000	2.300000	7.910000

**Rupture Length Parameters**

Rupture Dimensioning	A1	B1	Sigl	Aw	Bw	Sigw	Aa
Ba							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

**Trace Coordinates:**

Latitude	Longitude
33.3501	-115.7119
33.7882	-116.2463
33.8485	-116.3830
33.8481	-116.4265
33.8847	-116.5169
33.9070	-116.5849
33.9176	-116.6239
33.9442	-116.6858
33.9374	-116.7786
33.9532	-116.8014

33.9591 -116.8198  
 34.0114 -116.8735  
 34.0338 -116.9024  
 34.0738 -117.0139  
 34.0928 -117.0677  
 34.1500 -117.2220  
 34.1731 -117.2742  
 34.2328 -117.3887  
 34.2709 -117.4510  
 34.3163 -117.5490  
 34.4029 -117.7536  
 34.5478 -118.1039  
 34.6985 -118.5090  
 34.7732 -118.7673  
 34.8072 -118.8876  
 34.8076 -118.8901  
 34.8290 -119.0301  
 34.8639 -119.2100  
 34.9157 -119.3629  
 34.9441 -119.4029

Name: S. San Andreas;BG  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 7.126

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	58	0	0.001	12.72

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	5.033e-004	6.886000	7.366000	2.300000	7.126000
0.120000	Normal	0.250000	Activity	5.033e-004	6.731000	7.211000	2.300000	6.971000
0.120000	Normal	0.125000	Activity	1.369e-005	6.731000	7.211000	2.300000	6.971000
0.120000	Normal	0.050000	Activity	4.420e-005	6.731000	7.211000	2.300000	6.971000
0.120000	Normal	0.075000	Activity	6.300e-005	6.731000	7.211000	2.300000	6.971000
0.120000	Normal	0.125000	Activity	1.876e-004	6.886000	7.366000	2.300000	7.126000
0.120000	Normal	0.050000	Activity	1.713e-004	6.886000	7.366000	2.300000	7.126000
0.120000	Normal	0.075000	Activity	2.841e-004	6.886000	7.366000	2.300000	7.126000

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sig1	Aw	Bw	Sigw	Aa
Ba Sigw Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

```
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
```

Trace Coordinates:

Latitude	Longitude
33.7882	-116.2463
33.8485	-116.3830
33.8481	-116.4265
33.8847	-116.5169
33.9070	-116.5849
33.9176	-116.6239
33.9442	-116.6858
33.9374	-116.7786
33.9532	-116.8014

Name: S. San Andreas;BG+CO  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 7.386

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	72.4	0.3	0.301	11.74

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
	Delta1	Delta2						
0.120000	Normal	0.25	Activity	7.046e-004	7.146000	7.626000	2.300000	7.386000
	0.010000	10.000000						
	Normal	0.250000	Activity	7.046e-004	7.079000	7.559000	2.300000	7.319000
0.120000	0.010000	10.000000						
	Normal	0.125000	Activity	4.099e-004	7.079000	7.559000	2.300000	7.319000
0.120000	0.010000	10.000000						
	Normal	0.050000	Activity	3.456e-004	7.079000	7.559000	2.300000	7.319000
0.120000	0.010000	10.000000						
	Normal	0.075000	Activity	9.594e-004	7.079000	7.559000	2.300000	7.319000
0.120000	0.010000	10.000000						
	Normal	0.125000	Activity	2.863e-004	7.146000	7.626000	2.300000	7.386000
0.120000	0.010000	10.000000						
	Normal	0.050000	Activity	1.666e-004	7.146000	7.626000	2.300000	7.386000
0.120000	0.010000	10.000000						

Normal 0.075000 Activity 6.950e-004 7.146000 7.626000 2.300000 7.386000  
 0.120000 0.010000 10.000000

Rupture Length Parameters

Rupture Dimensioning		Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							

Trace Coordinates:

Latitude	Longitude
33.3501	-115.7119
33.7882	-116.2463
33.8485	-116.3830
33.8481	-116.4265
33.8847	-116.5169
33.9070	-116.5849
33.9176	-116.6239
33.9442	-116.6858
33.9374	-116.7786
33.9532	-116.8014

Name: S. San Andreas;CC  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 7.15

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	15

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	3.020e-004	6.910000	7.390000	2.300000	7.150000
0.120000	Normal	0.250000	Activity	3.020e-004	6.763000	7.243000	2.300000	7.003000
0.120000	Normal	0.125000	Activity	5.774e-005	6.763000	7.243000	2.300000	7.003000
0.120000	Normal	0.125000	Activity	5.774e-005	6.763000	7.243000	2.300000	7.003000



	Normal	0.050000	Activity	5.891e-005	6.763000	7.243000	2.300000	7.003000
0.120000	0.010000	10.000000						
	Normal	0.075000	Activity	5.525e-005	6.763000	7.243000	2.300000	7.003000
0.120000	0.010000	10.000000						
	Normal	0.125000	Activity	1.591e-004	6.910000	7.390000	2.300000	7.150000
0.120000	0.010000	10.000000						
	Normal	0.050000	Activity	1.606e-004	6.910000	7.390000	2.300000	7.150000
0.120000	0.010000	10.000000						
	Normal	0.075000	Activity	1.563e-004	6.910000	7.390000	2.300000	7.150000
0.120000	0.010000	10.000000						

Rupture Length Parameters

Rupture Dimensioning		Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							

Trace Coordinates:

Latitude	Longitude
35.3142	-119.8659
35.1607	-119.7068
35.0475	-119.5583
34.9878	-119.4711
34.9441	-119.4029

Name: S. San Andreas;CC+BB  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.45000000  
 Deterministic Magnitude: 7.415

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	15

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
	Delta1	Delta2						
	Normal	0.25	Activity	5.033e-006	7.117000	7.597000	2.300000	7.357000
0.120000	0.010000	10.000000						
	Normal	0.100000	Activity	5.033e-006	7.117000	7.597000	2.300000	7.357000

0.120000	0.010000	10.000000							
	Normal	0.150000	Activity	5.033e-006	7.117000	7.597000	2.300000	7.357000	
0.120000	0.010000	10.000000							
	Normal	0.250000	Activity	5.033e-006	7.175000	7.655000	2.300000	7.415000	
0.120000	0.010000	10.000000							
	Normal	0.100000	Activity	5.033e-006	7.175000	7.655000	2.300000	7.415000	
0.120000	0.010000	10.000000							
	Normal	0.150000	Activity	5.033e-006	7.175000	7.655000	2.300000	7.415000	
0.120000	0.010000	10.000000							

Rupture Length Parameters

Rupture Dimensioning		A1	B1	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							

Trace Coordinates:

Latitude	Longitude
35.3142	-119.8659
35.1607	-119.7068
35.0475	-119.5583
34.9878	-119.4711
34.9441	-119.4029
34.9157	-119.3629
34.8639	-119.2100
34.8290	-119.0301
34.8076	-118.8901

Name: S. San Andreas;CC+BB+NM  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.4500000  
 Deterministic Magnitude: 7.542

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	15

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
	Normal	0.25	Activity	1.007e-006	7.286000	7.766000	2.300000	7.526000
0.120000	0.010000	10.000000						
	Normal	0.100000	Activity	1.007e-006	7.286000	7.766000	2.300000	7.526000
0.120000	0.010000	10.000000						

0.120000	Normal	0.150000	Activity	1.007e-006	7.286000	7.766000	2.300000	7.526000
	0.010000	10.000000						
0.120000	Normal	0.250000	Activity	1.007e-006	7.302000	7.782000	2.300000	7.542000
	0.010000	10.000000						
0.120000	Normal	0.100000	Activity	1.007e-006	7.302000	7.782000	2.300000	7.542000
	0.010000	10.000000						
0.120000	Normal	0.150000	Activity	1.007e-006	7.302000	7.782000	2.300000	7.542000
	0.010000	10.000000						

Rupture Length Parameters

Rupture Dimensioning		Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							

Trace Coordinates:

Latitude	Longitude
34.6985	-118.5090
34.7732	-118.7673
34.8072	-118.8876
34.8076	-118.8901
34.8290	-119.0301
34.8639	-119.2100
34.9157	-119.3629
34.9441	-119.4029
34.9878	-119.4711
35.0475	-119.5583
35.1607	-119.7068
35.3142	-119.8659

Name: S. San Andreas;CC+BB+NM+SM  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.9000000  
 Deterministic Magnitude: 7.792

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	14

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	4.026e-004	7.501000	7.981000	2.300000	7.741000
	0.010000	10.000000						

	Normal	0.250000	Activity	4.026e-004	7.552000	8.032000	2.300000	7.792000
0.120000	0.010000	10.000000						
	Normal	0.125000	Activity	5.033e-006	7.552000	8.032000	2.300000	7.792000
0.120000	0.010000	10.000000						
	Normal	0.050000	Activity	5.033e-006	7.552000	8.032000	2.300000	7.792000
0.120000	0.010000	10.000000						
	Normal	0.075000	Activity	5.033e-006	7.552000	8.032000	2.300000	7.792000
0.120000	0.010000	10.000000						
	Normal	0.125000	Activity	1.955e-004	7.501000	7.981000	2.300000	7.741000
0.120000	0.010000	10.000000						
	Normal	0.050000	Activity	1.983e-004	7.501000	7.981000	2.300000	7.741000
0.120000	0.010000	10.000000						
	Normal	0.075000	Activity	1.753e-004	7.501000	7.981000	2.300000	7.741000
0.120000	0.010000	10.000000						

Rupture Length Parameters

Rupture Dimensioning		Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							

Trace Coordinates:

Latitude	Longitude
35.3142	-119.8659
35.1607	-119.7068
35.0475	-119.5583
34.9878	-119.4711
34.9441	-119.4029
34.9157	-119.3629
34.8639	-119.2100
34.8290	-119.0301
34.8076	-118.8901
34.8072	-118.8876
34.7732	-118.7673
34.6985	-118.5090
34.5478	-118.1039
34.4029	-117.7536
34.3163	-117.5490

Name: S. San Andreas;CC+BB+NM+SM+NSB  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip

Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 7.862

Fault Profile Parameters:

Dipl	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	14

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	1.007e-004	7.554000	8.034000	2.300000	7.794000
0.120000	Normal	0.250000	Activity	1.007e-004	7.622000	8.102000	2.300000	7.862000
0.120000	Normal	0.125000	Activity	5.652e-005	7.622000	8.102000	2.300000	7.862000
0.120000	Normal	0.050000	Activity	6.008e-005	7.622000	8.102000	2.300000	7.862000
0.120000	Normal	0.075000	Activity	7.330e-005	7.622000	8.102000	2.300000	7.862000
0.120000	Normal	0.125000	Activity	8.710e-005	7.554000	8.034000	2.300000	7.794000
0.120000	Normal	0.050000	Activity	8.906e-005	7.554000	8.034000	2.300000	7.794000
0.120000	Normal	0.075000	Activity	9.820e-005	7.554000	8.034000	2.300000	7.794000

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

Trace Coordinates:

Latitude	Longitude
35.3142	-119.8659
35.1607	-119.7068
35.0475	-119.5583
34.9878	-119.4711
34.9441	-119.4029
34.9157	-119.3629
34.8639	-119.2100

34.8290 -119.0301  
 34.8076 -118.8901  
 34.8072 -118.8876  
 34.7732 -118.7673  
 34.6985 -118.5090  
 34.5478 -118.1039  
 34.4029 -117.7536  
 34.3163 -117.5490  
 34.2709 -117.4510  
 34.2328 -117.3887  
 34.1731 -117.2742  
 34.1500 -117.2220

Name: S. San Andreas;CC+BB+NM+SM+NSB+SSB  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 7.939

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	14

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	1.007e-004	7.612000	8.092000	2.300000	7.852000
0.120000	Normal	0.250000	Activity	1.007e-004	7.699000	8.179000	2.300000	7.939000
0.120000	Normal	0.125000	Activity	6.712e-005	7.699000	8.179000	2.300000	7.939000
0.120000	Normal	0.050000	Activity	5.983e-005	7.699000	8.179000	2.300000	7.939000
0.120000	Normal	0.075000	Activity	8.612e-005	7.699000	8.179000	2.300000	7.939000
0.120000	Normal	0.125000	Activity	9.002e-005	7.612000	8.092000	2.300000	7.852000
0.120000	Normal	0.050000	Activity	8.690e-005	7.612000	8.092000	2.300000	7.852000
0.120000	Normal	0.075000	Activity	1.016e-004	7.612000	8.092000	2.300000	7.852000

Rupture Length Parameters

Rupture Dimensioning		A1	B1	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

```
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
```

Trace Coordinates:

Latitude	Longitude
33.9591	-116.8198
34.0114	-116.8735
34.0338	-116.9024
34.0738	-117.0139
34.0928	-117.0677
34.1500	-117.2220
34.1731	-117.2742
34.2328	-117.3887
34.2709	-117.4510
34.3163	-117.5490
34.4029	-117.7536
34.5478	-118.1039
34.6985	-118.5090
34.7732	-118.7673
34.8072	-118.8876
34.8076	-118.8901
34.8290	-119.0301
34.8639	-119.2100
34.9157	-119.3629
34.9441	-119.4029
34.9878	-119.4711
35.0475	-119.5583
35.1607	-119.7068
35.3142	-119.8659

Name: S. San Andreas;CC+BB+NM+SM+NSB+SSB+BG  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 8.039

Fault Profile Parameters:

Dipl	Dip2	Depth1	Depth2	Depth3
90	84.9	0	0.001	13.94

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	5.033e-005	7.687000	8.167000	2.300000	7.927000
	Normal	10.000000	Activity	5.033e-005	7.799000	8.279000	2.300000	8.039000
0.120000	Normal	0.125000	Activity	2.973e-005	7.799000	8.279000	2.300000	8.039000
	Normal	10.000000	Activity	2.475e-005	7.799000	8.279000	2.300000	8.039000

```

0.120000 0.010000 10.000000
          Normal 0.075000 Activity 3.120e-005 7.799000 8.279000 2.300000 8.039000
0.120000 0.010000 10.000000
          Normal 0.125000 Activity 4.431e-005 7.687000 8.167000 2.300000 7.927000
0.120000 0.010000 10.000000
          Normal 0.050000 Activity 4.150e-005 7.687000 8.167000 2.300000 7.927000
0.120000 0.010000 10.000000
          Normal 0.075000 Activity 4.593e-005 7.687000 8.167000 2.300000 7.927000
0.120000 0.010000 10.000000
    
```

Rupture Length Parameters

Rupture Dimensioning		Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

Trace Coordinates:

Latitude	Longitude
33.7882	-116.2463
33.8485	-116.3830
33.8481	-116.4265
33.8847	-116.5169
33.9070	-116.5849
33.9176	-116.6239
33.9442	-116.6858
33.9374	-116.7786
33.9532	-116.8014
33.9591	-116.8198
34.0114	-116.8735
34.0338	-116.9024
34.0738	-117.0139
34.0928	-117.0677
34.1500	-117.2220
34.1731	-117.2742
34.2328	-117.3887
34.2709	-117.4510
34.3163	-117.5490
34.4029	-117.7536
34.5478	-118.1039
34.6985	-118.5090
34.7732	-118.7673
34.8072	-118.8876
34.8076	-118.8901



34.8290 -119.0301  
 34.8639 -119.2100  
 34.9157 -119.3629  
 34.9441 -119.4029  
 34.9878 -119.4711  
 35.0475 -119.5583  
 35.1607 -119.7068  
 35.3142 -119.8659

Name: S. San Andreas;CC+BB+NM+SM+NSB+SSB+BG+CO  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 8.11

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	85.5	0.1	0.101	13.06

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
	Delta1	Delta2						
0.120000	Normal	0.25	Activity	1.007e-005	7.740000	8.220000	2.300000	7.980000
	0.010000	10.000000						
	Normal	0.250000	Activity	1.007e-005	7.870000	8.350000	2.300000	8.110000
0.120000	0.010000	10.000000						
	Normal	0.125000	Activity	9.271e-006	7.870000	8.350000	2.300000	8.110000
0.120000	0.010000	10.000000						
	Normal	0.050000	Activity	8.960e-006	7.870000	8.350000	2.300000	8.110000
0.120000	0.010000	10.000000						
	Normal	0.075000	Activity	9.460e-006	7.870000	8.350000	2.300000	8.110000
0.120000	0.010000	10.000000						
	Normal	0.125000	Activity	9.784e-006	7.740000	8.220000	2.300000	7.980000
0.120000	0.010000	10.000000						
	Normal	0.050000	Activity	9.622e-006	7.740000	8.220000	2.300000	7.980000
0.120000	0.010000	10.000000						
	Normal	0.075000	Activity	9.887e-006	7.740000	8.220000	2.300000	7.980000
0.120000	0.010000	10.000000						

Rupture Length Parameters

Rupture Dimensioning		A1	B1	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

```
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
```

Trace Coordinates:

Latitude	Longitude
33.3501	-115.7119
33.7882	-116.2463
33.8485	-116.3830
33.8481	-116.4265
33.8847	-116.5169
33.9070	-116.5849
33.9176	-116.6239
33.9442	-116.6858
33.9374	-116.7786
33.9532	-116.8014
33.9591	-116.8198
34.0114	-116.8735
34.0338	-116.9024
34.0738	-117.0139
34.0928	-117.0677
34.1500	-117.2220
34.1731	-117.2742
34.2328	-117.3887
34.2709	-117.4510
34.3163	-117.5490
34.4029	-117.7536
34.5478	-118.1039
34.6985	-118.5090
34.7732	-118.7673
34.8072	-118.8876
34.8076	-118.8901
34.8290	-119.0301
34.8639	-119.2100
34.9157	-119.3629
34.9441	-119.4029
34.9878	-119.4711
35.0475	-119.5583
35.1607	-119.7068
35.3142	-119.8659

Name: S. San Andreas;CH  
 Region: USGS 2008 California  
 Category: Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 7.075

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	12

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
	Normal	0.25	Activity	5.033e-005	6.835000	7.315000	2.300000	7.075000

0.120000	0.010000	10.000000							
	Normal	0.250000	Activity	5.033e-005	6.664000	7.144000	2.300000	6.904000	
0.120000	0.010000	10.000000							
	Normal	0.125000	Activity	5.492e-005	6.664000	7.144000	2.300000	6.904000	
0.120000	0.010000	10.000000							
	Normal	0.050000	Activity	5.491e-005	6.664000	7.144000	2.300000	6.904000	
0.120000	0.010000	10.000000							
	Normal	0.075000	Activity	5.497e-005	6.664000	7.144000	2.300000	6.904000	
0.120000	0.010000	10.000000							
	Normal	0.125000	Activity	5.280e-005	6.835000	7.315000	2.300000	7.075000	
0.120000	0.010000	10.000000							
	Normal	0.050000	Activity	5.280e-005	6.835000	7.315000	2.300000	7.075000	
0.120000	0.010000	10.000000							
	Normal	0.075000	Activity	5.281e-005	6.835000	7.315000	2.300000	7.075000	
0.120000	0.010000	10.000000							

Rupture Length Parameters

Rupture	Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							

Trace Coordinates:

Latitude	Longitude
35.3142	-119.8660
35.4139	-119.9703
35.5333	-120.0867
35.7520	-120.3001

Name: S. San Andreas;CH+CC  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 7.415

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	14

Magnitude Recurrence Distributions:

ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
-----------	--------	----------	------	--------	--------	------	------

Sigma	Delta1	Delta2						
	Normal	0.25	Activity	3.020e-004	7.175000	7.655000	2.300000	7.415000
0.120000	0.010000	10.000000						
	Normal	0.250000	Activity	3.020e-004	7.117000	7.597000	2.300000	7.357000
0.120000	0.010000	10.000000						
	Normal	0.125000	Activity	2.132e-004	7.117000	7.597000	2.300000	7.357000
0.120000	0.010000	10.000000						
	Normal	0.050000	Activity	2.144e-004	7.117000	7.597000	2.300000	7.357000
0.120000	0.010000	10.000000						
	Normal	0.075000	Activity	2.125e-004	7.117000	7.597000	2.300000	7.357000
0.120000	0.010000	10.000000						
	Normal	0.125000	Activity	2.397e-004	7.175000	7.655000	2.300000	7.415000
0.120000	0.010000	10.000000						
	Normal	0.050000	Activity	2.416e-004	7.175000	7.655000	2.300000	7.415000
0.120000	0.010000	10.000000						
	Normal	0.075000	Activity	2.363e-004	7.175000	7.655000	2.300000	7.415000
0.120000	0.010000	10.000000						

Rupture Length Parameters

Rupture Dimensioning		Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							

Trace Coordinates:

Latitude	Longitude
35.7520	-120.3001
35.5333	-120.0867
35.4139	-119.9703
35.3142	-119.8660
35.1607	-119.7068
35.0475	-119.5583
34.9878	-119.4711
34.9441	-119.4029

Name: S. San Andreas;CH+CC+BB  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.45000000  
 Deterministic Magnitude: 7.579

**Fault Profile Parameters:**

Dipl	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	14

**Magnitude Recurrence Distributions:**

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	1.007e-006	7.335000	7.815000	2.300000	7.575000
0.120000	Normal	0.100000	Activity	1.007e-006	7.335000	7.815000	2.300000	7.575000
0.120000	Normal	0.150000	Activity	1.007e-006	7.335000	7.815000	2.300000	7.575000
0.120000	Normal	0.250000	Activity	1.007e-006	7.339000	7.819000	2.300000	7.579000
0.120000	Normal	0.100000	Activity	1.007e-006	7.339000	7.819000	2.300000	7.579000
0.120000	Normal	0.150000	Activity	1.007e-006	7.339000	7.819000	2.300000	7.579000

**Rupture Length Parameters**

Rupture Dimensioning	Al	B1	Sigl	Aw	Bw	Sigw	Aa
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

**Trace Coordinates:**

Latitude	Longitude
35.7520	-120.3001
35.5333	-120.0867
35.4139	-119.9703
35.3142	-119.8660
35.1607	-119.7068
35.0475	-119.5583
34.9878	-119.4711
34.9441	-119.4029
34.9157	-119.3629
34.8639	-119.2100
34.8290	-119.0301
34.8076	-118.8901

Name: S. San Andreas;CH+CC+BB+NM  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.45000000

Deterministic Magnitude: 7.696

Fault Profile Parameters:

Dipl	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	14

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
	Normal	0.25	Activity	1.007e-006	7.456000	7.936000	2.300000	7.696000
0.120000	0.010000	10.000000	Activity	1.007e-006	7.456000	7.936000	2.300000	7.696000
	Normal	0.100000	Activity	1.007e-006	7.456000	7.936000	2.300000	7.696000
0.120000	0.010000	10.000000	Activity	1.007e-006	7.456000	7.936000	2.300000	7.696000
	Normal	0.150000	Activity	1.007e-006	7.456000	7.936000	2.300000	7.696000
0.120000	0.010000	10.000000	Activity	1.007e-006	7.456000	7.936000	2.300000	7.696000
	Normal	0.250000	Activity	1.007e-006	7.430000	7.910000	2.300000	7.670000
0.120000	0.010000	10.000000	Activity	1.007e-006	7.430000	7.910000	2.300000	7.670000
	Normal	0.100000	Activity	1.007e-006	7.430000	7.910000	2.300000	7.670000
0.120000	0.010000	10.000000	Activity	1.007e-006	7.430000	7.910000	2.300000	7.670000
	Normal	0.150000	Activity	1.007e-006	7.430000	7.910000	2.300000	7.670000
0.120000	0.010000	10.000000	Activity	1.007e-006	7.430000	7.910000	2.300000	7.670000

Rupture Length Parameters

Rupture Dimensioning		A1	B1	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							

Trace Coordinates:

Latitude	Longitude
35.7520	-120.3001
35.5333	-120.0867
35.4139	-119.9703
35.3142	-119.8660
35.1607	-119.7068
35.0475	-119.5583
34.9878	-119.4711
34.9441	-119.4029
34.9157	-119.3629
34.8639	-119.2100
34.8290	-119.0301
34.8076	-118.8901
34.8072	-118.8876
34.7732	-118.7673
34.6985	-118.5090

Name: S. San Andreas;CH+CC+BB+NM+SM

Region: USGS 2008 California  
 Category: Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 7.905

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	14

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	5.033e-004	7.586000	8.066000	2.300000	7.826000
0.120000	Normal	0.250000	Activity	5.033e-004	7.665000	8.145000	2.300000	7.905000
0.120000	Normal	0.125000	Activity	2.686e-004	7.665000	8.145000	2.300000	7.905000
0.120000	Normal	0.050000	Activity	2.737e-004	7.665000	8.145000	2.300000	7.905000
0.120000	Normal	0.075000	Activity	1.585e-004	7.665000	8.145000	2.300000	7.905000
0.120000	Normal	0.125000	Activity	4.150e-004	7.586000	8.066000	2.300000	7.826000
0.120000	Normal	0.050000	Activity	4.174e-004	7.586000	8.066000	2.300000	7.826000
0.120000	Normal	0.075000	Activity	3.888e-004	7.586000	8.066000	2.300000	7.826000

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sig1	Aw	Bw	Sigw	Aa
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

Trace Coordinates:

Latitude	Longitude
35.7520	-120.3001
35.5333	-120.0867
35.4139	-119.9703
35.3142	-119.8660

35.1607 -119.7068  
 35.0475 -119.5583  
 34.9878 -119.4711  
 34.9441 -119.4029  
 34.9157 -119.3629  
 34.8639 -119.2100  
 34.8290 -119.0301  
 34.8076 -118.8901  
 34.8072 -118.8876  
 34.7732 -118.7673  
 34.6985 -118.5090  
 34.5478 -118.1039  
 34.4029 -117.7536  
 34.3163 -117.5490

Name: S. San Andreas;CH+CC+BB+NM+SM+NSB  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.4500000  
 Deterministic Magnitude: 7.964

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	14

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	1.007e-006	7.724000	8.204000	2.300000	7.964000
0.120000	Normal	0.100000	Activity	1.007e-006	7.724000	8.204000	2.300000	7.964000
0.120000	Normal	0.150000	Activity	1.007e-006	7.724000	8.204000	2.300000	7.964000
0.120000	Normal	0.250000	Activity	1.007e-006	7.630000	8.110000	2.300000	7.870000
0.120000	Normal	0.100000	Activity	1.007e-006	7.630000	8.110000	2.300000	7.870000
0.120000	Normal	0.150000	Activity	1.007e-006	7.630000	8.110000	2.300000	7.870000
0.120000	Normal	0.100000	Activity	1.007e-006	7.630000	8.110000	2.300000	7.870000

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sig1	Aw	Bw	Sigw	Aa
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--



-- --

Trace Coordinates:

Latitude	Longitude
35.7520	-120.3001
35.5333	-120.0867
35.4139	-119.9703
35.3142	-119.8660
35.1607	-119.7068
35.0475	-119.5583
34.9878	-119.4711
34.9441	-119.4029
34.9157	-119.3629
34.8639	-119.2100
34.8290	-119.0301
34.8076	-118.8901
34.8072	-118.8876
34.7732	-118.7673
34.6985	-118.5090
34.5478	-118.1039
34.4029	-117.7536
34.3163	-117.5490
34.2709	-117.4510
34.2328	-117.3887
34.1731	-117.2742
34.1500	-117.2220

Name: S. San Andreas;CH+CC+BB+NM+SM+NSB+SSB  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 8.029

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	14

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
	Delta1	Delta2						
0.120000	Normal	0.25	Activity	5.033e-005	7.679000	8.159000	2.300000	7.919000
	Normal	0.250000	Activity	5.033e-005	7.789000	8.269000	2.300000	8.029000
0.120000	Normal	0.125000	Activity	5.072e-005	7.789000	8.269000	2.300000	8.029000
	Normal	0.050000	Activity	4.878e-005	7.789000	8.269000	2.300000	8.029000
0.120000	Normal	0.075000	Activity	5.625e-005	7.789000	8.269000	2.300000	8.029000
	Normal	0.125000	Activity	4.999e-005	7.679000	8.159000	2.300000	7.919000
0.120000	Normal	0.050000	Activity	4.923e-005	7.679000	8.159000	2.300000	7.919000
	Normal	0.075000	Activity	5.302e-005	7.679000	8.159000	2.300000	7.919000

0.120000 0.010000 10.000000

Rupture Length Parameters

Rupture Dimensioning		Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							

Trace Coordinates:

Latitude	Longitude
33.9591	-116.8198
34.0114	-116.8735
34.0338	-116.9024
34.0738	-117.0139
34.0928	-117.0677
34.1500	-117.2220
34.1731	-117.2742
34.2328	-117.3887
34.2709	-117.4510
34.3163	-117.5490
34.4029	-117.7536
34.5478	-118.1039
34.6985	-118.5090
34.7732	-118.7673
34.8072	-118.8876
34.8076	-118.8901
34.8290	-119.0301
34.8639	-119.2100
34.9157	-119.3629
34.9441	-119.4029
34.9878	-119.4711
35.0475	-119.5583
35.1607	-119.7068
35.3142	-119.8660
35.4139	-119.9703
35.5333	-120.0867
35.7520	-120.3001

Name: S. San Andreas;CH+CC+BB+NM+SM+NSB+SSB+BG  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude

Probability of Activity: 0.4500000  
 Deterministic Magnitude: 8.115

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	85.6	0	0.001	13.96

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	1.007e-006	7.875000	8.355000	2.300000	8.115000
0.120000	Normal	0.100000	Activity	1.007e-006	7.875000	8.355000	2.300000	8.115000
0.120000	Normal	0.150000	Activity	1.007e-006	7.875000	8.355000	2.300000	8.115000
0.120000	Normal	0.250000	Activity	1.007e-006	7.744000	8.224000	2.300000	7.984000
0.120000	Normal	0.100000	Activity	1.007e-006	7.744000	8.224000	2.300000	7.984000
0.120000	Normal	0.150000	Activity	1.007e-006	7.744000	8.224000	2.300000	7.984000
0.120000	Normal	0.100000	Activity	1.007e-006	7.744000	8.224000	2.300000	7.984000
0.120000	Normal	0.150000	Activity	1.007e-006	7.744000	8.224000	2.300000	7.984000

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sig1	Aw	Bw	Sigw	Aa
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

Trace Coordinates:

Latitude	Longitude
33.7882	-116.2463
33.8485	-116.3830
33.8481	-116.4265
33.8847	-116.5169
33.9070	-116.5849
33.9176	-116.6239
33.9442	-116.6858
33.9374	-116.7786
33.9532	-116.8014
33.9591	-116.8198
34.0114	-116.8735
34.0338	-116.9024
34.0738	-117.0139
34.0928	-117.0677
34.1500	-117.2220
34.1731	-117.2742

34.2328 -117.3887  
 34.2709 -117.4510  
 34.3163 -117.5490  
 34.4029 -117.7536  
 34.5478 -118.1039  
 34.6985 -118.5090  
 34.7732 -118.7673  
 34.8072 -118.8876  
 34.8076 -118.8901  
 34.8290 -119.0301  
 34.8639 -119.2100  
 34.9157 -119.3629  
 34.9441 -119.4029  
 34.9878 -119.4711  
 35.0475 -119.5583  
 35.1607 -119.7068  
 35.3142 -119.8660  
 35.4139 -119.9703  
 35.5333 -120.0867  
 35.7520 -120.3001

Name: S. San Andreas;CH+CC+BB+NM+SM+NSB+SSB+BG+CO  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.4500000  
 Deterministic Magnitude: 8.178

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	86	0.1	0.101	13.07

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	1.007e-006	7.938000	8.418000	2.300000	8.178000
0.120000	Normal	0.100000	Activity	1.007e-006	7.938000	8.418000	2.300000	8.178000
0.120000	Normal	0.150000	Activity	1.007e-006	7.938000	8.418000	2.300000	8.178000
0.120000	Normal	0.250000	Activity	1.007e-006	7.791000	8.271000	2.300000	8.031000
0.120000	Normal	0.100000	Activity	1.007e-006	7.791000	8.271000	2.300000	8.031000
0.120000	Normal	0.150000	Activity	1.007e-006	7.791000	8.271000	2.300000	8.031000
0.120000	Normal	0.100000	Activity	1.007e-006	7.791000	8.271000	2.300000	8.031000

Rupture Length Parameters

Rupture Dimensioning		A1	B1	Sig1	Aw	Bw	Sigw	Aa
Ba	Sigw							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

```
--      --  
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --  
--      --  
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --  
--      --  
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --  
--      --
```

Trace Coordinates:

Latitude	Longitude
33.3501	-115.7119
33.7882	-116.2463
33.8485	-116.3830
33.8481	-116.4265
33.8847	-116.5169
33.9070	-116.5849
33.9176	-116.6239
33.9442	-116.6858
33.9374	-116.7786
33.9532	-116.8014
33.9591	-116.8198
34.0114	-116.8735
34.0338	-116.9024
34.0738	-117.0139
34.0928	-117.0677
34.1500	-117.2220
34.1731	-117.2742
34.2328	-117.3887
34.2709	-117.4510
34.3163	-117.5490
34.4029	-117.7536
34.5478	-118.1039
34.6985	-118.5090
34.7732	-118.7673
34.8072	-118.8876
34.8076	-118.8901
34.8290	-119.0301
34.8639	-119.2100
34.9157	-119.3629
34.9441	-119.4029
34.9878	-119.4711
35.0475	-119.5583
35.1607	-119.7068
35.3142	-119.8660
35.4139	-119.9703
35.5333	-120.0867
35.7520	-120.3001

Name: S. San Andreas;CO  
Region: USGS 2008 California  
Category:Fault  
Fault Mechanism: Strike Slip  
Magnitude Scale: Moment Magnitude  
Probability of Activity: 0.90000000  
Deterministic Magnitude: 7.041

Fault Profile Parameters:

Dip1      Dip2      Depth1      Depth2      Depth3  
 90          90            0.6          0.601        10.6

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	2.516e-003	6.801000	7.281000	2.300000	7.041000
0.120000	Normal	0.250000	Activity	2.516e-003	6.618000	7.098000	2.300000	6.858000
0.120000	Normal	0.125000	Activity	1.200e-002	6.618000	7.098000	2.300000	6.858000
0.120000	Normal	0.050000	Activity	1.090e-002	6.618000	7.098000	2.300000	6.858000
0.120000	Normal	0.075000	Activity	1.424e-002	6.618000	7.098000	2.300000	6.858000
0.120000	Normal	0.125000	Activity	6.720e-003	6.801000	7.281000	2.300000	7.041000
0.120000	Normal	0.050000	Activity	6.043e-003	6.801000	7.281000	2.300000	7.041000
0.120000	Normal	0.075000	Activity	8.002e-003	6.801000	7.281000	2.300000	7.041000

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sig1	Aw	Bw	Sigw	Aa
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

Trace Coordinates:

Latitude      Longitude  
 33.7882      -116.2463  
 33.3501      -115.7119

Name: S. San Andreas;NM  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 6.945

Fault Profile Parameters:

Dip1      Dip2      Depth1      Depth2      Depth3  
 90          90            0            0.001       15

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	2.013e-004	6.705000	7.185000	2.300000	6.945000
0.120000	Normal	0.250000	Activity	2.013e-004	6.491000	6.971000	2.300000	6.731000
0.120000	Normal	0.125000	Activity	1.437e-004	6.491000	6.971000	2.300000	6.731000
0.120000	Normal	0.050000	Activity	1.319e-004	6.491000	6.971000	2.300000	6.731000
0.120000	Normal	0.075000	Activity	1.604e-004	6.491000	6.971000	2.300000	6.731000
0.120000	Normal	0.125000	Activity	1.052e-004	6.705000	7.185000	2.300000	6.945000
0.120000	Normal	0.050000	Activity	9.460e-005	6.705000	7.185000	2.300000	6.945000
0.120000	Normal	0.075000	Activity	1.274e-004	6.705000	7.185000	2.300000	6.945000

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sigl	Aw	Bw	Sigw	Aa
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

Trace Coordinates:

Latitude      Longitude  
 34.8076      -118.8901  
 34.8072      -118.8876  
 34.7732      -118.7673  
 34.6985      -118.5090

Name: S. San Andreas;NM+SM  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 7.464

**Fault Profile Parameters:**

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	14

**Magnitude Recurrence Distributions:**

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
	Delta1	Delta2						
0.120000	Normal	0.25	Activity	7.046e-004	7.224000	7.704000	2.300000	7.464000
0.120000	Normal	0.250000	Activity	7.046e-004	7.182000	7.662000	2.300000	7.422000
0.120000	Normal	0.125000	Activity	5.033e-006	7.182000	7.662000	2.300000	7.422000
0.120000	Normal	0.050000	Activity	5.033e-006	7.182000	7.662000	2.300000	7.422000
0.120000	Normal	0.075000	Activity	5.033e-006	7.182000	7.662000	2.300000	7.422000
0.120000	Normal	0.125000	Activity	5.033e-006	7.224000	7.704000	2.300000	7.464000
0.120000	Normal	0.050000	Activity	5.033e-006	7.224000	7.704000	2.300000	7.464000
0.120000	Normal	0.075000	Activity	5.033e-006	7.224000	7.704000	2.300000	7.464000

**Rupture Length Parameters**

Rupture Dimensioning	A1	B1	Sigl	Aw	Bw	Sigw	Aa
Ba							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

**Trace Coordinates:**

Latitude	Longitude
34.3163	-117.5490
34.4029	-117.7536
34.5478	-118.1039
34.6985	-118.5090
34.7732	-118.7673
34.8072	-118.8876
34.8076	-118.8901

Name: S. San Andreas;NM+SM+NSB  
 Region: USGS 2008 California



Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 7.559

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	13

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	1.007e-004	7.319000	7.799000	2.300000	7.559000
0.120000	Normal	0.250000	Activity	1.007e-004	7.309000	7.789000	2.300000	7.549000
0.120000	Normal	0.125000	Activity	6.680e-005	7.309000	7.789000	2.300000	7.549000
0.120000	Normal	0.050000	Activity	7.187e-005	7.309000	7.789000	2.300000	7.549000
0.120000	Normal	0.075000	Activity	7.805e-005	7.309000	7.789000	2.300000	7.549000
0.120000	Normal	0.125000	Activity	7.172e-005	7.319000	7.799000	2.300000	7.559000
0.120000	Normal	0.050000	Activity	7.527e-005	7.319000	7.799000	2.300000	7.559000
0.120000	Normal	0.075000	Activity	8.072e-005	7.319000	7.799000	2.300000	7.559000

Rupture Length Parameters

Rupture Dimensioning		Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							

Trace Coordinates:

Latitude	Longitude
34.1500	-117.2220
34.1731	-117.2742
34.2328	-117.3887
34.2709	-117.4510
34.3163	-117.5490

34.4029 -117.7536  
 34.5478 -118.1039  
 34.6985 -118.5090  
 34.7732 -118.7673  
 34.8072 -118.8876  
 34.8076 -118.8901

Name: S. San Andreas;NM+SM+NSB+SSB  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 7.675

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	13

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	2.013e-004	7.414000	7.894000	2.300000	7.654000
0.120000	Normal	0.250000	Activity	2.013e-004	7.435000	7.915000	2.300000	7.675000
0.120000	Normal	0.125000	Activity	1.037e-004	7.435000	7.915000	2.300000	7.675000
0.120000	Normal	0.050000	Activity	8.691e-005	7.435000	7.915000	2.300000	7.675000
0.120000	Normal	0.075000	Activity	1.444e-004	7.435000	7.915000	2.300000	7.675000
0.120000	Normal	0.125000	Activity	1.035e-004	7.414000	7.894000	2.300000	7.654000
0.120000	Normal	0.050000	Activity	9.484e-005	7.414000	7.894000	2.300000	7.654000
0.120000	Normal	0.075000	Activity	1.325e-004	7.414000	7.894000	2.300000	7.654000

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sig1	Aw	Bw	Sigw	Aa
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

-- --

Trace Coordinates:

Latitude	Longitude
34.8076	-118.8901
34.8072	-118.8876
34.7732	-118.7673
34.6985	-118.5090
34.5478	-118.1039
34.4029	-117.7536
34.3163	-117.5490
34.2709	-117.4510
34.2328	-117.3887
34.1731	-117.2742
34.1500	-117.2220
34.0928	-117.0677
34.0738	-117.0139
34.0338	-116.9024
34.0114	-116.8735
33.9591	-116.8198

Name: S. San Andreas;NM+SM+NSB+SSB+BG  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 7.825

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	82.7	0	0.001	13.89

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	1.007e-004	7.527000	8.007000	2.300000	7.767000
0.120000	Normal	0.250000	Activity	1.007e-004	7.585000	8.065000	2.300000	7.825000
0.120000	Normal	0.125000	Activity	3.285e-005	7.585000	8.065000	2.300000	7.825000
0.120000	Normal	0.050000	Activity	1.881e-005	7.585000	8.065000	2.300000	7.825000
0.120000	Normal	0.075000	Activity	3.269e-005	7.585000	8.065000	2.300000	7.825000
0.120000	Normal	0.125000	Activity	6.288e-005	7.527000	8.007000	2.300000	7.767000
0.120000	Normal	0.050000	Activity	5.289e-005	7.527000	8.007000	2.300000	7.767000
0.120000	Normal	0.075000	Activity	6.534e-005	7.527000	8.007000	2.300000	7.767000

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sig1	Aw	Bw	Sigw	Aa
Ba Sigw Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

```
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
```

Trace Coordinates:

Latitude	Longitude
33.7882	-116.2463
33.8485	-116.3830
33.8481	-116.4265
33.8847	-116.5169
33.9070	-116.5849
33.9176	-116.6239
33.9442	-116.6858
33.9374	-116.7786
33.9532	-116.8014
33.9591	-116.8198
34.0114	-116.8735
34.0338	-116.9024
34.0738	-117.0139
34.0928	-117.0677
34.1500	-117.2220
34.1731	-117.2742
34.2328	-117.3887
34.2709	-117.4510
34.3163	-117.5490
34.4029	-117.7536
34.5478	-118.1039
34.6985	-118.5090
34.7732	-118.7673
34.8072	-118.8876
34.8076	-118.8901

Name: S. San Andreas;NM+SM+NSB+SSB+BG+CO  
Region: USGS 2008 California  
Category:Fault  
Fault Mechanism: Strike Slip  
Magnitude Scale: Moment Magnitude  
Probability of Activity: 0.90000000  
Deterministic Magnitude: 7.925

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	83.8	0.1	0.101	13.02

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
	Normal	0.25	Activity	1.007e-004	7.601000	8.081000	2.300000	7.841000
0.120000	0.010000	10.000000	Activity	1.007e-004	7.685000	8.165000	2.300000	7.925000
	Normal	0.250000	Activity	1.007e-004	7.685000	8.165000	2.300000	7.925000
0.120000	0.010000	10.000000	Activity	3.893e-005	7.685000	8.165000	2.300000	7.925000
	Normal	0.125000	Activity	3.893e-005	7.685000	8.165000	2.300000	7.925000
0.120000	0.010000	10.000000	Activity	1.533e-005	7.685000	8.165000	2.300000	7.925000
	Normal	0.050000	Activity	1.533e-005	7.685000	8.165000	2.300000	7.925000
0.120000	0.010000	10.000000	Activity	5.003e-005	7.685000	8.165000	2.300000	7.925000
	Normal	0.075000	Activity	5.003e-005	7.685000	8.165000	2.300000	7.925000
0.120000	0.010000	10.000000	Activity	6.028e-005	7.601000	8.081000	2.300000	7.841000
	Normal	0.125000	Activity	6.028e-005	7.601000	8.081000	2.300000	7.841000
0.120000	0.010000	10.000000	Activity	4.562e-005	7.601000	8.081000	2.300000	7.841000
	Normal	0.050000	Activity	4.562e-005	7.601000	8.081000	2.300000	7.841000
0.120000	0.010000	10.000000	Activity	6.649e-005	7.601000	8.081000	2.300000	7.841000
	Normal	0.075000	Activity	6.649e-005	7.601000	8.081000	2.300000	7.841000
0.120000	0.010000	10.000000						

Rupture Length Parameters

Rupture Dimensioning		Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							

Trace Coordinates:

Latitude	Longitude
33.3501	-115.7119
33.7882	-116.2463
33.8485	-116.3830
33.8481	-116.4265
33.8847	-116.5169
33.9070	-116.5849
33.9176	-116.6239
33.9442	-116.6858
33.9374	-116.7786
33.9532	-116.8014
33.9591	-116.8198
34.0114	-116.8735
34.0338	-116.9024
34.0738	-117.0139
34.0928	-117.0677
34.1500	-117.2220

34.1731 -117.2742  
 34.2328 -117.3887  
 34.2709 -117.4510  
 34.3163 -117.5490  
 34.4029 -117.7536  
 34.5478 -118.1039  
 34.6985 -118.5090  
 34.7732 -118.7673  
 34.8072 -118.8876  
 34.8076 -118.8901

Name: S. San Andreas;NSB  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 6.855

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	13

Magnitude Recurrence Distributions:

Sigma	ModelType	Delta1	Weight	Delta2	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.010000	0.25	10.000000	Activity	7.046e-004	6.615000	7.095000	2.300000	6.855000
0.120000	Normal	0.010000	0.250000	10.000000	Activity	7.046e-004	6.395000	6.875000	2.300000	6.635000
0.120000	Normal	0.010000	0.125000	10.000000	Activity	6.604e-004	6.395000	6.875000	2.300000	6.635000
0.120000	Normal	0.010000	0.050000	10.000000	Activity	6.359e-004	6.395000	6.875000	2.300000	6.635000
0.120000	Normal	0.010000	0.075000	10.000000	Activity	1.078e-003	6.395000	6.875000	2.300000	6.635000
0.120000	Normal	0.010000	0.125000	10.000000	Activity	7.074e-004	6.615000	7.095000	2.300000	6.855000
0.120000	Normal	0.010000	0.050000	10.000000	Activity	7.048e-004	6.615000	7.095000	2.300000	6.855000
0.120000	Normal	0.010000	0.075000	10.000000	Activity	1.324e-003	6.615000	7.095000	2.300000	6.855000

Rupture Length Parameters

Ba	Rupture Dimensioning	Al	B1	Sigl	Aw	Bw	Sigw	Aa
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

```
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--      --
```

Trace Coordinates:

```
Latitude Longitude
34.3163 -117.5490
34.2709 -117.4510
34.2328 -117.3887
34.1731 -117.2742
34.1500 -117.2220
```

Name: S. San Andreas;NSB+SSB  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 7.203

Fault Profile Parameters:

```
Dipl    Dip2    Depth1    Depth2    Depth3
  90      90      0      0.001      13
```

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	8.052e-004	6.963000	7.443000	2.300000	7.203000
0.120000	Normal	0.250000	Activity	8.052e-004	6.834000	7.314000	2.300000	7.074000
0.120000	Normal	0.125000	Activity	1.240e-003	6.834000	7.314000	2.300000	7.074000
0.120000	Normal	0.050000	Activity	7.943e-004	6.834000	7.314000	2.300000	7.074000
0.120000	Normal	0.075000	Activity	1.379e-003	6.834000	7.314000	2.300000	7.074000
0.120000	Normal	0.125000	Activity	1.053e-003	6.963000	7.443000	2.300000	7.203000
0.120000	Normal	0.050000	Activity	6.413e-004	6.963000	7.443000	2.300000	7.203000
0.120000	Normal	0.075000	Activity	1.176e-003	6.963000	7.443000	2.300000	7.203000

Rupture Length Parameters

```
Rupture Dimensioning      A1      B1      Sig1      Aw      Bw      Sigw      Aa
Ba      Sigw
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--      --
```

```

--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--      --
    
```

Trace Coordinates:

```

Latitude  Longitude
34.3163   -117.5490
34.2709   -117.4510
34.2328   -117.3887
34.1731   -117.2742
34.1500   -117.2220
34.0928   -117.0677
34.0738   -117.0139
34.0338   -116.9024
34.0114   -116.8735
33.9591   -116.8198
    
```

Name: S. San Andreas;NSB+SSB+BG  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 7.467

Fault Profile Parameters:

```

Dip1      Dip2      Depth1     Depth2     Depth3
  90       75.4         0         0.001     13.55
    
```

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	4.026e-004	7.227000	7.707000	2.300000	7.467000
0.120000	Normal	0.250000	Activity	4.026e-004	7.186000	7.666000	2.300000	7.426000
0.120000	Normal	0.125000	Activity	3.040e-005	7.186000	7.666000	2.300000	7.426000
0.120000	Normal	0.050000	Activity	5.033e-006	7.186000	7.666000	2.300000	7.426000
0.120000	Normal	0.075000	Activity	5.033e-006	7.186000	7.666000	2.300000	7.426000
0.120000	Normal	0.125000	Activity	2.255e-004	7.227000	7.707000	2.300000	7.467000
0.120000	Normal	0.050000	Activity	3.675e-005	7.227000	7.707000	2.300000	7.467000
0.120000	Normal	0.075000	Activity	1.786e-004	7.227000	7.707000	2.300000	7.467000

Rupture Length Parameters

```

Rupture Dimensioning  A1      B1      Sig1      Aw      Bw      Sigw      Aa
Ba      Sigw
    
```





```

0.120000 0.010000 10.000000
          Normal 0.125000 Activity 2.181e-004 7.371000 7.851000 2.300000 7.611000
0.120000 0.010000 10.000000
          Normal 0.050000 Activity 5.033e-006 7.371000 7.851000 2.300000 7.611000
0.120000 0.010000 10.000000
          Normal 0.075000 Activity 2.755e-004 7.371000 7.851000 2.300000 7.611000
0.120000 0.010000 10.000000
          Normal 0.125000 Activity 2.241e-004 7.365000 7.845000 2.300000 7.605000
0.120000 0.010000 10.000000
          Normal 0.050000 Activity 5.033e-006 7.365000 7.845000 2.300000 7.605000
0.120000 0.010000 10.000000
          Normal 0.075000 Activity 2.454e-004 7.365000 7.845000 2.300000 7.605000
0.120000 0.010000 10.000000
    
```

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba Sigw							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							

Trace Coordinates:

Latitude	Longitude
33.3501	-115.7119
33.7882	-116.2463
33.8485	-116.3830
33.8481	-116.4265
33.8847	-116.5169
33.9070	-116.5849
33.9176	-116.6239
33.9442	-116.6858
33.9374	-116.7786
33.9532	-116.8014
33.9591	-116.8198
34.0114	-116.8735
34.0338	-116.9024
34.0738	-117.0139
34.0928	-117.0677
34.1500	-117.2220
34.1731	-117.2742
34.2328	-117.3887
34.2709	-117.4510
34.3163	-117.5490

Name: S. San Andreas;PK  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 6.092

**Fault Profile Parameters:**

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	4	4.001	6

**Magnitude Recurrence Distributions:**

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	3.483e-002	5.852000	6.332000	2.300000	6.092000
0.120000	Normal	0.250000	Activity	3.483e-002	5.632000	6.112000	2.300000	5.872000
0.120000	Normal	0.125000	Activity	5.337e-002	5.632000	6.112000	2.300000	5.872000
0.120000	Normal	0.050000	Activity	5.341e-002	5.632000	6.112000	2.300000	5.872000
0.120000	Normal	0.075000	Activity	5.256e-002	5.632000	6.112000	2.300000	5.872000
0.120000	Normal	0.125000	Activity	2.516e-002	5.852000	6.332000	2.300000	6.092000
0.120000	Normal	0.050000	Activity	2.517e-002	5.852000	6.332000	2.300000	6.092000
0.120000	Normal	0.075000	Activity	2.508e-002	5.852000	6.332000	2.300000	6.092000

**Rupture Length Parameters**

Rupture Dimensioning	Al	B1	Sigl	Aw	Bw	Sigw	Aa
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

**Trace Coordinates:**

Latitude	Longitude
35.7520	-120.3001
36.0027	-120.5609

Name: S. San Andreas;PK+CH  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 7.118

**Fault Profile Parameters:**

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0.4	0.401	8.4

**Magnitude Recurrence Distributions:**

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	1.610e-003	6.878000	7.358000	2.300000	7.118000
0.120000	Normal	0.250000	Activity	1.610e-003	6.721000	7.201000	2.300000	6.961000
0.120000	Normal	0.125000	Activity	7.135e-003	6.721000	7.201000	2.300000	6.961000
0.120000	Normal	0.050000	Activity	7.120e-003	6.721000	7.201000	2.300000	6.961000
0.120000	Normal	0.075000	Activity	7.190e-003	6.721000	7.201000	2.300000	6.961000
0.120000	Normal	0.125000	Activity	4.366e-003	6.878000	7.358000	2.300000	7.118000
0.120000	Normal	0.050000	Activity	4.363e-003	6.878000	7.358000	2.300000	7.118000
0.120000	Normal	0.075000	Activity	4.374e-003	6.878000	7.358000	2.300000	7.118000

**Rupture Length Parameters**

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

**Trace Coordinates:**

Latitude	Longitude
36.0027	-120.5609
35.7520	-120.3001
35.5333	-120.0867

35.4139 -119.9703  
 35.3142 -119.8660

Name: S. San Andreas;PK+CH+CC  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 7.435

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0.2	0.201	11.2

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	7.046e-004	7.195000	7.675000	2.300000	7.435000
0.120000	Normal	0.250000	Activity	7.046e-004	7.144000	7.624000	2.300000	7.384000
0.120000	Normal	0.125000	Activity	4.243e-004	7.144000	7.624000	2.300000	7.384000
0.120000	Normal	0.050000	Activity	4.304e-004	7.144000	7.624000	2.300000	7.384000
0.120000	Normal	0.075000	Activity	4.213e-004	7.144000	7.624000	2.300000	7.384000
0.120000	Normal	0.125000	Activity	4.234e-004	7.195000	7.675000	2.300000	7.435000
0.120000	Normal	0.050000	Activity	4.337e-004	7.195000	7.675000	2.300000	7.435000
0.120000	Normal	0.075000	Activity	4.046e-004	7.195000	7.675000	2.300000	7.435000

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

Trace Coordinates:

Latitude Longitude

36.0027 -120.5609  
 35.7520 -120.3001  
 35.5333 -120.0867  
 35.4139 -119.9703  
 35.3142 -119.8660  
 35.1607 -119.7068  
 35.0475 -119.5583  
 34.9878 -119.4711  
 34.9441 -119.4029

Name: S. San Andreas;PK+CH+CC+BB  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 7.594

Fault Profile Parameters:

Dipl	Dip2	Depth1	Depth2	Depth3
90	90	0.1	0.101	12.1

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	4.026e-004	7.353000	7.833000	2.300000	7.593000
0.120000	Normal	0.250000	Activity	4.026e-004	7.354000	7.834000	2.300000	7.594000
0.120000	Normal	0.125000	Activity	8.412e-004	7.354000	7.834000	2.300000	7.594000
0.120000	Normal	0.050000	Activity	8.947e-004	7.354000	7.834000	2.300000	7.594000
0.120000	Normal	0.075000	Activity	7.728e-004	7.354000	7.834000	2.300000	7.594000
0.120000	Normal	0.125000	Activity	8.278e-004	7.353000	7.833000	2.300000	7.593000
0.120000	Normal	0.050000	Activity	8.473e-004	7.353000	7.833000	2.300000	7.593000
0.120000	Normal	0.075000	Activity	7.881e-004	7.353000	7.833000	2.300000	7.593000

Rupture Length Parameters

Rupture Dimensioning	Al	B1	Sigl	Aw	Bw	Sigw	Aa
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

```

        Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--      --
        Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--      --
    
```

Trace Coordinates:

```

Latitude  Longitude
36.0027   -120.5609
35.7520   -120.3001
35.5333   -120.0867
35.4139   -119.9703
35.3142   -119.8660
35.1607   -119.7068
35.0475   -119.5583
34.9878   -119.4711
34.9441   -119.4029
34.9157   -119.3629
34.8639   -119.2100
34.8290   -119.0301
34.8076   -118.8901
    
```

Name: S. San Andreas;PK+CH+CC+BB+NM  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 7.711

Fault Profile Parameters:

```

Dip1      Dip2      Depth1     Depth2     Depth3
  90        90         0.1       0.101      12.1
    
```

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	7.046e-004	7.441000	7.921000	2.300000	7.681000
0.120000	Normal	0.250000	Activity	7.046e-004	7.471000	7.951000	2.300000	7.711000
0.120000	Normal	0.125000	Activity	1.664e-003	7.471000	7.951000	2.300000	7.711000
0.120000	Normal	0.050000	Activity	1.478e-003	7.471000	7.951000	2.300000	7.711000
0.120000	Normal	0.075000	Activity	1.956e-003	7.471000	7.951000	2.300000	7.711000
0.120000	Normal	0.125000	Activity	1.557e-003	7.441000	7.921000	2.300000	7.681000
0.120000	Normal	0.050000	Activity	1.465e-003	7.441000	7.921000	2.300000	7.681000
0.120000	Normal	0.075000	Activity	1.753e-003	7.441000	7.921000	2.300000	7.681000

Rupture Length Parameters

```

Rupture Dimensioning      A1      B1      Sig1      Aw      Bw      Sigw      Aa
Ba      Sigw
        Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
    
```

```
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
```

Trace Coordinates:

Latitude	Longitude
36.0027	-120.5609
35.7520	-120.3001
35.5333	-120.0867
35.4139	-119.9703
35.3142	-119.8660
35.1607	-119.7068
35.0475	-119.5583
34.9878	-119.4711
34.9441	-119.4029
34.9157	-119.3629
34.8639	-119.2100
34.8290	-119.0301
34.8076	-118.8901
34.8072	-118.8876
34.7732	-118.7673
34.6985	-118.5090

Name: S. San Andreas;PK+CH+CC+BB+NM+SM  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 7.915

Fault Profile Parameters:

Dipl	Dip2	Depth1	Depth2	Depth3
90	90	0.1	0.101	13.1

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	2.013e-003	7.594000	8.074000	2.300000	7.834000
	Normal	0.010000	Activity	2.013e-003	7.675000	8.155000	2.300000	7.915000
0.120000	Normal	0.250000	Activity	2.013e-003	7.675000	8.155000	2.300000	7.915000
	Normal	0.010000	Activity	6.443e-004	7.675000	8.155000	2.300000	7.915000
0.120000	Normal	0.125000	Activity	6.443e-004	7.675000	8.155000	2.300000	7.915000
	Normal	0.010000	Activity	7.149e-004	7.675000	8.155000	2.300000	7.915000
0.120000	Normal	0.050000	Activity	7.149e-004	7.675000	8.155000	2.300000	7.915000
	Normal	0.010000	Activity	7.149e-004	7.675000	8.155000	2.300000	7.915000



```

0.120000  0.010000  10.000000
           Normal  0.075000  Activity  5.033e-006  7.675000  8.155000  2.300000  7.915000
0.120000  0.010000  10.000000
           Normal  0.125000  Activity  1.032e-003  7.594000  8.074000  2.300000  7.834000
0.120000  0.010000  10.000000
           Normal  0.050000  Activity  1.067e-003  7.594000  8.074000  2.300000  7.834000
0.120000  0.010000  10.000000
           Normal  0.075000  Activity  6.211e-004  7.594000  8.074000  2.300000  7.834000
0.120000  0.010000  10.000000
    
```

Rupture Length Parameters

Rupture Dimensioning		Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

Trace Coordinates:

Latitude	Longitude
36.0027	-120.5609
35.7520	-120.3001
35.5333	-120.0867
35.4139	-119.9703
35.3142	-119.8660
35.1607	-119.7068
35.0475	-119.5583
34.9878	-119.4711
34.9441	-119.4029
34.9157	-119.3629
34.8639	-119.2100
34.8290	-119.0301
34.8076	-118.8901
34.8072	-118.8876
34.7732	-118.7673
34.6985	-118.5090
34.5478	-118.1039
34.4029	-117.7536
34.3163	-117.5490

Name: S. San Andreas;PK+CH+CC+BB+NM+SM+NSB  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude

Probability of Activity: 0.90000000  
 Deterministic Magnitude: 7.973

Fault Profile Parameters:

Dipl	Dip2	Depth1	Depth2	Depth3
90	90	0.1	0.101	13.1

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	5.033e-004	7.637000	8.117000	2.300000	7.877000
0.120000	Normal	0.250000	Activity	5.033e-004	7.733000	8.213000	2.300000	7.973000
0.120000	Normal	0.125000	Activity	3.545e-004	7.733000	8.213000	2.300000	7.973000
0.120000	Normal	0.050000	Activity	4.472e-004	7.733000	8.213000	2.300000	7.973000
0.120000	Normal	0.075000	Activity	8.035e-004	7.733000	8.213000	2.300000	7.973000
0.120000	Normal	0.125000	Activity	4.268e-004	7.637000	8.117000	2.300000	7.877000
0.120000	Normal	0.050000	Activity	4.738e-004	7.637000	8.117000	2.300000	7.877000
0.120000	Normal	0.075000	Activity	6.935e-004	7.637000	8.117000	2.300000	7.877000

Rupture Length Parameters

Rupture	Dimensioning	A1	B1	Sig1	Aw	Bw	Sigw	Aa
Ba	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--	--

Trace Coordinates:

Latitude	Longitude
36.0027	-120.5609
35.7520	-120.3001
35.5333	-120.0867
35.4139	-119.9703
35.3142	-119.8660
35.1607	-119.7068
35.0475	-119.5583
34.9878	-119.4711

34.9441 -119.4029  
 34.9157 -119.3629  
 34.8639 -119.2100  
 34.8290 -119.0301  
 34.8076 -118.8901  
 34.8072 -118.8876  
 34.7732 -118.7673  
 34.6985 -118.5090  
 34.5478 -118.1039  
 34.4029 -117.7536  
 34.3163 -117.5490  
 34.2709 -117.4510  
 34.2328 -117.3887  
 34.1731 -117.2742  
 34.1500 -117.2220

Name: S. San Andreas;PK+CH+CC+BB+NM+SM+NSB+SSB  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 8.037

Fault Profile Parameters:

Dipl	Dip2	Depth1	Depth2	Depth3
90	90	0.1	0.101	13.1

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
	Delta1	Delta2						
0.120000	Normal	0.25	Activity	1.007e-004	7.685000	8.165000	2.300000	7.925000
	0.010000	10.000000						
	Normal	0.250000	Activity	1.007e-004	7.797000	8.277000	2.300000	8.037000
0.120000	0.010000	10.000000						
	Normal	0.125000	Activity	1.085e-004	7.797000	8.277000	2.300000	8.037000
0.120000	0.010000	10.000000						
	Normal	0.050000	Activity	1.007e-004	7.797000	8.277000	2.300000	8.037000
0.120000	0.010000	10.000000						
	Normal	0.075000	Activity	1.310e-004	7.797000	8.277000	2.300000	8.037000
0.120000	0.010000	10.000000						
	Normal	0.125000	Activity	1.002e-004	7.685000	8.165000	2.300000	7.925000
0.120000	0.010000	10.000000						
	Normal	0.050000	Activity	9.723e-005	7.685000	8.165000	2.300000	7.925000
0.120000	0.010000	10.000000						
	Normal	0.075000	Activity	1.125e-004	7.685000	8.165000	2.300000	7.925000
0.120000	0.010000	10.000000						

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sig1	Aw	Bw	Sigw	Aa
Ba							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--

```

    Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--
    Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--
    Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--
    Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--
    Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--
    
```

Trace Coordinates:

Latitude	Longitude
33.9591	-116.8198
34.0114	-116.8735
34.0338	-116.9024
34.0738	-117.0139
34.0928	-117.0677
34.1500	-117.2220
34.1731	-117.2742
34.2328	-117.3887
34.2709	-117.4510
34.3163	-117.5490
34.4029	-117.7536
34.5478	-118.1039
34.6985	-118.5090
34.7732	-118.7673
34.8072	-118.8876
34.8076	-118.8901
34.8290	-119.0301
34.8639	-119.2100
34.9157	-119.3629
34.9441	-119.4029
34.9878	-119.4711
35.0475	-119.5583
35.1607	-119.7068
35.3142	-119.8660
35.4139	-119.9703
35.5333	-120.0867
35.7520	-120.3001
36.0027	-120.5609

Name: S. San Andreas;PK+CH+CC+BB+NM+SM+NSB+SSB+BG  
 Region: USGS 2008 California  
 Category: Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 8.122

Fault Profile Parameters:

Dipl	Dip2	Depth1	Depth2	Depth3
90	85.6	0.1	0.101	13.06

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
	Delta1	Delta2						

	Normal	0.25	Activity	5.033e-005	7.749000	8.229000	2.300000	7.989000
0.120000	0.010000	10.000000						
	Normal	0.250000	Activity	5.033e-005	7.882000	8.362000	2.300000	8.122000
0.120000	0.010000	10.000000						
	Normal	0.125000	Activity	4.085e-005	7.882000	8.362000	2.300000	8.122000
0.120000	0.010000	10.000000						
	Normal	0.050000	Activity	3.540e-005	7.882000	8.362000	2.300000	8.122000
0.120000	0.010000	10.000000						
	Normal	0.075000	Activity	4.277e-005	7.882000	8.362000	2.300000	8.122000
0.120000	0.010000	10.000000						
	Normal	0.125000	Activity	4.696e-005	7.749000	8.229000	2.300000	7.989000
0.120000	0.010000	10.000000						
	Normal	0.050000	Activity	4.414e-005	7.749000	8.229000	2.300000	7.989000
0.120000	0.010000	10.000000						
	Normal	0.075000	Activity	4.869e-005	7.749000	8.229000	2.300000	7.989000
0.120000	0.010000	10.000000						

Rupture Length Parameters

Rupture Dimensioning		Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							

Trace Coordinates:

Latitude	Longitude
33.7882	-116.2463
33.8485	-116.3830
33.8481	-116.4265
33.8847	-116.5169
33.9070	-116.5849
33.9176	-116.6239
33.9442	-116.6858
33.9374	-116.7786
33.9532	-116.8014
33.9591	-116.8198
34.0114	-116.8735
34.0338	-116.9024
34.0738	-117.0139
34.0928	-117.0677
34.1500	-117.2220
34.1731	-117.2742
34.2328	-117.3887
34.2709	-117.4510

34.3163 -117.5490  
 34.4029 -117.7536  
 34.5478 -118.1039  
 34.6985 -118.5090  
 34.7732 -118.7673  
 34.8072 -118.8876  
 34.8076 -118.8901  
 34.8290 -119.0301  
 34.8639 -119.2100  
 34.9157 -119.3629  
 34.9441 -119.4029  
 34.9878 -119.4711  
 35.0475 -119.5583  
 35.1607 -119.7068  
 35.3142 -119.8660  
 35.4139 -119.9703  
 35.5333 -120.0867  
 35.7520 -120.3001  
 36.0027 -120.5609

Name: S. San Andreas;PK+CH+CC+BB+NM+SM+NSB+SSB+BG+CO  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 8.184

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	86.1	0.1	0.101	13.07

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
	Delta1	Delta2						
0.120000	Normal	0.25	Activity	1.007e-004	7.796000	8.276000	2.300000	8.036000
	0.010000	10.000000						
	Normal	0.250000	Activity	1.007e-004	7.944000	8.424000	2.300000	8.184000
0.120000	0.010000	10.000000						
	Normal	0.125000	Activity	6.662e-005	7.944000	8.424000	2.300000	8.184000
0.120000	0.010000	10.000000						
	Normal	0.050000	Activity	3.292e-005	7.944000	8.424000	2.300000	8.184000
0.120000	0.010000	10.000000						
	Normal	0.075000	Activity	8.830e-005	7.944000	8.424000	2.300000	8.184000
0.120000	0.010000	10.000000						
	Normal	0.125000	Activity	8.242e-005	7.796000	8.276000	2.300000	8.036000
0.120000	0.010000	10.000000						
	Normal	0.050000	Activity	6.595e-005	7.796000	8.276000	2.300000	8.036000
0.120000	0.010000	10.000000						
	Normal	0.075000	Activity	9.337e-005	7.796000	8.276000	2.300000	8.036000
0.120000	0.010000	10.000000						

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sigl	Aw	Bw	Sigw	Aa
Ba Sigw							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--						

```
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --  
--      --  
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --  
--      --  
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --  
--      --  
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --  
--      --  
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --  
--      --  
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --  
--      --  
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --  
--      --
```

Trace Coordinates:

Latitude	Longitude
33.3501	-115.7119
33.7882	-116.2463
33.8485	-116.3830
33.8481	-116.4265
33.8847	-116.5169
33.9070	-116.5849
33.9176	-116.6239
33.9442	-116.6858
33.9374	-116.7786
33.9532	-116.8014
33.9591	-116.8198
34.0114	-116.8735
34.0338	-116.9024
34.0738	-117.0139
34.0928	-117.0677
34.1500	-117.2220
34.1731	-117.2742
34.2328	-117.3887
34.2709	-117.4510
34.3163	-117.5490
34.4029	-117.7536
34.5478	-118.1039
34.6985	-118.5090
34.7732	-118.7673
34.8072	-118.8876
34.8076	-118.8901
34.8290	-119.0301
34.8639	-119.2100
34.9157	-119.3629
34.9441	-119.4029
34.9878	-119.4711
35.0475	-119.5583
35.1607	-119.7068
35.3142	-119.8660
35.4139	-119.9703
35.5333	-120.0867
35.7520	-120.3001
36.0027	-120.5609

Name: S. San Andreas;SM

Region: USGS 2008 California  
 Category: Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 7.307

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	13

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	5.033e-004	7.067000	7.547000	2.300000	7.307000
0.120000	Normal	0.250000	Activity	5.033e-004	6.972000	7.452000	2.300000	7.212000
0.120000	Normal	0.125000	Activity	6.802e-004	6.972000	7.452000	2.300000	7.212000
0.120000	Normal	0.050000	Activity	8.646e-004	6.972000	7.452000	2.300000	7.212000
0.120000	Normal	0.075000	Activity	3.723e-004	6.972000	7.452000	2.300000	7.212000
0.120000	Normal	0.125000	Activity	6.481e-004	7.067000	7.547000	2.300000	7.307000
0.120000	Normal	0.050000	Activity	7.680e-004	7.067000	7.547000	2.300000	7.307000
0.120000	Normal	0.075000	Activity	3.799e-004	7.067000	7.547000	2.300000	7.307000

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sig1	Aw	Bw	Sigw	Aa
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

Trace Coordinates:

Latitude	Longitude
34.6985	-118.5090
34.5478	-118.1039
34.4029	-117.7536
34.3163	-117.5490



Name: S. San Andreas;SM+NSB  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 7.438

Fault Profile Parameters:

Dipl	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	13

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	6.039e-004	7.198000	7.678000	2.300000	7.438000
0.120000	Normal	0.250000	Activity	6.039e-004	7.148000	7.628000	2.300000	7.388000
0.120000	Normal	0.125000	Activity	8.991e-004	7.148000	7.628000	2.300000	7.388000
0.120000	Normal	0.050000	Activity	1.247e-003	7.148000	7.628000	2.300000	7.388000
0.120000	Normal	0.075000	Activity	1.026e-003	7.148000	7.628000	2.300000	7.388000
0.120000	Normal	0.125000	Activity	8.729e-004	7.198000	7.678000	2.300000	7.438000
0.120000	Normal	0.050000	Activity	1.090e-003	7.198000	7.678000	2.300000	7.438000
0.120000	Normal	0.075000	Activity	1.025e-003	7.198000	7.678000	2.300000	7.438000

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sigl	Aw	Bw	Sigw	Aa
Ba							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

Trace Coordinates:

Latitude	Longitude
34.6985	-118.5090
34.5478	-118.1039

34.4029 -117.7536  
 34.3163 -117.5490  
 34.2709 -117.4510  
 34.2328 -117.3887  
 34.1731 -117.2742  
 34.1500 -117.2220

Name: S. San Andreas;SM+NSB+SSB  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 7.559

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	13

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	4.026e-004	7.319000	7.799000	2.300000	7.559000
0.120000	Normal	0.250000	Activity	4.026e-004	7.309000	7.789000	2.300000	7.549000
0.120000	Normal	0.125000	Activity	7.535e-004	7.309000	7.789000	2.300000	7.549000
0.120000	Normal	0.050000	Activity	7.810e-004	7.309000	7.789000	2.300000	7.549000
0.120000	Normal	0.075000	Activity	7.649e-004	7.309000	7.789000	2.300000	7.549000
0.120000	Normal	0.125000	Activity	5.996e-004	7.319000	7.799000	2.300000	7.559000
0.120000	Normal	0.050000	Activity	5.990e-004	7.319000	7.799000	2.300000	7.559000
0.120000	Normal	0.075000	Activity	6.242e-004	7.319000	7.799000	2.300000	7.559000

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sig1	Aw	Bw	Sigw	Aa
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

-- --

Trace Coordinates:

Latitude	Longitude
34.6985	-118.5090
34.5478	-118.1039
34.4029	-117.7536
34.3163	-117.5490
34.2709	-117.4510
34.2328	-117.3887
34.1731	-117.2742
34.1500	-117.2220
34.0928	-117.0677
34.0738	-117.0139
34.0338	-116.9024
34.0114	-116.8735
33.9591	-116.8198

Name: S. San Andreas;SM+NSB+SSB+BG  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 7.731

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	81.4	0	0.001	12.85

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	3.020e-004	7.455000	7.935000	2.300000	7.695000
0.120000	Normal	0.250000	Activity	3.020e-004	7.491000	7.971000	2.300000	7.731000
0.120000	Normal	0.125000	Activity	1.963e-004	7.491000	7.971000	2.300000	7.731000
0.120000	Normal	0.050000	Activity	1.419e-004	7.491000	7.971000	2.300000	7.731000
0.120000	Normal	0.075000	Activity	1.035e-004	7.491000	7.971000	2.300000	7.731000
0.120000	Normal	0.125000	Activity	2.941e-004	7.455000	7.935000	2.300000	7.695000
0.120000	Normal	0.050000	Activity	2.257e-004	7.455000	7.935000	2.300000	7.695000
0.120000	Normal	0.075000	Activity	2.629e-004	7.455000	7.935000	2.300000	7.695000

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sig1	Aw	Bw	Sigw	Aa
Ba Sigw							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--

```

    Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--
    Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--
    Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--
    Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--
    Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--
    Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--
    
```

Trace Coordinates:

Latitude	Longitude
33.7882	-116.2463
33.8485	-116.3830
33.8481	-116.4265
33.8847	-116.5169
33.9070	-116.5849
33.9176	-116.6239
33.9442	-116.6858
33.9374	-116.7786
33.9532	-116.8014
33.9591	-116.8198
34.0114	-116.8735
34.0338	-116.9024
34.0738	-117.0139
34.0928	-117.0677
34.1500	-117.2220
34.1731	-117.2742
34.2328	-117.3887
34.2709	-117.4510
34.3163	-117.5490
34.4029	-117.7536
34.5478	-118.1039
34.6985	-118.5090

Name: S. San Andreas;SM+NSB+SSB+BG+CO  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 7.847

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	82.9	0.1	0.101	13

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	4.026e-004	7.542000	8.022000	2.300000	7.782000
0.120000	Normal	0.250000	Activity	4.026e-004	7.607000	8.087000	2.300000	7.847000

0.120000	Normal	0.125000	Activity	4.162e-004	7.607000	8.087000	2.300000	7.847000
	0.010000	10.000000						
	Normal	0.050000	Activity	1.926e-004	7.607000	8.087000	2.300000	7.847000
0.120000	0.010000	10.000000						
	Normal	0.075000	Activity	4.008e-004	7.607000	8.087000	2.300000	7.847000
0.120000	0.010000	10.000000						
	Normal	0.125000	Activity	3.622e-004	7.542000	8.022000	2.300000	7.782000
0.120000	0.010000	10.000000						
	Normal	0.050000	Activity	1.710e-004	7.542000	8.022000	2.300000	7.782000
0.120000	0.010000	10.000000						
	Normal	0.075000	Activity	3.641e-004	7.542000	8.022000	2.300000	7.782000
0.120000	0.010000	10.000000						

Rupture Length Parameters

Rupture Dimensioning		Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							

Trace Coordinates:

Latitude	Longitude
33.3501	-115.7119
33.7882	-116.2463
33.8485	-116.3830
33.8481	-116.4265
33.8847	-116.5169
33.9070	-116.5849
33.9176	-116.6239
33.9442	-116.6858
33.9374	-116.7786
33.9532	-116.8014
33.9591	-116.8198
34.0114	-116.8735
34.0338	-116.9024
34.0738	-117.0139
34.0928	-117.0677
34.1500	-117.2220
34.1731	-117.2742
34.2328	-117.3887
34.2709	-117.4510
34.3163	-117.5490
34.4029	-117.7536
34.5478	-118.1039

34.6985 -118.5090

Name: S. San Andreas;SSB  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 6.945

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	13

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	5.033e-005	6.705000	7.185000	2.300000	6.945000
0.120000	Normal	0.250000	Activity	5.033e-005	6.490000	6.970000	2.300000	6.730000
0.120000	Normal	0.125000	Activity	5.151e-005	6.490000	6.970000	2.300000	6.730000
0.120000	Normal	0.050000	Activity	5.069e-005	6.490000	6.970000	2.300000	6.730000
0.120000	Normal	0.075000	Activity	4.943e-005	6.490000	6.970000	2.300000	6.730000
0.120000	Normal	0.125000	Activity	5.103e-005	6.705000	7.185000	2.300000	6.945000
0.120000	Normal	0.050000	Activity	4.985e-005	6.705000	7.185000	2.300000	6.945000
0.120000	Normal	0.075000	Activity	4.793e-005	6.705000	7.185000	2.300000	6.945000

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sig1	Aw	Bw	Sigw	Aa
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

Trace Coordinates:

Latitude	Longitude
34.1500	-117.2220

34.0928 -117.0677  
 34.0738 -117.0139  
 34.0338 -116.9024  
 34.0114 -116.8735  
 33.9591 -116.8198

Name: S. San Andreas;SSB+BG  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 7.346

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	70.7	0	0.001	13.21

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	9.059e-004	7.106000	7.586000	2.300000	7.346000
0.120000	Normal	0.250000	Activity	9.059e-004	7.024000	7.504000	2.300000	7.264000
0.120000	Normal	0.125000	Activity	5.033e-006	7.024000	7.504000	2.300000	7.264000
0.120000	Normal	0.050000	Activity	5.033e-006	7.024000	7.504000	2.300000	7.264000
0.120000	Normal	0.075000	Activity	5.033e-006	7.024000	7.504000	2.300000	7.264000
0.120000	Normal	0.125000	Activity	5.033e-006	7.106000	7.586000	2.300000	7.346000
0.120000	Normal	0.050000	Activity	5.033e-006	7.106000	7.586000	2.300000	7.346000
0.120000	Normal	0.075000	Activity	5.033e-006	7.106000	7.586000	2.300000	7.346000

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sigl	Aw	Bw	Sigw	Aa
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

Trace Coordinates:

Latitude	Longitude
33.7882	-116.2463
33.8485	-116.3830
33.8481	-116.4265
33.8847	-116.5169
33.9070	-116.5849
33.9176	-116.6239
33.9442	-116.6858
33.9374	-116.7786
33.9532	-116.8014
33.9591	-116.8198
34.0114	-116.8735
34.0338	-116.9024
34.0738	-117.0139
34.0928	-117.0677
34.1500	-117.2220

Name: S. San Andreas;SSB+BG+CO  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 7.521

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	77.1	0.2	0.201	11.9

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
	Delta1	Delta2						
0.120000	Normal	0.25	Activity	4.026e-004	7.281000	7.761000	2.300000	7.521000
0.120000	Normal	0.250000	Activity	4.026e-004	7.257000	7.737000	2.300000	7.497000
0.120000	Normal	0.125000	Activity	2.499e-004	7.257000	7.737000	2.300000	7.497000
0.120000	Normal	0.050000	Activity	8.073e-005	7.257000	7.737000	2.300000	7.497000
0.120000	Normal	0.075000	Activity	8.054e-005	7.257000	7.737000	2.300000	7.497000
0.120000	Normal	0.125000	Activity	2.233e-004	7.281000	7.761000	2.300000	7.521000
0.120000	Normal	0.050000	Activity	5.831e-005	7.281000	7.761000	2.300000	7.521000
0.120000	Normal	0.075000	Activity	7.863e-005	7.281000	7.761000	2.300000	7.521000
0.120000	Normal	0.075000	Activity	7.863e-005	7.281000	7.761000	2.300000	7.521000

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sig1	Aw	Bw	Sigw	Aa
Ba							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--



```
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000      --
--      --
```

Trace Coordinates:

Latitude	Longitude
33.3501	-115.7119
33.7882	-116.2463
33.8485	-116.3830
33.8481	-116.4265
33.8847	-116.5169
33.9070	-116.5849
33.9176	-116.6239
33.9442	-116.6858
33.9374	-116.7786
33.9532	-116.8014
33.9591	-116.8198
34.0114	-116.8735
34.0338	-116.9024
34.0738	-117.0139
34.0928	-117.0677
34.1500	-117.2220

----- End Nested Sources for Southern San Andreas -----

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

\*\*\*\*\*

```
Name: San Jacinto
Region: USGS 2008 California
Category:Composite Seismic Source
Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files
\USGS 2008 Lower 48.bin-ssdb
Magnitude Scale: Moment Magnitude
Probability of Activity: 1
----- Start Nested Sources forSan Jacinto -----
Name: San Jacinto (CC to SM)
Region: USGS 2008 California
Category:Fault
Fault Mechanism: Strike Slip
Magnitude Scale: Moment Magnitude
```

Probability of Activity: 0.1000000  
 Deterministic Magnitude: 7.3

Fault Profile Parameters:

Dipl	Dip2	Depth1	Depth2	Depth3
90	90	0.2	0.201	14.2

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.000000	Exponential	0.25	Activity	4.777e-003	6.500000	7.300000	0.000000	0.000000
0.000000	Exponential	0.100000	Activity	4.777e-003	6.500000	7.300000	0.000000	0.000000
0.000000	Exponential	0.150000	Activity	4.777e-003	6.500000	7.300000	0.000000	0.000000
0.000000	Exponential	0.250000	Activity	4.777e-003	6.500000	7.300000	0.000000	0.000000
0.000000	Exponential	0.100000	Activity	4.777e-003	6.500000	7.300000	0.000000	0.000000
0.000000	Exponential	0.150000	Activity	4.777e-003	6.500000	7.300000	0.000000	0.000000

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba Sigw Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000 Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000 Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000 Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000 Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000 Area	--	--	--	--	--	--	-4.153061

Trace Coordinates:

Latitude	Longitude
33.4688	-116.5430
33.4204	-116.4700
33.2636	-116.2830
33.2066	-116.2050
33.1822	-116.1640
33.1434	-116.1290
33.0976	-116.0580
33.0297	-116.0110
33.0010	-115.9430
32.9378	-115.8067
32.8842	-115.6980

Name: San Jacinto (SB to C)  
 Region: USGS 2008 California  
 Category: Fault  
 Fault Mechanism: Strike Slip

Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.10000000  
 Deterministic Magnitude: 7.7

Fault Profile Parameters:

Dipl	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	17

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.000000	Exponential	0.25	Activity	1.205e-002	6.500000	7.700000	0.000000	0.000000
0.000000	Exponential	0.100000	Activity	1.549e-002	6.500000	7.700000	0.000000	0.000000
0.000000	Exponential	0.150000	Activity	8.825e-003	6.500000	7.700000	0.000000	0.000000
0.000000	Exponential	0.250000	Activity	1.205e-002	6.500000	7.700000	0.000000	0.000000
0.000000	Exponential	0.100000	Activity	1.549e-002	6.500000	7.700000	0.000000	0.000000
0.000000	Exponential	0.150000	Activity	8.825e-003	6.500000	7.700000	0.000000	0.000000

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sig1	Aw	Bw	Sigw	Aa
Ba Sigw Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000 Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000 Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000 Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000 Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000 Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000 Area	--	--	--	--	--	--	-4.153061

Trace Coordinates:

Latitude	Longitude
34.2936	-117.5650
34.1820	-117.4030
34.1917	-117.3890
34.1588	-117.3640
34.1013	-117.3250
34.0170	-117.2370
34.0067	-117.2220
33.9045	-117.0896
33.7364	-116.9143
33.6967	-116.8447
33.5112	-116.5490
33.4896	-116.5133
33.4166	-116.3930
33.3960	-116.3390
33.3839	-116.2970

33.3150 -116.2100  
 33.2854 -116.1470  
 33.2558 -116.0990

Name: San Jacinto;A  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.45000000  
 Deterministic Magnitude: 7.277

Fault Profile Parameters:

Dipl	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	17

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
	Delta1	Delta2						
0.120000	Normal	0.25	Activity	8.947e-005	6.933000	7.413000	2.300000	7.173000
0.120000	Normal	0.100000	Activity	8.947e-005	6.933000	7.413000	2.300000	7.173000
0.120000	Normal	0.150000	Activity	8.947e-005	6.933000	7.413000	2.300000	7.173000
0.120000	Normal	0.250000	Activity	8.947e-005	7.037000	7.517000	2.300000	7.277000
0.120000	Normal	0.100000	Activity	8.947e-005	7.037000	7.517000	2.300000	7.277000
0.120000	Normal	0.150000	Activity	8.947e-005	7.037000	7.517000	2.300000	7.277000
0.120000	Normal	0.100000	Activity	8.947e-005	7.037000	7.517000	2.300000	7.277000

Rupture Length Parameters

Rupture Dimensioning	Al	B1	Sigl	Aw	Bw	Sigw	Aa
Ba Sigw							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

Trace Coordinates:

Latitude	Longitude
33.8907	-117.1083
33.7778	-116.9790
33.7617	-116.9620
33.7364	-116.9143
33.6967	-116.8447
33.5112	-116.5490
33.4896	-116.5133

Name: San Jacinto;A+C  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 7.497

Fault Profile Parameters:

Dipl	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	17

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	3.165e-003	7.257000	7.737000	2.300000	7.497000
0.120000	Normal	0.250000	Activity	3.165e-003	7.226000	7.706000	2.300000	7.466000
0.120000	Normal	0.125000	Activity	1.179e-003	7.226000	7.706000	2.300000	7.466000
0.120000	Normal	0.050000	Activity	2.190e-003	7.226000	7.706000	2.300000	7.466000
0.120000	Normal	0.075000	Activity	7.480e-004	7.226000	7.706000	2.300000	7.466000
0.120000	Normal	0.125000	Activity	1.217e-003	7.257000	7.737000	2.300000	7.497000
0.120000	Normal	0.050000	Activity	2.124e-003	7.257000	7.737000	2.300000	7.497000
0.120000	Normal	0.075000	Activity	8.016e-004	7.257000	7.737000	2.300000	7.497000

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sigl	Aw	Bw	Sigw	Aa
Ba							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

Trace Coordinates:

Latitude	Longitude
33.8907	-117.1083
33.7778	-116.9790

33.7617 -116.9620  
 33.7364 -116.9143  
 33.6967 -116.8447  
 33.5112 -116.5490  
 33.4896 -116.5133  
 33.4166 -116.3930  
 33.3960 -116.3390  
 33.3839 -116.2970  
 33.3150 -116.2100  
 33.2854 -116.1470  
 33.2558 -116.0990

Name: San Jacinto;A+CC  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.45000000  
 Deterministic Magnitude: 7.473

Fault Profile Parameters:

Dipl	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	16

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
	Delta1	Delta2						
0.120000	Normal	0.25	Activity	8.947e-005	7.194000	7.674000	2.300000	7.434000
0.120000	Normal	0.100000	Activity	8.947e-005	7.194000	7.674000	2.300000	7.434000
0.120000	Normal	0.150000	Activity	8.947e-005	7.194000	7.674000	2.300000	7.434000
0.120000	Normal	0.250000	Activity	8.947e-005	7.233000	7.713000	2.300000	7.473000
0.120000	Normal	0.100000	Activity	8.947e-005	7.233000	7.713000	2.300000	7.473000
0.120000	Normal	0.150000	Activity	8.947e-005	7.233000	7.713000	2.300000	7.473000
0.120000	Normal	0.100000	Activity	8.947e-005	7.233000	7.713000	2.300000	7.473000

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sigl	Aw	Bw	Sigw	Aa
Ba							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

Trace Coordinates:

Latitude Longitude  
 33.2066 -116.2050  
 33.2636 -116.2830  
 33.4204 -116.4700  
 33.4688 -116.5430  
 33.4896 -116.5133  
 33.5112 -116.5490  
 33.6967 -116.8447  
 33.7364 -116.9143  
 33.7617 -116.9620  
 33.7778 -116.9790  
 33.8907 -117.1083

Name: San Jacinto;A+CC+B  
 Region: USGS 2008 California  
 Category: Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.45000000  
 Deterministic Magnitude: 7.558

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0.1	0.101	15.1

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	8.947e-005	7.307000	7.787000	2.300000	7.547000
0.120000	Normal	0.100000	Activity	8.947e-005	7.307000	7.787000	2.300000	7.547000
0.120000	Normal	0.150000	Activity	8.947e-005	7.307000	7.787000	2.300000	7.547000
0.120000	Normal	0.250000	Activity	8.947e-005	7.318000	7.798000	2.300000	7.558000
0.120000	Normal	0.100000	Activity	8.947e-005	7.318000	7.798000	2.300000	7.558000
0.120000	Normal	0.150000	Activity	8.947e-005	7.318000	7.798000	2.300000	7.558000

Rupture Length Parameters

Rupture Dimensioning		A1	B1	Sig1	Aw	Bw	Sigw	Aa
Ba	Sigw							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

Trace Coordinates:

Latitude	Longitude
33.0010	-115.9430
33.0297	-116.0110
33.0976	-116.0580
33.1434	-116.1290
33.1822	-116.1640
33.2066	-116.2050
33.2636	-116.2830
33.4204	-116.4700
33.4688	-116.5430
33.4896	-116.5133
33.5112	-116.5490
33.6967	-116.8447
33.7364	-116.9143
33.7617	-116.9620
33.7778	-116.9790
33.8907	-117.1083

Name: San Jacinto;A+CC+B+SM  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.4500000  
 Deterministic Magnitude: 7.624

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0.1	0.101	15.1

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
	Normal	0.25	Activity	8.947e-005	7.384000	7.864000	2.300000	7.624000
0.120000	Normal	0.100000	Activity	8.947e-005	7.384000	7.864000	2.300000	7.624000
0.120000	Normal	0.150000	Activity	8.947e-005	7.384000	7.864000	2.300000	7.624000
0.120000	Normal	0.250000	Activity	8.947e-005	7.376000	7.856000	2.300000	7.616000
0.120000	Normal	0.100000	Activity	8.947e-005	7.376000	7.856000	2.300000	7.616000
0.120000	Normal	0.150000	Activity	8.947e-005	7.376000	7.856000	2.300000	7.616000
0.120000	Normal	0.100000	Activity	8.947e-005	7.376000	7.856000	2.300000	7.616000

Rupture Length Parameters

Rupture Dimensioning	Al	B1	Sigl	Aw	Bw	Sigw	Aa
Ba							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--



```
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--      --
--      Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--      --
```

Trace Coordinates:

Latitude	Longitude
32.8842	-115.6980
32.9378	-115.8067
33.0010	-115.9430
33.0297	-116.0110
33.0976	-116.0580
33.1434	-116.1290
33.1822	-116.1640
33.2066	-116.2050
33.2636	-116.2830
33.4204	-116.4700
33.4688	-116.5430
33.4896	-116.5133
33.5112	-116.5490
33.6967	-116.8447
33.7364	-116.9143
33.7617	-116.9620
33.7778	-116.9790
33.8907	-117.1083

Name: San Jacinto;B  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 6.806

Fault Profile Parameters:

Dipl	Dip2	Depth1	Depth2	Depth3
90	90	0.7	0.701	12.7

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
	Delta1	Delta2						
0.120000	Normal	0.25	Activity	4.852e-003	6.566000	7.046000	2.300000	6.806000
0.120000	Normal	0.250000	Activity	4.852e-003	6.346000	6.826000	2.300000	6.586000
0.120000	Normal	0.125000	Activity	4.474e-004	6.346000	6.826000	2.300000	6.586000
0.120000	Normal	0.050000	Activity	4.474e-004	6.346000	6.826000	2.300000	6.586000
0.120000	Normal	0.075000	Activity	4.474e-004	6.346000	6.826000	2.300000	6.586000
0.120000	Normal	0.125000	Activity	4.474e-004	6.566000	7.046000	2.300000	6.806000
0.120000	Normal	0.050000	Activity	4.474e-004	6.566000	7.046000	2.300000	6.806000
0.120000	Normal	0.075000	Activity	4.474e-004	6.566000	7.046000	2.300000	6.806000

0.120000 0.010000 10.000000

Rupture Length Parameters

Rupture Dimensioning		A1	B1	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

Trace Coordinates:

Latitude	Longitude
33.2066	-116.2050
33.1822	-116.1640
33.1434	-116.1290
33.0976	-116.0580
33.0297	-116.0110
33.0010	-115.9430

Name: San Jacinto;B+SM  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 7.063

Fault Profile Parameters:

Dipl	Dip2	Depth1	Depth2	Depth3
90	90	0.4	0.401	12.4

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	1.101e-003	6.823000	7.303000	2.300000	7.063000
0.120000	Normal	0.250000	Activity	1.101e-003	6.647000	7.127000	2.300000	6.887000
0.120000	Normal	0.125000	Activity	4.474e-004	6.647000	7.127000	2.300000	6.887000
0.120000	Normal	0.050000	Activity	4.474e-004	6.647000	7.127000	2.300000	6.887000
0.120000	Normal	0.075000	Activity	4.474e-004	6.647000	7.127000	2.300000	6.887000
0.120000	Normal	0.125000	Activity	4.474e-004	6.823000	7.303000	2.300000	7.063000

```

0.120000 0.010000 10.000000
          Normal 0.050000 Activity 4.474e-004 6.823000 7.303000 2.300000 7.063000
0.120000 0.010000 10.000000
          Normal 0.075000 Activity 4.474e-004 6.823000 7.303000 2.300000 7.063000
0.120000 0.010000 10.000000
    
```

Rupture Length Parameters

Rupture Dimensioning		Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

Trace Coordinates:

Latitude	Longitude
33.2066	-116.2050
33.1822	-116.1640
33.1434	-116.1290
33.0976	-116.0580
33.0297	-116.0110
33.0010	-115.9430
32.9378	-115.8067
32.8842	-115.6980

Name: San Jacinto;C  
 Region: USGS 2008 California  
 Category: Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.45000000  
 Deterministic Magnitude: 7.095

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	17

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
	Normal	0.25	Activity	8.947e-005	6.691000	7.171000	2.300000	6.931000
0.120000	0.010000	10.000000						
	Normal	0.100000	Activity	8.947e-005	6.691000	7.171000	2.300000	6.931000
0.120000	0.010000	10.000000						
	Normal	0.150000	Activity	8.947e-005	6.691000	7.171000	2.300000	6.931000

```

0.120000 0.010000 10.000000
          Normal 0.250000 Activity 8.947e-005 6.855000 7.335000 2.300000 7.095000
0.120000 0.010000 10.000000
          Normal 0.100000 Activity 8.947e-005 6.855000 7.335000 2.300000 7.095000
0.120000 0.010000 10.000000
          Normal 0.150000 Activity 8.947e-005 6.855000 7.335000 2.300000 7.095000
0.120000 0.010000 10.000000
    
```

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sig1	Aw	Bw	Sigw	Aa
Ba Sigw							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--							

Trace Coordinates:

Latitude	Longitude
33.4896	-116.5133
33.4166	-116.3930
33.3960	-116.3390
33.3839	-116.2970
33.3150	-116.2100
33.2854	-116.1470
33.2558	-116.0990

Name: San Jacinto;CC  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 7.033

Fault Profile Parameters:

Dipl	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	16

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean		
	Normal	0.25	Activity	8.947e-004	6.793000	7.273000	2.300000	7.033000		
0.120000	0.010000	10.000000	Normal	0.250000	Activity	8.947e-004	6.608000	7.088000	2.300000	6.848000
0.120000	0.010000	10.000000	Normal	0.125000	Activity	4.474e-004	6.608000	7.088000	2.300000	6.848000
0.120000	0.010000	10.000000	Normal	0.050000	Activity	4.474e-004	6.608000	7.088000	2.300000	6.848000
0.120000	0.010000	10.000000								

	Normal	0.075000	Activity	4.474e-004	6.608000	7.088000	2.300000	6.848000
0.120000	0.010000	10.000000						
	Normal	0.125000	Activity	4.474e-004	6.793000	7.273000	2.300000	7.033000
0.120000	0.010000	10.000000						
	Normal	0.050000	Activity	4.474e-004	6.793000	7.273000	2.300000	7.033000
0.120000	0.010000	10.000000						
	Normal	0.075000	Activity	4.474e-004	6.793000	7.273000	2.300000	7.033000
0.120000	0.010000	10.000000						

Rupture Length Parameters

Rupture Dimensioning		Al	B1	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							

Trace Coordinates:

Latitude	Longitude
33.4688	-116.5430
33.4204	-116.4700
33.2636	-116.2830
33.2066	-116.2050

Name: San Jacinto;CC+B  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 7.235

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0.2	0.201	14.2

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
	Normal	0.25	Activity	8.947e-004	6.995000	7.475000	2.300000	7.235000
0.120000	0.010000	10.000000						
	Normal	0.250000	Activity	8.947e-004	6.877000	7.357000	2.300000	7.117000
0.120000	0.010000	10.000000						
	Normal	0.125000	Activity	4.474e-004	6.877000	7.357000	2.300000	7.117000
0.120000	0.010000	10.000000						

0.120000	Normal	0.050000	Activity	4.474e-004	6.877000	7.357000	2.300000	7.117000
	Normal	0.010000						
	Normal	0.075000	Activity	4.474e-004	6.877000	7.357000	2.300000	7.117000
0.120000	Normal	0.010000						
	Normal	0.125000	Activity	4.474e-004	6.995000	7.475000	2.300000	7.235000
0.120000	Normal	0.010000						
	Normal	0.050000	Activity	4.474e-004	6.995000	7.475000	2.300000	7.235000
0.120000	Normal	0.010000						
	Normal	0.075000	Activity	4.474e-004	6.995000	7.475000	2.300000	7.235000
0.120000	Normal	0.010000						

Rupture Length Parameters

Rupture Dimensioning		Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							

Trace Coordinates:

Latitude	Longitude
33.4688	-116.5430
33.4204	-116.4700
33.2636	-116.2830
33.2066	-116.2050
33.1822	-116.1640
33.1434	-116.1290
33.0976	-116.0580
33.0297	-116.0110
33.0010	-115.9430

Name: San Jacinto;CC+B+SM  
 Region: USGS 2008 California  
 Category: Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 7.35

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0.2	0.201	14.2

Magnitude Recurrence Distributions:

ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
-----------	--------	----------	------	--------	--------	------	------

Sigma	Delta1	Delta2						
	Normal	0.25	Activity	8.947e-004	7.110000	7.590000	2.300000	7.350000
0.120000	0.010000	10.000000						
	Normal	0.250000	Activity	8.947e-004	7.029000	7.509000	2.300000	7.269000
0.120000	0.010000	10.000000						
	Normal	0.125000	Activity	4.474e-004	7.029000	7.509000	2.300000	7.269000
0.120000	0.010000	10.000000						
	Normal	0.050000	Activity	4.474e-004	7.029000	7.509000	2.300000	7.269000
0.120000	0.010000	10.000000						
	Normal	0.075000	Activity	4.474e-004	7.029000	7.509000	2.300000	7.269000
0.120000	0.010000	10.000000						
	Normal	0.125000	Activity	4.474e-004	7.110000	7.590000	2.300000	7.350000
0.120000	0.010000	10.000000						
	Normal	0.050000	Activity	4.474e-004	7.110000	7.590000	2.300000	7.350000
0.120000	0.010000	10.000000						
	Normal	0.075000	Activity	4.474e-004	7.110000	7.590000	2.300000	7.350000
0.120000	0.010000	10.000000						

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba							
Sigw							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--

Trace Coordinates:

Latitude	Longitude
33.4688	-116.5430
33.4204	-116.4700
33.2636	-116.2830
33.2066	-116.2050
33.1822	-116.1640
33.1434	-116.1290
33.0976	-116.0580
33.0297	-116.0110
33.0010	-115.9430
32.9378	-115.8067
32.8842	-115.6980

Name: San Jacinto;SBV  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude

Probability of Activity: 0.90000000  
 Deterministic Magnitude: 7.061

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	16

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	2.328e-003	6.821000	7.301000	2.300000	7.061000
0.120000	Normal	0.250000	Activity	2.328e-003	6.644000	7.124000	2.300000	6.884000
0.120000	Normal	0.125000	Activity	4.474e-004	6.644000	7.124000	2.300000	6.884000
0.120000	Normal	0.050000	Activity	2.324e-003	6.644000	7.124000	2.300000	6.884000
0.120000	Normal	0.075000	Activity	4.474e-004	6.644000	7.124000	2.300000	6.884000
0.120000	Normal	0.125000	Activity	4.474e-004	6.821000	7.301000	2.300000	7.061000
0.120000	Normal	0.050000	Activity	1.598e-003	6.821000	7.301000	2.300000	7.061000
0.120000	Normal	0.075000	Activity	4.474e-004	6.821000	7.301000	2.300000	7.061000

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sig1	Aw	Bw	Sigw	Aa
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

Trace Coordinates:

Latitude	Longitude
34.2936	-117.5650
34.1820	-117.4030
34.1917	-117.3890
34.1588	-117.3640
34.1013	-117.3250
34.0170	-117.2370

Name: San Jacinto;SBV+SJV



Region: USGS 2008 California  
 Category: Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 7.35

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	16

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	1.331e-003	7.110000	7.590000	2.300000	7.350000
0.120000	Normal	0.250000	Activity	1.331e-003	7.030000	7.510000	2.300000	7.270000
0.120000	Normal	0.125000	Activity	4.474e-004	7.030000	7.510000	2.300000	7.270000
0.120000	Normal	0.050000	Activity	7.194e-004	7.030000	7.510000	2.300000	7.270000
0.120000	Normal	0.075000	Activity	4.474e-004	7.030000	7.510000	2.300000	7.270000
0.120000	Normal	0.125000	Activity	4.474e-004	7.110000	7.590000	2.300000	7.350000
0.120000	Normal	0.050000	Activity	4.844e-004	7.110000	7.590000	2.300000	7.350000
0.120000	Normal	0.075000	Activity	4.474e-004	7.110000	7.590000	2.300000	7.350000

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sig1	Aw	Bw	Sigw	Aa
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

Trace Coordinates:

Latitude	Longitude
34.2936	-117.5650
34.1820	-117.4030
34.1917	-117.3890
34.1588	-117.3640

34.1013 -117.3250  
 34.0170 -117.2370  
 34.0067 -117.2220  
 33.9045 -117.0896  
 33.8493 -117.0121  
 33.8054 -116.9390  
 33.7557 -116.9030

Name: San Jacinto;SBV+SJV+A  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.45000000  
 Deterministic Magnitude: 7.625

Fault Profile Parameters:

Dipl	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	16

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
	Delta1	Delta2						
0.120000	Normal	0.25	Activity	4.474e-004	7.385000	7.865000	2.300000	7.625000
0.120000	Normal	0.100000	Activity	4.474e-004	7.385000	7.865000	2.300000	7.625000
0.120000	Normal	0.150000	Activity	4.474e-004	7.385000	7.865000	2.300000	7.625000
0.120000	Normal	0.250000	Activity	4.474e-004	7.376000	7.856000	2.300000	7.616000
0.120000	Normal	0.100000	Activity	4.474e-004	7.376000	7.856000	2.300000	7.616000
0.120000	Normal	0.150000	Activity	4.474e-004	7.376000	7.856000	2.300000	7.616000
0.120000	Normal	0.100000	Activity	4.474e-004	7.376000	7.856000	2.300000	7.616000

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sigl	Aw	Bw	Sigw	Aa
Ba							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

Trace Coordinates:

Latitude	Longitude
34.2936	-117.5650
34.1820	-117.4030
34.1917	-117.3890

34.1588 -117.3640  
 34.1013 -117.3250  
 34.0170 -117.2370  
 34.0067 -117.2220  
 33.9045 -117.0896  
 33.7364 -116.9143  
 33.6967 -116.8447  
 33.5112 -116.5490  
 33.4896 -116.5133

Name: San Jacinto;SBV+SJV+A+C  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 7.777

Fault Profile Parameters:

Dipl	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	17

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	1.055e-003	7.491000	7.971000	2.300000	7.731000
0.120000	Normal	0.250000	Activity	1.055e-003	7.537000	8.017000	2.300000	7.777000
0.120000	Normal	0.125000	Activity	4.474e-004	7.537000	8.017000	2.300000	7.777000
0.120000	Normal	0.050000	Activity	4.474e-004	7.537000	8.017000	2.300000	7.777000
0.120000	Normal	0.075000	Activity	4.474e-004	7.537000	8.017000	2.300000	7.777000
0.120000	Normal	0.125000	Activity	4.474e-004	7.491000	7.971000	2.300000	7.731000
0.120000	Normal	0.050000	Activity	4.474e-004	7.491000	7.971000	2.300000	7.731000
0.120000	Normal	0.075000	Activity	4.474e-004	7.491000	7.971000	2.300000	7.731000
0.120000	Normal	0.010000	Activity	4.474e-004	7.491000	7.971000	2.300000	7.731000

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

```

        Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--      --
        Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--      --
    
```

Trace Coordinates:

```

Latitude  Longitude
34.2936   -117.5650
34.1820   -117.4030
34.1917   -117.3890
34.1588   -117.3640
34.1013   -117.3250
34.0170   -117.2370
34.0067   -117.2220
33.9045   -117.0896
33.7364   -116.9143
33.6967   -116.8447
33.5112   -116.5490
33.4896   -116.5133
33.4166   -116.3930
33.3960   -116.3390
33.3839   -116.2970
33.3150   -116.2100
33.2854   -116.1470
33.2558   -116.0990
    
```

Name: San Jacinto;SBV+SJV+A+CC  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.45000000  
 Deterministic Magnitude: 7.759

Fault Profile Parameters:

```

Dipl  Dip2  Depth1  Depth2  Depth3
  90    90    0      0.001   16
    
```

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	8.947e-005	7.519000	7.999000	2.300000	7.759000
0.120000	Normal	0.100000	Activity	8.947e-005	7.519000	7.999000	2.300000	7.759000
0.120000	Normal	0.150000	Activity	8.947e-005	7.519000	7.999000	2.300000	7.759000
0.120000	Normal	0.250000	Activity	8.947e-005	7.477000	7.957000	2.300000	7.717000
0.120000	Normal	0.100000	Activity	8.947e-005	7.477000	7.957000	2.300000	7.717000
0.120000	Normal	0.150000	Activity	8.947e-005	7.477000	7.957000	2.300000	7.717000

Rupture Length Parameters

```

Rupture Dimensioning  A1  B1  Sig1  Aw  Bw  Sigw  Aa
Ba  Sigw
    
```

```

    Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--
    Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--
    Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--
    Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--
    Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--
    Length and width  4.000000  0.000000  0.001000  4.000000  0.000000  0.001000  --
--
    
```

Trace Coordinates:

Latitude	Longitude
33.2066	-116.2050
33.2636	-116.2830
33.4204	-116.4700
33.4688	-116.5430
33.4896	-116.5133
33.5112	-116.5490
33.6967	-116.8447
33.7364	-116.9143
33.9045	-117.0896
34.0067	-117.2220
34.0170	-117.2370
34.1013	-117.3250
34.1588	-117.3640
34.1917	-117.3890
34.1820	-117.4030
34.2936	-117.5650

Name: San Jacinto;SBV+SJV+A+CC+B  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.45000000  
 Deterministic Magnitude: 7.826

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0.1	0.101	15.1

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	8.947e-005	7.586000	8.066000	2.300000	7.826000
0.120000	Normal	0.100000	Activity	8.947e-005	7.586000	8.066000	2.300000	7.826000
0.120000	Normal	0.150000	Activity	8.947e-005	7.586000	8.066000	2.300000	7.826000
0.120000	Normal	0.250000	Activity	8.947e-005	7.527000	8.007000	2.300000	7.767000
0.120000	Normal	0.100000	Activity	8.947e-005	7.527000	8.007000	2.300000	7.767000
0.120000	Normal	0.100000	Activity	8.947e-005	7.527000	8.007000	2.300000	7.767000

Normal 0.150000 Activity 8.947e-005 7.527000 8.007000 2.300000 7.767000  
 0.120000 0.010000 10.000000

Rupture Length Parameters

Rupture Dimensioning		Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							

Trace Coordinates:

Latitude	Longitude
33.0010	-115.9430
33.0297	-116.0110
33.0976	-116.0580
33.1434	-116.1290
33.1822	-116.1640
33.2066	-116.2050
33.2636	-116.2830
33.4204	-116.4700
33.4688	-116.5430
33.4896	-116.5133
33.5112	-116.5490
33.6967	-116.8447
33.7364	-116.9143
33.9045	-117.0896
34.0067	-117.2220
34.0170	-117.2370
34.1013	-117.3250
34.1588	-117.3640
34.1917	-117.3890
34.1820	-117.4030
34.2936	-117.5650

Name: San Jacinto;SBV+SJV+A+CC+B+SM  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.45000000  
 Deterministic Magnitude: 7.875

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0.1	0.101	15.1

Magnitude Recurrence Distributions:

ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
-----------	--------	----------	------	--------	--------	------	------

Sigma	Delta1	Delta2						
	Normal	0.25	Activity	8.947e-005	7.635000	8.115000	2.300000	7.875000
0.120000	0.010000	10.000000						
	Normal	0.100000	Activity	8.947e-005	7.635000	8.115000	2.300000	7.875000
0.120000	0.010000	10.000000						
	Normal	0.150000	Activity	8.947e-005	7.635000	8.115000	2.300000	7.875000
0.120000	0.010000	10.000000						
	Normal	0.250000	Activity	8.947e-005	7.564000	8.044000	2.300000	7.804000
0.120000	0.010000	10.000000						
	Normal	0.100000	Activity	8.947e-005	7.564000	8.044000	2.300000	7.804000
0.120000	0.010000	10.000000						
	Normal	0.150000	Activity	8.947e-005	7.564000	8.044000	2.300000	7.804000
0.120000	0.010000	10.000000						

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sig1	Aw	Bw	Sigw	Aa
Ba							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--

Trace Coordinates:

Latitude	Longitude
32.8842	-115.6980
32.9378	-115.8067
33.0010	-115.9430
33.0297	-116.0110
33.0976	-116.0580
33.1434	-116.1290
33.1822	-116.1640
33.2066	-116.2050
33.2636	-116.2830
33.4204	-116.4700
33.4688	-116.5430
33.4896	-116.5133
33.5112	-116.5490
33.6967	-116.8447
33.7364	-116.9143
33.9045	-117.0896
34.0067	-117.2220
34.0170	-117.2370
34.1013	-117.3250
34.1588	-117.3640
34.1917	-117.3890
34.1820	-117.4030
34.2936	-117.5650

Name: San Jacinto;SJV

Region: USGS 2008 California  
 Category: Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 7.037

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	16

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	2.445e-003	6.797000	7.277000	2.300000	7.037000
0.120000	Normal	0.250000	Activity	2.445e-003	6.612000	7.092000	2.300000	6.852000
0.120000	Normal	0.125000	Activity	4.474e-004	6.612000	7.092000	2.300000	6.852000
0.120000	Normal	0.050000	Activity	1.409e-003	6.612000	7.092000	2.300000	6.852000
0.120000	Normal	0.075000	Activity	4.474e-004	6.612000	7.092000	2.300000	6.852000
0.120000	Normal	0.125000	Activity	4.474e-004	6.797000	7.277000	2.300000	7.037000
0.120000	Normal	0.050000	Activity	1.219e-003	6.797000	7.277000	2.300000	7.037000
0.120000	Normal	0.075000	Activity	4.474e-004	6.797000	7.277000	2.300000	7.037000

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sig1	Aw	Bw	Sigw	Aa
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

Trace Coordinates:

Latitude	Longitude
34.0170	-117.2370
34.0067	-117.2220
33.9045	-117.0896
33.8493	-117.0121



33.8054 -116.9390  
 33.7557 -116.9030

Name: San Jacinto;SJV+A  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.45000000  
 Deterministic Magnitude: 7.474

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	17

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	4.474e-004	7.196000	7.676000	2.300000	7.436000
0.120000	Normal	0.100000	Activity	4.474e-004	7.196000	7.676000	2.300000	7.436000
0.120000	Normal	0.150000	Activity	4.474e-004	7.196000	7.676000	2.300000	7.436000
0.120000	Normal	0.250000	Activity	4.474e-004	7.234000	7.714000	2.300000	7.474000
0.120000	Normal	0.100000	Activity	4.474e-004	7.234000	7.714000	2.300000	7.474000
0.120000	Normal	0.150000	Activity	4.474e-004	7.234000	7.714000	2.300000	7.474000
0.120000	Normal	0.100000	Activity	4.474e-004	7.234000	7.714000	2.300000	7.474000

Rupture Length Parameters

Rupture Dimensioning	Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

Trace Coordinates:

Latitude	Longitude
34.0170	-117.2370
34.0067	-117.2220
33.9045	-117.0896
33.7364	-116.9143
33.6967	-116.8447
33.5112	-116.5490
33.4896	-116.5133

Name: San Jacinto;SJV+A+C  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.45000000  
 Deterministic Magnitude: 7.638

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	17

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	4.474e-004	7.398000	7.878000	2.300000	7.638000
0.120000	Normal	0.100000	Activity	4.474e-004	7.398000	7.878000	2.300000	7.638000
0.120000	Normal	0.150000	Activity	4.474e-004	7.398000	7.878000	2.300000	7.638000
0.120000	Normal	0.250000	Activity	4.474e-004	7.386000	7.866000	2.300000	7.626000
0.120000	Normal	0.100000	Activity	4.474e-004	7.386000	7.866000	2.300000	7.626000
0.120000	Normal	0.150000	Activity	4.474e-004	7.386000	7.866000	2.300000	7.626000

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sig1	Aw	Bw	Sigw	Aa
Ba Sigw							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

Trace Coordinates:

Latitude	Longitude
34.0170	-117.2370
34.0067	-117.2220
33.9045	-117.0896
33.7364	-116.9143
33.6967	-116.8447
33.5112	-116.5490
33.4896	-116.5133
33.4166	-116.3930
33.3960	-116.3390
33.3839	-116.2970
33.3150	-116.2100

33.2854 -116.1470  
 33.2558 -116.0990

Name: San Jacinto;SJV+A+CC  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.45000000  
 Deterministic Magnitude: 7.615

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	16

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	8.947e-005	7.375000	7.855000	2.300000	7.615000
0.120000	Normal	0.100000	Activity	8.947e-005	7.375000	7.855000	2.300000	7.615000
0.120000	Normal	0.150000	Activity	8.947e-005	7.375000	7.855000	2.300000	7.615000
0.120000	Normal	0.250000	Activity	8.947e-005	7.369000	7.849000	2.300000	7.609000
0.120000	Normal	0.100000	Activity	8.947e-005	7.369000	7.849000	2.300000	7.609000
0.120000	Normal	0.150000	Activity	8.947e-005	7.369000	7.849000	2.300000	7.609000

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sig1	Aw	Bw	Sigw	Aa
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

Trace Coordinates:

Latitude	Longitude
33.2066	-116.2050
33.2636	-116.2830
33.4204	-116.4700
33.4688	-116.5430
33.4896	-116.5133
33.5112	-116.5490
33.6967	-116.8447
33.7364	-116.9143

33.9045 -117.0896  
 34.0067 -117.2220  
 34.0170 -117.2370

Name: San Jacinto;SJV+A+CC+B  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.45000000  
 Deterministic Magnitude: 7.7

Fault Profile Parameters:

Dipl	Dip2	Depth1	Depth2	Depth3
90	90	0.1	0.101	15.1

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
	Deltal	Delta2						
0.120000	Normal	0.25	Activity	8.947e-005	7.460000	7.940000	2.300000	7.700000
0.120000	Normal	0.100000	Activity	8.947e-005	7.460000	7.940000	2.300000	7.700000
0.120000	Normal	0.150000	Activity	8.947e-005	7.460000	7.940000	2.300000	7.700000
0.120000	Normal	0.250000	Activity	8.947e-005	7.432000	7.912000	2.300000	7.672000
0.120000	Normal	0.100000	Activity	8.947e-005	7.432000	7.912000	2.300000	7.672000
0.120000	Normal	0.150000	Activity	8.947e-005	7.432000	7.912000	2.300000	7.672000
0.120000	Normal	0.100000	Activity	8.947e-005	7.432000	7.912000	2.300000	7.672000

Rupture Length Parameters

Rupture Dimensioning	Al	B1	Sigl	Aw	Bw	Sigw	Aa
Ba Sigw							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

Trace Coordinates:

Latitude	Longitude
33.0010	-115.9430
33.0297	-116.0110
33.0976	-116.0580
33.1434	-116.1290
33.1822	-116.1640
33.2066	-116.2050
33.2636	-116.2830

33.4204 -116.4700  
 33.4688 -116.5430  
 33.4896 -116.5133  
 33.5112 -116.5490  
 33.6967 -116.8447  
 33.7364 -116.9143  
 33.9045 -117.0896  
 34.0067 -117.2220  
 34.0170 -117.2370

Name: San Jacinto;SJV+A+CC+B+SM  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.45000000  
 Deterministic Magnitude: 7.76

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0.1	0.101	15.1

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	8.947e-005	7.520000	8.000000	2.300000	7.760000
0.120000	Normal	0.100000	Activity	8.947e-005	7.520000	8.000000	2.300000	7.760000
0.120000	Normal	0.150000	Activity	8.947e-005	7.520000	8.000000	2.300000	7.760000
0.120000	Normal	0.250000	Activity	8.947e-005	7.477000	7.957000	2.300000	7.717000
0.120000	Normal	0.100000	Activity	8.947e-005	7.477000	7.957000	2.300000	7.717000
0.120000	Normal	0.150000	Activity	8.947e-005	7.477000	7.957000	2.300000	7.717000
0.120000	Normal	0.100000	Activity	8.947e-005	7.477000	7.957000	2.300000	7.717000
0.120000	Normal	0.150000	Activity	8.947e-005	7.477000	7.957000	2.300000	7.717000

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sig1	Aw	Bw	Sigw	Aa
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

Trace Coordinates:

Latitude	Longitude
32.8842	-115.6980

32.9378 -115.8067  
 33.0010 -115.9430  
 33.0297 -116.0110  
 33.0976 -116.0580  
 33.1434 -116.1290  
 33.1822 -116.1640  
 33.2066 -116.2050  
 33.2636 -116.2830  
 33.4204 -116.4700  
 33.4688 -116.5430  
 33.4896 -116.5133  
 33.5112 -116.5490  
 33.6967 -116.8447  
 33.7364 -116.9143  
 33.9045 -117.0896  
 34.0067 -117.2220  
 34.0170 -117.2370

Name: San Jacinto;SM  
 Region: USGS 2008 California  
 Category:Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.90000000  
 Deterministic Magnitude: 6.713

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	90	0	0.001	12

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
0.120000	Normal	0.25	Activity	1.101e-003	6.473000	6.953000	2.300000	6.713000
0.120000	Normal	0.250000	Activity	1.101e-003	6.253000	6.733000	2.300000	6.493000
0.120000	Normal	0.125000	Activity	4.049e-003	6.253000	6.733000	2.300000	6.493000
0.120000	Normal	0.050000	Activity	4.049e-003	6.253000	6.733000	2.300000	6.493000
0.120000	Normal	0.075000	Activity	4.049e-003	6.253000	6.733000	2.300000	6.493000
0.120000	Normal	0.125000	Activity	1.508e-003	6.473000	6.953000	2.300000	6.713000
0.120000	Normal	0.050000	Activity	1.508e-003	6.473000	6.953000	2.300000	6.713000
0.120000	Normal	0.075000	Activity	1.508e-003	6.473000	6.953000	2.300000	6.713000

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sig1	Aw	Bw	Sigw	Aa
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

```

Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--
Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--
Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--
Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--
Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--
Length and width 4.000000 0.000000 0.001000 4.000000 0.000000 0.001000 --
--

```

Trace Coordinates:

```

Latitude Longitude
33.0010 -115.9430
32.9378 -115.8067
32.8842 -115.6980

```

----- End Nested Sources for San Jacinto -----

Attenuation Equations for Source:

```

Raw Weight Normalized Weight Name
1 0.250000 Abrahamson-Silva (2008) NGA
1 0.250000 Boore-Atkinson (2008) NGA
1 0.250000 Campbell-Bozorgnia (2008) NGA
1 0.250000 Chiou-Youngs (2008) NGA

```

\*\*\*\*\*

```

Name: Santa Monica
Region: USGS 2008 California
Category:Composite Seismic Source
Database: C:\Users\Jay\AppData\Local\Risk Engineering\EZ-FRISK\Regions\USGS2008 Lower 48 v2.00\Files
\USGS 2008 Lower 48.bin-ssdb
Magnitude Scale: Moment Magnitude
Probability of Activity: 1

```

----- Start Nested Sources for Santa Monica -----

```

Name: Santa Monica Connected alt 1
Region: USGS 2008 California
Category:Fault
Fault Mechanism: Reverse
Magnitude Scale: Moment Magnitude
Probability of Activity: 0.25000000
Deterministic Magnitude: 7.3

```

Fault Profile Parameters:

```

Dipl Dip2 Depth1 Depth2 Depth3
90 50.8 0 0.001 16.27

```

Magnitude Recurrence Distributions:

```

ModelType Weight RateType Rate MinMag MaxMag Beta Mean
Sigma Deltal Delta2
Normal 0.33334 Activity 9.083e-004 7.060000 7.540000 2.300000 7.300000
0.120000 0.010000 10.000000
Normal 0.333340 Activity 9.083e-004 7.060000 7.540000 2.300000 7.300000
0.120000 0.010000 10.000000

```

```

    Exponential 0.083330 Activity 3.970e-003 6.500000 7.300000 1.842068 0.000000
0.000000 0.000000 0.000000
    Exponential 0.083330 Activity 2.893e-003 6.500000 7.300000 0.000000 0.000000
0.000000 0.000000 0.000000
    Exponential 0.083330 Activity 3.970e-003 6.500000 7.300000 1.842068 0.000000
0.000000 0.000000 0.000000
    Exponential 0.083330 Activity 2.893e-003 6.500000 7.300000 0.000000 0.000000
0.000000 0.000000 0.000000
    
```

Rupture Length Parameters

Rupture Dimensioning		Al	B1	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061

Trace Coordinates:

Latitude	Longitude
34.0691	-118.4118
34.0421	-118.4558
34.0356	-118.4749
34.0316	-118.4813
34.0304	-118.5247
34.0324	-118.5544
33.9832	-118.6950
33.9731	-118.7430
33.9581	-118.8190
33.9474	-118.9350
33.9698	-119.0200
33.9748	-119.1450
33.9388	-119.2280

Name: Santa Monica Connected alt 2  
 Region: USGS 2008 California  
 Category: Fault  
 Fault Mechanism: Reverse  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.25000000  
 Deterministic Magnitude: 7.4

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	43.7	0.8	0.801	11.16

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
	Delta1	Delta2						
	Normal	0.33334	Activity	6.124e-004	7.160000	7.640000	2.300000	7.400000



```

0.120000 0.010000 10.000000
      Normal 0.333340 Activity 8.650e-004 7.060000 7.540000 2.300000 7.300000
0.120000 0.010000 10.000000
      Exponential 0.083330 Activity 3.198e-003 6.500000 7.400000 1.842068 0.000000
0.000000 0.000000 0.000000
      Exponential 0.083330 Activity 2.152e-003 6.500000 7.400000 0.000000 0.000000
0.000000 0.000000 0.000000
      Exponential 0.083330 Activity 3.781e-003 6.500000 7.300000 1.842068 0.000000
0.000000 0.000000 0.000000
      Exponential 0.083330 Activity 2.755e-003 6.500000 7.300000 0.000000 0.000000
0.000000 0.000000 0.000000
    
```

Rupture Length Parameters

Rupture Dimensioning	A1	B1	Sig1	Aw	Bw	Sigw	Aa
Ba Sigw							
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--
Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--	--	--	--	--	--	--
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							
Area	--	--	--	--	--	--	-4.153061
1.020408 0.240000							

Trace Coordinates:

Latitude	Longitude
34.1093	-118.2840
34.0724	-118.3890
34.0503	-118.4340
34.0330	-118.4580
34.0419	-118.4670
34.0364	-118.4980
34.0302	-118.5410
34.0202	-118.5520
33.9919	-118.6492
33.9731	-118.7430
33.9581	-118.8190
33.9474	-118.9350
33.9698	-119.0200
33.9748	-119.1450
33.9388	-119.2280

Name: Santa Monica, alt 1  
 Region: USGS 2008 California  
 Category: Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.25000000  
 Deterministic Magnitude: 6.401

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	75	0	0.001	18.35

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
	Delta1	Delta2						
0.120000	Normal	0.16666	Activity	7.539e-004	6.360000	6.840000	2.300000	6.600000
0.120000	Normal	0.166660	Activity	1.504e-003	6.160000	6.640000	2.300000	6.400000
0.000000	Exponential	0.166670	Activity	9.641e-004	6.500000	6.600000	1.842068	0.000000
0.000000	Exponential	0.166670	Activity	9.628e-004	6.500000	6.600000	0.000000	0.000000
0.000000	Characteristic	0.333340	Activity	1.616e-003	6.399000	6.401000	2.300000	0.000000
0.120000	Normal	0.16666	Activity	7.539e-004	6.360000	6.840000	2.300000	6.600000

Rupture Length Parameters

Ba	Rupture Dimensioning	A1	B1	Sigl	Aw	Bw	Sigw	Aa
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	Area	--	--	--	--	--	--	-4.153061
1.020408	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
1.020408	Area	--	--	--	--	--	--	-4.153061
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--

Trace Coordinates:

Latitude	Longitude
34.0691	-118.4118
34.0421	-118.4558
34.0356	-118.4749
34.0316	-118.4813
34.0304	-118.5247
34.0324	-118.5544

Name: Santa Monica, alt 2  
 Region: USGS 2008 California  
 Category: Fault  
 Fault Mechanism: Strike Slip  
 Magnitude Scale: Moment Magnitude  
 Probability of Activity: 0.2500000  
 Deterministic Magnitude: 6.8

Fault Profile Parameters:

Dip1	Dip2	Depth1	Depth2	Depth3
90	50	0	0.001	11.49

Magnitude Recurrence Distributions:

Sigma	ModelType	Weight	RateType	Rate	MinMag	MaxMag	Beta	Mean
	Delta1	Delta2						
0.120000	Normal	0.33334	Activity	5.985e-004	6.560000	7.040000	2.300000	6.800000
0.120000	Normal	0.333340	Activity	1.194e-003	6.360000	6.840000	2.300000	6.600000
0.120000	Normal	0.33334	Activity	5.985e-004	6.560000	7.040000	2.300000	6.800000

```

    Exponential 0.083330 Activity 1.084e-003 6.500000 6.800000 1.842068 0.000000
0.000000 0.000000 0.000000
    Exponential 0.083330 Activity 1.038e-003 6.500000 6.800000 0.000000 0.000000
0.000000 0.000000 0.000000
    Exponential 0.083330 Activity 1.527e-003 6.500000 6.600000 1.842068 0.000000
0.000000 0.000000 0.000000
    Exponential 0.083330 Activity 1.525e-003 6.500000 6.600000 0.000000 0.000000
0.000000 0.000000 0.000000
    
```

Rupture Length Parameters

Rupture Dimensioning		Al	Bl	Sigl	Aw	Bw	Sigw	Aa
Ba	Sigw							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
--	Length and width	4.000000	0.000000	0.001000	4.000000	0.000000	0.001000	--
--	--							
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061
1.020408	Area	--	--	--	--	--	--	-4.153061

Trace Coordinates:

Latitude	Longitude
34.1093	-118.2840
34.0724	-118.3890
34.0503	-118.4340
34.0330	-118.4580
34.0419	-118.4670
34.0364	-118.4980
34.0302	-118.5410
34.0202	-118.5520

----- End Nested Sources for Santa Monica -----

Attenuation Equations for Source:

Raw Weight	Normalized Weight	Name
1	0.250000	Abrahamson-Silva (2008) NGA
1	0.250000	Boore-Atkinson (2008) NGA
1	0.250000	Campbell-Bozorgnia (2008) NGA
1	0.250000	Chiou-Youngs (2008) NGA

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MAGNITUDE CONVERSIONS

This analysis does not require any magnitude conversions.  
 Note: Your analysis may indirectly use magnitude conversions that are not listed here.

Echo File Creation Time: 10:45:23 Tuesday, October 06, 2015

Deterministic Spectra Results using EZ-FRISK 7.65 Build 004

Largest Amplitudes of Ground Motions Considering All Sources Calculated using Weighted Mean of Attenuation Equations

Amplitude Units: Acceleration (g)

Fractile: 0.5

Period	Amplitude	Magnitude	Closest Distance (km)	Region	Controlling Source
PGA	6.980e-001	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.05	7.767e-001	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.1	9.466e-001	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.2	1.225e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.3	1.473e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.4	1.508e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.5	1.500e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.75	1.359e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
1	1.169e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
2	8.223e-001	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
3	5.776e-001	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
4	4.489e-001	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected

Fractile: 0.84

Period	Amplitude	Magnitude	Closest Distance (km)	Region	Controlling Source
PGA	1.091e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.05	1.231e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.1	1.511e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.2	1.962e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.3	2.405e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.4	2.493e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.5	2.530e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.75	2.396e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
1	2.108e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
2	1.604e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
3	1.169e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
4	9.355e-001	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected

Largest Amplitudes of Ground Motions Considering Sources Calculated with Abrahamson-Silva (2008) NGA  
 Amplitude Units: Acceleration (g)

Fractile: 0.5

Period	Amplitude	Magnitude	Closest Distance (km)	Region	Controlling Source
PGA	7.161e-001	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.05	7.473e-001	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.1	9.025e-001	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.2	1.185e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.3	1.448e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.4	1.504e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.5	1.463e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.75	1.274e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
1	1.098e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
2	8.593e-001	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
3	6.136e-001	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
4	4.745e-001	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected

Fractile: 0.84

Period	Amplitude	Magnitude	Closest Distance (km)	Region	Controlling Source
PGA	1.066e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.05	1.099e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.1	1.332e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.2	1.791e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.3	2.253e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.4	2.400e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.5	2.395e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.75	2.183e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
1	1.925e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
2	1.600e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
3	1.183e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
4	9.361e-001	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected

Largest Amplitudes of Ground Motions Considering Sources Calculated with Boore-Atkinson (2008) NGA  
 Amplitude Units: Acceleration (g)

Fractile: 0.5

Period	Amplitude	Magnitude	Closest Distance (km)	Region	Controlling Source
PGA	5.475e-001	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.05	6.635e-001	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.1	9.348e-001	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.2	1.317e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.3	1.588e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.4	1.532e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.5	1.433e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.75	1.213e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
1	8.941e-001	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
2	5.262e-001	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
3	4.294e-001	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
4	3.509e-001	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected

Fractile: 0.84

Period	Amplitude	Magnitude	Closest Distance (km)	Region	Controlling Source
PGA	9.593e-001	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.05	1.192e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.1	1.711e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.2	2.382e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.3	2.907e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.4	2.791e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.5	2.641e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.75	2.307e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
1	1.706e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
2	1.086e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
3	9.007e-001	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
4	7.523e-001	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected

Largest Amplitudes of Ground Motions Considering Sources Calculated with Campbell-Bozorgnia (2008) NGA

Amplitude Units: Acceleration (g)

Fractile: 0.5

Period	Amplitude	Magnitude	Closest Distance (km)	Region	Controlling Source
PGA	6.704e-001	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.05	7.002e-001	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.1	7.720e-001	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.2	9.749e-001	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.3	1.237e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.4	1.385e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.5	1.551e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.75	1.554e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
1	1.422e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
2	1.085e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
3	6.954e-001	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
4	5.267e-001	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected

Fractile: 0.84

Period	Amplitude	Magnitude	Closest Distance (km)	Region	Controlling Source
PGA	1.027e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.05	1.100e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.1	1.246e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.2	1.547e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.3	1.976e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.4	2.253e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.5	2.579e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.75	2.717e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
1	2.561e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
2	2.108e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
3	1.390e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
4	1.074e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected

Largest Amplitudes of Ground Motions Considering Sources Calculated with Chiou-Youngs (2008) NGA  
 Amplitude Units: Acceleration (g)

Fractile: 0.5

Period	Amplitude	Magnitude	Closest Distance (km)	Region	Controlling Source
PGA	8.580e-001	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.05	9.956e-001	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.1	1.177e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.2	1.423e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.3	1.621e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.4	1.608e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.5	1.555e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.75	1.397e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
1	1.261e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
2	8.188e-001	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
3	5.718e-001	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
4	4.435e-001	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected

Fractile: 0.84

Period	Amplitude	Magnitude	Closest Distance (km)	Region	Controlling Source
PGA	1.311e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected

0.05	1.534e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.1	1.756e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.2	2.128e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.3	2.486e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.4	2.528e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.5	2.506e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
0.75	2.378e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
1	2.239e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
2	1.621e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
3	1.203e+000	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected
4	9.794e-001	7.40 Mw	2.84	USGS 2008 California	Oak Ridge Connected

Largest Amplitudes of Ground Motions for Each Source

Source: Imp Extensional Gridded, Char, Normal

Region: USGS 2008 California

Closest Distance: 130.44 km

Amplitude Units: Acceleration (g)

Magnitude: 7.00 Mw

Fractile: 0.50

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA

Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	3.647e-002	5.162e-002	3.287e-002	3.361e-002	2.777e-002	
0.05	3.853e-002	5.135e-002	3.463e-002	3.776e-002	3.037e-002	
0.1	5.109e-002	6.560e-002	4.523e-002	5.010e-002	4.345e-002	
0.2	8.401e-002	1.155e-001	7.270e-002	8.091e-002	6.697e-002	
0.3	9.689e-002	1.393e-001	8.225e-002	9.293e-002	7.310e-002	
0.4	9.386e-002	1.344e-001	8.332e-002	8.637e-002	7.138e-002	
0.5	8.767e-002	1.202e-001	8.144e-002	8.237e-002	6.671e-002	
0.75	6.881e-002	9.235e-002	6.073e-002	6.642e-002	5.575e-002	
1	5.495e-002	7.109e-002	4.751e-002	5.261e-002	4.858e-002	
2	2.696e-002	3.149e-002	2.336e-002	2.649e-002	2.648e-002	
3	1.589e-002	1.803e-002	1.327e-002	1.665e-002	1.559e-002	
4	1.113e-002	1.201e-002	1.015e-002	1.218e-002	1.016e-002	

Fractile: 0.84

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA

Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	6.162e-002	8.679e-002	5.760e-002	5.606e-002	4.602e-002	
0.05	6.687e-002	8.735e-002	6.221e-002	6.558e-002	5.232e-002	
0.1	9.037e-002	1.130e-001	8.279e-002	8.964e-002	7.602e-002	
0.2	1.489e-001	2.028e-001	1.315e-001	1.432e-001	1.179e-001	
0.3	1.730e-001	2.480e-001	1.506e-001	1.643e-001	1.293e-001	

0.4	1.682e-001	2.412e-001	1.518e-001	1.529e-001	1.270e-001
0.5	1.586e-001	2.173e-001	1.501e-001	1.472e-001	1.197e-001
0.75	1.269e-001	1.686e-001	1.153e-001	1.215e-001	1.022e-001
1	1.022e-001	1.301e-001	9.041e-002	9.746e-002	9.095e-002
2	5.155e-002	5.732e-002	4.686e-002	5.021e-002	5.179e-002
3	3.065e-002	3.309e-002	2.649e-002	3.166e-002	3.135e-002
4	2.165e-002	2.213e-002	2.032e-002	2.321e-002	2.095e-002

Source: Imp Extensional Gridded, Char, Strike Slip  
 Region: USGS 2008 California  
 Closest Distance: 130.44 km  
 Amplitude Units: Acceleration (g)  
 Magnitude: 7.00 Mw  
 Fractile: 0.50  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	4.250e-002	5.463e-002	4.226e-002	3.768e-002	3.543e-002
0.05	4.475e-002	5.425e-002	4.378e-002	4.223e-002	3.873e-002
0.1	5.861e-002	6.924e-002	5.526e-002	5.479e-002	5.514e-002
0.2	9.367e-002	1.220e-001	8.738e-002	8.122e-002	8.410e-002
0.3	1.075e-001	1.473e-001	9.961e-002	9.235e-002	9.060e-002
0.4	1.041e-001	1.423e-001	1.010e-001	8.594e-002	8.718e-002
0.5	9.699e-002	1.273e-001	9.839e-002	8.204e-002	8.025e-002
0.75	7.772e-002	9.789e-002	8.171e-002	6.623e-002	6.504e-002
1	6.272e-002	7.538e-002	6.744e-002	5.249e-002	5.558e-002
2	3.126e-002	3.343e-002	3.562e-002	2.648e-002	2.952e-002
3	1.863e-002	1.915e-002	2.143e-002	1.665e-002	1.730e-002
4	1.292e-002	1.275e-002	1.550e-002	1.218e-002	1.125e-002

Fractile: 0.84  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	7.176e-002	9.173e-002	7.404e-002	6.277e-002	5.850e-002
0.05	7.760e-002	9.212e-002	7.864e-002	7.319e-002	6.645e-002
0.1	1.035e-001	1.191e-001	1.012e-001	9.782e-002	9.597e-002
0.2	1.657e-001	2.140e-001	1.581e-001	1.435e-001	1.472e-001
0.3	1.917e-001	2.620e-001	1.823e-001	1.631e-001	1.593e-001
0.4	1.863e-001	2.551e-001	1.839e-001	1.520e-001	1.543e-001
0.5	1.753e-001	2.300e-001	1.814e-001	1.464e-001	1.434e-001
0.75	1.435e-001	1.786e-001	1.552e-001	1.211e-001	1.189e-001
1	1.168e-001	1.379e-001	1.283e-001	9.722e-002	1.039e-001
2	6.005e-002	6.085e-002	7.145e-002	5.019e-002	5.770e-002
3	3.608e-002	3.514e-002	4.277e-002	3.166e-002	3.477e-002



4      2.523e-002      2.349e-002      3.103e-002      2.321e-002      2.320e-002

Source: Imp Extensional Gridded, GR, Normal

Region: USGS 2008 California

Closest Distance: 132.16 km

Amplitude Units: Acceleration (g)

Magnitude: 7.00 Mw

Fractile: 0.50

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA

Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	3.583e-002	5.078e-002	3.208e-002	3.322e-002	2.724e-002
0.05	3.781e-002	5.044e-002	3.378e-002	3.730e-002	2.972e-002
0.1	5.008e-002	6.433e-002	4.409e-002	4.942e-002	4.248e-002
0.2	8.254e-002	1.135e-001	7.108e-002	7.989e-002	6.572e-002
0.3	9.543e-002	1.373e-001	8.066e-002	9.189e-002	7.193e-002
0.4	9.258e-002	1.327e-001	8.185e-002	8.543e-002	7.036e-002
0.5	8.656e-002	1.188e-001	8.012e-002	8.150e-002	6.585e-002
0.75	6.806e-002	9.149e-002	5.987e-002	6.574e-002	5.513e-002
1	5.437e-002	7.043e-002	4.690e-002	5.206e-002	4.808e-002
2	2.669e-002	3.119e-002	2.309e-002	2.621e-002	2.625e-002
3	1.573e-002	1.786e-002	1.313e-002	1.648e-002	1.546e-002
4	1.102e-002	1.190e-002	1.004e-002	1.205e-002	1.007e-002

Fractile: 0.84

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA

Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	6.054e-002	8.540e-002	5.620e-002	5.542e-002	4.514e-002
0.05	6.564e-002	8.584e-002	6.069e-002	6.479e-002	5.123e-002
0.1	8.860e-002	1.109e-001	8.072e-002	8.844e-002	7.437e-002
0.2	1.463e-001	1.994e-001	1.286e-001	1.414e-001	1.158e-001
0.3	1.705e-001	2.445e-001	1.477e-001	1.625e-001	1.272e-001
0.4	1.659e-001	2.382e-001	1.491e-001	1.512e-001	1.252e-001
0.5	1.566e-001	2.149e-001	1.477e-001	1.456e-001	1.182e-001
0.75	1.255e-001	1.671e-001	1.137e-001	1.203e-001	1.011e-001
1	1.012e-001	1.289e-001	8.924e-002	9.646e-002	9.002e-002
2	5.103e-002	5.678e-002	4.633e-002	4.968e-002	5.134e-002
3	3.035e-002	3.278e-002	2.620e-002	3.133e-002	3.109e-002
4	2.144e-002	2.192e-002	2.010e-002	2.296e-002	2.078e-002

Source: Imp Extensional Gridded, GR, Strike Slip

Region: USGS 2008 California

Closest Distance: 132.16 km  
 Amplitude Units: Acceleration (g)  
 Magnitude: 7.00 Mw  
 Fractile: 0.50  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	4.174e-002	5.373e-002	4.124e-002	3.725e-002	3.475e-002
0.05	4.391e-002	5.329e-002	4.271e-002	4.171e-002	3.791e-002
0.1	5.744e-002	6.790e-002	5.388e-002	5.404e-002	5.393e-002
0.2	9.202e-002	1.199e-001	8.543e-002	8.021e-002	8.255e-002
0.3	1.058e-001	1.452e-001	9.769e-002	9.132e-002	8.918e-002
0.4	1.026e-001	1.404e-001	9.919e-002	8.501e-002	8.595e-002
0.5	9.575e-002	1.258e-001	9.680e-002	8.117e-002	7.922e-002
0.75	7.685e-002	9.698e-002	8.056e-002	6.556e-002	6.431e-002
1	6.205e-002	7.469e-002	6.656e-002	5.195e-002	5.501e-002
2	3.095e-002	3.312e-002	3.521e-002	2.620e-002	2.926e-002
3	1.845e-002	1.897e-002	2.119e-002	1.648e-002	1.715e-002
4	1.279e-002	1.263e-002	1.533e-002	1.205e-002	1.116e-002

Fractile: 0.84  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	7.050e-002	9.027e-002	7.226e-002	6.207e-002	5.740e-002
0.05	7.616e-002	9.054e-002	7.672e-002	7.232e-002	6.508e-002
0.1	1.015e-001	1.168e-001	9.863e-002	9.651e-002	9.393e-002
0.2	1.628e-001	2.104e-001	1.545e-001	1.417e-001	1.445e-001
0.3	1.888e-001	2.583e-001	1.788e-001	1.613e-001	1.569e-001
0.4	1.838e-001	2.519e-001	1.807e-001	1.503e-001	1.522e-001
0.5	1.731e-001	2.274e-001	1.784e-001	1.449e-001	1.416e-001
0.75	1.419e-001	1.770e-001	1.530e-001	1.199e-001	1.176e-001
1	1.156e-001	1.366e-001	1.267e-001	9.622e-002	1.028e-001
2	5.944e-002	6.028e-002	7.064e-002	4.966e-002	5.720e-002
3	3.573e-002	3.480e-002	4.229e-002	3.133e-002	3.448e-002
4	2.498e-002	2.327e-002	3.069e-002	2.296e-002	2.301e-002

Source: Mojave Shear Gridded  
 Region: USGS 2008 California  
 Closest Distance: 161.26 km  
 Amplitude Units: Acceleration (g)  
 Magnitude: 7.60 Mw  
 Fractile: 0.50  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	5.053e-002	7.419e-002	3.954e-002	4.331e-002	4.510e-002	4.510e-002
0.05	5.180e-002	6.959e-002	4.225e-002	4.739e-002	4.797e-002	4.797e-002
0.1	6.470e-002	8.415e-002	4.974e-002	5.784e-002	6.709e-002	6.709e-002
0.2	1.058e-001	1.603e-001	6.712e-002	8.825e-002	1.073e-001	1.073e-001
0.3	1.302e-001	2.141e-001	8.032e-002	1.057e-001	1.207e-001	1.207e-001
0.4	1.317e-001	2.198e-001	8.612e-002	1.008e-001	1.199e-001	1.199e-001
0.5	1.278e-001	2.060e-001	8.942e-002	1.025e-001	1.132e-001	1.132e-001
0.75	1.115e-001	1.716e-001	8.570e-002	9.265e-002	9.594e-002	9.594e-002
1	9.399e-002	1.358e-001	7.629e-002	7.908e-002	8.478e-002	8.478e-002
2	5.185e-002	6.464e-002	4.686e-002	4.720e-002	4.870e-002	4.870e-002
3	3.316e-002	3.842e-002	3.327e-002	3.125e-002	2.970e-002	2.970e-002
4	2.320e-002	2.623e-002	2.329e-002	2.346e-002	1.981e-002	1.981e-002

Fractile: 0.84

Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	8.478e-002	1.237e-001	6.927e-002	7.202e-002	7.416e-002	7.416e-002
0.05	8.917e-002	1.169e-001	7.589e-002	8.192e-002	8.195e-002	8.195e-002
0.1	1.133e-001	1.430e-001	9.105e-002	1.030e-001	1.162e-001	1.162e-001
0.2	1.854e-001	2.785e-001	1.214e-001	1.555e-001	1.864e-001	1.864e-001
0.3	2.304e-001	3.779e-001	1.470e-001	1.863e-001	2.102e-001	2.102e-001
0.4	2.342e-001	3.919e-001	1.569e-001	1.780e-001	2.102e-001	2.102e-001
0.5	2.296e-001	3.706e-001	1.648e-001	1.827e-001	2.004e-001	2.004e-001
0.75	2.046e-001	3.123e-001	1.628e-001	1.693e-001	1.740e-001	1.740e-001
1	1.742e-001	2.479e-001	1.452e-001	1.464e-001	1.573e-001	1.573e-001
2	9.901e-002	1.176e-001	9.400e-002	8.945e-002	9.493e-002	9.493e-002
3	6.400e-002	7.049e-002	6.641e-002	5.942e-002	5.966e-002	5.966e-002
4	4.512e-002	4.833e-002	4.662e-002	4.469e-002	4.085e-002	4.085e-002

Source: San Andreas Creeping Section Gridded  
 Region: USGS 2008 California

Closest Distance: 197.43 km  
 Amplitude Units: Acceleration (g)  
 Magnitude: 6.00 Mw  
 Fractile: 0.50

Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
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PGA	8.014e-003	7.508e-003	6.799e-003	1.269e-002	5.058e-003
0.05	8.445e-003	7.313e-003	7.497e-003	1.402e-002	4.947e-003
0.1	1.098e-002	8.826e-003	1.046e-002	1.798e-002	6.642e-003
0.2	1.827e-002	1.552e-002	1.892e-002	2.623e-002	1.239e-002
0.3	2.196e-002	1.986e-002	2.423e-002	2.821e-002	1.556e-002
0.4	2.083e-002	2.002e-002	2.224e-002	2.464e-002	1.642e-002
0.5	1.945e-002	1.853e-002	2.122e-002	2.213e-002	1.591e-002
0.75	1.544e-002	1.512e-002	1.701e-002	1.620e-002	1.343e-002
1	1.187e-002	1.094e-002	1.328e-002	1.185e-002	1.140e-002
2	5.173e-003	4.052e-003	6.403e-003	4.667e-003	5.570e-003
3	2.777e-003	2.097e-003	3.645e-003	2.368e-003	2.998e-003
4	1.707e-003	1.282e-003	2.296e-003	1.443e-003	1.807e-003

Fractile: 0.84

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA

Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	1.414e-002	1.417e-002	1.191e-002	2.132e-002	9.145e-003	
0.05	1.542e-002	1.430e-002	1.347e-002	2.460e-002	9.315e-003	
0.1	2.050e-002	1.762e-002	1.915e-002	3.253e-002	1.270e-002	
0.2	3.393e-002	3.090e-002	3.423e-002	4.686e-002	2.374e-002	
0.3	4.088e-002	3.921e-002	4.435e-002	5.025e-002	2.971e-002	
0.4	3.872e-002	3.925e-002	4.051e-002	4.385e-002	3.128e-002	
0.5	3.633e-002	3.616e-002	3.911e-002	3.969e-002	3.034e-002	
0.75	2.925e-002	2.921e-002	3.231e-002	2.972e-002	2.577e-002	
1	2.257e-002	2.087e-002	2.527e-002	2.199e-002	2.212e-002	
2	1.008e-002	7.541e-003	1.284e-002	8.845e-003	1.109e-002	
3	5.443e-003	3.890e-003	7.275e-003	4.502e-003	6.104e-003	
4	3.371e-003	2.372e-003	4.596e-003	2.749e-003	3.768e-003	

Source: San Gorgonio Shear Gridded

Region: USGS 2008 California

Closest Distance: 149.19 km

Amplitude Units: Acceleration (g)

Magnitude: 7.60 Mw

Fractile: 0.50

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA

Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	5.611e-002	8.118e-002	4.647e-002	4.601e-002	5.077e-002	
0.05	5.794e-002	7.676e-002	4.973e-002	5.057e-002	5.469e-002	
0.1	7.294e-002	9.381e-002	5.879e-002	6.223e-002	7.692e-002	
0.2	1.172e-001	1.765e-001	7.800e-002	9.432e-002	1.202e-001	
0.3	1.419e-001	2.313e-001	9.138e-002	1.120e-001	1.327e-001	
0.4	1.421e-001	2.348e-001	9.664e-002	1.067e-001	1.303e-001	

0.5	1.369e-001	2.182e-001	9.926e-002	1.083e-001	1.221e-001
0.75	1.182e-001	1.790e-001	9.367e-002	9.771e-002	1.023e-001
1	9.939e-002	1.417e-001	8.259e-002	8.344e-002	8.989e-002
2	5.467e-002	6.754e-002	5.015e-002	4.986e-002	5.114e-002
3	3.496e-002	4.016e-002	3.557e-002	3.302e-002	3.109e-002
4	2.446e-002	2.742e-002	2.491e-002	2.479e-002	2.071e-002

Fractile: 0.84

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA

Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	9.403e-002	1.349e-001	8.142e-002	7.645e-002	8.329e-002	9.315e-002
0.05	9.957e-002	1.285e-001	8.933e-002	8.732e-002	9.315e-002	9.315e-002
0.1	1.274e-001	1.587e-001	1.076e-001	1.107e-001	1.326e-001	1.326e-001
0.2	2.050e-001	3.054e-001	1.411e-001	1.660e-001	2.077e-001	2.077e-001
0.3	2.505e-001	4.071e-001	1.673e-001	1.973e-001	2.303e-001	2.303e-001
0.4	2.524e-001	4.178e-001	1.760e-001	1.882e-001	2.278e-001	2.278e-001
0.5	2.458e-001	3.918e-001	1.830e-001	1.930e-001	2.156e-001	2.156e-001
0.75	2.168e-001	3.253e-001	1.779e-001	1.785e-001	1.853e-001	1.853e-001
1	1.842e-001	2.584e-001	1.572e-001	1.544e-001	1.666e-001	1.666e-001
2	1.044e-001	1.229e-001	1.006e-001	9.449e-002	9.965e-002	9.965e-002
3	6.748e-002	7.369e-002	7.099e-002	6.278e-002	6.246e-002	6.246e-002
4	4.758e-002	5.052e-002	4.987e-002	4.722e-002	4.272e-002	4.272e-002

Source: Casmalia (Orcutt Frontal)

Region: USGS 2008 California

Closest Distance: 125.61 km

Amplitude Units: Acceleration (g)

Magnitude: 6.70 Mw

Fractile: 0.50

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA

Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	3.671e-002	3.323e-002	4.468e-002	4.018e-002	2.874e-002	2.874e-002
0.05	3.920e-002	3.403e-002	4.584e-002	4.535e-002	3.159e-002	3.159e-002
0.1	5.249e-002	4.447e-002	5.980e-002	6.020e-002	4.549e-002	4.549e-002
0.2	8.518e-002	7.781e-002	1.044e-001	8.852e-002	6.994e-002	6.994e-002
0.3	1.025e-001	9.602e-002	1.308e-001	1.038e-001	7.925e-002	7.925e-002
0.4	9.899e-002	9.486e-002	1.277e-001	9.641e-002	7.694e-002	7.694e-002
0.5	9.346e-002	8.872e-002	1.239e-001	8.993e-002	7.136e-002	7.136e-002
0.75	7.574e-002	7.351e-002	1.012e-001	6.969e-002	5.852e-002	5.852e-002
1	6.040e-002	5.967e-002	7.843e-002	5.373e-002	4.979e-002	4.979e-002
2	2.774e-002	2.918e-002	3.319e-002	2.491e-002	2.370e-002	2.370e-002
3	1.616e-002	1.777e-002	1.782e-002	1.526e-002	1.379e-002	1.379e-002
4	1.116e-002	1.238e-002	1.221e-002	1.102e-002	9.046e-003	9.046e-003

Fractile: 0.84

Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	6.303e-002	5.802e-002	7.829e-002	6.702e-002	4.879e-002	5.576e-002
0.05	6.937e-002	6.062e-002	8.234e-002	7.877e-002	5.576e-002	8.148e-002
0.1	9.479e-002	8.047e-002	1.095e-001	1.077e-001	8.148e-002	1.258e-001
0.2	1.535e-001	1.425e-001	1.889e-001	1.566e-001	1.258e-001	1.429e-001
0.3	1.857e-001	1.770e-001	2.395e-001	1.835e-001	1.429e-001	1.394e-001
0.4	1.795e-001	1.753e-001	2.327e-001	1.707e-001	1.394e-001	1.302e-001
0.5	1.709e-001	1.645e-001	2.283e-001	1.607e-001	1.302e-001	1.087e-001
0.75	1.413e-001	1.367e-001	1.923e-001	1.275e-001	1.087e-001	9.417e-002
1	1.134e-001	1.106e-001	1.492e-001	9.954e-002	9.417e-002	4.661e-002
2	5.346e-002	5.347e-002	6.658e-002	4.720e-002	4.661e-002	2.783e-002
3	3.129e-002	3.272e-002	3.557e-002	2.902e-002	2.783e-002	2.100e-002
4	2.175e-002	2.284e-002	2.445e-002	2.100e-002	1.872e-002	

Source: Channel Islands Thrust

Region: USGS 2008 California

Closest Distance: 15.80 km

Amplitude Units: Acceleration (g)

Magnitude: 7.30 Mw

Fractile: 0.50

Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	4.308e-001	5.994e-001	3.240e-001	3.334e-001	4.663e-001	5.507e-001
0.05	4.765e-001	6.100e-001	3.688e-001	3.765e-001	5.507e-001	7.213e-001
0.1	6.237e-001	7.336e-001	5.109e-001	5.291e-001	7.213e-001	9.059e-001
0.2	8.437e-001	1.076e+000	6.989e-001	6.940e-001	9.059e-001	9.925e-001
0.3	9.856e-001	1.367e+000	8.112e-001	7.722e-001	9.925e-001	9.389e-001
0.4	9.594e-001	1.377e+000	7.695e-001	7.518e-001	9.389e-001	8.662e-001
0.5	9.030e-001	1.273e+000	7.226e-001	7.499e-001	8.662e-001	7.036e-001
0.75	7.325e-001	9.988e-001	5.943e-001	6.334e-001	7.036e-001	5.934e-001
1	5.894e-001	7.950e-001	4.424e-001	5.267e-001	5.934e-001	3.057e-001
2	3.229e-001	4.599e-001	2.263e-001	2.998e-001	3.057e-001	1.858e-001
3	1.990e-001	2.564e-001	1.620e-001	1.920e-001	1.858e-001	1.303e-001
4	1.424e-001	1.654e-001	1.226e-001	1.513e-001	1.303e-001	

Fractile: 0.84

Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	6.780e-001	8.995e-001	5.677e-001	5.232e-001	7.215e-001
0.05	7.584e-001	9.029e-001	6.625e-001	6.048e-001	8.635e-001
0.1	9.997e-001	1.089e+000	9.352e-001	8.723e-001	1.103e+000
0.2	1.357e+000	1.640e+000	1.264e+000	1.133e+000	1.389e+000
0.3	1.616e+000	2.148e+000	1.485e+000	1.274e+000	1.557e+000
0.4	1.597e+000	2.221e+000	1.402e+000	1.260e+000	1.507e+000
0.5	1.535e+000	2.105e+000	1.332e+000	1.281e+000	1.422e+000
0.75	1.299e+000	1.724e+000	1.131e+000	1.129e+000	1.214e+000
1	1.068e+000	1.401e+000	8.444e-001	9.610e-001	1.065e+000
2	6.286e-001	8.570e-001	4.669e-001	5.832e-001	6.071e-001
3	4.023e-001	4.943e-001	3.398e-001	3.837e-001	3.915e-001
4	2.964e-001	3.264e-001	2.629e-001	3.087e-001	2.878e-001

Source: Clamshell-Sawpit  
 Region: USGS 2008 California  
 Closest Distance: 105.67 km  
 Amplitude Units: Acceleration (g)  
 Magnitude: 6.70 Mw  
 Fractile: 0.50

Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	4.682e-002	4.175e-002	6.104e-002	4.738e-002	3.712e-002
0.05	5.058e-002	4.358e-002	6.296e-002	5.402e-002	4.178e-002
0.1	6.867e-002	5.813e-002	8.266e-002	7.300e-002	6.087e-002
0.2	1.084e-001	9.897e-002	1.392e-001	1.058e-001	8.974e-002
0.3	1.264e-001	1.179e-001	1.678e-001	1.217e-001	9.837e-002
0.4	1.202e-001	1.140e-001	1.607e-001	1.128e-001	9.341e-002
0.5	1.121e-001	1.049e-001	1.534e-001	1.049e-001	8.536e-002
0.75	8.908e-002	8.454e-002	1.224e-001	8.086e-002	6.854e-002
1	7.054e-002	6.855e-002	9.361e-002	6.240e-002	5.761e-002
2	3.206e-002	3.353e-002	3.887e-002	2.897e-002	2.687e-002
3	1.861e-002	2.044e-002	2.077e-002	1.773e-002	1.551e-002
4	1.284e-002	1.424e-002	1.418e-002	1.279e-002	1.014e-002

Fractile: 0.84  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	8.032e-002	7.266e-002	1.070e-001	7.888e-002	6.278e-002
0.05	8.934e-002	7.728e-002	1.131e-001	9.355e-002	7.342e-002

0.1	1.236e-001	1.046e-001	1.513e-001	1.302e-001	1.084e-001
0.2	1.949e-001	1.805e-001	2.517e-001	1.867e-001	1.605e-001
0.3	2.288e-001	2.165e-001	3.072e-001	2.149e-001	1.765e-001
0.4	2.177e-001	2.102e-001	2.928e-001	1.993e-001	1.685e-001
0.5	2.048e-001	1.942e-001	2.827e-001	1.871e-001	1.551e-001
0.75	1.661e-001	1.570e-001	2.324e-001	1.479e-001	1.270e-001
1	1.324e-001	1.270e-001	1.781e-001	1.156e-001	1.088e-001
2	6.178e-002	6.145e-002	7.797e-002	5.491e-002	5.281e-002
3	3.602e-002	3.762e-002	4.145e-002	3.371e-002	3.130e-002
4	2.500e-002	2.626e-002	2.838e-002	2.436e-002	2.099e-002

Source: Cleghorn

Region: USGS 2008 California

Closest Distance: 160.64 km

Amplitude Units: Acceleration (g)

Magnitude: 6.80 Mw

Fractile: 0.50

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA

Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	2.715e-002	2.626e-002	2.938e-002	3.369e-002	1.927e-002	
0.05	2.840e-002	2.592e-002	2.991e-002	3.740e-002	2.036e-002	
0.1	3.688e-002	3.256e-002	3.820e-002	4.806e-002	2.872e-002	
0.2	6.151e-002	5.815e-002	6.811e-002	7.230e-002	4.749e-002	
0.3	7.662e-002	7.559e-002	8.637e-002	8.749e-002	5.705e-002	
0.4	7.673e-002	7.693e-002	9.040e-002	8.194e-002	5.763e-002	
0.5	7.397e-002	7.359e-002	8.982e-002	7.753e-002	5.495e-002	
0.75	6.214e-002	6.399e-002	7.574e-002	6.164e-002	4.718e-002	
1	5.138e-002	5.233e-002	6.329e-002	4.806e-002	4.183e-002	
2	2.643e-002	2.599e-002	3.304e-002	2.285e-002	2.383e-002	
3	1.592e-002	1.597e-002	1.896e-002	1.411e-002	1.463e-002	
4	1.127e-002	1.119e-002	1.390e-002	1.024e-002	9.744e-003	

Fractile: 0.84

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA

Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	4.648e-002	4.552e-002	5.148e-002	5.630e-002	3.261e-002	
0.05	5.014e-002	4.585e-002	5.372e-002	6.512e-002	3.585e-002	
0.1	6.652e-002	5.850e-002	6.992e-002	8.623e-002	5.144e-002	
0.2	1.107e-001	1.058e-001	1.232e-001	1.282e-001	8.552e-002	
0.3	1.386e-001	1.385e-001	1.581e-001	1.550e-001	1.030e-001	
0.4	1.389e-001	1.414e-001	1.647e-001	1.452e-001	1.044e-001	
0.5	1.351e-001	1.358e-001	1.656e-001	1.387e-001	1.003e-001	
0.75	1.157e-001	1.185e-001	1.438e-001	1.129e-001	8.761e-002	



1	9.633e-002	9.674e-002	1.204e-001	8.908e-002	7.908e-002
2	5.098e-002	4.754e-002	6.628e-002	4.330e-002	4.681e-002
3	3.088e-002	2.936e-002	3.784e-002	2.684e-002	2.949e-002
4	2.203e-002	2.063e-002	2.784e-002	1.950e-002	2.014e-002

Source: Coronado Bank  
 Region: USGS 2008 California  
 Closest Distance: 158.77 km  
 Amplitude Units: Acceleration (g)  
 Magnitude: 7.40 Mw  
 Fractile: 0.50  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	4.396e-002	4.907e-002	4.340e-002	4.723e-002	3.612e-002	
0.05	4.589e-002	4.721e-002	4.583e-002	5.193e-002	3.859e-002	
0.1	5.802e-002	5.805e-002	5.510e-002	6.432e-002	5.463e-002	
0.2	9.343e-002	1.082e-001	7.946e-002	9.764e-002	8.846e-002	
0.3	1.184e-001	1.475e-001	9.965e-002	1.214e-001	1.049e-001	
0.4	1.206e-001	1.545e-001	1.066e-001	1.159e-001	1.055e-001	
0.5	1.194e-001	1.510e-001	1.099e-001	1.163e-001	1.006e-001	
0.75	1.073e-001	1.364e-001	1.027e-001	1.028e-001	8.724e-002	
1	9.254e-002	1.147e-001	9.050e-002	8.643e-002	7.855e-002	
2	5.268e-002	6.154e-002	5.326e-002	4.873e-002	4.720e-002	
3	3.426e-002	3.944e-002	3.584e-002	3.171e-002	3.004e-002	
4	2.450e-002	2.846e-002	2.538e-002	2.360e-002	2.056e-002	

Fractile: 0.84  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	7.433e-002	8.285e-002	7.604e-002	7.864e-002	5.978e-002	
0.05	7.987e-002	8.080e-002	8.232e-002	8.994e-002	6.643e-002	
0.1	1.030e-001	1.007e-001	1.009e-001	1.147e-001	9.550e-002	
0.2	1.656e-001	1.911e-001	1.437e-001	1.723e-001	1.554e-001	
0.3	2.114e-001	2.638e-001	1.824e-001	2.143e-001	1.850e-001	
0.4	2.161e-001	2.782e-001	1.943e-001	2.049e-001	1.870e-001	
0.5	2.159e-001	2.738e-001	2.025e-001	2.076e-001	1.799e-001	
0.75	1.980e-001	2.493e-001	1.951e-001	1.881e-001	1.594e-001	
1	1.722e-001	2.100e-001	1.722e-001	1.601e-001	1.466e-001	
2	1.008e-001	1.120e-001	1.068e-001	9.235e-002	9.216e-002	
3	6.614e-002	7.237e-002	7.154e-002	6.029e-002	6.036e-002	
4	4.765e-002	5.243e-002	5.082e-002	4.495e-002	4.241e-002	

Source: Cucamonga  
 Region: USGS 2008 California  
 Closest Distance: 133.36 km  
 Amplitude Units: Acceleration (g)  
 Magnitude: 6.70 Mw  
 Fractile: 0.50  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	3.372e-002	3.061e-002	4.004e-002	3.802e-002	2.622e-002	
0.05	3.586e-002	3.112e-002	4.100e-002	4.276e-002	2.856e-002	
0.1	4.777e-002	4.035e-002	5.338e-002	5.640e-002	4.093e-002	
0.2	7.828e-002	7.130e-002	9.449e-002	8.336e-002	6.398e-002	
0.3	9.525e-002	8.919e-002	1.200e-001	9.836e-002	7.344e-002	
0.4	9.257e-002	8.883e-002	1.180e-001	9.149e-002	7.192e-002	
0.5	8.781e-002	8.360e-002	1.151e-001	8.543e-002	6.709e-002	
0.75	7.170e-002	7.002e-002	9.495e-002	6.633e-002	5.548e-002	
1	5.732e-002	5.686e-002	7.389e-002	5.112e-002	4.742e-002	
2	2.643e-002	2.780e-002	3.150e-002	2.367e-002	2.273e-002	
3	1.541e-002	1.693e-002	1.694e-002	1.450e-002	1.325e-002	
4	1.065e-002	1.180e-002	1.162e-002	1.047e-002	8.697e-003	

Fractile: 0.84  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	5.791e-002	5.350e-002	7.016e-002	6.345e-002	4.455e-002	
0.05	6.349e-002	5.552e-002	7.365e-002	7.432e-002	5.047e-002	
0.1	8.633e-002	7.313e-002	9.772e-002	1.010e-001	7.346e-002	
0.2	1.412e-001	1.308e-001	1.709e-001	1.476e-001	1.153e-001	
0.3	1.727e-001	1.645e-001	2.197e-001	1.741e-001	1.327e-001	
0.4	1.679e-001	1.643e-001	2.150e-001	1.620e-001	1.304e-001	
0.5	1.606e-001	1.551e-001	2.122e-001	1.527e-001	1.225e-001	
0.75	1.338e-001	1.302e-001	1.803e-001	1.214e-001	1.031e-001	
1	1.076e-001	1.055e-001	1.406e-001	9.472e-002	8.973e-002	
2	5.093e-002	5.095e-002	6.318e-002	4.487e-002	4.471e-002	
3	2.983e-002	3.117e-002	3.381e-002	2.757e-002	2.675e-002	
4	2.074e-002	2.176e-002	2.327e-002	1.994e-002	1.800e-002	

Source: Elysian Park (Upper)  
 Region: USGS 2008 California  
 Closest Distance: 84.83 km  
 Amplitude Units: Acceleration (g)  
 Magnitude: 6.70 Mw

Fractile: 0.50

Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	7.055e-002	6.744e-002	8.328e-002	7.497e-002	5.652e-002
0.05	7.700e-002	7.100e-002	8.646e-002	8.567e-002	6.488e-002
0.1	1.055e-001	9.525e-002	1.144e-001	1.178e-001	9.478e-002
0.2	1.616e-001	1.588e-001	1.861e-001	1.684e-001	1.332e-001
0.3	1.837e-001	1.863e-001	2.166e-001	1.907e-001	1.411e-001
0.4	1.720e-001	1.761e-001	2.040e-001	1.770e-001	1.310e-001
0.5	1.577e-001	1.567e-001	1.918e-001	1.645e-001	1.177e-001
0.75	1.218e-001	1.189e-001	1.497e-001	1.266e-001	9.182e-002
1	9.438e-002	9.293e-002	1.132e-001	9.568e-002	7.566e-002
2	3.992e-002	4.177e-002	4.622e-002	3.826e-002	3.344e-002
3	2.220e-002	2.419e-002	2.459e-002	2.139e-002	1.865e-002
4	1.508e-002	1.623e-002	1.671e-002	1.545e-002	1.195e-002

Fractile: 0.84

Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	1.203e-001	1.163e-001	1.459e-001	1.239e-001	9.491e-002
0.05	1.348e-001	1.242e-001	1.553e-001	1.469e-001	1.130e-001
0.1	1.881e-001	1.689e-001	2.094e-001	2.077e-001	1.666e-001
0.2	2.881e-001	2.861e-001	3.366e-001	2.944e-001	2.351e-001
0.3	3.300e-001	3.391e-001	3.965e-001	3.340e-001	2.504e-001
0.4	3.097e-001	3.223e-001	3.716e-001	3.110e-001	2.340e-001
0.5	2.866e-001	2.885e-001	3.535e-001	2.922e-001	2.122e-001
0.75	2.261e-001	2.201e-001	2.843e-001	2.309e-001	1.692e-001
1	1.766e-001	1.718e-001	2.155e-001	1.769e-001	1.423e-001
2	7.685e-002	7.653e-002	9.271e-002	7.249e-002	6.567e-002
3	4.297e-002	4.453e-002	4.907e-002	4.067e-002	3.762e-002
4	2.938e-002	2.994e-002	3.345e-002	2.942e-002	2.472e-002

Source: Gravel Hills-Harper Lk  
 Region: USGS 2008 California  
 Closest Distance: 197.43 km  
 Amplitude Units: Acceleration (g)  
 Magnitude: 7.10 Mw

Fractile: 0.50

Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	2.480e-002	2.665e-002	2.148e-002	3.317e-002	1.789e-002
0.05	2.543e-002	2.520e-002	2.215e-002	3.617e-002	1.820e-002
0.1	3.178e-002	3.017e-002	2.720e-002	4.460e-002	2.514e-002
0.2	5.426e-002	5.741e-002	4.648e-002	6.865e-002	4.449e-002
0.3	7.176e-002	8.142e-002	6.283e-002	8.622e-002	5.657e-002
0.4	7.451e-002	8.741e-002	6.930e-002	8.187e-002	5.946e-002
0.5	7.447e-002	8.710e-002	7.237e-002	8.009e-002	5.833e-002
0.75	6.719e-002	8.135e-002	6.735e-002	6.760e-002	5.246e-002
1	5.742e-002	6.764e-002	5.937e-002	5.467e-002	4.799e-002
2	3.165e-002	3.503e-002	3.416e-002	2.823e-002	2.919e-002
3	1.994e-002	2.201e-002	2.138e-002	1.789e-002	1.849e-002
4	1.420e-002	1.568e-002	1.543e-002	1.314e-002	1.256e-002

Fractile: 0.84

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA

Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	4.206e-002	4.534e-002	3.764e-002	5.543e-002	2.983e-002
0.05	4.450e-002	4.360e-002	3.979e-002	6.299e-002	3.160e-002
0.1	5.682e-002	5.299e-002	4.980e-002	8.004e-002	4.446e-002
0.2	9.688e-002	1.024e-001	8.407e-002	1.218e-001	7.920e-002
0.3	1.289e-001	1.467e-001	1.150e-001	1.528e-001	1.010e-001
0.4	1.341e-001	1.583e-001	1.262e-001	1.451e-001	1.067e-001
0.5	1.352e-001	1.587e-001	1.334e-001	1.432e-001	1.054e-001
0.75	1.244e-001	1.492e-001	1.279e-001	1.238e-001	9.666e-002
1	1.071e-001	1.241e-001	1.130e-001	1.013e-001	9.015e-002
2	6.074e-002	6.378e-002	6.853e-002	5.350e-002	5.714e-002
3	3.856e-002	4.039e-002	4.268e-002	3.401e-002	3.718e-002
4	2.768e-002	2.888e-002	3.090e-002	2.503e-002	2.591e-002

Source: Great Valley 14 (Kettleman Hills)

Region: USGS 2008 California

Closest Distance: 191.45 km

Amplitude Units: Acceleration (g)

Magnitude: 7.20 Mw

Fractile: 0.50

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA

Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	4.243e-002	6.246e-002	2.505e-002	4.727e-002	3.493e-002
0.05	4.276e-002	5.821e-002	2.590e-002	5.124e-002	3.568e-002
0.1	5.312e-002	6.931e-002	3.158e-002	6.280e-002	4.880e-002

0.2	9.261e-002	1.373e-001	5.303e-002	9.689e-002	8.325e-002
0.3	1.250e-001	2.000e-001	7.441e-002	1.224e-001	1.031e-001
0.4	1.280e-001	2.088e-001	8.016e-002	1.169e-001	1.064e-001
0.5	1.245e-001	1.951e-001	8.458e-002	1.156e-001	1.027e-001
0.75	1.074e-001	1.601e-001	8.119e-002	9.949e-002	8.880e-002
1	8.684e-002	1.213e-001	6.867e-002	7.959e-002	7.780e-002
2	3.950e-002	5.039e-002	3.401e-002	3.613e-002	3.747e-002
3	2.265e-002	2.771e-002	2.076e-002	2.102e-002	2.111e-002
4	1.529e-002	1.793e-002	1.414e-002	1.550e-002	1.358e-002

Fractile: 0.84

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA

Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	7.136e-002	1.050e-001	4.389e-002	7.870e-002	5.784e-002	
0.05	7.394e-002	9.900e-002	4.653e-002	8.875e-002	6.149e-002	
0.1	9.368e-002	1.194e-001	5.780e-002	1.120e-001	8.550e-002	
0.2	1.636e-001	2.411e-001	9.592e-002	1.710e-001	1.464e-001	
0.3	2.225e-001	3.561e-001	1.362e-001	2.159e-001	1.818e-001	
0.4	2.289e-001	3.747e-001	1.460e-001	2.065e-001	1.885e-001	
0.5	2.246e-001	3.528e-001	1.559e-001	2.062e-001	1.835e-001	
0.75	1.977e-001	2.923e-001	1.542e-001	1.819e-001	1.622e-001	
1	1.613e-001	2.220e-001	1.307e-001	1.474e-001	1.452e-001	
2	7.542e-002	9.173e-002	6.822e-002	6.847e-002	7.326e-002	
3	4.368e-002	5.085e-002	4.145e-002	3.997e-002	4.245e-002	
4	2.972e-002	3.303e-002	2.831e-002	2.953e-002	2.801e-002	

Source: Helendale-So Lockhart

Region: USGS 2008 California

Closest Distance: 177.45 km

Amplitude Units: Acceleration (g)

Magnitude: 7.40 Mw

Fractile: 0.50

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA

Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	3.731e-002	4.246e-002	3.380e-002	4.312e-002	2.987e-002	
0.05	3.855e-002	4.026e-002	3.561e-002	4.710e-002	3.125e-002	
0.1	4.816e-002	4.862e-002	4.258e-002	5.765e-002	4.378e-002	
0.2	7.941e-002	9.246e-002	6.319e-002	8.835e-002	7.364e-002	
0.3	1.033e-001	1.299e-001	8.195e-002	1.112e-001	9.003e-002	
0.4	1.067e-001	1.386e-001	8.957e-002	1.064e-001	9.232e-002	
0.5	1.069e-001	1.375e-001	9.378e-002	1.070e-001	8.920e-002	
0.75	9.770e-002	1.273e-001	8.979e-002	9.492e-002	7.883e-002	
1	8.470e-002	1.071e-001	8.024e-002	7.973e-002	7.173e-002	

2	4.856e-002	5.743e-002	4.808e-002	4.488e-002	4.382e-002
3	3.162e-002	3.680e-002	3.245e-002	2.919e-002	2.803e-002
4	2.262e-002	2.655e-002	2.297e-002	2.173e-002	1.922e-002

Fractile: 0.84

Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	6.312e-002	7.184e-002	5.922e-002	7.188e-002	4.956e-002
0.05	6.718e-002	6.912e-002	6.396e-002	8.170e-002	5.396e-002
0.1	8.561e-002	8.464e-002	7.794e-002	1.030e-001	7.685e-002
0.2	1.411e-001	1.638e-001	1.143e-001	1.562e-001	1.299e-001
0.3	1.847e-001	2.329e-001	1.500e-001	1.965e-001	1.593e-001
0.4	1.914e-001	2.501e-001	1.631e-001	1.883e-001	1.642e-001
0.5	1.934e-001	2.496e-001	1.729e-001	1.910e-001	1.599e-001
0.75	1.804e-001	2.329e-001	1.705e-001	1.736e-001	1.443e-001
1	1.577e-001	1.963e-001	1.527e-001	1.477e-001	1.340e-001
2	9.292e-002	1.046e-001	9.644e-002	8.506e-002	8.561e-002
3	6.103e-002	6.752e-002	6.477e-002	5.551e-002	5.633e-002
4	4.399e-002	4.892e-002	4.599e-002	4.139e-002	3.965e-002

Source: Hollywood  
 Region: USGS 2008 California  
 Closest Distance: 73.56 km  
 Amplitude Units: Acceleration (g)  
 Magnitude: 6.70 Mw  
 Fractile: 0.50

Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	7.075e-002	5.963e-002	1.030e-001	6.658e-002	5.382e-002
0.05	7.800e-002	6.376e-002	1.080e-001	7.731e-002	6.292e-002
0.1	1.078e-001	8.609e-002	1.435e-001	1.083e-001	9.326e-002
0.2	1.599e-001	1.367e-001	2.214e-001	1.524e-001	1.290e-001
0.3	1.746e-001	1.554e-001	2.393e-001	1.691e-001	1.347e-001
0.4	1.635e-001	1.467e-001	2.278e-001	1.559e-001	1.238e-001
0.5	1.494e-001	1.325e-001	2.102e-001	1.442e-001	1.107e-001
0.75	1.149e-001	1.046e-001	1.585e-001	1.101e-001	8.654e-002
1	9.176e-002	8.459e-002	1.247e-001	8.520e-002	7.257e-002
2	4.449e-002	4.142e-002	5.929e-002	3.977e-002	3.746e-002
3	2.618e-002	2.527e-002	3.307e-002	2.427e-002	2.210e-002
4	1.828e-002	1.760e-002	2.359e-002	1.746e-002	1.445e-002

Fractile: 0.84  
 Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	1.211e-001	1.031e-001	1.804e-001	1.103e-001	9.046e-002	
0.05	1.371e-001	1.120e-001	1.940e-001	1.329e-001	1.096e-001	
0.1	1.929e-001	1.533e-001	2.627e-001	1.916e-001	1.640e-001	
0.2	2.857e-001	2.472e-001	4.005e-001	2.671e-001	2.281e-001	
0.3	3.145e-001	2.837e-001	4.380e-001	2.968e-001	2.394e-001	
0.4	2.950e-001	2.691e-001	4.149e-001	2.744e-001	2.216e-001	
0.5	2.721e-001	2.443e-001	3.875e-001	2.565e-001	2.000e-001	
0.75	2.138e-001	1.937e-001	3.010e-001	2.010e-001	1.596e-001	
1	1.720e-001	1.565e-001	2.372e-001	1.576e-001	1.366e-001	
2	8.593e-002	7.589e-002	1.189e-001	7.535e-002	7.353e-002	
3	5.081e-002	4.652e-002	6.601e-002	4.615e-002	4.457e-002	
4	3.571e-002	3.247e-002	4.722e-002	3.325e-002	2.991e-002	

Source: Holser, alt 1  
 Region: USGS 2008 California  
 Closest Distance: 46.64 km  
 Amplitude Units: Acceleration (g)  
 Magnitude: 6.80 Mw  
 Fractile: 0.50

Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	1.182e-001	9.747e-002	1.635e-001	1.046e-001	1.073e-001	
0.05	1.328e-001	1.059e-001	1.730e-001	1.233e-001	1.288e-001	
0.1	1.862e-001	1.432e-001	2.327e-001	1.782e-001	1.905e-001	
0.2	2.687e-001	2.267e-001	3.540e-001	2.431e-001	2.511e-001	
0.3	2.953e-001	2.632e-001	3.953e-001	2.641e-001	2.586e-001	
0.4	2.740e-001	2.508e-001	3.688e-001	2.429e-001	2.334e-001	
0.5	2.502e-001	2.284e-001	3.406e-001	2.253e-001	2.065e-001	
0.75	1.914e-001	1.795e-001	2.578e-001	1.711e-001	1.569e-001	
1	1.491e-001	1.443e-001	1.909e-001	1.333e-001	1.278e-001	
2	6.866e-002	7.294e-002	7.822e-002	6.532e-002	5.817e-002	
3	4.091e-002	4.602e-002	4.292e-002	4.092e-002	3.376e-002	
4	2.880e-002	3.289e-002	2.992e-002	2.998e-002	2.242e-002	

Fractile: 0.84  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	1.997e-001	1.649e-001	2.864e-001	1.716e-001	1.760e-001
0.05	2.297e-001	1.808e-001	3.108e-001	2.091e-001	2.179e-001
0.1	3.266e-001	2.473e-001	4.259e-001	3.109e-001	3.224e-001
0.2	4.719e-001	3.993e-001	6.404e-001	4.206e-001	4.272e-001
0.3	5.244e-001	4.705e-001	7.236e-001	4.588e-001	4.448e-001
0.4	4.886e-001	4.522e-001	6.718e-001	4.242e-001	4.062e-001
0.5	4.513e-001	4.150e-001	6.278e-001	3.983e-001	3.639e-001
0.75	3.539e-001	3.296e-001	4.901e-001	3.113e-001	2.848e-001
1	2.783e-001	2.655e-001	3.636e-001	2.463e-001	2.377e-001
2	1.336e-001	1.350e-001	1.589e-001	1.253e-001	1.152e-001
3	8.079e-002	8.652e-002	8.758e-002	7.956e-002	6.951e-002
4	5.773e-002	6.251e-002	6.175e-002	5.887e-002	4.778e-002

Source: Hosgri

Region: USGS 2008 California

Closest Distance: 156.83 km

Amplitude Units: Acceleration (g)

Magnitude: 7.30 Mw

Fractile: 0.50

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA

Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	4.147e-002	4.517e-002	4.202e-002	4.521e-002	3.349e-002
0.05	4.338e-002	4.372e-002	4.412e-002	4.984e-002	3.582e-002
0.1	5.516e-002	5.405e-002	5.362e-002	6.221e-002	5.077e-002
0.2	8.898e-002	9.986e-002	7.979e-002	9.418e-002	8.207e-002
0.3	1.120e-001	1.347e-001	9.983e-002	1.164e-001	9.716e-002
0.4	1.136e-001	1.402e-001	1.062e-001	1.107e-001	9.747e-002
0.5	1.119e-001	1.363e-001	1.085e-001	1.100e-001	9.277e-002
0.75	9.928e-002	1.221e-001	9.940e-002	9.548e-002	8.015e-002
1	8.502e-002	1.023e-001	8.665e-002	7.926e-002	7.192e-002
2	4.760e-002	5.427e-002	4.987e-002	4.343e-002	4.280e-002
3	3.059e-002	3.458e-002	3.267e-002	2.801e-002	2.709e-002
4	2.184e-002	2.486e-002	2.327e-002	2.076e-002	1.847e-002

Fractile: 0.84

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA

Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	7.020e-002	7.637e-002	7.362e-002	7.531e-002	5.550e-002
0.05	7.558e-002	7.497e-002	7.924e-002	8.639e-002	6.174e-002
0.1	9.802e-002	9.396e-002	9.815e-002	1.111e-001	8.889e-002
0.2	1.580e-001	1.767e-001	1.443e-001	1.663e-001	1.444e-001
0.3	2.003e-001	2.412e-001	1.827e-001	2.055e-001	1.716e-001



0.4	2.037e-001	2.527e-001	1.934e-001	1.958e-001	1.731e-001
0.5	2.025e-001	2.474e-001	2.000e-001	1.963e-001	1.662e-001
0.75	1.834e-001	2.234e-001	1.888e-001	1.746e-001	1.467e-001
1	1.584e-001	1.874e-001	1.649e-001	1.468e-001	1.344e-001
2	9.120e-002	9.882e-002	1.000e-001	8.231e-002	8.363e-002
3	5.909e-002	6.345e-002	6.521e-002	5.327e-002	5.444e-002
4	4.251e-002	4.579e-002	4.659e-002	3.954e-002	3.810e-002

Source: Lenwood-Lockhart-Old Woman Springs  
 Region: USGS 2008 California  
 Closest Distance: 171.45 km  
 Amplitude Units: Acceleration (g)  
 Magnitude: 7.50 Mw  
 Fractile: 0.50  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	4.247e-002	4.911e-002	3.893e-002	4.688e-002	3.496e-002
0.05	4.399e-002	4.657e-002	4.130e-002	5.121e-002	3.687e-002
0.1	5.492e-002	5.639e-002	4.896e-002	6.251e-002	5.183e-002
0.2	8.958e-002	1.072e-001	6.949e-002	9.570e-002	8.592e-002
0.3	1.159e-001	1.502e-001	8.903e-002	1.206e-001	1.039e-001
0.4	1.196e-001	1.600e-001	9.705e-002	1.157e-001	1.058e-001
0.5	1.199e-001	1.584e-001	1.017e-001	1.174e-001	1.018e-001
0.75	1.101e-001	1.463e-001	9.839e-002	1.059e-001	8.960e-002
1	9.586e-002	1.236e-001	8.834e-002	9.011e-002	8.142e-002
2	5.568e-002	6.696e-002	5.370e-002	5.222e-002	4.982e-002
3	3.663e-002	4.314e-002	3.718e-002	3.426e-002	3.196e-002
4	2.625e-002	3.124e-002	2.617e-002	2.561e-002	2.197e-002

Fractile: 0.84  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	7.177e-002	8.291e-002	6.822e-002	7.806e-002	5.789e-002
0.05	7.653e-002	7.971e-002	7.419e-002	8.871e-002	6.351e-002
0.1	9.742e-002	9.781e-002	8.963e-002	1.115e-001	9.070e-002
0.2	1.587e-001	1.894e-001	1.257e-001	1.689e-001	1.510e-001
0.3	2.069e-001	2.687e-001	1.630e-001	2.128e-001	1.832e-001
0.4	2.143e-001	2.882e-001	1.768e-001	2.045e-001	1.875e-001
0.5	2.166e-001	2.873e-001	1.875e-001	2.095e-001	1.820e-001
0.75	2.029e-001	2.676e-001	1.869e-001	1.937e-001	1.637e-001
1	1.783e-001	2.263e-001	1.681e-001	1.669e-001	1.519e-001
2	1.065e-001	1.219e-001	1.077e-001	9.896e-002	9.726e-002
3	7.068e-002	7.915e-002	7.421e-002	6.515e-002	6.421e-002

4      5.101e-002      5.756e-002      5.238e-002      4.879e-002      4.531e-002

Source: Lions Head  
 Region: USGS 2008 California  
 Closest Distance: 108.00 km  
 Amplitude Units: Acceleration (g)  
 Magnitude: 6.80 Mw  
 Fractile: 0.50  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	4.881e-002	4.493e-002	6.236e-002	4.851e-002	3.944e-002
0.05	5.247e-002	4.653e-002	6.391e-002	5.515e-002	4.429e-002
0.1	7.073e-002	6.163e-002	8.297e-002	7.390e-002	6.440e-002
0.2	1.121e-001	1.062e-001	1.393e-001	1.075e-001	9.523e-002
0.3	1.317e-001	1.284e-001	1.691e-001	1.245e-001	1.048e-001
0.4	1.264e-001	1.253e-001	1.647e-001	1.158e-001	9.983e-002
0.5	1.187e-001	1.161e-001	1.585e-001	1.088e-001	9.150e-002
0.75	9.559e-002	9.463e-002	1.283e-001	8.542e-002	7.398e-002
1	7.639e-002	7.718e-002	9.904e-002	6.674e-002	6.258e-002
2	3.544e-002	3.837e-002	4.181e-002	3.190e-002	2.970e-002
3	2.080e-002	2.359e-002	2.256e-002	1.972e-002	1.734e-002
4	1.447e-002	1.653e-002	1.561e-002	1.431e-002	1.143e-002

Fractile: 0.84  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	8.339e-002	7.739e-002	1.093e-001	8.074e-002	6.616e-002
0.05	9.224e-002	8.150e-002	1.148e-001	9.547e-002	7.718e-002
0.1	1.267e-001	1.095e-001	1.519e-001	1.318e-001	1.137e-001
0.2	2.006e-001	1.917e-001	2.520e-001	1.896e-001	1.690e-001
0.3	2.374e-001	2.337e-001	3.095e-001	2.197e-001	1.866e-001
0.4	2.281e-001	2.291e-001	3.000e-001	2.046e-001	1.789e-001
0.5	2.162e-001	2.133e-001	2.921e-001	1.941e-001	1.654e-001
0.75	1.778e-001	1.748e-001	2.437e-001	1.562e-001	1.364e-001
1	1.431e-001	1.425e-001	1.885e-001	1.236e-001	1.177e-001
2	6.819e-002	7.015e-002	8.387e-002	6.045e-002	5.827e-002
3	4.022e-002	4.338e-002	4.503e-002	3.751e-002	3.496e-002
4	2.815e-002	3.048e-002	3.125e-002	2.725e-002	2.363e-002

Source: Los Alamos-West Baseline  
 Region: USGS 2008 California

Closest Distance: 90.81 km  
 Amplitude Units: Acceleration (g)  
 Magnitude: 6.90 Mw  
 Fractile: 0.50  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	6.440e-002	5.890e-002	8.538e-002	5.934e-002	5.398e-002
0.05	6.993e-002	6.149e-002	8.845e-002	6.796e-002	6.182e-002
0.1	9.477e-002	8.189e-002	1.145e-001	9.208e-002	9.057e-002
0.2	1.455e-001	1.394e-001	1.812e-001	1.322e-001	1.292e-001
0.3	1.675e-001	1.669e-001	2.134e-001	1.512e-001	1.385e-001
0.4	1.595e-001	1.621e-001	2.053e-001	1.407e-001	1.299e-001
0.5	1.492e-001	1.498e-001	1.960e-001	1.332e-001	1.179e-001
0.75	1.200e-001	1.215e-001	1.584e-001	1.059e-001	9.421e-002
1	9.617e-002	9.957e-002	1.219e-001	8.390e-002	7.932e-002
2	4.526e-002	5.029e-002	5.177e-002	4.140e-002	3.758e-002
3	2.692e-002	3.120e-002	2.863e-002	2.583e-002	2.203e-002
4	1.877e-002	2.199e-002	1.967e-002	1.882e-002	1.458e-002

Fractile: 0.84  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	1.094e-001	1.000e-001	1.496e-001	9.848e-002	8.941e-002
0.05	1.220e-001	1.058e-001	1.589e-001	1.172e-001	1.062e-001
0.1	1.683e-001	1.428e-001	2.097e-001	1.634e-001	1.573e-001
0.2	2.583e-001	2.476e-001	3.278e-001	2.324e-001	2.256e-001
0.3	3.000e-001	2.998e-001	3.906e-001	2.660e-001	2.434e-001
0.4	2.863e-001	2.933e-001	3.740e-001	2.481e-001	2.300e-001
0.5	2.705e-001	2.727e-001	3.613e-001	2.371e-001	2.109e-001
0.75	2.224e-001	2.230e-001	3.008e-001	1.935e-001	1.724e-001
1	1.796e-001	1.829e-001	2.320e-001	1.552e-001	1.484e-001
2	8.690e-002	9.175e-002	1.038e-001	7.845e-002	7.357e-002
3	5.198e-002	5.731e-002	5.714e-002	4.912e-002	4.433e-002
4	3.647e-002	4.053e-002	3.938e-002	3.585e-002	3.011e-002

Source: Los Osos  
 Region: USGS 2008 California  
 Closest Distance: 147.44 km  
 Amplitude Units: Acceleration (g)  
 Magnitude: 7.00 Mw  
 Fractile: 0.50  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA		3.678e-002	3.635e-002	3.978e-002	4.062e-002	3.035e-002
0.05		3.868e-002	3.595e-002	4.089e-002	4.519e-002	3.268e-002
0.1		5.030e-002	4.538e-002	5.145e-002	5.787e-002	4.650e-002
0.2		8.272e-002	8.369e-002	8.628e-002	8.670e-002	7.421e-002
0.3		1.036e-001	1.104e-001	1.122e-001	1.049e-001	8.680e-002
0.4		1.032e-001	1.135e-001	1.144e-001	9.872e-002	8.627e-002
0.5		1.002e-001	1.095e-001	1.150e-001	9.509e-002	8.145e-002
0.75		8.594e-002	9.568e-002	1.010e-001	7.812e-002	6.896e-002
1		7.073e-002	7.901e-002	8.133e-002	6.247e-002	6.010e-002
2		3.479e-002	4.039e-002	3.709e-002	3.145e-002	3.024e-002
3		2.110e-002	2.522e-002	2.130e-002	1.976e-002	1.811e-002
4		1.477e-002	1.787e-002	1.465e-002	1.445e-002	1.212e-002

Fractile: 0.84

Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA		6.236e-002	6.163e-002	6.970e-002	6.776e-002	5.035e-002
0.05		6.756e-002	6.191e-002	7.346e-002	7.847e-002	5.639e-002
0.1		8.963e-002	7.926e-002	9.418e-002	1.035e-001	8.155e-002
0.2		1.473e-001	1.487e-001	1.561e-001	1.534e-001	1.309e-001
0.3		1.857e-001	1.983e-001	2.054e-001	1.855e-001	1.537e-001
0.4		1.855e-001	2.051e-001	2.084e-001	1.747e-001	1.536e-001
0.5		1.818e-001	1.990e-001	2.119e-001	1.699e-001	1.463e-001
0.75		1.591e-001	1.752e-001	1.918e-001	1.429e-001	1.266e-001
1		1.320e-001	1.449e-001	1.548e-001	1.157e-001	1.126e-001
2		6.668e-002	7.355e-002	7.440e-002	5.961e-002	5.918e-002
3		4.070e-002	4.627e-002	4.251e-002	3.758e-002	3.643e-002
4		2.870e-002	3.292e-002	2.933e-002	2.753e-002	2.500e-002

Source: Mission Ridge-Arroyo Parida-Santa Ana  
 Region: USGS 2008 California

Closest Distance: 22.91 km  
 Amplitude Units: Acceleration (g)  
 Magnitude: 6.90 Mw  
 Fractile: 0.50

Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
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PGA	2.106e-001	1.983e-001	2.360e-001	1.875e-001	2.207e-001
0.05	2.417e-001	2.194e-001	2.584e-001	2.230e-001	2.662e-001
0.1	3.403e-001	2.946e-001	3.552e-001	3.312e-001	3.803e-001
0.2	4.698e-001	4.411e-001	5.177e-001	4.342e-001	4.863e-001
0.3	5.183e-001	5.136e-001	5.835e-001	4.632e-001	5.130e-001
0.4	4.832e-001	4.896e-001	5.476e-001	4.288e-001	4.667e-001
0.5	4.425e-001	4.458e-001	5.063e-001	4.011e-001	4.168e-001
0.75	3.366e-001	3.441e-001	3.828e-001	3.018e-001	3.175e-001
1	2.621e-001	2.736e-001	2.794e-001	2.369e-001	2.585e-001
2	1.170e-001	1.318e-001	1.089e-001	1.143e-001	1.130e-001
3	6.743e-002	7.805e-002	5.898e-002	6.915e-002	6.352e-002
4	4.530e-002	5.263e-002	3.914e-002	4.870e-002	4.073e-002

Fractile: 0.84

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA

Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	3.474e-001	3.225e-001	4.135e-001	3.019e-001	3.516e-001	
0.05	4.056e-001	3.557e-001	4.642e-001	3.692e-001	4.334e-001	
0.1	5.763e-001	4.809e-001	6.503e-001	5.630e-001	6.112e-001	
0.2	7.986e-001	7.397e-001	9.363e-001	7.326e-001	7.858e-001	
0.3	8.953e-001	8.824e-001	1.068e+000	7.878e-001	8.431e-001	
0.4	8.424e-001	8.547e-001	9.975e-001	7.367e-001	7.807e-001	
0.5	7.830e-001	7.890e-001	9.333e-001	6.998e-001	7.099e-001	
0.75	6.144e-001	6.215e-001	7.282e-001	5.452e-001	5.626e-001	
1	4.850e-001	4.979e-001	5.331e-001	4.360e-001	4.729e-001	
2	2.300e-001	2.470e-001	2.247e-001	2.225e-001	2.259e-001	
3	1.367e-001	1.507e-001	1.237e-001	1.382e-001	1.341e-001	
4	9.430e-002	1.039e-001	8.391e-002	9.935e-002	9.005e-002	

Source: North Channel

Region: USGS 2008 California

Closest Distance: 22.70 km

Amplitude Units: Acceleration (g)

Magnitude: 6.80 Mw

Fractile: 0.50

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA

Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	2.146e-001	1.920e-001	2.260e-001	2.265e-001	2.140e-001	
0.05	2.447e-001	2.118e-001	2.459e-001	2.641e-001	2.570e-001	
0.1	3.455e-001	2.860e-001	3.395e-001	3.896e-001	3.670e-001	
0.2	4.788e-001	4.265e-001	5.056e-001	5.139e-001	4.694e-001	
0.3	5.274e-001	4.935e-001	5.674e-001	5.538e-001	4.950e-001	
0.4	4.912e-001	4.658e-001	5.318e-001	5.173e-001	4.498e-001	

0.5	4.481e-001	4.187e-001	4.896e-001	4.833e-001	4.008e-001
0.75	3.423e-001	3.215e-001	3.705e-001	3.682e-001	3.089e-001
1	2.662e-001	2.548e-001	2.728e-001	2.840e-001	2.530e-001
2	1.468e-001	1.550e-001	1.366e-001	1.529e-001	1.426e-001
3	1.036e-001	1.160e-001	9.063e-002	1.073e-001	1.005e-001
4	8.519e-002	9.581e-002	7.364e-002	9.298e-002	7.832e-002

Fractile: 0.84

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA

Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	3.541e-001	3.153e-001	3.959e-001	3.619e-001	3.435e-001	3.435e-001
0.05	4.110e-001	3.471e-001	4.417e-001	4.330e-001	4.219e-001	4.219e-001
0.1	5.860e-001	4.720e-001	6.214e-001	6.557e-001	5.949e-001	5.949e-001
0.2	8.149e-001	7.224e-001	9.145e-001	8.581e-001	7.646e-001	7.646e-001
0.3	9.116e-001	8.551e-001	1.039e+000	9.335e-001	8.194e-001	8.194e-001
0.4	8.569e-001	8.194e-001	9.687e-001	8.824e-001	7.571e-001	7.571e-001
0.5	7.933e-001	7.459e-001	9.026e-001	8.381e-001	6.865e-001	6.865e-001
0.75	6.253e-001	5.838e-001	7.049e-001	6.627e-001	5.496e-001	5.496e-001
1	4.930e-001	4.655e-001	5.206e-001	5.215e-001	4.645e-001	4.645e-001
2	2.891e-001	2.910e-001	2.819e-001	2.978e-001	2.856e-001	2.856e-001
3	2.102e-001	2.241e-001	1.901e-001	2.144e-001	2.124e-001	2.124e-001
4	1.775e-001	1.892e-001	1.579e-001	1.897e-001	1.733e-001	1.733e-001

Source: North Frontal (West)

Region: USGS 2008 California

Closest Distance: 178.59 km

Amplitude Units: Acceleration (g)

Magnitude: 7.20 Mw

Fractile: 0.50

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA

Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	3.211e-002	3.427e-002	2.923e-002	3.833e-002	2.661e-002	2.661e-002
0.05	3.318e-002	3.274e-002	3.027e-002	4.199e-002	2.773e-002	2.773e-002
0.1	4.189e-002	3.978e-002	3.700e-002	5.202e-002	3.876e-002	3.876e-002
0.2	7.080e-002	7.710e-002	6.096e-002	7.950e-002	6.564e-002	6.564e-002
0.3	9.311e-002	1.089e-001	8.374e-002	9.918e-002	8.060e-002	8.060e-002
0.4	9.573e-002	1.167e-001	8.906e-002	9.430e-002	8.283e-002	8.283e-002
0.5	9.558e-002	1.162e-001	9.305e-002	9.297e-002	8.006e-002	8.006e-002
0.75	8.634e-002	1.074e-001	8.804e-002	7.961e-002	7.033e-002	7.033e-002
1	7.286e-002	8.962e-002	7.383e-002	6.522e-002	6.276e-002	6.276e-002
2	3.774e-002	4.699e-002	3.615e-002	3.468e-002	3.313e-002	3.313e-002
3	2.355e-002	2.974e-002	2.203e-002	2.217e-002	2.027e-002	2.027e-002
4	1.659e-002	2.128e-002	1.500e-002	1.636e-002	1.373e-002	1.373e-002

Fractile: 0.84

Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	5.438e-002	5.814e-002	5.121e-002	6.396e-002	4.422e-002	
0.05	5.794e-002	5.644e-002	5.437e-002	7.298e-002	4.795e-002	
0.1	7.466e-002	6.957e-002	6.773e-002	9.315e-002	6.819e-002	
0.2	1.261e-001	1.371e-001	1.103e-001	1.408e-001	1.161e-001	
0.3	1.669e-001	1.957e-001	1.533e-001	1.755e-001	1.430e-001	
0.4	1.720e-001	2.111e-001	1.622e-001	1.670e-001	1.477e-001	
0.5	1.732e-001	2.114e-001	1.715e-001	1.661e-001	1.439e-001	
0.75	1.597e-001	1.967e-001	1.672e-001	1.457e-001	1.290e-001	
1	1.358e-001	1.644e-001	1.405e-001	1.208e-001	1.175e-001	
2	7.215e-002	8.556e-002	7.252e-002	6.573e-002	6.480e-002	
3	4.536e-002	5.457e-002	4.396e-002	4.216e-002	4.076e-002	
4	3.218e-002	3.921e-002	3.002e-002	3.117e-002	2.832e-002	

Source: Northridge

Region: USGS 2008 California

Closest Distance: 47.00 km

Amplitude Units: Acceleration (g)

Magnitude: 6.90 Mw

Fractile: 0.50

Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	1.618e-001	1.858e-001	1.679e-001	1.358e-001	1.579e-001	
0.05	1.789e-001	1.930e-001	1.787e-001	1.571e-001	1.868e-001	
0.1	2.460e-001	2.542e-001	2.384e-001	2.236e-001	2.679e-001	
0.2	3.559e-001	4.137e-001	3.535e-001	3.081e-001	3.485e-001	
0.3	3.986e-001	4.986e-001	3.958e-001	3.402e-001	3.598e-001	
0.4	3.700e-001	4.675e-001	3.701e-001	3.165e-001	3.259e-001	
0.5	3.335e-001	4.038e-001	3.436e-001	2.983e-001	2.883e-001	
0.75	2.509e-001	2.872e-001	2.654e-001	2.330e-001	2.179e-001	
1	1.921e-001	2.144e-001	1.979e-001	1.803e-001	1.756e-001	
2	8.374e-002	9.301e-002	8.500e-002	8.048e-002	7.648e-002	
3	4.811e-002	5.333e-002	4.906e-002	4.759e-002	4.247e-002	
4	3.343e-002	3.559e-002	3.479e-002	3.576e-002	2.758e-002	

Fractile: 0.84

Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	2.682e-001	3.032e-001	2.942e-001	2.211e-001	2.542e-001
0.05	3.021e-001	3.145e-001	3.209e-001	2.640e-001	3.091e-001
0.1	4.202e-001	4.171e-001	4.364e-001	3.860e-001	4.412e-001
0.2	6.103e-001	6.971e-001	6.394e-001	5.277e-001	5.772e-001
0.3	6.937e-001	8.598e-001	7.245e-001	5.861e-001	6.042e-001
0.4	6.494e-001	8.186e-001	6.741e-001	5.494e-001	5.554e-001
0.5	5.935e-001	7.165e-001	6.335e-001	5.247e-001	4.992e-001
0.75	4.591e-001	5.190e-001	5.044e-001	4.226e-001	3.905e-001
1	3.558e-001	3.900e-001	3.771e-001	3.325e-001	3.238e-001
2	1.623e-001	1.716e-001	1.726e-001	1.543e-001	1.509e-001
3	9.497e-002	1.001e-001	1.001e-001	9.246e-002	8.725e-002
4	6.703e-002	6.756e-002	7.174e-002	7.017e-002	5.865e-002

Source: Oak Ridge (Offshore)  
 Region: USGS 2008 California  
 Closest Distance: 5.32 km  
 Amplitude Units: Acceleration (g)  
 Magnitude: 7.00 Mw  
 Fractile: 0.50

Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	5.035e-001	6.499e-001	3.919e-001	4.187e-001	5.534e-001
0.05	5.703e-001	6.992e-001	4.545e-001	4.788e-001	6.488e-001
0.1	7.398e-001	8.605e-001	6.569e-001	6.097e-001	8.322e-001
0.2	9.782e-001	1.127e+000	9.604e-001	7.779e-001	1.048e+000
0.3	1.131e+000	1.335e+000	1.114e+000	8.961e-001	1.178e+000
0.4	1.123e+000	1.352e+000	1.086e+000	9.121e-001	1.144e+000
0.5	1.077e+000	1.291e+000	1.018e+000	9.172e-001	1.082e+000
0.75	8.937e-001	1.079e+000	8.103e-001	7.645e-001	9.210e-001
1	7.359e-001	9.026e-001	6.009e-001	6.384e-001	8.020e-001
2	4.300e-001	5.838e-001	2.850e-001	4.066e-001	4.448e-001
3	2.744e-001	3.485e-001	1.824e-001	2.810e-001	2.857e-001
4	1.974e-001	2.346e-001	1.333e-001	2.178e-001	2.040e-001

Fractile: 0.84  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	7.903e-001	9.714e-001	6.867e-001	6.503e-001	8.527e-001
0.05	9.050e-001	1.031e+000	8.165e-001	7.609e-001	1.011e+000



0.1	1.183e+000	1.273e+000	1.202e+000	9.946e-001	1.261e+000
0.2	1.573e+000	1.710e+000	1.737e+000	1.254e+000	1.592e+000
0.3	1.854e+000	2.088e+000	2.039e+000	1.459e+000	1.832e+000
0.4	1.869e+000	2.169e+000	1.978e+000	1.511e+000	1.820e+000
0.5	1.828e+000	2.125e+000	1.876e+000	1.552e+000	1.762e+000
0.75	1.583e+000	1.856e+000	1.541e+000	1.354e+000	1.579e+000
1	1.331e+000	1.587e+000	1.147e+000	1.160e+000	1.432e+000
2	8.369e-001	1.087e+000	5.879e-001	7.908e-001	8.817e-001
3	5.544e-001	6.720e-001	3.827e-001	5.616e-001	6.015e-001
4	4.108e-001	4.628e-001	2.857e-001	4.443e-001	4.504e-001

Source: Oak Ridge (Onshore)  
 Region: USGS 2008 California  
 Closest Distance: 3.25 km  
 Amplitude Units: Acceleration (g)  
 Magnitude: 7.20 Mw  
 Fractile: 0.50  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	6.122e-001	6.473e-001	4.982e-001	6.189e-001	6.841e-001	7.907e-001
0.05	6.812e-001	6.806e-001	5.963e-001	6.572e-001	7.440e-001	8.590e-001
0.1	8.543e-001	8.395e-001	8.590e-001	7.440e-001	9.748e-001	1.125e+000
0.2	1.125e+000	1.110e+000	1.235e+000	9.435e-001	1.212e+000	1.341e+000
0.3	1.341e+000	1.335e+000	1.466e+000	1.178e+000	1.383e+000	1.364e+000
0.4	1.364e+000	1.363e+000	1.432e+000	1.295e+000	1.367e+000	1.342e+000
0.5	1.342e+000	1.304e+000	1.343e+000	1.406e+000	1.315e+000	1.181e+000
0.75	1.181e+000	1.106e+000	1.112e+000	1.338e+000	1.167e+000	9.950e-001
1	9.950e-001	9.362e-001	8.259e-001	1.172e+000	1.046e+000	6.766e-001
2	6.766e-001	7.092e-001	4.731e-001	8.283e-001	6.957e-001	4.908e-001
3	4.908e-001	5.242e-001	3.658e-001	5.602e-001	5.131e-001	3.959e-001
4	3.959e-001	4.184e-001	2.987e-001	4.571e-001	4.096e-001	

Fractile: 0.84  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	9.599e-001	9.677e-001	8.730e-001	9.494e-001	1.049e+000	1.083e+000
0.05	1.083e+000	1.004e+000	1.071e+000	1.033e+000	1.225e+000	1.370e+000
0.1	1.370e+000	1.242e+000	1.573e+000	1.201e+000	1.466e+000	1.811e+000
0.2	1.811e+000	1.685e+000	2.234e+000	1.499e+000	1.826e+000	2.198e+000
0.3	2.198e+000	2.089e+000	2.684e+000	1.884e+000	2.134e+000	2.267e+000
0.4	2.267e+000	2.187e+000	2.608e+000	2.110e+000	2.161e+000	2.273e+000
0.5	2.273e+000	2.146e+000	2.475e+000	2.344e+000	2.128e+000	2.089e+000
0.75	2.089e+000	1.902e+000	2.115e+000	2.344e+000	1.993e+000	

1	1.799e+000	1.646e+000	1.576e+000	2.114e+000	1.861e+000
2	1.321e+000	1.321e+000	9.760e-001	1.610e+000	1.378e+000
3	9.944e-001	1.011e+000	7.673e-001	1.119e+000	1.080e+000
4	8.257e-001	8.254e-001	6.403e-001	9.324e-001	9.045e-001

Source: Oak Ridge Connected  
 Region: USGS 2008 California  
 Closest Distance: 2.84 km  
 Amplitude Units: Acceleration (g)  
 Magnitude: 7.40 Mw  
 Fractile: 0.50

Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	6.980e-001	7.161e-001	5.475e-001	6.704e-001	8.580e-001
0.05	7.767e-001	7.473e-001	6.635e-001	7.002e-001	9.956e-001
0.1	9.466e-001	9.025e-001	9.348e-001	7.720e-001	1.177e+000
0.2	1.225e+000	1.185e+000	1.317e+000	9.749e-001	1.423e+000
0.3	1.473e+000	1.448e+000	1.588e+000	1.237e+000	1.621e+000
0.4	1.508e+000	1.504e+000	1.532e+000	1.385e+000	1.608e+000
0.5	1.500e+000	1.463e+000	1.433e+000	1.551e+000	1.555e+000
0.75	1.359e+000	1.274e+000	1.213e+000	1.554e+000	1.397e+000
1	1.169e+000	1.098e+000	8.941e-001	1.422e+000	1.261e+000
2	8.223e-001	8.593e-001	5.262e-001	1.085e+000	8.188e-001
3	5.776e-001	6.136e-001	4.294e-001	6.954e-001	5.718e-001
4	4.489e-001	4.745e-001	3.509e-001	5.267e-001	4.435e-001

Fractile: 0.84  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	1.091e+000	1.066e+000	9.593e-001	1.027e+000	1.311e+000
0.05	1.231e+000	1.099e+000	1.192e+000	1.100e+000	1.534e+000
0.1	1.511e+000	1.332e+000	1.711e+000	1.246e+000	1.756e+000
0.2	1.962e+000	1.791e+000	2.382e+000	1.547e+000	2.128e+000
0.3	2.405e+000	2.253e+000	2.907e+000	1.976e+000	2.486e+000
0.4	2.493e+000	2.400e+000	2.791e+000	2.253e+000	2.528e+000
0.5	2.530e+000	2.395e+000	2.641e+000	2.579e+000	2.506e+000
0.75	2.396e+000	2.183e+000	2.307e+000	2.717e+000	2.378e+000
1	2.108e+000	1.925e+000	1.706e+000	2.561e+000	2.239e+000
2	1.604e+000	1.600e+000	1.086e+000	2.108e+000	1.621e+000
3	1.169e+000	1.183e+000	9.007e-001	1.390e+000	1.203e+000
4	9.355e-001	9.361e-001	7.523e-001	1.074e+000	9.794e-001

Source: Palos Verdes  
 Region: USGS 2008 California  
 Closest Distance: 66.17 km  
 Amplitude Units: Acceleration (g)  
 Magnitude: 7.30 Mw  
 Fractile: 0.50  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	1.093e-001	1.047e-001	1.456e-001	9.117e-002	9.582e-002	
0.05	1.207e-001	1.086e-001	1.565e-001	1.050e-001	1.125e-001	
0.1	1.623e-001	1.428e-001	1.983e-001	1.428e-001	1.652e-001	
0.2	2.310e-001	2.361e-001	2.612e-001	2.016e-001	2.253e-001	
0.3	2.574e-001	2.833e-001	2.827e-001	2.281e-001	2.356e-001	
0.4	2.462e-001	2.768e-001	2.755e-001	2.146e-001	2.181e-001	
0.5	2.315e-001	2.567e-001	2.621e-001	2.105e-001	1.968e-001	
0.75	1.914e-001	2.119e-001	2.173e-001	1.786e-001	1.576e-001	
1	1.598e-001	1.769e-001	1.776e-001	1.492e-001	1.355e-001	
2	8.709e-002	9.468e-002	9.519e-002	8.323e-002	7.528e-002	
3	5.576e-002	6.054e-002	6.199e-002	5.386e-002	4.667e-002	
4	3.982e-002	4.351e-002	4.427e-002	3.992e-002	3.160e-002	

Fractile: 0.84  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	1.836e-001	1.737e-001	2.550e-001	1.501e-001	1.555e-001	
0.05	2.075e-001	1.812e-001	2.811e-001	1.790e-001	1.886e-001	
0.1	2.831e-001	2.407e-001	3.630e-001	2.504e-001	2.782e-001	
0.2	4.029e-001	4.072e-001	4.725e-001	3.503e-001	3.814e-001	
0.3	4.538e-001	4.975e-001	5.175e-001	3.978e-001	4.027e-001	
0.4	4.365e-001	4.915e-001	5.018e-001	3.758e-001	3.770e-001	
0.5	4.152e-001	4.602e-001	4.831e-001	3.728e-001	3.447e-001	
0.75	3.517e-001	3.848e-001	4.128e-001	3.251e-001	2.842e-001	
1	2.966e-001	3.225e-001	3.380e-001	2.755e-001	2.504e-001	
2	1.669e-001	1.723e-001	1.909e-001	1.577e-001	1.466e-001	
3	1.077e-001	1.111e-001	1.237e-001	1.024e-001	9.372e-002	
4	7.750e-002	8.015e-002	8.862e-002	7.604e-002	6.517e-002	

Source: Palos Verdes Connected  
 Region: USGS 2008 California  
 Closest Distance: 66.17 km  
 Amplitude Units: Acceleration (g)  
 Magnitude: 7.70 Mw

Fractile: 0.50

Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	1.349e-001	1.388e-001	1.679e-001	1.060e-001	1.270e-001
0.05	1.487e-001	1.405e-001	1.847e-001	1.209e-001	1.488e-001
0.1	1.961e-001	1.816e-001	2.265e-001	1.600e-001	2.162e-001
0.2	2.741e-001	3.082e-001	2.658e-001	2.277e-001	2.949e-001
0.3	3.115e-001	3.818e-001	2.900e-001	2.632e-001	3.111e-001
0.4	3.022e-001	3.807e-001	2.861e-001	2.513e-001	2.907e-001
0.5	2.896e-001	3.583e-001	2.787e-001	2.566e-001	2.647e-001
0.75	2.505e-001	3.032e-001	2.487e-001	2.342e-001	2.159e-001
1	2.151e-001	2.573e-001	2.091e-001	2.059e-001	1.881e-001
2	1.260e-001	1.441e-001	1.224e-001	1.290e-001	1.084e-001
3	8.470e-002	9.416e-002	8.961e-002	8.649e-002	6.853e-002
4	6.106e-002	6.862e-002	6.343e-002	6.521e-002	4.698e-002

Fractile: 0.84

Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	2.251e-001	2.278e-001	2.942e-001	1.739e-001	2.045e-001
0.05	2.537e-001	2.312e-001	3.318e-001	2.050e-001	2.468e-001
0.1	3.384e-001	3.014e-001	4.147e-001	2.790e-001	3.586e-001
0.2	4.726e-001	5.245e-001	4.808e-001	3.937e-001	4.912e-001
0.3	5.438e-001	6.634e-001	5.308e-001	4.571e-001	5.239e-001
0.4	5.315e-001	6.702e-001	5.211e-001	4.388e-001	4.959e-001
0.5	5.159e-001	6.381e-001	5.138e-001	4.535e-001	4.581e-001
0.75	4.580e-001	5.482e-001	4.723e-001	4.257e-001	3.856e-001
1	3.977e-001	4.678e-001	3.980e-001	3.798e-001	3.453e-001
2	2.407e-001	2.621e-001	2.455e-001	2.445e-001	2.106e-001
3	1.634e-001	1.728e-001	1.789e-001	1.645e-001	1.375e-001
4	1.186e-001	1.264e-001	1.270e-001	1.242e-001	9.688e-002

Source: Pitas Point (Lower)-Montalvo

Region: USGS 2008 California

Closest Distance: 25.29 km

Amplitude Units: Acceleration (g)

Magnitude: 7.30 Mw

Fractile: 0.50

Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	2.286e-001	2.156e-001	2.446e-001	2.103e-001	2.447e-001
0.05	2.593e-001	2.302e-001	2.712e-001	2.447e-001	2.921e-001
0.1	3.567e-001	3.033e-001	3.612e-001	3.512e-001	4.125e-001
0.2	4.887e-001	4.747e-001	4.821e-001	4.679e-001	5.319e-001
0.3	5.536e-001	5.786e-001	5.527e-001	5.150e-001	5.700e-001
0.4	5.233e-001	5.651e-001	5.184e-001	4.858e-001	5.259e-001
0.5	4.895e-001	5.231e-001	4.873e-001	4.747e-001	4.753e-001
0.75	3.932e-001	4.178e-001	3.958e-001	3.889e-001	3.732e-001
1	3.157e-001	3.400e-001	2.955e-001	3.189e-001	3.113e-001
2	1.660e-001	1.906e-001	1.394e-001	1.772e-001	1.587e-001
3	1.098e-001	1.287e-001	9.322e-002	1.166e-001	1.007e-001
4	8.140e-002	9.645e-002	6.712e-002	9.093e-002	7.111e-002

Fractile: 0.84

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA

Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	3.741e-001	3.463e-001	4.286e-001	3.370e-001	3.859e-001
0.05	4.317e-001	3.681e-001	4.871e-001	4.028e-001	4.706e-001
0.1	5.988e-001	4.877e-001	6.612e-001	5.935e-001	6.552e-001
0.2	8.220e-001	7.854e-001	8.721e-001	7.845e-001	8.491e-001
0.3	9.471e-001	9.824e-001	1.012e+000	8.713e-001	9.259e-001
0.4	9.047e-001	9.766e-001	9.443e-001	8.311e-001	8.701e-001
0.5	8.596e-001	9.176e-001	8.983e-001	8.253e-001	8.014e-001
0.75	7.137e-001	7.498e-001	7.530e-001	7.010e-001	6.561e-001
1	5.817e-001	6.158e-001	5.639e-001	5.862e-001	5.659e-001
2	3.253e-001	3.563e-001	2.876e-001	3.450e-001	3.163e-001
3	2.222e-001	2.481e-001	1.956e-001	2.331e-001	2.122e-001
4	1.692e-001	1.903e-001	1.439e-001	1.855e-001	1.570e-001

Source: Pitas Point (Lower, West)

Region: USGS 2008 California

Closest Distance: 44.52 km

Amplitude Units: Acceleration (g)

Magnitude: 7.30 Mw

Fractile: 0.50

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA

Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	1.667e-001	1.573e-001	1.894e-001	1.582e-001	1.620e-001
0.05	1.860e-001	1.644e-001	2.059e-001	1.813e-001	1.926e-001
0.1	2.532e-001	2.160e-001	2.668e-001	2.518e-001	2.783e-001

0.2	3.568e-001	3.564e-001	3.564e-001	3.485e-001	3.659e-001
0.3	4.047e-001	4.376e-001	4.050e-001	3.927e-001	3.836e-001
0.4	3.830e-001	4.277e-001	3.816e-001	3.709e-001	3.516e-001
0.5	3.587e-001	3.937e-001	3.618e-001	3.640e-001	3.154e-001
0.75	2.925e-001	3.157e-001	3.004e-001	3.061e-001	2.476e-001
1	2.359e-001	2.571e-001	2.297e-001	2.498e-001	2.068e-001
2	1.258e-001	1.463e-001	1.145e-001	1.338e-001	1.084e-001
3	8.408e-002	1.007e-001	7.863e-002	8.693e-002	7.005e-002
4	6.398e-002	7.720e-002	5.822e-002	6.986e-002	5.065e-002

Fractile: 0.84

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA

Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	2.760e-001	2.567e-001	3.318e-001	2.563e-001	2.589e-001	
0.05	3.142e-001	2.685e-001	3.698e-001	3.025e-001	3.161e-001	
0.1	4.325e-001	3.555e-001	4.884e-001	4.317e-001	4.544e-001	
0.2	6.101e-001	6.022e-001	6.446e-001	5.928e-001	6.007e-001	
0.3	7.021e-001	7.559e-001	7.413e-001	6.728e-001	6.386e-001	
0.4	6.700e-001	7.496e-001	6.951e-001	6.409e-001	5.944e-001	
0.5	6.363e-001	6.986e-001	6.669e-001	6.378e-001	5.418e-001	
0.75	5.340e-001	5.702e-001	5.711e-001	5.540e-001	4.408e-001	
1	4.361e-001	4.673e-001	4.378e-001	4.600e-001	3.792e-001	
2	2.435e-001	2.701e-001	2.330e-001	2.570e-001	2.138e-001	
3	1.661e-001	1.896e-001	1.610e-001	1.696e-001	1.443e-001	
4	1.285e-001	1.473e-001	1.207e-001	1.379e-001	1.082e-001	

Source: Pitas Point (Upper)

Region: USGS 2008 California

Closest Distance: 35.89 km

Amplitude Units: Acceleration (g)

Magnitude: 6.90 Mw

Fractile: 0.50

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA

Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	1.621e-001	1.446e-001	1.876e-001	1.651e-001	1.513e-001	
0.05	1.828e-001	1.565e-001	2.013e-001	1.920e-001	1.812e-001	
0.1	2.557e-001	2.102e-001	2.710e-001	2.779e-001	2.637e-001	
0.2	3.615e-001	3.290e-001	3.985e-001	3.763e-001	3.424e-001	
0.3	4.017e-001	3.882e-001	4.486e-001	4.127e-001	3.574e-001	
0.4	3.735e-001	3.689e-001	4.186e-001	3.835e-001	3.231e-001	
0.5	3.417e-001	3.327e-001	3.873e-001	3.605e-001	2.864e-001	
0.75	2.615e-001	2.553e-001	2.956e-001	2.777e-001	2.175e-001	
1	2.028e-001	2.019e-001	2.182e-001	2.141e-001	1.769e-001	

2	9.587e-002	1.046e-001	9.524e-002	9.874e-002	8.495e-002
3	5.932e-002	6.810e-002	5.648e-002	6.051e-002	5.217e-002
4	4.345e-002	5.002e-002	4.088e-002	4.673e-002	3.618e-002

Fractile: 0.84

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA

Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	2.696e-001	2.388e-001	3.286e-001	2.671e-001	2.440e-001
0.05	3.102e-001	2.592e-001	3.616e-001	3.199e-001	3.003e-001
0.1	4.393e-001	3.511e-001	4.960e-001	4.754e-001	4.348e-001
0.2	6.227e-001	5.633e-001	7.207e-001	6.388e-001	5.678e-001
0.3	7.015e-001	6.781e-001	8.213e-001	7.058e-001	6.009e-001
0.4	6.570e-001	6.527e-001	7.624e-001	6.617e-001	5.511e-001
0.5	6.091e-001	5.952e-001	7.139e-001	6.312e-001	4.962e-001
0.75	4.797e-001	4.641e-001	5.621e-001	5.026e-001	3.899e-001
1	3.765e-001	3.690e-001	4.162e-001	3.944e-001	3.263e-001
2	1.877e-001	1.949e-001	1.954e-001	1.913e-001	1.693e-001
3	1.191e-001	1.302e-001	1.173e-001	1.198e-001	1.092e-001
4	8.921e-002	9.739e-002	8.646e-002	9.406e-002	7.894e-002

Source: Pitas Point Connected

Region: USGS 2008 California

Closest Distance: 8.06 km

Amplitude Units: Acceleration (g)

Magnitude: 7.30 Mw

Fractile: 0.50

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA

Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	4.235e-001	4.227e-001	3.549e-001	4.256e-001	4.908e-001
0.05	4.767e-001	4.481e-001	4.080e-001	4.777e-001	5.728e-001
0.1	6.317e-001	5.765e-001	5.732e-001	6.313e-001	7.460e-001
0.2	8.445e-001	8.256e-001	7.947e-001	8.106e-001	9.473e-001
0.3	9.779e-001	9.959e-001	9.299e-001	9.234e-001	1.063e+000
0.4	9.595e-001	9.905e-001	8.874e-001	9.319e-001	1.028e+000
0.5	9.201e-001	9.261e-001	8.338e-001	9.521e-001	9.685e-001
0.75	7.785e-001	7.590e-001	6.938e-001	8.330e-001	8.282e-001
1	6.460e-001	6.292e-001	5.187e-001	7.092e-001	7.268e-001
2	4.249e-001	4.417e-001	2.991e-001	4.873e-001	4.717e-001
3	3.250e-001	3.482e-001	2.367e-001	3.630e-001	3.520e-001
4	2.735e-001	2.949e-001	1.948e-001	3.213e-001	2.831e-001

Fractile: 0.84

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	6.724e-001	6.488e-001	6.219e-001	6.605e-001	7.584e-001	7.584e-001
0.05	7.667e-001	6.787e-001	7.328e-001	7.586e-001	8.969e-001	8.969e-001
0.1	1.023e+000	8.754e-001	1.049e+000	1.029e+000	1.138e+000	1.138e+000
0.2	1.371e+000	1.291e+000	1.437e+000	1.305e+000	1.449e+000	1.449e+000
0.3	1.618e+000	1.608e+000	1.702e+000	1.502e+000	1.660e+000	1.660e+000
0.4	1.610e+000	1.639e+000	1.616e+000	1.543e+000	1.643e+000	1.643e+000
0.5	1.574e+000	1.567e+000	1.537e+000	1.610e+000	1.583e+000	1.583e+000
0.75	1.387e+000	1.331e+000	1.320e+000	1.474e+000	1.424e+000	1.424e+000
1	1.175e+000	1.121e+000	9.899e-001	1.288e+000	1.300e+000	1.300e+000
2	8.311e-001	8.242e-001	6.170e-001	9.476e-001	9.355e-001	9.355e-001
3	6.587e-001	6.714e-001	4.966e-001	7.255e-001	7.412e-001	7.412e-001
4	5.700e-001	5.817e-001	4.177e-001	6.554e-001	6.252e-001	6.252e-001

Source: Pleito  
 Region: USGS 2008 California  
 Closest Distance: 69.05 km  
 Amplitude Units: Acceleration (g)  
 Magnitude: 7.10 Mw  
 Fractile: 0.50

Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	9.708e-002	8.730e-002	1.311e-001	8.226e-002	8.763e-002	8.763e-002
0.05	1.070e-001	9.142e-002	1.387e-001	9.499e-002	1.028e-001	1.028e-001
0.1	1.453e-001	1.212e-001	1.787e-001	1.304e-001	1.511e-001	1.511e-001
0.2	2.132e-001	2.043e-001	2.578e-001	1.839e-001	2.067e-001	2.067e-001
0.3	2.405e-001	2.457e-001	2.936e-001	2.069e-001	2.159e-001	2.159e-001
0.4	2.282e-001	2.406e-001	2.792e-001	1.933e-001	1.995e-001	1.995e-001
0.5	2.136e-001	2.236e-001	2.654e-001	1.860e-001	1.796e-001	1.796e-001
0.75	1.739e-001	1.835e-001	2.174e-001	1.524e-001	1.423e-001	1.423e-001
1	1.407e-001	1.518e-001	1.674e-001	1.241e-001	1.197e-001	1.197e-001
2	6.856e-002	7.905e-002	7.307e-002	6.511e-002	5.701e-002	5.701e-002
3	4.184e-002	4.985e-002	4.271e-002	4.122e-002	3.356e-002	3.356e-002
4	2.929e-002	3.551e-002	2.911e-002	3.020e-002	2.236e-002	2.236e-002

Fractile: 0.84  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA



1	2	3	4	5	6
PGA	1.634e-001	1.456e-001	2.298e-001	1.357e-001	1.426e-001
0.05	1.845e-001	1.537e-001	2.491e-001	1.624e-001	1.728e-001
0.1	2.545e-001	2.061e-001	3.272e-001	2.293e-001	2.555e-001
0.2	3.734e-001	3.551e-001	4.663e-001	3.207e-001	3.515e-001
0.3	4.259e-001	4.340e-001	5.375e-001	3.617e-001	3.706e-001
0.4	4.058e-001	4.291e-001	5.086e-001	3.392e-001	3.461e-001
0.5	3.842e-001	4.023e-001	4.892e-001	3.299e-001	3.155e-001
0.75	3.204e-001	3.340e-001	4.128e-001	2.776e-001	2.572e-001
1	2.617e-001	2.771e-001	3.186e-001	2.292e-001	2.217e-001
2	1.313e-001	1.439e-001	1.466e-001	1.234e-001	1.112e-001
3	8.064e-002	9.147e-002	8.525e-002	7.838e-002	6.744e-002
4	5.684e-002	6.541e-002	5.828e-002	5.752e-002	4.613e-002

Source: Puente Hills  
 Region: USGS 2008 California  
 Closest Distance: 85.93 km  
 Amplitude Units: Acceleration (g)  
 Magnitude: 7.10 Mw  
 Fractile: 0.50  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	9.669e-002	1.106e-001	1.017e-001	8.790e-002	8.654e-002
0.05	1.044e-001	1.125e-001	1.067e-001	9.942e-002	9.912e-002
0.1	1.398e-001	1.472e-001	1.361e-001	1.329e-001	1.431e-001
0.2	2.121e-001	2.559e-001	2.010e-001	1.918e-001	1.997e-001
0.3	2.460e-001	3.150e-001	2.349e-001	2.220e-001	2.121e-001
0.4	2.341e-001	3.032e-001	2.263e-001	2.090e-001	1.980e-001
0.5	2.174e-001	2.707e-001	2.177e-001	2.023e-001	1.789e-001
0.75	1.740e-001	2.058e-001	1.811e-001	1.675e-001	1.416e-001
1	1.383e-001	1.608e-001	1.411e-001	1.331e-001	1.183e-001
2	6.216e-002	7.287e-002	6.224e-002	5.973e-002	5.382e-002
3	3.586e-002	4.215e-002	3.639e-002	3.458e-002	3.034e-002
4	2.451e-002	2.821e-002	2.481e-002	2.540e-002	1.964e-002

Fractile: 0.84  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	1.617e-001	1.831e-001	1.782e-001	1.448e-001	1.408e-001
0.05	1.789e-001	1.873e-001	1.917e-001	1.696e-001	1.669e-001
0.1	2.431e-001	2.476e-001	2.491e-001	2.333e-001	2.426e-001
0.2	3.694e-001	4.404e-001	3.635e-001	3.337e-001	3.401e-001
0.3	4.335e-001	5.522e-001	4.300e-001	3.874e-001	3.643e-001

0.4	4.150e-001	5.377e-001	4.123e-001	3.663e-001	3.436e-001
0.5	3.898e-001	4.848e-001	4.013e-001	3.586e-001	3.145e-001
0.75	3.196e-001	3.734e-001	3.440e-001	3.050e-001	2.560e-001
1	2.566e-001	2.930e-001	2.684e-001	2.458e-001	2.192e-001
2	1.189e-001	1.326e-001	1.248e-001	1.132e-001	1.050e-001
3	6.917e-002	7.734e-002	7.262e-002	6.575e-002	6.096e-002
4	4.763e-002	5.197e-002	4.967e-002	4.839e-002	4.051e-002

Source: Puente Hills (Coyote Hills)  
 Region: USGS 2008 California  
 Closest Distance: 113.35 km  
 Amplitude Units: Acceleration (g)  
 Magnitude: 6.90 Mw  
 Fractile: 0.50  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	5.751e-002	5.901e-002	6.100e-002	6.344e-002	4.658e-002
0.05	6.151e-002	6.011e-002	6.279e-002	7.121e-002	5.192e-002
0.1	8.199e-002	7.858e-002	8.061e-002	9.393e-002	7.483e-002
0.2	1.298e-001	1.381e-001	1.322e-001	1.380e-001	1.109e-001
0.3	1.544e-001	1.709e-001	1.618e-001	1.624e-001	1.226e-001
0.4	1.487e-001	1.665e-001	1.590e-001	1.522e-001	1.172e-001
0.5	1.397e-001	1.518e-001	1.544e-001	1.450e-001	1.075e-001
0.75	1.128e-001	1.199e-001	1.280e-001	1.165e-001	8.692e-002
1	8.963e-002	9.516e-002	9.993e-002	9.003e-002	7.341e-002
2	3.992e-002	4.432e-002	4.326e-002	3.787e-002	3.421e-002
3	2.282e-002	2.618e-002	2.402e-002	2.152e-002	1.958e-002
4	1.570e-002	1.782e-002	1.655e-002	1.567e-002	1.275e-002

Fractile: 0.84  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	9.741e-002	1.002e-001	1.069e-001	1.052e-001	7.736e-002
0.05	1.071e-001	1.035e-001	1.128e-001	1.226e-001	8.955e-002
0.1	1.455e-001	1.370e-001	1.476e-001	1.665e-001	1.307e-001
0.2	2.303e-001	2.453e-001	2.391e-001	2.421e-001	1.947e-001
0.3	2.762e-001	3.071e-001	2.963e-001	2.854e-001	2.162e-001
0.4	2.667e-001	3.012e-001	2.895e-001	2.682e-001	2.081e-001
0.5	2.529e-001	2.764e-001	2.847e-001	2.580e-001	1.928e-001
0.75	2.088e-001	2.201e-001	2.431e-001	2.126e-001	1.593e-001
1	1.672e-001	1.748e-001	1.902e-001	1.665e-001	1.375e-001
2	7.660e-002	8.086e-002	8.678e-002	7.176e-002	6.699e-002
3	4.409e-002	4.808e-002	4.794e-002	4.091e-002	3.941e-002

4      3.054e-002      3.284e-002      3.314e-002      2.985e-002      2.634e-002

Source: Puente Hills (LA)  
 Region: USGS 2008 California  
 Closest Distance: 83.14 km  
 Amplitude Units: Acceleration (g)  
 Magnitude: 7.00 Mw  
 Fractile: 0.50  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	8.546e-002	8.250e-002	1.007e-001	8.658e-002	7.208e-002	
0.05	9.301e-002	8.553e-002	1.052e-001	9.831e-002	8.306e-002	
0.1	1.256e-001	1.132e-001	1.355e-001	1.327e-001	1.212e-001	
0.2	1.897e-001	1.933e-001	2.055e-001	1.907e-001	1.694e-001	
0.3	2.178e-001	2.335e-001	2.390e-001	2.189e-001	1.796e-001	
0.4	2.069e-001	2.259e-001	2.292e-001	2.052e-001	1.673e-001	
0.5	1.930e-001	2.056e-001	2.188e-001	1.966e-001	1.511e-001	
0.75	1.550e-001	1.623e-001	1.784e-001	1.597e-001	1.198e-001	
1	1.234e-001	1.304e-001	1.377e-001	1.254e-001	1.003e-001	
2	5.594e-002	6.306e-002	5.938e-002	5.470e-002	4.662e-002	
3	3.252e-002	3.804e-002	3.374e-002	3.140e-002	2.688e-002	
4	2.249e-002	2.627e-002	2.308e-002	2.297e-002	1.764e-002	

Fractile: 0.84  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	1.437e-001	1.378e-001	1.764e-001	1.427e-001	1.178e-001	
0.05	1.604e-001	1.441e-001	1.889e-001	1.678e-001	1.406e-001	
0.1	2.202e-001	1.929e-001	2.480e-001	2.331e-001	2.069e-001	
0.2	3.328e-001	3.367e-001	3.716e-001	3.319e-001	2.909e-001	
0.3	3.859e-001	4.131e-001	4.375e-001	3.821e-001	3.108e-001	
0.4	3.682e-001	4.034e-001	4.174e-001	3.598e-001	2.923e-001	
0.5	3.473e-001	3.703e-001	4.033e-001	3.486e-001	2.671e-001	
0.75	2.857e-001	2.955e-001	3.389e-001	2.909e-001	2.174e-001	
1	2.296e-001	2.382e-001	2.621e-001	2.316e-001	1.864e-001	
2	1.071e-001	1.148e-001	1.191e-001	1.036e-001	9.103e-002	
3	6.272e-002	6.980e-002	6.735e-002	5.971e-002	5.403e-002	
4	4.369e-002	4.839e-002	4.621e-002	4.376e-002	3.639e-002	

Source: Puente Hills (Santa Fe Springs)  
 Region: USGS 2008 California

Closest Distance: 96.84 km  
 Amplitude Units: Acceleration (g)  
 Magnitude: 6.70 Mw  
 Fractile: 0.50  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	6.372e-002	6.648e-002	7.024e-002	6.683e-002	5.135e-002	
0.05	6.899e-002	6.926e-002	7.265e-002	7.590e-002	5.817e-002	
0.1	9.388e-002	9.253e-002	9.568e-002	1.030e-001	8.435e-002	
0.2	1.462e-001	1.565e-001	1.586e-001	1.489e-001	1.210e-001	
0.3	1.686e-001	1.854e-001	1.881e-001	1.708e-001	1.302e-001	
0.4	1.585e-001	1.746e-001	1.788e-001	1.587e-001	1.220e-001	
0.5	1.453e-001	1.539e-001	1.694e-001	1.478e-001	1.103e-001	
0.75	1.123e-001	1.146e-001	1.338e-001	1.141e-001	8.658e-002	
1	8.690e-002	8.826e-002	1.018e-001	8.612e-002	7.146e-002	
2	3.644e-002	3.825e-002	4.193e-002	3.429e-002	3.132e-002	
3	2.009e-002	2.175e-002	2.236e-002	1.912e-002	1.723e-002	
4	1.363e-002	1.463e-002	1.523e-002	1.378e-002	1.095e-002	

Fractile: 0.84  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	1.087e-001	1.147e-001	1.231e-001	1.107e-001	8.640e-002	
0.05	1.209e-001	1.212e-001	1.305e-001	1.305e-001	1.015e-001	
0.1	1.676e-001	1.642e-001	1.751e-001	1.823e-001	1.488e-001	
0.2	2.611e-001	2.822e-001	2.868e-001	2.610e-001	2.144e-001	
0.3	3.033e-001	3.375e-001	3.444e-001	2.998e-001	2.317e-001	
0.4	2.858e-001	3.197e-001	3.256e-001	2.793e-001	2.185e-001	
0.5	2.644e-001	2.833e-001	3.122e-001	2.629e-001	1.992e-001	
0.75	2.085e-001	2.121e-001	2.541e-001	2.083e-001	1.597e-001	
1	1.627e-001	1.632e-001	1.937e-001	1.593e-001	1.345e-001	
2	7.016e-002	7.007e-002	8.411e-002	6.497e-002	6.152e-002	
3	3.891e-002	4.004e-002	4.463e-002	3.635e-002	3.478e-002	
4	2.657e-002	2.699e-002	3.049e-002	2.626e-002	2.266e-002	

Source: Raymond  
 Region: USGS 2008 California  
 Closest Distance: 91.36 km  
 Amplitude Units: Acceleration (g)  
 Magnitude: 6.80 Mw  
 Fractile: 0.50  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	5.995e-002	5.368e-002	8.059e-002	5.648e-002	4.903e-002	
0.05	6.506e-002	5.634e-002	8.302e-002	6.478e-002	5.610e-002	
0.1	8.859e-002	7.537e-002	1.085e-001	8.829e-002	8.224e-002	
0.2	1.372e-001	1.273e-001	1.771e-001	1.266e-001	1.176e-001	
0.3	1.575e-001	1.508e-001	2.086e-001	1.442e-001	1.261e-001	
0.4	1.495e-001	1.457e-001	2.002e-001	1.338e-001	1.182e-001	
0.5	1.392e-001	1.339e-001	1.902e-001	1.253e-001	1.072e-001	
0.75	1.106e-001	1.078e-001	1.512e-001	9.795e-002	8.528e-002	
1	8.786e-002	8.787e-002	1.155e-001	7.661e-002	7.149e-002	
2	4.048e-002	4.370e-002	4.804e-002	3.673e-002	3.344e-002	
3	2.372e-002	2.688e-002	2.584e-002	2.272e-002	1.943e-002	
4	1.648e-002	1.884e-002	1.782e-002	1.647e-002	1.279e-002	

Fractile: 0.84

Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	1.023e-001	9.218e-002	1.412e-001	9.380e-002	8.195e-002	
0.05	1.141e-001	9.824e-002	1.491e-001	1.118e-001	9.729e-002	
0.1	1.582e-001	1.333e-001	1.985e-001	1.569e-001	1.442e-001	
0.2	2.448e-001	2.287e-001	3.204e-001	2.228e-001	2.073e-001	
0.3	2.832e-001	2.737e-001	3.819e-001	2.539e-001	2.235e-001	
0.4	2.693e-001	2.658e-001	3.647e-001	2.359e-001	2.108e-001	
0.5	2.531e-001	2.457e-001	3.506e-001	2.233e-001	1.929e-001	
0.75	2.055e-001	1.990e-001	2.871e-001	1.789e-001	1.569e-001	
1	1.645e-001	1.620e-001	2.197e-001	1.418e-001	1.343e-001	
2	7.786e-002	7.990e-002	9.637e-002	6.960e-002	6.558e-002	
3	4.584e-002	4.943e-002	5.157e-002	4.319e-002	3.917e-002	
4	3.206e-002	3.474e-002	3.568e-002	3.138e-002	2.643e-002	

Source: Red Mountain  
 Region: USGS 2008 California  
 Closest Distance: 15.78 km  
 Amplitude Units: Acceleration (g)  
 Magnitude: 7.40 Mw  
 Fractile: 0.50

Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
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PGA	2.955e-001	2.862e-001	2.966e-001	2.549e-001	3.442e-001
0.05	3.372e-001	3.061e-001	3.352e-001	2.995e-001	4.081e-001
0.1	4.606e-001	4.003e-001	4.543e-001	4.298e-001	5.578e-001
0.2	6.205e-001	6.064e-001	6.020e-001	5.586e-001	7.149e-001
0.3	7.055e-001	7.366e-001	6.971e-001	6.063e-001	7.820e-001
0.4	6.749e-001	7.273e-001	6.569e-001	5.779e-001	7.373e-001
0.5	6.376e-001	6.804e-001	6.188e-001	5.718e-001	6.793e-001
0.75	5.293e-001	5.592e-001	5.178e-001	4.817e-001	5.584e-001
1	4.363e-001	4.648e-001	3.890e-001	4.114e-001	4.798e-001
2	2.849e-001	3.167e-001	2.204e-001	3.046e-001	2.978e-001
3	2.213e-001	2.487e-001	1.746e-001	2.429e-001	2.190e-001
4	1.848e-001	2.110e-001	1.413e-001	2.125e-001	1.745e-001

Fractile: 0.84

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA

Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	4.784e-001	4.517e-001	5.197e-001	4.050e-001	5.371e-001	
0.05	5.541e-001	4.785e-001	6.021e-001	4.881e-001	6.477e-001	
0.1	7.615e-001	6.285e-001	8.316e-001	7.188e-001	8.672e-001	
0.2	1.028e+000	9.809e-001	1.089e+000	9.264e-001	1.115e+000	
0.3	1.191e+000	1.227e+000	1.276e+000	1.016e+000	1.244e+000	
0.4	1.153e+000	1.237e+000	1.197e+000	9.807e-001	1.198e+000	
0.5	1.108e+000	1.178e+000	1.141e+000	9.876e-001	1.127e+000	
0.75	9.537e-001	9.951e-001	9.851e-001	8.646e-001	9.700e-001	
1	7.995e-001	8.370e-001	7.424e-001	7.542e-001	8.646e-001	
2	5.578e-001	5.917e-001	4.547e-001	5.929e-001	5.918e-001	
3	4.481e-001	4.796e-001	3.662e-001	4.854e-001	4.613e-001	
4	3.845e-001	4.163e-001	3.028e-001	4.335e-001	3.854e-001	

Source: Rinconada

Region: USGS 2008 California

Closest Distance: 170.25 km

Amplitude Units: Acceleration (g)

Magnitude: 7.50 Mw

Fractile: 0.50

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA

Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	4.291e-002	4.955e-002	3.956e-002	4.715e-002	3.538e-002	
0.05	4.447e-002	4.704e-002	4.197e-002	5.152e-002	3.737e-002	
0.1	5.557e-002	5.701e-002	4.978e-002	6.294e-002	5.256e-002	
0.2	9.049e-002	1.082e-001	7.052e-002	9.629e-002	8.692e-002	
0.3	1.169e-001	1.514e-001	9.014e-002	1.212e-001	1.049e-001	
0.4	1.206e-001	1.611e-001	9.814e-002	1.163e-001	1.067e-001	

0.5	1.207e-001	1.594e-001	1.028e-001	1.180e-001	1.026e-001
0.75	1.107e-001	1.469e-001	9.923e-002	1.064e-001	9.017e-002
1	9.638e-002	1.241e-001	8.901e-002	9.056e-002	8.189e-002
2	5.596e-002	6.724e-002	5.405e-002	5.248e-002	5.006e-002
3	3.682e-002	4.332e-002	3.741e-002	3.444e-002	3.209e-002
4	2.638e-002	3.138e-002	2.633e-002	2.574e-002	2.206e-002

Fractile: 0.84

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA

Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	7.251e-002	8.365e-002	6.932e-002	7.850e-002	5.858e-002	6.435e-002
0.05	7.737e-002	8.049e-002	7.539e-002	8.924e-002	6.435e-002	6.435e-002
0.1	9.856e-002	9.887e-002	9.112e-002	1.123e-001	9.196e-002	9.196e-002
0.2	1.604e-001	1.912e-001	1.276e-001	1.700e-001	1.527e-001	1.527e-001
0.3	2.087e-001	2.708e-001	1.650e-001	2.140e-001	1.849e-001	1.849e-001
0.4	2.159e-001	2.901e-001	1.788e-001	2.056e-001	1.891e-001	1.891e-001
0.5	2.181e-001	2.889e-001	1.894e-001	2.106e-001	1.834e-001	1.834e-001
0.75	2.041e-001	2.687e-001	1.885e-001	1.946e-001	1.647e-001	1.647e-001
1	1.793e-001	2.273e-001	1.694e-001	1.677e-001	1.527e-001	1.527e-001
2	1.070e-001	1.224e-001	1.084e-001	9.946e-002	9.771e-002	9.771e-002
3	7.103e-002	7.949e-002	7.468e-002	6.548e-002	6.449e-002	6.449e-002
4	5.126e-002	5.780e-002	5.271e-002	4.904e-002	4.550e-002	4.550e-002

Source: San Cayetano

Region: USGS 2008 California

Closest Distance: 25.52 km

Amplitude Units: Acceleration (g)

Magnitude: 7.20 Mw

Fractile: 0.50

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA

Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	2.102e-001	1.958e-001	2.376e-001	1.809e-001	2.264e-001	2.264e-001
0.05	2.395e-001	2.110e-001	2.621e-001	2.138e-001	2.711e-001	2.711e-001
0.1	3.320e-001	2.800e-001	3.512e-001	3.111e-001	3.858e-001	3.858e-001
0.2	4.560e-001	4.352e-001	4.793e-001	4.119e-001	4.977e-001	4.977e-001
0.3	5.124e-001	5.244e-001	5.472e-001	4.472e-001	5.309e-001	5.309e-001
0.4	4.818e-001	5.094e-001	5.129e-001	4.171e-001	4.877e-001	4.877e-001
0.5	4.478e-001	4.707e-001	4.801e-001	4.014e-001	4.391e-001	4.391e-001
0.75	3.593e-001	3.794e-001	3.877e-001	3.240e-001	3.463e-001	3.463e-001
1	2.895e-001	3.108e-001	2.903e-001	2.669e-001	2.898e-001	2.898e-001
2	1.793e-001	2.042e-001	1.575e-001	1.829e-001	1.727e-001	1.727e-001
3	1.366e-001	1.592e-001	1.174e-001	1.441e-001	1.258e-001	1.258e-001
4	1.142e-001	1.353e-001	9.524e-002	1.263e-001	1.002e-001	1.002e-001

Fractile: 0.84

Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	3.455e-001	3.162e-001	4.164e-001	2.916e-001	3.580e-001	3.580e-001
0.05	4.008e-001	3.396e-001	4.709e-001	3.545e-001	4.383e-001	4.383e-001
0.1	5.606e-001	4.537e-001	6.429e-001	5.299e-001	6.158e-001	6.158e-001
0.2	7.717e-001	7.250e-001	8.670e-001	6.963e-001	7.985e-001	7.985e-001
0.3	8.814e-001	8.956e-001	1.002e+000	7.618e-001	8.665e-001	8.665e-001
0.4	8.367e-001	8.845e-001	9.343e-001	7.176e-001	8.103e-001	8.103e-001
0.5	7.895e-001	8.289e-001	8.850e-001	7.010e-001	7.432e-001	7.432e-001
0.75	6.540e-001	6.824e-001	7.375e-001	5.857e-001	6.105e-001	6.105e-001
1	5.344e-001	5.640e-001	5.541e-001	4.914e-001	5.280e-001	5.280e-001
2	3.518e-001	3.818e-001	3.250e-001	3.562e-001	3.444e-001	3.444e-001
3	2.766e-001	3.070e-001	2.462e-001	2.880e-001	2.653e-001	2.653e-001
4	2.375e-001	2.669e-001	2.042e-001	2.576e-001	2.213e-001	2.213e-001

Source: San Gabriel

Region: USGS 2008 California

Closest Distance: 59.85 km

Amplitude Units: Acceleration (g)

Magnitude: 7.30 Mw

Fractile: 0.50

Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	1.185e-001	1.128e-001	1.573e-001	9.864e-002	1.054e-001	1.054e-001
0.05	1.314e-001	1.175e-001	1.698e-001	1.141e-001	1.244e-001	1.244e-001
0.1	1.775e-001	1.547e-001	2.162e-001	1.564e-001	1.827e-001	1.827e-001
0.2	2.506e-001	2.533e-001	2.831e-001	2.192e-001	2.466e-001	2.466e-001
0.3	2.773e-001	3.026e-001	3.043e-001	2.459e-001	2.565e-001	2.565e-001
0.4	2.647e-001	2.953e-001	2.956e-001	2.312e-001	2.366e-001	2.366e-001
0.5	2.484e-001	2.737e-001	2.803e-001	2.265e-001	2.131e-001	2.131e-001
0.75	2.048e-001	2.257e-001	2.315e-001	1.918e-001	1.702e-001	1.702e-001
1	1.708e-001	1.884e-001	1.885e-001	1.604e-001	1.461e-001	1.461e-001
2	9.315e-002	1.010e-001	1.008e-001	8.976e-002	8.098e-002	8.098e-002
3	5.969e-002	6.463e-002	6.579e-002	5.814e-002	5.019e-002	5.019e-002
4	4.265e-002	4.647e-002	4.704e-002	4.310e-002	3.398e-002	3.398e-002

Fractile: 0.84

Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA



Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	1.987e-001	1.866e-001	2.756e-001	1.621e-001	1.706e-001	
0.05	2.255e-001	1.954e-001	3.049e-001	1.939e-001	2.078e-001	
0.1	3.087e-001	2.598e-001	3.957e-001	2.736e-001	3.059e-001	
0.2	4.357e-001	4.356e-001	5.120e-001	3.800e-001	4.154e-001	
0.3	4.879e-001	5.301e-001	5.571e-001	4.279e-001	4.365e-001	
0.4	4.684e-001	5.234e-001	5.384e-001	4.042e-001	4.076e-001	
0.5	4.449e-001	4.899e-001	5.166e-001	4.008e-001	3.721e-001	
0.75	3.761e-001	4.094e-001	4.397e-001	3.489e-001	3.062e-001	
1	3.169e-001	3.432e-001	3.587e-001	2.960e-001	2.695e-001	
2	1.785e-001	1.838e-001	2.023e-001	1.701e-001	1.576e-001	
3	1.153e-001	1.186e-001	1.313e-001	1.106e-001	1.008e-001	
4	8.302e-002	8.564e-002	9.421e-002	8.213e-002	7.012e-002	

Source: San Joaquin Hills  
 Region: USGS 2008 California  
 Closest Distance: 131.40 km  
 Amplitude Units: Acceleration (g)  
 Magnitude: 7.10 Mw  
 Fractile: 0.50

Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	5.338e-002	5.532e-002	5.264e-002	6.156e-002	4.400e-002	
0.05	5.652e-002	5.498e-002	5.460e-002	6.828e-002	4.821e-002	
0.1	7.373e-002	7.006e-002	6.834e-002	8.759e-002	6.892e-002	
0.2	1.181e-001	1.280e-001	1.080e-001	1.307e-001	1.057e-001	
0.3	1.451e-001	1.663e-001	1.364e-001	1.578e-001	1.200e-001	
0.4	1.428e-001	1.675e-001	1.373e-001	1.493e-001	1.170e-001	
0.5	1.372e-001	1.573e-001	1.370e-001	1.453e-001	1.091e-001	
0.75	1.158e-001	1.310e-001	1.202e-001	1.215e-001	9.050e-002	
1	9.418e-002	1.061e-001	9.654e-002	9.620e-002	7.793e-002	
2	4.426e-002	5.193e-002	4.427e-002	4.274e-002	3.809e-002	
3	2.618e-002	3.156e-002	2.604e-002	2.470e-002	2.240e-002	
4	1.818e-002	2.193e-002	1.780e-002	1.815e-002	1.485e-002	

Fractile: 0.84  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	9.004e-002	9.320e-002	9.223e-002	1.021e-001	7.261e-002	
0.05	9.804e-002	9.381e-002	9.807e-002	1.176e-001	8.266e-002	

0.1	1.304e-001	1.211e-001	1.251e-001	1.553e-001	1.198e-001
0.2	2.088e-001	2.255e-001	1.953e-001	2.295e-001	1.847e-001
0.3	2.586e-001	2.967e-001	2.497e-001	2.774e-001	2.107e-001
0.4	2.553e-001	3.011e-001	2.501e-001	2.630e-001	2.069e-001
0.5	2.477e-001	2.848e-001	2.526e-001	2.586e-001	1.946e-001
0.75	2.137e-001	2.393e-001	2.282e-001	2.218e-001	1.653e-001
1	1.753e-001	1.942e-001	1.837e-001	1.780e-001	1.455e-001
2	8.470e-002	9.453e-002	8.880e-002	8.098e-002	7.447e-002
3	5.047e-002	5.790e-002	5.198e-002	4.696e-002	4.504e-002
4	3.531e-002	4.039e-002	3.564e-002	3.457e-002	3.063e-002

Source: San Jose  
 Region: USGS 2008 California  
 Closest Distance: 122.16 km  
 Amplitude Units: Acceleration (g)  
 Magnitude: 6.70 Mw  
 Fractile: 0.50  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	3.781e-002	3.451e-002	4.798e-002	4.136e-002	2.739e-002	
0.05	4.049e-002	3.545e-002	4.950e-002	4.676e-002	3.025e-002	
0.1	5.425e-002	4.649e-002	6.456e-002	6.225e-002	4.370e-002	
0.2	8.625e-002	7.851e-002	1.084e-001	9.132e-002	6.675e-002	
0.3	1.011e-001	9.456e-002	1.278e-001	1.067e-001	7.517e-002	
0.4	9.761e-002	9.189e-002	1.268e-001	9.912e-002	7.266e-002	
0.5	9.144e-002	8.485e-002	1.213e-001	9.241e-002	6.721e-002	
0.75	7.314e-002	6.941e-002	9.649e-002	7.156e-002	5.512e-002	
1	5.926e-002	5.632e-002	7.802e-002	5.517e-002	4.752e-002	
2	2.938e-002	2.754e-002	3.870e-002	2.557e-002	2.570e-002	
3	1.742e-002	1.678e-002	2.181e-002	1.565e-002	1.543e-002	
4	1.222e-002	1.169e-002	1.572e-002	1.129e-002	1.016e-002	

Fractile: 0.84  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	6.494e-002	6.022e-002	8.408e-002	6.896e-002	4.651e-002	
0.05	7.165e-002	6.311e-002	8.892e-002	8.117e-002	5.342e-002	
0.1	9.798e-002	8.406e-002	1.182e-001	1.113e-001	7.834e-002	
0.2	1.554e-001	1.437e-001	1.961e-001	1.615e-001	1.202e-001	
0.3	1.831e-001	1.742e-001	2.340e-001	1.887e-001	1.357e-001	
0.4	1.770e-001	1.698e-001	2.309e-001	1.754e-001	1.318e-001	
0.5	1.672e-001	1.573e-001	2.236e-001	1.650e-001	1.227e-001	
0.75	1.364e-001	1.290e-001	1.832e-001	1.309e-001	1.024e-001	

1	1.113e-001	1.044e-001	1.485e-001	1.022e-001	8.992e-002
2	5.677e-002	5.048e-002	7.762e-002	4.845e-002	5.053e-002
3	3.383e-002	3.089e-002	4.353e-002	2.975e-002	3.114e-002
4	2.389e-002	2.156e-002	3.148e-002	2.150e-002	2.103e-002

Source: San Juan  
 Region: USGS 2008 California  
 Closest Distance: 123.91 km  
 Amplitude Units: Acceleration (g)  
 Magnitude: 7.10 Mw  
 Fractile: 0.50  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	4.957e-002	5.012e-002	5.892e-002	4.974e-002	3.948e-002	
0.05	5.283e-002	5.035e-002	6.148e-002	5.580e-002	4.370e-002	
0.1	6.930e-002	6.478e-002	7.702e-002	7.232e-002	6.306e-002	
0.2	1.082e-001	1.134e-001	1.166e-001	1.069e-001	9.580e-002	
0.3	1.289e-001	1.424e-001	1.379e-001	1.276e-001	1.079e-001	
0.4	1.268e-001	1.419e-001	1.405e-001	1.201e-001	1.046e-001	
0.5	1.213e-001	1.335e-001	1.380e-001	1.165e-001	9.715e-002	
0.75	1.020e-001	1.129e-001	1.173e-001	9.686e-002	8.087e-002	
1	8.526e-002	9.358e-002	9.811e-002	7.851e-002	7.086e-002	
2	4.554e-002	4.853e-002	5.258e-002	4.079e-002	4.025e-002	
3	2.846e-002	3.054e-002	3.246e-002	2.587e-002	2.497e-002	
4	2.024e-002	2.175e-002	2.335e-002	1.901e-002	1.684e-002	

Fractile: 0.84  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	8.396e-002	8.459e-002	1.032e-001	8.276e-002	6.526e-002	
0.05	9.205e-002	8.613e-002	1.104e-001	9.655e-002	7.507e-002	
0.1	1.230e-001	1.123e-001	1.410e-001	1.289e-001	1.099e-001	
0.2	1.919e-001	2.002e-001	2.109e-001	1.886e-001	1.679e-001	
0.3	2.305e-001	2.546e-001	2.524e-001	2.250e-001	1.899e-001	
0.4	2.272e-001	2.554e-001	2.560e-001	2.121e-001	1.854e-001	
0.5	2.195e-001	2.420e-001	2.544e-001	2.077e-001	1.739e-001	
0.75	1.885e-001	2.064e-001	2.227e-001	1.771e-001	1.480e-001	
1	1.590e-001	1.714e-001	1.867e-001	1.454e-001	1.324e-001	
2	8.744e-002	8.835e-002	1.055e-001	7.729e-002	7.867e-002	
3	5.505e-002	5.603e-002	6.479e-002	4.920e-002	5.020e-002	
4	3.944e-002	4.007e-002	4.675e-002	3.621e-002	3.474e-002	

Source: San Luis Range (So Margin)

Region: USGS 2008 California

Closest Distance: 117.35 km

Amplitude Units: Acceleration (g)

Magnitude: 7.20 Mw

Fractile: 0.50

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA

Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	5.821e-002	5.869e-002	6.813e-002	5.473e-002	5.127e-002	
0.05	6.223e-002	5.900e-002	7.128e-002	6.147e-002	5.719e-002	
0.1	8.178e-002	7.609e-002	8.880e-002	7.960e-002	8.263e-002	
0.2	1.278e-001	1.373e-001	1.329e-001	1.174e-001	1.235e-001	
0.3	1.540e-001	1.750e-001	1.636e-001	1.399e-001	1.376e-001	
0.4	1.510e-001	1.764e-001	1.629e-001	1.320e-001	1.327e-001	
0.5	1.453e-001	1.674e-001	1.616e-001	1.292e-001	1.229e-001	
0.75	1.237e-001	1.424e-001	1.417e-001	1.092e-001	1.016e-001	
1	1.024e-001	1.186e-001	1.137e-001	8.967e-002	8.763e-002	
2	5.167e-002	6.233e-002	5.253e-002	4.798e-002	4.383e-002	
3	3.207e-002	3.950e-002	3.168e-002	3.070e-002	2.638e-002	
4	2.256e-002	2.827e-002	2.154e-002	2.266e-002	1.776e-002	

Fractile: 0.84

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA

Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	9.837e-002	9.878e-002	1.194e-001	9.094e-002	8.439e-002	
0.05	1.081e-001	1.005e-001	1.280e-001	1.062e-001	9.772e-002	
0.1	1.446e-001	1.313e-001	1.625e-001	1.416e-001	1.430e-001	
0.2	2.258e-001	2.415e-001	2.403e-001	2.066e-001	2.147e-001	
0.3	2.746e-001	3.120e-001	2.995e-001	2.464e-001	2.406e-001	
0.4	2.700e-001	3.169e-001	2.968e-001	2.330e-001	2.336e-001	
0.5	2.624e-001	3.031e-001	2.979e-001	2.302e-001	2.185e-001	
0.75	2.285e-001	2.601e-001	2.692e-001	1.996e-001	1.850e-001	
1	1.907e-001	2.171e-001	2.163e-001	1.660e-001	1.633e-001	
2	9.884e-002	1.135e-001	1.054e-001	9.092e-002	8.562e-002	
3	6.178e-002	7.248e-002	6.324e-002	5.838e-002	5.302e-002	
4	4.375e-002	5.208e-002	4.312e-002	4.316e-002	3.664e-002	

Source: Santa Cruz Island

Region: USGS 2008 California

Closest Distance: 26.83 km

Amplitude Units: Acceleration (g)

Magnitude: 7.20 Mw

Fractile: 0.50

Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	1.994e-001	1.891e-001	2.336e-001	1.745e-001	2.001e-001
0.05	2.272e-001	2.036e-001	2.585e-001	2.062e-001	2.404e-001
0.1	3.152e-001	2.703e-001	3.449e-001	2.997e-001	3.458e-001
0.2	4.275e-001	4.090e-001	4.561e-001	3.978e-001	4.472e-001
0.3	4.717e-001	4.846e-001	4.942e-001	4.328e-001	4.751e-001
0.4	4.437e-001	4.647e-001	4.724e-001	4.034e-001	4.343e-001
0.5	4.101e-001	4.250e-001	4.380e-001	3.880e-001	3.895e-001
0.75	3.260e-001	3.394e-001	3.456e-001	3.129e-001	3.059e-001
1	2.662e-001	2.778e-001	2.709e-001	2.573e-001	2.585e-001
2	1.743e-001	1.801e-001	1.708e-001	1.738e-001	1.723e-001
3	1.339e-001	1.389e-001	1.323e-001	1.355e-001	1.286e-001
4	1.122e-001	1.170e-001	1.120e-001	1.177e-001	1.021e-001

Fractile: 0.84

Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	3.287e-001	3.060e-001	4.094e-001	2.817e-001	3.177e-001
0.05	3.815e-001	3.285e-001	4.643e-001	3.426e-001	3.908e-001
0.1	5.345e-001	4.390e-001	6.314e-001	5.113e-001	5.562e-001
0.2	7.263e-001	6.829e-001	8.250e-001	6.736e-001	7.234e-001
0.3	8.133e-001	8.292e-001	9.046e-001	7.385e-001	7.810e-001
0.4	7.724e-001	8.082e-001	8.605e-001	6.947e-001	7.263e-001
0.5	7.245e-001	7.495e-001	8.074e-001	6.783e-001	6.630e-001
0.75	5.940e-001	6.111e-001	6.575e-001	5.660e-001	5.414e-001
1	4.919e-001	5.044e-001	5.171e-001	4.740e-001	4.722e-001
2	3.428e-001	3.367e-001	3.524e-001	3.385e-001	3.436e-001
3	2.719e-001	2.679e-001	2.776e-001	2.709e-001	2.712e-001
4	2.342e-001	2.309e-001	2.402e-001	2.401e-001	2.255e-001

Source: Santa Rosa Island  
 Region: USGS 2008 California  
 Closest Distance: 68.25 km  
 Amplitude Units: Acceleration (g)  
 Magnitude: 6.90 Mw  
 Fractile: 0.50

Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	8.494e-002	7.550e-002	1.201e-001	7.614e-002	6.800e-002
0.05	9.360e-002	8.007e-002	1.262e-001	8.839e-002	7.977e-002
0.1	1.283e-001	1.072e-001	1.650e-001	1.231e-001	1.180e-001
0.2	1.878e-001	1.721e-001	2.447e-001	1.728e-001	1.616e-001
0.3	2.059e-001	1.991e-001	2.639e-001	1.922e-001	1.682e-001
0.4	1.945e-001	1.902e-001	2.548e-001	1.782e-001	1.547e-001
0.5	1.793e-001	1.733e-001	2.373e-001	1.680e-001	1.386e-001
0.75	1.411e-001	1.389e-001	1.837e-001	1.327e-001	1.092e-001
1	1.144e-001	1.137e-001	1.461e-001	1.054e-001	9.235e-002
2	5.771e-002	5.752e-002	7.188e-002	5.233e-002	4.910e-002
3	3.493e-002	3.572e-002	4.168e-002	3.270e-002	2.964e-002
4	2.469e-002	2.518e-002	3.006e-002	2.382e-002	1.969e-002

Fractile: 0.84

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA

Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	1.440e-001	1.275e-001	2.105e-001	1.258e-001	1.121e-001
0.05	1.628e-001	1.367e-001	2.267e-001	1.515e-001	1.361e-001
0.1	2.268e-001	1.853e-001	3.021e-001	2.170e-001	2.030e-001
0.2	3.319e-001	3.033e-001	4.427e-001	3.019e-001	2.797e-001
0.3	3.672e-001	3.558e-001	4.832e-001	3.365e-001	2.934e-001
0.4	3.480e-001	3.425e-001	4.642e-001	3.131e-001	2.723e-001
0.5	3.243e-001	3.146e-001	4.375e-001	2.984e-001	2.467e-001
0.75	2.611e-001	2.544e-001	3.488e-001	2.420e-001	1.992e-001
1	2.134e-001	2.085e-001	2.780e-001	1.948e-001	1.723e-001
2	1.111e-001	1.049e-001	1.442e-001	9.916e-002	9.598e-002
3	6.765e-002	6.561e-002	8.319e-002	6.217e-002	5.963e-002
4	4.815e-002	4.640e-002	6.018e-002	4.537e-002	4.067e-002

Source: Santa Susana, alt 1

Region: USGS 2008 California

Closest Distance: 43.43 km

Amplitude Units: Acceleration (g)

Magnitude: 6.90 Mw

Fractile: 0.50

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA

Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	1.274e-001	1.107e-001	1.691e-001	1.115e-001	1.183e-001
0.05	1.432e-001	1.198e-001	1.800e-001	1.316e-001	1.415e-001
0.1	2.000e-001	1.613e-001	2.404e-001	1.901e-001	2.082e-001

0.2	2.861e-001	2.560e-001	3.562e-001	2.584e-001	2.738e-001
0.3	3.165e-001	3.005e-001	4.002e-001	2.812e-001	2.840e-001
0.4	2.945e-001	2.878e-001	3.738e-001	2.591e-001	2.572e-001
0.5	2.701e-001	2.631e-001	3.468e-001	2.424e-001	2.282e-001
0.75	2.097e-001	2.087e-001	2.675e-001	1.873e-001	1.752e-001
1	1.650e-001	1.689e-001	1.993e-001	1.479e-001	1.439e-001
2	8.386e-002	9.307e-002	8.953e-002	8.069e-002	7.216e-002
3	5.445e-002	6.309e-002	5.392e-002	5.507e-002	4.572e-002
4	4.081e-002	4.788e-002	3.966e-002	4.319e-002	3.249e-002

Fractile: 0.84

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA

Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	2.140e-001	1.848e-001	2.963e-001	1.826e-001	1.922e-001	
0.05	2.461e-001	2.013e-001	3.234e-001	2.227e-001	2.368e-001	
0.1	3.483e-001	2.739e-001	4.400e-001	3.308e-001	3.483e-001	
0.2	4.989e-001	4.445e-001	6.443e-001	4.460e-001	4.608e-001	
0.3	5.587e-001	5.308e-001	7.325e-001	4.877e-001	4.837e-001	
0.4	5.225e-001	5.137e-001	6.809e-001	4.519e-001	4.436e-001	
0.5	4.851e-001	4.740e-001	6.392e-001	4.280e-001	3.992e-001	
0.75	3.865e-001	3.808e-001	5.084e-001	3.405e-001	3.161e-001	
1	3.072e-001	3.093e-001	3.798e-001	2.732e-001	2.666e-001	
2	1.632e-001	1.724e-001	1.824e-001	1.553e-001	1.430e-001	
3	1.080e-001	1.191e-001	1.106e-001	1.076e-001	9.450e-002	
4	8.230e-002	9.164e-002	8.246e-002	8.544e-002	6.968e-002	

Source: Santa Ynez (East)

Region: USGS 2008 California

Closest Distance: 31.41 km

Amplitude Units: Acceleration (g)

Magnitude: 7.20 Mw

Fractile: 0.50

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA

Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	1.867e-001	1.718e-001	2.272e-001	1.616e-001	1.861e-001	
0.05	2.125e-001	1.844e-001	2.508e-001	1.900e-001	2.248e-001	
0.1	2.944e-001	2.446e-001	3.337e-001	2.739e-001	3.255e-001	
0.2	4.011e-001	3.749e-001	4.411e-001	3.674e-001	4.211e-001	
0.3	4.425e-001	4.457e-001	4.773e-001	4.033e-001	4.436e-001	
0.4	4.157e-001	4.275e-001	4.563e-001	3.758e-001	4.032e-001	
0.5	3.840e-001	3.910e-001	4.233e-001	3.617e-001	3.599e-001	
0.75	3.014e-001	3.087e-001	3.304e-001	2.892e-001	2.771e-001	
1	2.436e-001	2.506e-001	2.573e-001	2.355e-001	2.310e-001	

2	1.316e-001	1.347e-001	1.352e-001	1.306e-001	1.258e-001
3	8.540e-002	8.831e-002	8.943e-002	8.533e-002	7.852e-002
4	6.213e-002	6.470e-002	6.609e-002	6.383e-002	5.391e-002

Fractile: 0.84

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA

Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	3.088e-001	2.793e-001	3.981e-001	2.617e-001	2.961e-001
0.05	3.583e-001	2.994e-001	4.505e-001	3.168e-001	3.665e-001
0.1	5.015e-001	4.002e-001	6.108e-001	4.691e-001	5.258e-001
0.2	6.842e-001	6.301e-001	7.979e-001	6.245e-001	6.843e-001
0.3	7.658e-001	7.667e-001	8.738e-001	6.903e-001	7.325e-001
0.4	7.259e-001	7.465e-001	8.311e-001	6.488e-001	6.770e-001
0.5	6.801e-001	6.918e-001	7.803e-001	6.336e-001	6.148e-001
0.75	5.502e-001	5.569e-001	6.286e-001	5.236e-001	4.918e-001
1	4.509e-001	4.555e-001	4.910e-001	4.342e-001	4.228e-001
2	2.587e-001	2.516e-001	2.786e-001	2.540e-001	2.507e-001
3	1.731e-001	1.699e-001	1.872e-001	1.701e-001	1.652e-001
4	1.292e-001	1.272e-001	1.412e-001	1.298e-001	1.187e-001

Source: Santa Ynez (West)

Region: USGS 2008 California

Closest Distance: 49.48 km

Amplitude Units: Acceleration (g)

Magnitude: 7.00 Mw

Fractile: 0.50

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA

Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	1.193e-001	1.063e-001	1.635e-001	1.042e-001	1.033e-001
0.05	1.335e-001	1.137e-001	1.750e-001	1.221e-001	1.233e-001
0.1	1.846e-001	1.522e-001	2.304e-001	1.735e-001	1.822e-001
0.2	2.609e-001	2.390e-001	3.241e-001	2.385e-001	2.419e-001
0.3	2.841e-001	2.782e-001	3.459e-001	2.620e-001	2.503e-001
0.4	2.667e-001	2.655e-001	3.311e-001	2.428e-001	2.274e-001
0.5	2.452e-001	2.420e-001	3.067e-001	2.300e-001	2.024e-001
0.75	1.926e-001	1.933e-001	2.372e-001	1.824e-001	1.574e-001
1	1.560e-001	1.580e-001	1.873e-001	1.464e-001	1.323e-001
2	8.582e-002	8.717e-002	1.001e-001	8.067e-002	7.537e-002
3	5.645e-002	5.853e-002	6.409e-002	5.437e-002	4.880e-002
4	4.238e-002	4.402e-002	4.888e-002	4.211e-002	3.451e-002

Fractile: 0.84

Column 1: Spectral Period



Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	2.002e-001	1.762e-001	2.865e-001	1.709e-001	1.673e-001	1.673e-001
0.05	2.293e-001	1.897e-001	3.144e-001	2.072e-001	2.060e-001	2.060e-001
0.1	3.215e-001	2.563e-001	4.217e-001	3.028e-001	3.051e-001	3.051e-001
0.2	4.547e-001	4.122e-001	5.863e-001	4.127e-001	4.078e-001	4.078e-001
0.3	5.009e-001	4.884e-001	6.332e-001	4.553e-001	4.267e-001	4.267e-001
0.4	4.728e-001	4.713e-001	6.032e-001	4.240e-001	3.926e-001	3.926e-001
0.5	4.399e-001	4.337e-001	5.653e-001	4.065e-001	3.542e-001	3.542e-001
0.75	3.545e-001	3.512e-001	4.508e-001	3.318e-001	2.840e-001	2.840e-001
1	2.901e-001	2.884e-001	3.568e-001	2.703e-001	2.448e-001	2.448e-001
2	1.664e-001	1.602e-001	2.027e-001	1.543e-001	1.483e-001	1.483e-001
3	1.111e-001	1.093e-001	1.302e-001	1.052e-001	9.974e-002	9.974e-002
4	8.459e-002	8.306e-002	1.002e-001	8.216e-002	7.291e-002	7.291e-002

Source: Santa Ynez Connected  
 Region: USGS 2008 California  
 Closest Distance: 31.41 km  
 Amplitude Units: Acceleration (g)  
 Magnitude: 7.40 Mw  
 Fractile: 0.50

Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	1.996e-001	1.890e-001	2.371e-001	1.683e-001	2.039e-001	2.039e-001
0.05	2.266e-001	2.001e-001	2.640e-001	1.970e-001	2.453e-001	2.453e-001
0.1	3.105e-001	2.630e-001	3.462e-001	2.803e-001	3.524e-001	3.524e-001
0.2	4.202e-001	4.092e-001	4.369e-001	3.772e-001	4.573e-001	4.573e-001
0.3	4.690e-001	4.956e-001	4.765e-001	4.182e-001	4.858e-001	4.858e-001
0.4	4.437e-001	4.809e-001	4.563e-001	3.925e-001	4.450e-001	4.450e-001
0.5	4.141e-001	4.437e-001	4.273e-001	3.855e-001	3.998e-001	3.998e-001
0.75	3.351e-001	3.578e-001	3.472e-001	3.215e-001	3.138e-001	3.138e-001
1	2.760e-001	2.945e-001	2.743e-001	2.698e-001	2.654e-001	2.654e-001
2	1.701e-001	1.783e-001	1.653e-001	1.743e-001	1.627e-001	1.627e-001
3	1.230e-001	1.285e-001	1.258e-001	1.260e-001	1.117e-001	1.117e-001
4	9.661e-002	1.018e-001	9.963e-002	1.021e-001	8.296e-002	8.296e-002

Fractile: 0.84  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	3.292e-001	3.058e-001	4.154e-001	2.721e-001	3.235e-001
0.05	3.808e-001	3.229e-001	4.742e-001	3.278e-001	3.983e-001
0.1	5.266e-001	4.272e-001	6.338e-001	4.791e-001	5.661e-001
0.2	7.130e-001	6.834e-001	7.902e-001	6.399e-001	7.385e-001
0.3	8.081e-001	8.480e-001	8.722e-001	7.147e-001	7.974e-001
0.4	7.718e-001	8.363e-001	8.312e-001	6.769e-001	7.430e-001
0.5	7.310e-001	7.824e-001	7.876e-001	6.745e-001	6.796e-001
0.75	6.103e-001	6.440e-001	6.605e-001	5.818e-001	5.547e-001
1	5.099e-001	5.346e-001	5.234e-001	4.971e-001	4.843e-001
2	3.341e-001	3.330e-001	3.405e-001	3.390e-001	3.239e-001
3	2.491e-001	2.471e-001	2.632e-001	2.511e-001	2.350e-001
4	2.008e-001	2.002e-001	2.129e-001	2.076e-001	1.826e-001

Source: Sierra Madre  
 Region: USGS 2008 California  
 Closest Distance: 84.69 km  
 Amplitude Units: Acceleration (g)  
 Magnitude: 7.20 Mw  
 Fractile: 0.50  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	8.402e-002	8.032e-002	1.084e-001	7.178e-002	7.556e-002
0.05	9.158e-002	8.275e-002	1.145e-001	8.198e-002	8.716e-002
0.1	1.227e-001	1.089e-001	1.447e-001	1.097e-001	1.274e-001
0.2	1.831e-001	1.887e-001	2.070e-001	1.575e-001	1.792e-001
0.3	2.114e-001	2.314e-001	2.417e-001	1.816e-001	1.910e-001
0.4	2.028e-001	2.285e-001	2.334e-001	1.706e-001	1.789e-001
0.5	1.919e-001	2.136e-001	2.255e-001	1.661e-001	1.626e-001
0.75	1.594e-001	1.770e-001	1.907e-001	1.392e-001	1.309e-001
1	1.306e-001	1.472e-001	1.495e-001	1.146e-001	1.112e-001
2	6.522e-002	7.759e-002	6.734e-002	6.170e-002	5.427e-002
3	4.042e-002	4.924e-002	4.049e-002	3.953e-002	3.242e-002
4	2.842e-002	3.523e-002	2.751e-002	2.917e-002	2.177e-002

Fractile: 0.84  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	1.416e-001	1.342e-001	1.900e-001	1.187e-001	1.234e-001
0.05	1.583e-001	1.396e-001	2.056e-001	1.407e-001	1.473e-001
0.1	2.154e-001	1.858e-001	2.649e-001	1.937e-001	2.171e-001
0.2	3.214e-001	3.288e-001	3.744e-001	2.755e-001	3.068e-001
0.3	3.750e-001	4.095e-001	4.424e-001	3.182e-001	3.296e-001

0.4	3.612e-001	4.082e-001	4.250e-001	2.999e-001	3.117e-001
0.5	3.456e-001	3.849e-001	4.157e-001	2.952e-001	2.867e-001
0.75	2.939e-001	3.224e-001	3.622e-001	2.539e-001	2.370e-001
1	2.429e-001	2.690e-001	2.846e-001	2.118e-001	2.063e-001
2	1.248e-001	1.412e-001	1.351e-001	1.169e-001	1.059e-001
3	7.787e-002	9.034e-002	8.082e-002	7.517e-002	6.513e-002
4	5.512e-002	6.491e-002	5.508e-002	5.557e-002	4.490e-002

Source: Sierra Madre (San Fernando)  
 Region: USGS 2008 California  
 Closest Distance: 67.82 km  
 Amplitude Units: Acceleration (g)  
 Magnitude: 6.70 Mw  
 Fractile: 0.50  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	7.682e-002	6.428e-002	1.086e-001	7.078e-002	6.358e-002
0.05	8.494e-002	6.903e-002	1.136e-001	8.254e-002	7.453e-002
0.1	1.179e-001	9.335e-002	1.515e-001	1.165e-001	1.103e-001
0.2	1.763e-001	1.516e-001	2.398e-001	1.629e-001	1.510e-001
0.3	1.956e-001	1.748e-001	2.714e-001	1.793e-001	1.568e-001
0.4	1.821e-001	1.669e-001	2.527e-001	1.651e-001	1.438e-001
0.5	1.670e-001	1.522e-001	2.350e-001	1.526e-001	1.284e-001
0.75	1.294e-001	1.209e-001	1.806e-001	1.163e-001	9.973e-002
1	1.014e-001	9.777e-002	1.355e-001	9.001e-002	8.228e-002
2	4.550e-002	4.790e-002	5.462e-002	4.221e-002	3.729e-002
3	2.637e-002	2.923e-002	2.897e-002	2.592e-002	2.137e-002
4	1.816e-002	2.036e-002	1.961e-002	1.872e-002	1.394e-002

Fractile: 0.84  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	1.312e-001	1.110e-001	1.903e-001	1.171e-001	1.065e-001
0.05	1.490e-001	1.210e-001	2.041e-001	1.417e-001	1.293e-001
0.1	2.105e-001	1.658e-001	2.774e-001	2.058e-001	1.928e-001
0.2	3.144e-001	2.736e-001	4.337e-001	2.851e-001	2.652e-001
0.3	3.517e-001	3.186e-001	4.969e-001	3.143e-001	2.772e-001
0.4	3.281e-001	3.058e-001	4.603e-001	2.904e-001	2.561e-001
0.5	3.039e-001	2.803e-001	4.331e-001	2.712e-001	2.309e-001
0.75	2.406e-001	2.239e-001	3.429e-001	2.121e-001	1.834e-001
1	1.899e-001	1.808e-001	2.578e-001	1.664e-001	1.545e-001
2	8.762e-002	8.775e-002	1.096e-001	7.998e-002	7.320e-002
3	5.101e-002	5.381e-002	5.783e-002	4.928e-002	4.312e-002

4      3.533e-002      3.756e-002      3.925e-002      3.566e-002      2.885e-002

Source: Sierra Madre Connected  
 Region: USGS 2008 California  
 Closest Distance: 67.82 km  
 Amplitude Units: Acceleration (g)  
 Magnitude: 7.30 Mw  
 Fractile: 0.50  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	1.091e-001	1.028e-001	1.419e-001	8.942e-002	1.024e-001
0.05	1.203e-001	1.065e-001	1.517e-001	1.029e-001	1.199e-001
0.1	1.618e-001	1.400e-001	1.923e-001	1.396e-001	1.754e-001
0.2	2.345e-001	2.393e-001	2.618e-001	1.974e-001	2.395e-001
0.3	2.667e-001	2.927e-001	2.992e-001	2.240e-001	2.510e-001
0.4	2.549e-001	2.898e-001	2.861e-001	2.107e-001	2.329e-001
0.5	2.409e-001	2.715e-001	2.750e-001	2.067e-001	2.106e-001
0.75	2.008e-001	2.260e-001	2.334e-001	1.755e-001	1.685e-001
1	1.651e-001	1.887e-001	1.824e-001	1.466e-001	1.429e-001
2	8.390e-002	1.010e-001	8.312e-002	8.171e-002	6.982e-002
3	5.268e-002	6.454e-002	5.149e-002	5.287e-002	4.181e-002
4	3.716e-002	4.639e-002	3.492e-002	3.918e-002	2.816e-002

Fractile: 0.84  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	1.831e-001	1.707e-001	2.486e-001	1.473e-001	1.659e-001
0.05	2.066e-001	1.779e-001	2.725e-001	1.755e-001	2.006e-001
0.1	2.819e-001	2.362e-001	3.520e-001	2.449e-001	2.944e-001
0.2	4.085e-001	4.131e-001	4.735e-001	3.433e-001	4.040e-001
0.3	4.701e-001	5.144e-001	5.476e-001	3.907e-001	4.277e-001
0.4	4.516e-001	5.148e-001	5.211e-001	3.691e-001	4.015e-001
0.5	4.320e-001	4.870e-001	5.070e-001	3.663e-001	3.678e-001
0.75	3.691e-001	4.105e-001	4.433e-001	3.195e-001	3.032e-001
1	3.064e-001	3.441e-001	3.471e-001	2.707e-001	2.638e-001
2	1.603e-001	1.837e-001	1.667e-001	1.548e-001	1.360e-001
3	1.014e-001	1.184e-001	1.028e-001	1.005e-001	8.399e-002
4	7.202e-002	8.546e-002	6.991e-002	7.464e-002	5.808e-002

Source: Simi-Santa Rosa  
 Region: USGS 2008 California

Closest Distance: 9.94 km  
 Amplitude Units: Acceleration (g)  
 Magnitude: 6.90 Mw  
 Fractile: 0.50  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	3.681e-001	4.280e-001	3.260e-001	3.241e-001	3.945e-001	
0.05	4.218e-001	4.674e-001	3.710e-001	3.788e-001	4.701e-001	
0.1	5.747e-001	6.042e-001	5.273e-001	5.349e-001	6.324e-001	
0.2	7.618e-001	8.164e-001	7.497e-001	6.843e-001	7.966e-001	
0.3	8.388e-001	9.366e-001	8.104e-001	7.431e-001	8.651e-001	
0.4	8.064e-001	9.004e-001	7.952e-001	7.177e-001	8.121e-001	
0.5	7.472e-001	8.204e-001	7.335e-001	6.894e-001	7.455e-001	
0.75	5.901e-001	6.463e-001	5.621e-001	5.438e-001	6.083e-001	
1	4.814e-001	5.232e-001	4.373e-001	4.430e-001	5.220e-001	
2	3.139e-001	3.416e-001	2.676e-001	2.961e-001	3.504e-001	
3	2.278e-001	2.383e-001	1.933e-001	2.246e-001	2.548e-001	
4	1.845e-001	1.848e-001	1.634e-001	1.908e-001	1.989e-001	

Fractile: 0.84  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	5.894e-001	6.601e-001	5.712e-001	5.093e-001	6.170e-001	
0.05	6.834e-001	7.113e-001	6.664e-001	6.094e-001	7.462e-001	
0.1	9.376e-001	9.219e-001	9.653e-001	8.831e-001	9.801e-001	
0.2	1.249e+000	1.282e+000	1.356e+000	1.119e+000	1.239e+000	
0.3	1.401e+000	1.518e+000	1.484e+000	1.228e+000	1.374e+000	
0.4	1.366e+000	1.495e+000	1.448e+000	1.204e+000	1.318e+000	
0.5	1.290e+000	1.393e+000	1.352e+000	1.179e+000	1.236e+000	
0.75	1.058e+000	1.137e+000	1.069e+000	9.701e-001	1.057e+000	
1	8.798e-001	9.347e-001	8.345e-001	8.087e-001	9.412e-001	
2	6.159e-001	6.387e-001	5.520e-001	5.762e-001	6.968e-001	
3	4.629e-001	4.600e-001	4.055e-001	4.489e-001	5.374e-001	
4	3.860e-001	3.647e-001	3.503e-001	3.893e-001	4.397e-001	

Source: So Sierra Nevada  
 Region: USGS 2008 California  
 Closest Distance: 161.24 km  
 Amplitude Units: Acceleration (g)  
 Magnitude: 7.50 Mw  
 Fractile: 0.50  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	3.977e-002	5.012e-002	3.470e-002	4.394e-002	3.033e-002	
0.05	4.153e-002	4.798e-002	3.748e-002	4.831e-002	3.235e-002	
0.1	5.286e-002	5.870e-002	4.612e-002	6.071e-002	4.593e-002	
0.2	8.798e-002	1.103e-001	6.553e-002	1.007e-001	7.543e-002	
0.3	1.130e-001	1.519e-001	8.181e-002	1.273e-001	9.101e-002	
0.4	1.158e-001	1.600e-001	8.811e-002	1.218e-001	9.313e-002	
0.5	1.157e-001	1.572e-001	9.181e-002	1.234e-001	9.037e-002	
0.75	1.035e-001	1.431e-001	7.869e-002	1.109e-001	8.119e-002	
1	8.909e-002	1.208e-001	6.645e-002	9.433e-002	7.480e-002	
2	5.095e-002	6.541e-002	3.723e-002	5.460e-002	4.655e-002	
3	3.305e-002	4.215e-002	2.432e-002	3.582e-002	2.991e-002	
4	2.399e-002	3.052e-002	1.810e-002	2.678e-002	2.058e-002	

Fractile: 0.84

Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	6.723e-002	8.460e-002	6.080e-002	7.321e-002	5.032e-002	
0.05	7.225e-002	8.207e-002	6.733e-002	8.378e-002	5.584e-002	
0.1	9.380e-002	1.018e-001	8.442e-002	1.085e-001	8.057e-002	
0.2	1.560e-001	1.947e-001	1.185e-001	1.779e-001	1.330e-001	
0.3	2.018e-001	2.715e-001	1.498e-001	2.249e-001	1.610e-001	
0.4	2.074e-001	2.881e-001	1.605e-001	2.155e-001	1.656e-001	
0.5	2.091e-001	2.849e-001	1.692e-001	2.202e-001	1.620e-001	
0.75	1.906e-001	2.616e-001	1.494e-001	2.029e-001	1.486e-001	
1	1.655e-001	2.212e-001	1.264e-001	1.747e-001	1.397e-001	
2	9.704e-002	1.191e-001	7.469e-002	1.035e-001	9.090e-002	
3	6.352e-002	7.733e-002	4.853e-002	6.812e-002	6.011e-002	
4	4.648e-002	5.623e-002	3.623e-002	5.101e-002	4.244e-002	

Source: Ventura-Pitas Point  
 Region: USGS 2008 California  
 Closest Distance: 8.03 km  
 Amplitude Units: Acceleration (g)  
 Magnitude: 7.00 Mw  
 Fractile: 0.50

Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
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PGA	4.006e-001	3.936e-001	3.380e-001	4.179e-001	4.531e-001
0.05	4.534e-001	4.260e-001	3.850e-001	4.713e-001	5.315e-001
0.1	6.088e-001	5.572e-001	5.474e-001	6.304e-001	7.001e-001
0.2	8.171e-001	7.813e-001	7.925e-001	8.079e-001	8.868e-001
0.3	9.302e-001	9.150e-001	9.098e-001	9.120e-001	9.839e-001
0.4	9.057e-001	8.933e-001	8.747e-001	9.130e-001	9.418e-001
0.5	8.567e-001	8.243e-001	8.169e-001	9.068e-001	8.789e-001
0.75	7.003e-001	6.608e-001	6.506e-001	7.529e-001	7.369e-001
1	5.695e-001	5.398e-001	4.845e-001	6.169e-001	6.368e-001
2	3.518e-001	3.626e-001	2.597e-001	3.875e-001	3.973e-001
3	2.591e-001	2.798e-001	1.855e-001	2.807e-001	2.904e-001
4	2.147e-001	2.337e-001	1.501e-001	2.449e-001	2.301e-001

Fractile: 0.84

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA

Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	6.375e-001	6.073e-001	5.922e-001	6.491e-001	7.016e-001	
0.05	7.310e-001	6.487e-001	6.916e-001	7.490e-001	8.345e-001	
0.1	9.884e-001	8.510e-001	1.002e+000	1.029e+000	1.072e+000	
0.2	1.332e+000	1.229e+000	1.433e+000	1.302e+000	1.362e+000	
0.3	1.545e+000	1.486e+000	1.665e+000	1.485e+000	1.544e+000	
0.4	1.526e+000	1.486e+000	1.593e+000	1.513e+000	1.511e+000	
0.5	1.471e+000	1.401e+000	1.506e+000	1.535e+000	1.442e+000	
0.75	1.251e+000	1.162e+000	1.238e+000	1.333e+000	1.270e+000	
1	1.038e+000	9.640e-001	9.246e-001	1.121e+000	1.141e+000	
2	6.887e-001	6.768e-001	5.357e-001	7.536e-001	7.886e-001	
3	5.253e-001	5.396e-001	3.891e-001	5.610e-001	6.115e-001	
4	4.477e-001	4.611e-001	3.218e-001	4.995e-001	5.082e-001	

Source: Verdugo

Region: USGS 2008 California

Closest Distance: 72.62 km

Amplitude Units: Acceleration (g)

Magnitude: 6.90 Mw

Fractile: 0.50

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA

Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	8.138e-002	7.157e-002	1.121e-001	7.216e-002	6.972e-002	
0.05	8.937e-002	7.565e-002	1.169e-001	8.354e-002	8.136e-002	
0.1	1.224e-001	1.012e-001	1.528e-001	1.156e-001	1.199e-001	
0.2	1.831e-001	1.685e-001	2.352e-001	1.632e-001	1.654e-001	
0.3	2.060e-001	1.992e-001	2.691e-001	1.825e-001	1.731e-001	
0.4	1.944e-001	1.929e-001	2.553e-001	1.694e-001	1.599e-001	

0.5	1.805e-001	1.777e-001	2.407e-001	1.598e-001	1.437e-001
0.75	1.436e-001	1.437e-001	1.911e-001	1.264e-001	1.132e-001
1	1.145e-001	1.176e-001	1.456e-001	1.003e-001	9.450e-002
2	5.361e-002	5.948e-002	6.102e-002	4.974e-002	4.420e-002
3	3.187e-002	3.693e-002	3.368e-002	3.107e-002	2.580e-002
4	2.220e-002	2.603e-002	2.308e-002	2.263e-002	1.705e-002

Fractile: 0.84

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA

Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	1.379e-001	1.210e-001	1.964e-001	1.194e-001	1.149e-001	
0.05	1.554e-001	1.294e-001	2.100e-001	1.434e-001	1.388e-001	
0.1	2.163e-001	1.752e-001	2.797e-001	2.042e-001	2.062e-001	
0.2	3.236e-001	2.975e-001	4.255e-001	2.855e-001	2.859e-001	
0.3	3.676e-001	3.564e-001	4.925e-001	3.199e-001	3.016e-001	
0.4	3.479e-001	3.478e-001	4.650e-001	2.979e-001	2.811e-001	
0.5	3.265e-001	3.228e-001	4.437e-001	2.840e-001	2.554e-001	
0.75	2.658e-001	2.633e-001	3.630e-001	2.306e-001	2.063e-001	
1	2.136e-001	2.158e-001	2.770e-001	1.855e-001	1.762e-001	
2	1.029e-001	1.085e-001	1.224e-001	9.425e-002	8.645e-002	
3	6.151e-002	6.783e-002	6.722e-002	5.908e-002	5.191e-002	
4	4.313e-002	4.797e-002	4.621e-002	4.311e-002	3.521e-002	

Source: White Wolf

Region: USGS 2008 California

Closest Distance: 90.27 km

Amplitude Units: Acceleration (g)

Magnitude: 7.20 Mw

Fractile: 0.50

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA

Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	7.946e-002	7.638e-002	1.019e-001	6.840e-002	7.110e-002	
0.05	8.635e-002	7.842e-002	1.074e-001	7.786e-002	8.167e-002	
0.1	1.154e-001	1.031e-001	1.355e-001	1.035e-001	1.193e-001	
0.2	1.733e-001	1.797e-001	1.950e-001	1.494e-001	1.693e-001	
0.3	2.013e-001	2.211e-001	2.292e-001	1.734e-001	1.816e-001	
0.4	1.936e-001	2.186e-001	2.221e-001	1.630e-001	1.707e-001	
0.5	1.836e-001	2.045e-001	2.153e-001	1.589e-001	1.556e-001	
0.75	1.529e-001	1.696e-001	1.829e-001	1.334e-001	1.256e-001	
1	1.254e-001	1.411e-001	1.438e-001	1.097e-001	1.069e-001	
2	6.263e-002	7.434e-002	6.496e-002	5.894e-002	5.226e-002	
3	3.876e-002	4.716e-002	3.907e-002	3.768e-002	3.115e-002	
4	2.724e-002	3.375e-002	2.655e-002	2.776e-002	2.089e-002	



Fractile: 0.84

Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	1.340e-001	1.278e-001	1.786e-001	1.132e-001	1.163e-001	1.163e-001
0.05	1.494e-001	1.325e-001	1.930e-001	1.338e-001	1.383e-001	1.383e-001
0.1	2.028e-001	1.762e-001	2.481e-001	1.831e-001	2.038e-001	2.038e-001
0.2	3.047e-001	3.138e-001	3.526e-001	2.617e-001	2.907e-001	2.907e-001
0.3	3.574e-001	3.919e-001	4.195e-001	3.042e-001	3.141e-001	3.141e-001
0.4	3.451e-001	3.909e-001	4.045e-001	2.868e-001	2.981e-001	2.981e-001
0.5	3.307e-001	3.688e-001	3.969e-001	2.825e-001	2.747e-001	2.747e-001
0.75	2.819e-001	3.091e-001	3.474e-001	2.434e-001	2.278e-001	2.278e-001
1	2.333e-001	2.579e-001	2.737e-001	2.029e-001	1.985e-001	1.985e-001
2	1.198e-001	1.353e-001	1.303e-001	1.117e-001	1.020e-001	1.020e-001
3	7.469e-002	8.653e-002	7.798e-002	7.165e-002	6.259e-002	6.259e-002
4	5.283e-002	6.217e-002	5.314e-002	5.289e-002	4.310e-002	4.310e-002

Source: California Gridded  
 Region: USGS 2008 California  
 Closest Distance: 5.00 km  
 Amplitude Units: Acceleration (g)  
 Magnitude: 7.00 Mw  
 Fractile: 0.50

Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	4.705e-001	4.990e-001	4.538e-001	4.060e-001	5.252e-001	5.252e-001
0.05	5.279e-001	5.116e-001	5.516e-001	4.510e-001	6.020e-001	6.020e-001
0.1	6.777e-001	6.390e-001	7.702e-001	5.574e-001	7.497e-001	7.497e-001
0.2	9.025e-001	8.699e-001	1.089e+000	7.115e-001	9.394e-001	9.394e-001
0.3	9.748e-001	9.700e-001	1.169e+000	7.749e-001	9.856e-001	9.856e-001
0.4	9.735e-001	9.645e-001	1.156e+000	8.067e-001	9.666e-001	9.666e-001
0.5	9.284e-001	8.847e-001	1.084e+000	8.255e-001	9.200e-001	9.200e-001
0.75	7.761e-001	7.011e-001	8.821e-001	7.188e-001	8.024e-001	8.024e-001
1	6.334e-001	5.658e-001	6.599e-001	6.011e-001	7.069e-001	7.069e-001
2	3.203e-001	3.027e-001	3.290e-001	3.214e-001	3.778e-001	3.778e-001
3	1.964e-001	1.806e-001	2.016e-001	1.914e-001	2.258e-001	2.258e-001
4	1.351e-001	1.203e-001	1.420e-001	1.400e-001	1.474e-001	1.474e-001

Fractile: 0.84

Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	7.436e-001	7.488e-001	7.951e-001	6.269e-001	8.069e-001
0.05	8.468e-001	7.574e-001	9.908e-001	7.126e-001	9.352e-001
0.1	1.096e+000	9.485e-001	1.410e+000	9.045e-001	1.132e+000
0.2	1.464e+000	1.326e+000	1.970e+000	1.139e+000	1.422e+000
0.3	1.610e+000	1.525e+000	2.139e+000	1.252e+000	1.526e+000
0.4	1.630e+000	1.556e+000	2.106e+000	1.327e+000	1.532e+000
0.5	1.585e+000	1.463e+000	1.997e+000	1.388e+000	1.493e+000
0.75	1.380e+000	1.208e+000	1.675e+000	1.265e+000	1.370e+000
1	1.148e+000	9.944e-001	1.256e+000	1.086e+000	1.257e+000
2	6.130e-001	5.484e-001	6.600e-001	6.076e-001	7.278e-001
3	3.811e-001	3.314e-001	4.025e-001	3.639e-001	4.523e-001
4	2.648e-001	2.216e-001	2.842e-001	2.667e-001	3.039e-001

Source: Anacapa-Dume  
 Region: USGS 2008 California  
 Closest Distance: 19.71 km  
 Amplitude Units: Acceleration (g)  
 Magnitude: 7.20 Mw  
 Fractile: 0.50  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	3.107e-001	3.475e-001	3.072e-001	2.851e-001	3.475e-001
0.05	3.557e-001	3.741e-001	3.472e-001	3.251e-001	4.225e-001
0.1	4.870e-001	4.804e-001	4.808e-001	4.640e-001	5.812e-001
0.2	6.630e-001	7.222e-001	6.664e-001	6.135e-001	7.352e-001
0.3	7.497e-001	8.765e-001	7.673e-001	6.779e-001	7.875e-001
0.4	7.133e-001	8.584e-001	7.273e-001	6.499e-001	7.291e-001
0.5	6.662e-001	7.919e-001	6.810e-001	6.369e-001	6.615e-001
0.75	5.340e-001	6.260e-001	5.492e-001	5.225e-001	5.225e-001
1	4.285e-001	5.042e-001	4.073e-001	4.249e-001	4.347e-001
2	2.289e-001	2.900e-001	1.949e-001	2.252e-001	2.144e-001
3	1.430e-001	1.766e-001	1.302e-001	1.408e-001	1.297e-001
4	1.030e-001	1.234e-001	9.527e-002	1.093e-001	9.151e-002

Fractile: 0.84  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	4.997e-001	5.410e-001	5.383e-001	4.508e-001	5.420e-001
0.05	5.816e-001	5.757e-001	6.236e-001	5.266e-001	6.695e-001

0.1	8.014e-001	7.415e-001	8.801e-001	7.712e-001	9.009e-001
0.2	1.095e+000	1.149e+000	1.205e+000	1.011e+000	1.145e+000
0.3	1.263e+000	1.438e+000	1.404e+000	1.128e+000	1.253e+000
0.4	1.217e+000	1.441e+000	1.325e+000	1.097e+000	1.185e+000
0.5	1.158e+000	1.356e+000	1.255e+000	1.095e+000	1.098e+000
0.75	9.622e-001	1.106e+000	1.045e+000	9.353e-001	9.091e-001
1	7.852e-001	9.038e-001	7.772e-001	7.774e-001	7.846e-001
2	4.478e-001	5.415e-001	4.022e-001	4.383e-001	4.266e-001
3	2.894e-001	3.405e-001	2.731e-001	2.814e-001	2.733e-001
4	2.142e-001	2.435e-001	2.042e-001	2.231e-001	2.021e-001

Source: Chino

Region: USGS 2008 California

Closest Distance: 130.41 km

Amplitude Units: Acceleration (g)

Magnitude: 6.80 Mw

Fractile: 0.50

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA

Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	3.667e-002	3.463e-002	4.460e-002	4.052e-002	2.694e-002	
0.05	3.893e-002	3.507e-002	4.566e-002	4.553e-002	2.945e-002	
0.1	5.154e-002	4.533e-002	5.876e-002	5.975e-002	4.231e-002	
0.2	8.297e-002	7.822e-002	9.949e-002	8.837e-002	6.579e-002	
0.3	9.903e-002	9.682e-002	1.195e-001	1.046e-001	7.521e-002	
0.4	9.703e-002	9.564e-002	1.214e-001	9.763e-002	7.350e-002	
0.5	9.194e-002	8.942e-002	1.178e-001	9.204e-002	6.853e-002	
0.75	7.508e-002	7.474e-002	9.587e-002	7.271e-002	5.699e-002	
1	6.150e-002	6.103e-002	7.858e-002	5.675e-002	4.963e-002	
2	3.117e-002	3.032e-002	3.987e-002	2.703e-002	2.746e-002	
3	1.868e-002	1.863e-002	2.272e-002	1.668e-002	1.669e-002	
4	1.321e-002	1.306e-002	1.661e-002	1.209e-002	1.108e-002	

Fractile: 0.84

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA

Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	6.275e-002	5.986e-002	7.815e-002	6.759e-002	4.542e-002	
0.05	6.862e-002	6.175e-002	8.203e-002	7.907e-002	5.165e-002	
0.1	9.272e-002	8.104e-002	1.076e-001	1.069e-001	7.537e-002	
0.2	1.490e-001	1.418e-001	1.800e-001	1.564e-001	1.178e-001	
0.3	1.789e-001	1.769e-001	2.187e-001	1.850e-001	1.351e-001	
0.4	1.755e-001	1.754e-001	2.211e-001	1.728e-001	1.326e-001	
0.5	1.677e-001	1.647e-001	2.171e-001	1.644e-001	1.246e-001	
0.75	1.397e-001	1.383e-001	1.821e-001	1.331e-001	1.055e-001	

1	1.153e-001	1.128e-001	1.495e-001	1.051e-001	9.365e-002
2	6.014e-002	5.544e-002	7.998e-002	5.122e-002	5.390e-002
3	3.624e-002	3.426e-002	4.536e-002	3.172e-002	3.364e-002
4	2.581e-002	2.407e-002	3.325e-002	2.303e-002	2.290e-002

Source: Elsinore  
 Region: USGS 2008 California  
 Closest Distance: 109.79 km  
 Amplitude Units: Acceleration (g)  
 Magnitude: 7.85 Mw  
 Fractile: 0.50  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	9.603e-002	1.101e-001	1.079e-001	7.854e-002	8.753e-002	8.753e-002
0.05	1.029e-001	1.076e-001	1.180e-001	8.723e-002	9.864e-002	9.864e-002
0.1	1.315e-001	1.364e-001	1.385e-001	1.089e-001	1.420e-001	1.420e-001
0.2	1.942e-001	2.459e-001	1.611e-001	1.618e-001	2.080e-001	2.080e-001
0.3	2.331e-001	3.189e-001	1.856e-001	1.979e-001	2.302e-001	2.302e-001
0.4	2.321e-001	3.244e-001	1.912e-001	1.910e-001	2.218e-001	2.218e-001
0.5	2.273e-001	3.099e-001	1.939e-001	1.992e-001	2.061e-001	2.061e-001
0.75	2.039e-001	2.686e-001	1.846e-001	1.889e-001	1.734e-001	1.734e-001
1	1.786e-001	2.293e-001	1.625e-001	1.685e-001	1.541e-001	1.541e-001
2	1.076e-001	1.291e-001	1.005e-001	1.088e-001	9.200e-002	9.200e-002
3	7.335e-002	8.467e-002	7.611e-002	7.371e-002	5.893e-002	5.893e-002
4	5.286e-002	6.194e-002	5.292e-002	5.593e-002	4.064e-002	4.064e-002

Fractile: 0.84  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	1.609e-001	1.823e-001	1.891e-001	1.297e-001	1.424e-001	1.424e-001
0.05	1.766e-001	1.792e-001	2.119e-001	1.493e-001	1.661e-001	1.661e-001
0.1	2.289e-001	2.293e-001	2.535e-001	1.919e-001	2.408e-001	2.408e-001
0.2	3.376e-001	4.233e-001	2.913e-001	2.824e-001	3.535e-001	3.535e-001
0.3	4.097e-001	5.591e-001	3.397e-001	3.463e-001	3.938e-001	3.938e-001
0.4	4.105e-001	5.753e-001	3.483e-001	3.353e-001	3.831e-001	3.831e-001
0.5	4.066e-001	5.551e-001	3.574e-001	3.536e-001	3.604e-001	3.604e-001
0.75	3.735e-001	4.874e-001	3.506e-001	3.444e-001	3.117e-001	3.117e-001
1	3.306e-001	4.178e-001	3.093e-001	3.113e-001	2.840e-001	2.840e-001
2	2.054e-001	2.349e-001	2.015e-001	2.062e-001	1.789e-001	1.789e-001
3	1.414e-001	1.553e-001	1.519e-001	1.402e-001	1.183e-001	1.183e-001
4	1.026e-001	1.141e-001	1.059e-001	1.065e-001	8.383e-002	8.383e-002

Source: Garlock

Region: USGS 2008 California

Closest Distance: 72.17 km

Amplitude Units: Acceleration (g)

Magnitude: 7.72 Mw

Fractile: 0.50

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA

Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	1.294e-001	1.368e-001	1.589e-001	1.005e-001	1.213e-001
0.05	1.419e-001	1.376e-001	1.745e-001	1.142e-001	1.414e-001
0.1	1.862e-001	1.773e-001	2.125e-001	1.497e-001	2.052e-001
0.2	2.623e-001	3.040e-001	2.486e-001	2.145e-001	2.822e-001
0.3	3.004e-001	3.791e-001	2.728e-001	2.503e-001	2.993e-001
0.4	2.922e-001	3.783e-001	2.705e-001	2.393e-001	2.806e-001
0.5	2.804e-001	3.557e-001	2.648e-001	2.452e-001	2.560e-001
0.75	2.432e-001	3.002e-001	2.381e-001	2.250e-001	2.094e-001
1	2.092e-001	2.542e-001	2.014e-001	1.982e-001	1.827e-001
2	1.225e-001	1.413e-001	1.187e-001	1.248e-001	1.054e-001
3	8.238e-002	9.194e-002	8.731e-002	8.375e-002	6.652e-002
4	5.929e-002	6.680e-002	6.163e-002	6.321e-002	4.555e-002

Fractile: 0.84

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA

Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	2.160e-001	2.247e-001	2.784e-001	1.651e-001	1.957e-001
0.05	2.422e-001	2.265e-001	3.134e-001	1.940e-001	2.351e-001
0.1	3.216e-001	2.945e-001	3.889e-001	2.616e-001	3.414e-001
0.2	4.526e-001	5.178e-001	4.496e-001	3.716e-001	4.714e-001
0.3	5.247e-001	6.591e-001	4.994e-001	4.352e-001	5.052e-001
0.4	5.142e-001	6.664e-001	4.927e-001	4.183e-001	4.795e-001
0.5	4.998e-001	6.338e-001	4.881e-001	4.336e-001	4.437e-001
0.75	4.447e-001	5.430e-001	4.522e-001	4.093e-001	3.744e-001
1	3.867e-001	4.622e-001	3.833e-001	3.658e-001	3.356e-001
2	2.341e-001	2.571e-001	2.381e-001	2.364e-001	2.048e-001
3	1.589e-001	1.687e-001	1.743e-001	1.592e-001	1.335e-001
4	1.152e-001	1.231e-001	1.234e-001	1.204e-001	9.394e-002

Source: Malibu Coast

Region: USGS 2008 California

Closest Distance: 31.62 km

Amplitude Units: Acceleration (g)

Magnitude: 7.00 Mw

Fractile: 0.50

Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	1.688e-001	1.516e-001	2.117e-001	1.503e-001	1.615e-001
0.05	1.923e-001	1.648e-001	2.311e-001	1.779e-001	1.952e-001
0.1	2.692e-001	2.211e-001	3.109e-001	2.600e-001	2.848e-001
0.2	3.699e-001	3.338e-001	4.307e-001	3.474e-001	3.680e-001
0.3	4.034e-001	3.889e-001	4.625e-001	3.770e-001	3.850e-001
0.4	3.764e-001	3.683e-001	4.411e-001	3.484e-001	3.476e-001
0.5	3.440e-001	3.337e-001	4.056e-001	3.284e-001	3.084e-001
0.75	2.664e-001	2.625e-001	3.095e-001	2.559e-001	2.375e-001
1	2.140e-001	2.126e-001	2.407e-001	2.048e-001	1.979e-001
2	1.322e-001	1.318e-001	1.435e-001	1.277e-001	1.256e-001
3	9.719e-002	9.912e-002	1.034e-001	9.585e-002	9.042e-002
4	8.004e-002	8.198e-002	8.669e-002	8.131e-002	7.017e-002

Fractile: 0.84

Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	2.803e-001	2.480e-001	3.709e-001	2.440e-001	2.582e-001
0.05	3.257e-001	2.698e-001	4.150e-001	2.976e-001	3.202e-001
0.1	4.613e-001	3.649e-001	5.691e-001	4.468e-001	4.642e-001
0.2	6.351e-001	5.652e-001	7.790e-001	5.924e-001	6.039e-001
0.3	7.020e-001	6.730e-001	8.466e-001	6.472e-001	6.414e-001
0.4	6.602e-001	6.464e-001	8.034e-001	6.029e-001	5.883e-001
0.5	6.118e-001	5.929e-001	7.476e-001	5.763e-001	5.306e-001
0.75	4.878e-001	4.747e-001	5.887e-001	4.640e-001	4.236e-001
1	3.969e-001	3.871e-001	4.593e-001	3.778e-001	3.635e-001
2	2.602e-001	2.463e-001	2.957e-001	2.483e-001	2.505e-001
3	1.970e-001	1.906e-001	2.162e-001	1.910e-001	1.902e-001
4	1.665e-001	1.611e-001	1.852e-001	1.652e-001	1.544e-001

Source: Newport-Inglewood  
 Region: USGS 2008 California  
 Closest Distance: 77.95 km  
 Amplitude Units: Acceleration (g)  
 Magnitude: 7.50 Mw  
 Fractile: 0.50  
 Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	1.065e-001	1.080e-001	1.363e-001	8.689e-002	9.499e-002
0.05	1.166e-001	1.098e-001	1.473e-001	9.891e-002	1.103e-001
0.1	1.542e-001	1.428e-001	1.820e-001	1.307e-001	1.611e-001
0.2	2.208e-001	2.431e-001	2.286e-001	1.876e-001	2.238e-001
0.3	2.515e-001	2.990e-001	2.517e-001	2.179e-001	2.376e-001
0.4	2.434e-001	2.957e-001	2.488e-001	2.067e-001	2.225e-001
0.5	2.319e-001	2.767e-001	2.412e-001	2.073e-001	2.025e-001
0.75	1.971e-001	2.317e-001	2.091e-001	1.830e-001	1.646e-001
1	1.674e-001	1.952e-001	1.747e-001	1.566e-001	1.430e-001
2	9.466e-002	1.068e-001	9.833e-002	9.214e-002	8.142e-002
3	6.212e-002	6.902e-002	6.772e-002	6.063e-002	5.109e-002
4	4.454e-002	4.999e-002	4.801e-002	4.532e-002	3.485e-002

Fractile: 0.84

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA

Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	1.788e-001	1.789e-001	2.387e-001	1.432e-001	1.542e-001
0.05	2.004e-001	1.830e-001	2.647e-001	1.688e-001	1.851e-001
0.1	2.687e-001	2.404e-001	3.332e-001	2.296e-001	2.715e-001
0.2	3.845e-001	4.189e-001	4.136e-001	3.265e-001	3.790e-001
0.3	4.429e-001	5.245e-001	4.608e-001	3.803e-001	4.060e-001
0.4	4.311e-001	5.246e-001	4.533e-001	3.624e-001	3.842e-001
0.5	4.155e-001	4.958e-001	4.446e-001	3.674e-001	3.542e-001
0.75	3.619e-001	4.206e-001	3.972e-001	3.333e-001	2.963e-001
1	3.104e-001	3.558e-001	3.325e-001	2.892e-001	2.639e-001
2	1.811e-001	1.943e-001	1.972e-001	1.746e-001	1.585e-001
3	1.199e-001	1.266e-001	1.352e-001	1.153e-001	1.026e-001
4	8.661e-002	9.210e-002	9.612e-002	8.633e-002	7.189e-002

Source: Southern San Andreas

Region: USGS 2008 California

Closest Distance: 69.62 km

Amplitude Units: Acceleration (g)

Magnitude: 8.20 Mw

Fractile: 0.50

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA

Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	1.680e-001	1.886e-001	1.914e-001	1.236e-001	1.685e-001
0.05	1.840e-001	1.848e-001	2.165e-001	1.387e-001	1.959e-001
0.1	2.361e-001	2.340e-001	2.540e-001	1.764e-001	2.801e-001

0.2	3.264e-001	4.086e-001	2.580e-001	2.547e-001	3.841e-001
0.3	3.813e-001	5.237e-001	2.854e-001	3.041e-001	4.119e-001
0.4	3.769e-001	5.334e-001	2.871e-001	2.962e-001	3.909e-001
0.5	3.695e-001	5.096e-001	2.891e-001	3.185e-001	3.606e-001
0.75	3.364e-001	4.412e-001	2.840e-001	3.188e-001	3.015e-001
1	2.986e-001	3.799e-001	2.484e-001	2.987e-001	2.673e-001
2	1.901e-001	2.211e-001	1.626e-001	2.165e-001	1.602e-001
3	1.347e-001	1.467e-001	1.376e-001	1.516e-001	1.030e-001
4	9.801e-002	1.078e-001	9.618e-002	1.168e-001	7.129e-002

Fractile: 0.84

Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	2.778e-001	3.051e-001	3.353e-001	2.019e-001	2.690e-001	
0.05	3.106e-001	2.982e-001	3.889e-001	2.338e-001	3.213e-001	
0.1	4.020e-001	3.801e-001	4.650e-001	3.058e-001	4.571e-001	
0.2	5.539e-001	6.825e-001	4.667e-001	4.380e-001	6.285e-001	
0.3	6.566e-001	8.963e-001	5.225e-001	5.256e-001	6.820e-001	
0.4	6.556e-001	9.278e-001	5.229e-001	5.152e-001	6.566e-001	
0.5	6.521e-001	8.987e-001	5.330e-001	5.612e-001	6.156e-001	
0.75	6.110e-001	7.930e-001	5.393e-001	5.786e-001	5.330e-001	
1	5.494e-001	6.877e-001	4.727e-001	5.505e-001	4.867e-001	
2	3.622e-001	4.020e-001	3.262e-001	4.101e-001	3.104e-001	
3	2.597e-001	2.691e-001	2.747e-001	2.883e-001	2.067e-001	
4	1.902e-001	1.985e-001	1.926e-001	2.225e-001	1.470e-001	

Source: San Jacinto  
 Region: USGS 2008 California  
 Closest Distance: 151.31 km  
 Amplitude Units: Acceleration (g)  
 Magnitude: 7.88 Mw  
 Fractile: 0.50

Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

	1	2	3	4	5	6
PGA	6.729e-002	8.205e-002	6.386e-002	6.312e-002	6.013e-002	
0.05	7.025e-002	7.764e-002	6.947e-002	6.889e-002	6.502e-002	
0.1	8.743e-002	9.462e-002	7.982e-002	8.313e-002	9.215e-002	
0.2	1.372e-001	1.795e-001	9.660e-002	1.268e-001	1.457e-001	
0.3	1.749e-001	2.495e-001	1.189e-001	1.606e-001	1.705e-001	
0.4	1.797e-001	2.642e-001	1.286e-001	1.559e-001	1.703e-001	
0.5	1.804e-001	2.602e-001	1.355e-001	1.638e-001	1.621e-001	
0.75	1.682e-001	2.379e-001	1.364e-001	1.575e-001	1.410e-001	
1	1.490e-001	2.030e-001	1.247e-001	1.405e-001	1.277e-001	



2	9.083e-002	1.135e-001	8.023e-002	9.089e-002	7.869e-002
3	6.200e-002	7.425e-002	6.125e-002	6.164e-002	5.088e-002
4	4.464e-002	5.428e-002	4.224e-002	4.682e-002	3.520e-002

Fractile: 0.84

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA

Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	1.131e-001	1.371e-001	1.119e-001	1.046e-001	9.867e-002
0.05	1.213e-001	1.309e-001	1.248e-001	1.186e-001	1.108e-001
0.1	1.534e-001	1.613e-001	1.461e-001	1.473e-001	1.589e-001
0.2	2.404e-001	3.127e-001	1.747e-001	2.226e-001	2.517e-001
0.3	3.092e-001	4.413e-001	2.177e-001	2.823e-001	2.956e-001
0.4	3.195e-001	4.719e-001	2.342e-001	2.746e-001	2.973e-001
0.5	3.240e-001	4.688e-001	2.498e-001	2.915e-001	2.858e-001
0.75	3.087e-001	4.332e-001	2.591e-001	2.875e-001	2.549e-001
1	2.761e-001	3.708e-001	2.373e-001	2.600e-001	2.363e-001
2	1.732e-001	2.066e-001	1.609e-001	1.722e-001	1.532e-001
3	1.195e-001	1.362e-001	1.223e-001	1.172e-001	1.022e-001
4	8.659e-002	1.000e-001	8.456e-002	8.919e-002	7.261e-002

Source: Santa Monica

Region: USGS 2008 California

Closest Distance: 20.42 km

Amplitude Units: Acceleration (g)

Magnitude: 7.40 Mw

Fractile: 0.50

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA

Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA

Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA

Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	3.096e-001	3.419e-001	2.972e-001	2.742e-001	3.335e-001
0.05	3.506e-001	3.639e-001	3.354e-001	3.133e-001	3.994e-001
0.1	4.743e-001	4.651e-001	4.586e-001	4.435e-001	5.519e-001
0.2	6.454e-001	7.120e-001	6.208e-001	5.881e-001	7.014e-001
0.3	7.403e-001	8.783e-001	7.162e-001	6.534e-001	7.576e-001
0.4	7.093e-001	8.700e-001	6.762e-001	6.279e-001	7.069e-001
0.5	6.695e-001	8.113e-001	6.348e-001	6.256e-001	6.454e-001
0.75	5.485e-001	6.537e-001	5.175e-001	5.294e-001	5.167e-001
1	4.451e-001	5.336e-001	3.843e-001	4.423e-001	4.353e-001
2	2.446e-001	3.128e-001	1.852e-001	2.530e-001	2.274e-001
3	1.589e-001	1.972e-001	1.321e-001	1.635e-001	1.429e-001
4	1.169e-001	1.405e-001	9.766e-002	1.277e-001	1.015e-001

Fractile: 0.84

Column 1: Spectral Period

Column 2: Acceleration (g) for: Weighted Mean of Attenuation Equations  
Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	4.986e-001	5.330e-001	5.208e-001	4.343e-001	5.209e-001
0.05	5.722e-001	5.607e-001	6.024e-001	5.085e-001	6.344e-001
0.1	7.792e-001	7.189e-001	8.394e-001	7.388e-001	8.586e-001
0.2	1.063e+000	1.134e+000	1.123e+000	9.711e-001	1.096e+000
0.3	1.243e+000	1.443e+000	1.311e+000	1.090e+000	1.208e+000
0.4	1.207e+000	1.462e+000	1.232e+000	1.062e+000	1.151e+000
0.5	1.160e+000	1.391e+000	1.170e+000	1.078e+000	1.073e+000
0.75	9.860e-001	1.156e+000	9.844e-001	9.486e-001	8.994e-001
1	8.143e-001	9.567e-001	7.334e-001	8.098e-001	7.857e-001
2	4.777e-001	5.841e-001	3.821e-001	4.924e-001	4.523e-001
3	3.213e-001	3.803e-001	2.771e-001	3.267e-001	3.011e-001
4	2.428e-001	2.772e-001	2.094e-001	2.605e-001	2.243e-001

Probabilistic Spectra results for EZ-FRISK 7.65 Build 004

ANNUAL FREQUENCY OF EXCEEDANCE: 4.041e-004  
 RETURN PERIOD: 2474.9  
 PROBABILITY OF EXCEEDENCE: 2.0% IN 50.0 YEARS

Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Mean  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	9.995e-001	1.007e+000	9.678e-001	9.232e-001	1.057e+000
0.05	1.121e+000	1.048e+000	1.157e+000	1.041e+000	1.225e+000
0.1	1.457e+000	1.293e+000	1.693e+000	1.328e+000	1.486e+000
0.2	2.000e+000	1.878e+000	2.373e+000	1.686e+000	1.936e+000
0.3	2.334e+000	2.305e+000	2.786e+000	2.035e+000	2.206e+000
0.4	2.345e+000	2.369e+000	2.662e+000	2.147e+000	2.200e+000
0.5	2.310e+000	2.293e+000	2.530e+000	2.275e+000	2.146e+000
0.75	2.059e+000	1.990e+000	2.127e+000	2.154e+000	1.967e+000
1	1.716e+000	1.637e+000	1.565e+000	1.890e+000	1.781e+000
2	1.124e+000	1.126e+000	9.023e-001	1.268e+000	1.176e+000
3	8.004e-001	8.103e-001	6.415e-001	8.667e-001	8.748e-001
4	6.416e-001	6.411e-001	5.096e-001	7.057e-001	7.074e-001

ANNUAL FREQUENCY OF EXCEEDANCE: 1.026e-003  
 RETURN PERIOD: 974.8  
 PROBABILITY OF EXCEEDENCE: 5.0% IN 50.0 YEARS

Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Mean  
 Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
 Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
 Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
 Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	7.594e-001	7.789e-001	7.389e-001	7.092e-001	8.072e-001
0.05	8.706e-001	8.297e-001	8.815e-001	8.006e-001	9.724e-001
0.1	1.142e+000	1.065e+000	1.252e+000	1.070e+000	1.179e+000
0.2	1.495e+000	1.443e+000	1.748e+000	1.317e+000	1.469e+000
0.3	1.765e+000	1.795e+000	2.046e+000	1.523e+000	1.680e+000
0.4	1.750e+000	1.821e+000	1.944e+000	1.582e+000	1.643e+000
0.5	1.692e+000	1.720e+000	1.829e+000	1.647e+000	1.565e+000
0.75	1.439e+000	1.421e+000	1.491e+000	1.471e+000	1.372e+000
1	1.204e+000	1.193e+000	1.128e+000	1.260e+000	1.238e+000
2	7.479e-001	7.733e-001	6.231e-001	8.181e-001	7.827e-001
3	5.148e-001	5.333e-001	4.308e-001	5.473e-001	5.499e-001
4	4.032e-001	4.137e-001	3.311e-001	4.405e-001	4.285e-001

ANNUAL FREQUENCY OF EXCEEDANCE: 2.107e-003  
 RETURN PERIOD: 474.6  
 PROBABILITY OF EXCEEDENCE: 10.0% IN 50.0 YEARS

Column 1: Spectral Period  
 Column 2: Acceleration (g) for: Mean

Column 3: Acceleration (g) for: Abrahamson-Silva (2008) NGA  
Column 4: Acceleration (g) for: Boore-Atkinson (2008) NGA  
Column 5: Acceleration (g) for: Campbell-Bozorgnia (2008) NGA  
Column 6: Acceleration (g) for: Chiou-Youngs (2008) NGA

1	2	3	4	5	6
PGA	5.902e-001	6.121e-001	5.832e-001	5.432e-001	6.224e-001
0.05	6.865e-001	6.665e-001	6.919e-001	6.288e-001	7.481e-001
0.1	9.228e-001	8.629e-001	9.899e-001	8.636e-001	9.785e-001
0.2	1.194e+000	1.178e+000	1.329e+000	1.088e+000	1.188e+000
0.3	1.357e+000	1.394e+000	1.520e+000	1.209e+000	1.306e+000
0.4	1.329e+000	1.392e+000	1.436e+000	1.218e+000	1.262e+000
0.5	1.275e+000	1.311e+000	1.357e+000	1.231e+000	1.194e+000
0.75	1.083e+000	1.096e+000	1.119e+000	1.074e+000	1.039e+000
1	8.946e-001	9.131e-001	8.510e-001	9.040e-001	9.139e-001
2	5.174e-001	5.446e-001	4.554e-001	5.435e-001	5.324e-001
3	3.476e-001	3.657e-001	3.074e-001	3.631e-001	3.600e-001
4	2.657e-001	2.775e-001	2.299e-001	2.886e-001	2.710e-001

APPENDIX F

SITE-SPECIFIC LIQUEFACTION EVALUATION

## LIQUEFACTION CALCULATIONS

Liquefaction analyses were performed on Boring B-1 and sounding data from CPT-1b, CPT-2, CPT-3 and CPT-4. The symbols, method and N values used in the liquefaction analyses including detail computations for typical CPT are presented in this Appendix. Below is a table summarizing the estimated due to liquefaction for each liquefaction analysis.

Boring or CPT	Total Settlement (in inches)
Boring B-1	2.31
CPT-1b	1.65
CPT-2	1.71
CPT-3	2.33
CPT-4	1.74

The general liquefaction analyses including computations for both CPT data are also presented in this Appendix.

## CONCLUSIONS

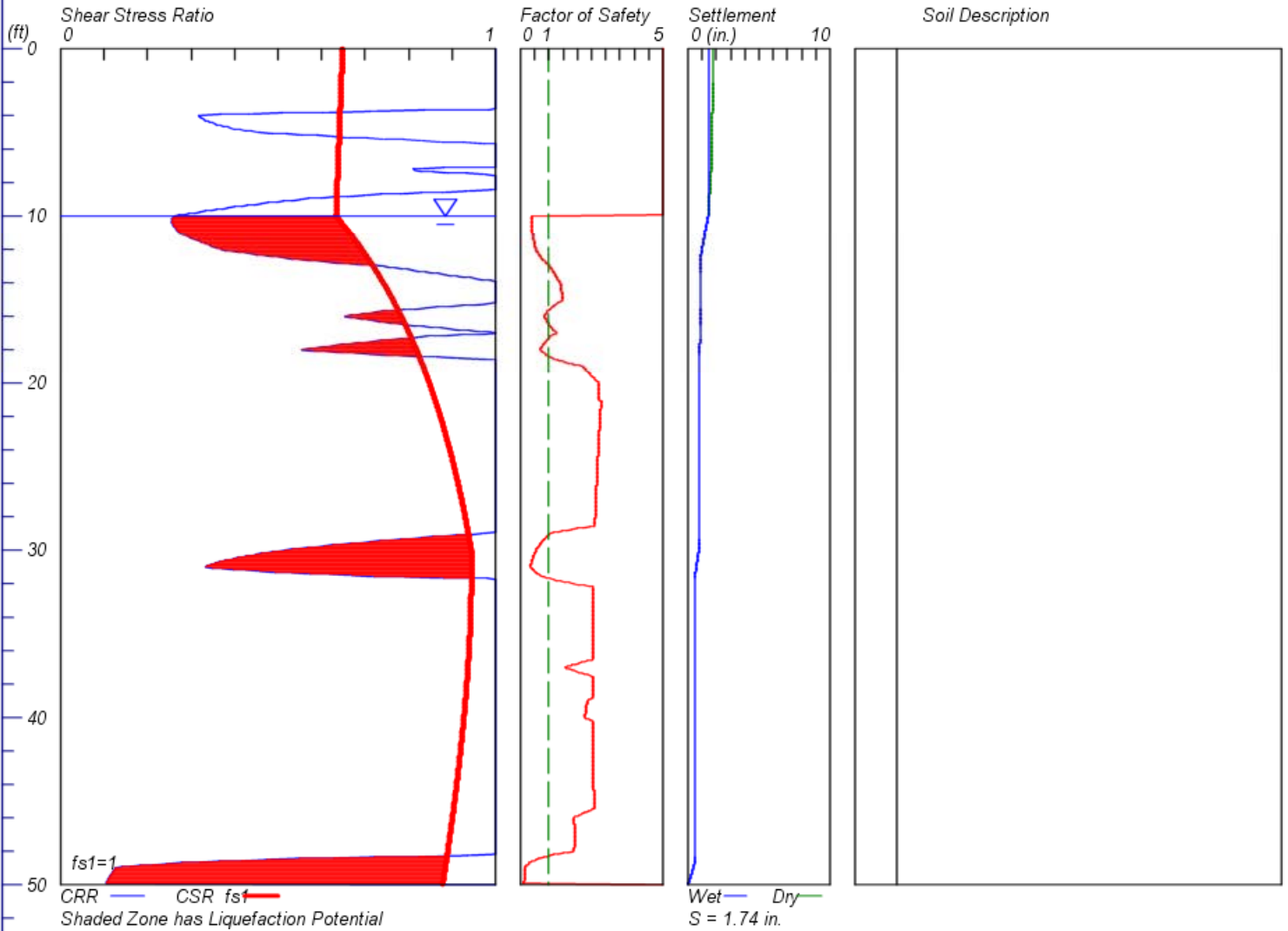
The subsurface soils are anticipated to locally liquefy under the design seismic event. The estimated total seismic settlement is 2.33 inches. The maximum differential settlement can be estimated by finding the largest difference between the liquefaction analyses. As such, the differential settlement can be estimated to be on the order of 0.68 inches (the difference between CPT-1b's and CPT-2's total settlement) in a horizontal distance of approximately 30 feet. The potential seismically induced settlement in surface soils can be mitigate with proper foundation design and ground modification or ground improvement as recommended herein.

# LIQUEFACTION ANALYSIS

## Liquefaction

Hole No.=CPT-4 Water Depth=10 ft Surface Elev.=0

Magnitude=7.04  
Acceleration=.997g



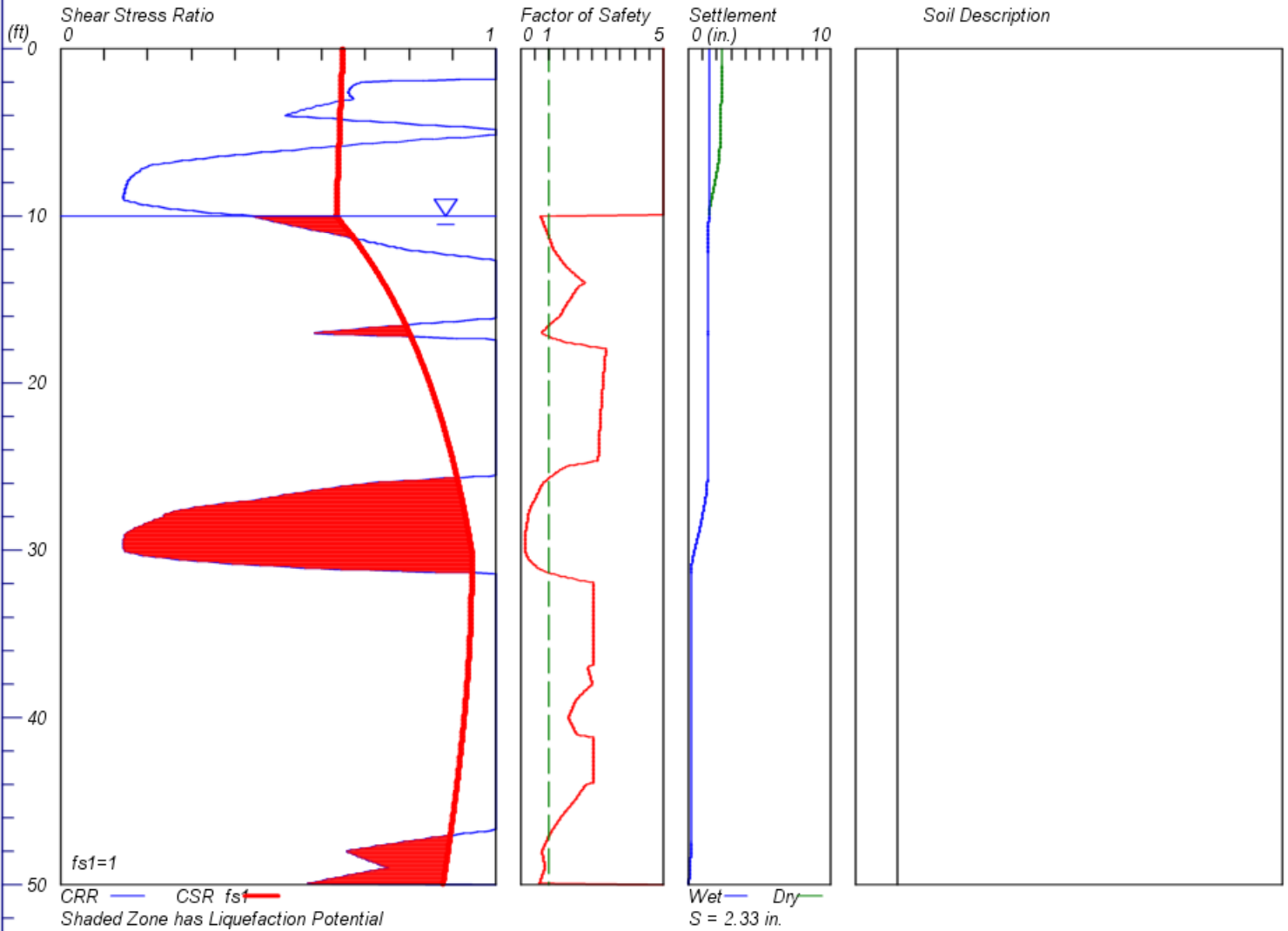
LiquefyPro CivilTech Software USA www.civilttech.com

# LIQUEFACTION ANALYSIS

## Liquefaction

Hole No.=CPT-3 Water Depth=10 ft Surface Elev.=0

Magnitude=7.04  
Acceleration=.997g



LiquefyPro CivilTech Software USA www.civiltech.com

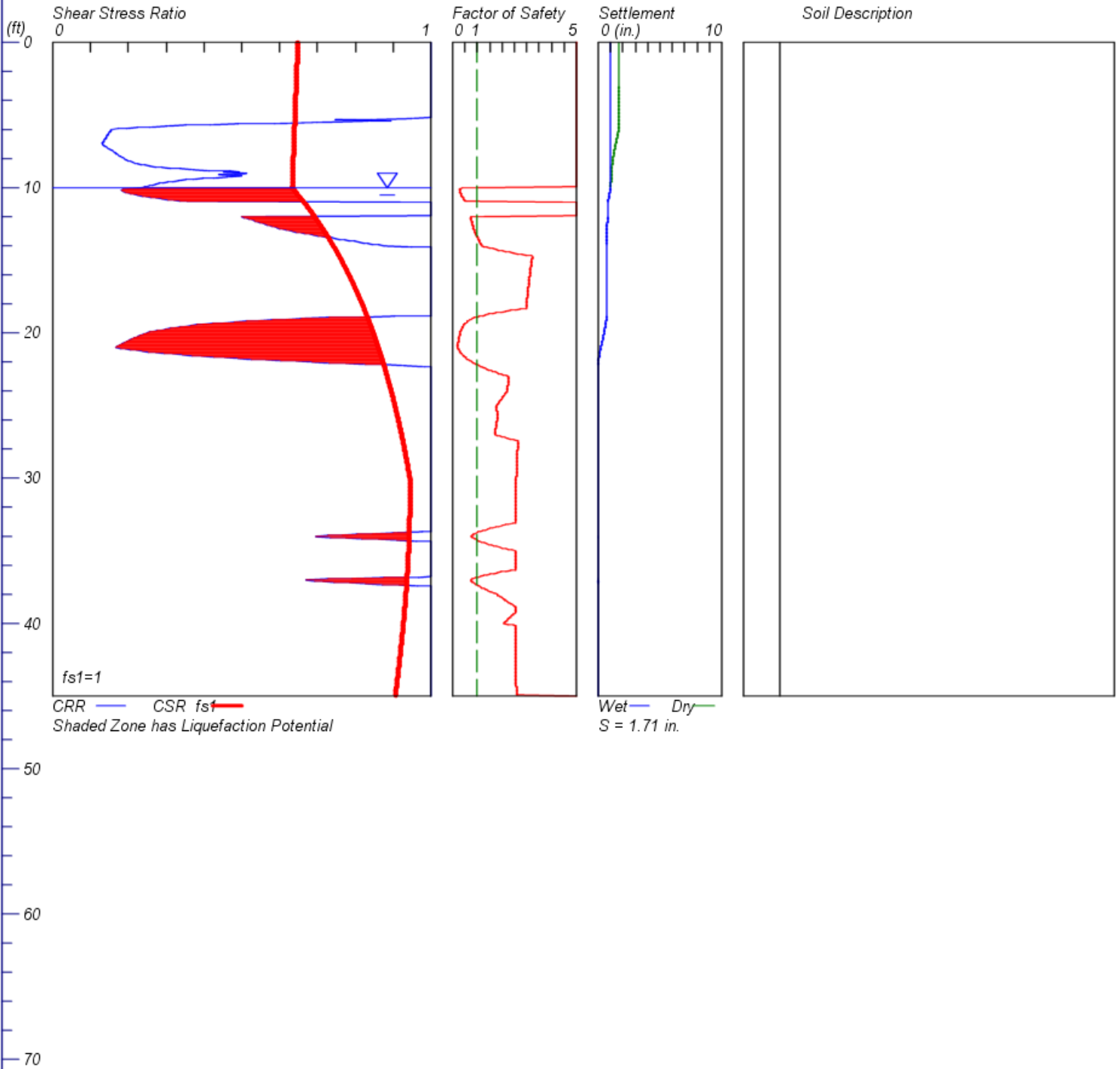


# LIQUEFACTION ANALYSIS

## Liquefaction

Hole No.=CPT-2 Water Depth=10 ft Surface Elev.=0

Magnitude=7.04  
Acceleration=.997g

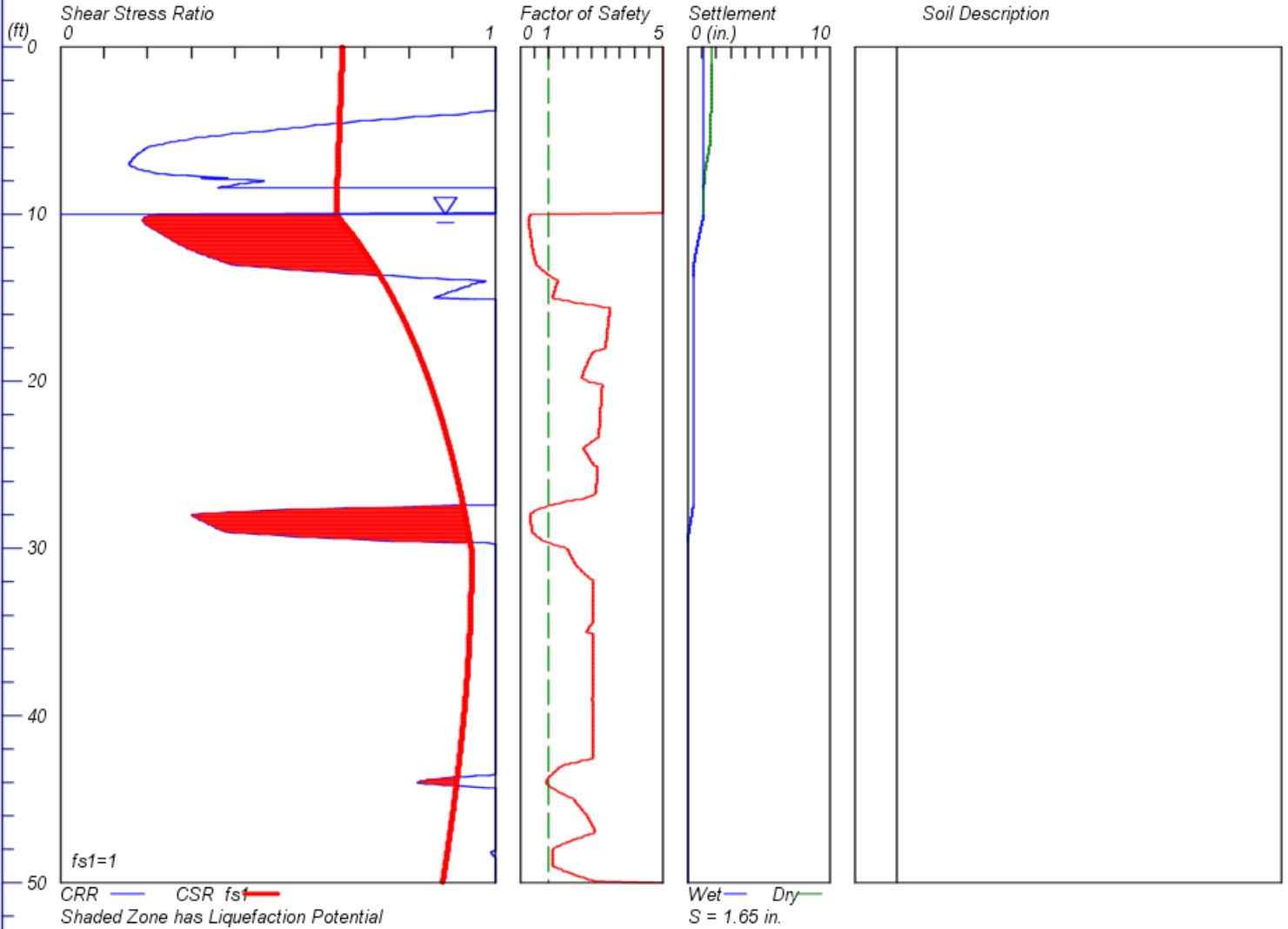


# LIQUEFACTION ANALYSIS

## Liquefaction

Hole No.=CPT-1b Water Depth=10 ft Surface Elev.=0

Magnitude=7.04  
Acceleration=.997g



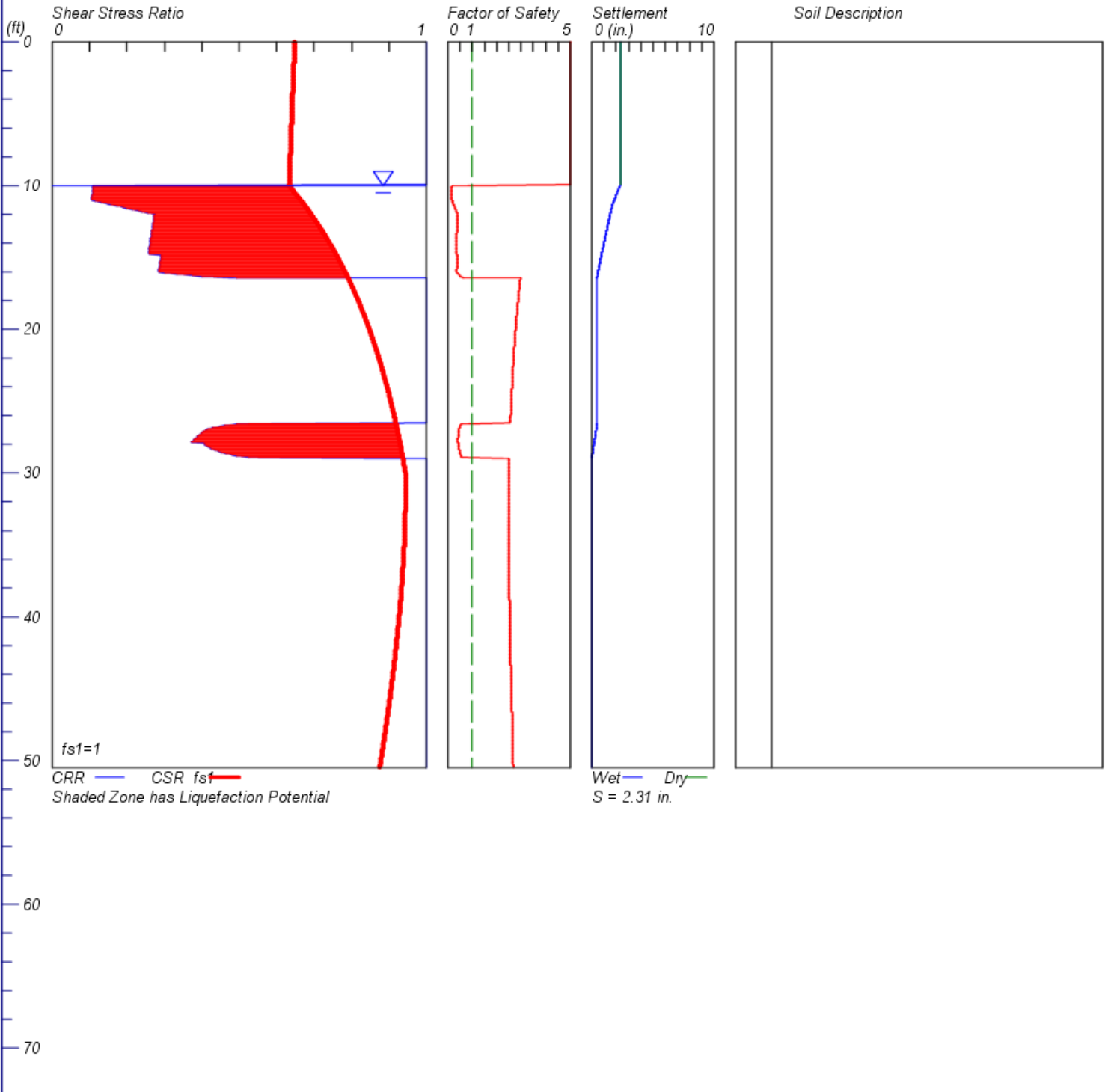
LiquefyPro CivilTech Software USA www.civiltech.com

# LIQUEFACTION ANALYSIS

## CSUCI Student Housing Phase III

Hole No.=B-1 Water Depth=10 ft

Magnitude=7.04  
Acceleration=.997g







Winston H. Hickox  
Agency Secretary  
California Environmental  
Protection Agency

## Department of Toxic Substances Control

Edwin F. Lowry, Director  
1011 N. Grandview Avenue  
Glendale, California 91201



Gray Davis  
Governor

March 6, 2001

Mr. Salvador Godoy, Director  
Maintenance, Operations and Facilities  
Oxnard School District  
1055 South C Street  
Oxnard, California 93030

### NOTICE OF THE PRELIMINARY ENDANGERMENT ASSESSMENT DETERMINATION FOR THE PROPOSED THURGOOD MARSHALL ELEMENTARY SCHOOL SITE AT GONZALES AND PATTERSON ROADS, OXNARD, CALIFORNIA

Dear Mr. Godoy:

The Department of Toxic Substances Control (DTSC) has reviewed correspondence, submitted by ENSR, dated February 28, 2001, indicating that the Oxnard School District (OSD) has complied with all public participation requirements set forth in the California Education Code, Section 17213.1(a)(6). According to the correspondence, the OSD held a public hearing on February 8, 2001, and a public review period, ending February 11, 2001, on the Draft Final Preliminary Endangerment Assessment (PEA).

During the public review period, comments pertaining to the PEA were received by OSD. The PEA comments and a response to comments prepared by OSD have been reviewed by DTSC. The comments received were adequately addressed by the OSD response and the PEA investigation. Therefore, no revision of the PEA was necessary.

Based on the findings of the PEA investigation and compliance with the public participation requirements, DTSC hereby approves the Draft Final PEA, dated January 2001, as the Final PEA. The PEA report indicates that no actual or potential hazardous materials release was indicated which would pose a threat to human health or the environment under any land use, therefore DTSC concurs that no further investigation is required for the site. As with any real property, additional investigation and/or cleanup may be required if previously unidentified contamination is discovered at the site.

*The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption.  
For a list of simple ways you can reduce demand and cut your energy costs, see our Web-site at [www.dtsc.ca.gov](http://www.dtsc.ca.gov).*

♻️ Printed on Recycled Paper

**Mr. Salvador Godoy**  
**March 6, 2001**  
**Page 2**

**If you have any questions, please contact Mr. Pete Cooke, Project Manager at (818) 551-2193 or me at (818) 551-2821.**

**Sincerely,**



**Sharon Fair**  
**Branch Chief**  
**School Property Evaluation and Cleanup Division**

**cc: Gerald Hels. REA II**  
**ENSR**  
**1220 Avenida Acaso**  
**Camarillo, California 93012**

**Mr. Jim Bush**  
**School Facilities Planning Division**  
**California Department of Education**  
**660 J Street, Suite 350**  
**Sacramento, California 95814**

DRAFT FINAL

**Results of Preliminary Endangerment Assessment  
Voluntary Cleanup Agreement HSA-A-99/00-147**

Proposed Thurgood Marshall Elementary School Site  
Located at Gonzales and Patterson Roads  
Oxnard, California

ENSR Document No. 5197-002-600

Prepared for  
Oxnard School District  
Oxnard, California

---

## EXECUTIVE SUMMARY

The Oxnard School District conducted a three-phase Preliminary Endangerment Assessment (PEA) for the California Environmental Protection Agency Department of Toxic Substances Control (DTSC) at the proposed Thurgood Marshall Elementary School Property located at Gonzales and Patterson Roads, Oxnard California. This PEA assessment was conducted consistent with DTSC guidelines to 1) determine if there has been a release of hazardous substances from historic agricultural and nearby former landfill operations, 2) identify if the presence of these chemicals pose a potential risk to human health and the environment, and 3) confirm that contaminated soils have been removed from the site. The results of the PEA will be used to assist the DTSC in determining if the site meets the current DTSC model as acceptable for an elementary school setting.

Due to site-specific conditions, the PEA process for the Thurgood Marshall site extended from July to October 2000. The chronology of PEA-related events is summarized below:

- July 5, 2000 - DTSC approved the initial phase PEA Workplan that described the initial phase of the PEA program including soil, groundwater, soil gas, and ambient air assessment over the entire school site.
- July 13 and 14, 2000 – The Oxnard School District (OSD) conducted the initial phase of the PEA field work as approved by DTSC in the PEA Workplan. This phase included assessment of soil, groundwater, soil gas, and ambient air for organochlorine pesticides (OCPs), volatile organic compounds (VOCs), total petroleum hydrocarbon (TPH), polychlorinated biphenyls (PCBs), methane, and metals at locations scattered sitewide. The results of the initial phase of the PEA indicated that the OCPs, p,p'-dichloro-diphenyl-trichloroethane (DDT), p,p'-dichloro-diphenyldi-chloroethene (DDE), dichlorodiphenyldichloroethane (DDD), and toxaphene were present at several locations primarily in the southeastern half of the subject site at concentrations in excess of the risk-based cleanup levels determined in Section 7.0 below. The DTSC reviewed the draft PEA report and agreed with the recommendation that additional site assessment be conducted to evaluate the lateral and vertical extent of soil contamination requiring remediation. The remainder of the subject site and the other chemicals assessed did not require further evaluation, based on the assessment results and risk-based evaluation, conducted in Section 7.0 below.
- August 2000 – Prior to completion of an additional site assessment workplan, the current agricultural site manager, Ag Land Services, Inc. (Ag Land) determined to preserve as much top soil as possible for future agricultural use, by relocating the DDT and toxaphene-containing near-surface soil from the subject site to nearby areas on the same property.



- August 30, 2000 – To provide additional information regarding the extent of toxaphene-containing soil requiring remediation, the OSD installed an additional 17 soil borings (GP-21 through GP-37) in the east central, northeast, and southwest portions of the subject site to further evaluate the extent of DDT and toxaphene-containing soil. This assessment was conducted in accordance with the original PEA Workplan, Quality Assurance/Quality Control (QA/QC) and Quality Assurance Project Plan requirements. The analytical program included OCPs with the results only for DDD, DDE, DDT, DDT (total), and toxaphene being reported. The analytical results were used to further delineate the lateral and vertical extent of DDD, DDE, DDT, and toxaphene-containing soil requiring action at the subject site.
- September 26 through October 31, 2000 – The current site manager conducted an agricultural soil relocation program to relocate soils from about the southeastern two-thirds of the site to nearby fields also operated under Ag Land management. The field areas receiving the relocated soil from the subject site are located west of the proposed school site. The relocated soils were spread on an area about 250-feet wide (east-west) and 1,000-feet long (north-south) north of Gonzales Road, west of the subject site.

It is ENSR's understanding that the receiving field will be about 3 feet higher than before and will be graded flat with a slight slope to the southwest in preparation for the planting of new row crops. The relocation transportation program was restricted to the use of Ag Land managed farm roads only, and did not cross or use public right-of-way. As the agricultural soil relocation program was being undertaken, ENSR, on behalf of the OSD, provided oversight and recommendations to the soil relocation process when requested. ENSR also collected confirmatory soil samples for analysis of OCPs by U.S. Environmental Protection Agency (U.S. EPA) Method 8081A. These samples were collected as the soils relocation program progressed in order to: 1) guide the progress of excavation, and 2) confirm the successful relocation of DDD, DDE, DDT, and toxaphene-containing soil.

Approximately, 94 confirmatory soil samples were collected for analysis. These samples were collected, handled, and analyzed in strict conformance with the PEA Workplan/QAPP requirements.

The initial PEA phase, which included 114 soil, five groundwater, four soil gas and one ambient air samples indicated that the PCB soil sample analytical results did not report any detectable concentrations above the laboratory quantitation limits. The results of the PEA revealed laterally-limited low levels of OCPs: toxaphene, DDT, DDE, DDD, endosulfan II, endosulfan sulfate, chlordane, and endrin within the surficial soils to a depth of 5 feet bgs. The OCP concentrations detected were the highest in surficial samples (0.5 feet) generally collected in the borings from the

southeastern half of the site. The OCP concentrations decreased with depth, and in most cases, were not detectable at 4 feet below ground surface (bgs). The data do not suggest that pesticide disposal, storage, or significant spillage had occurred on the property.

Groundwater samples tested did not report any detectable concentrations of TPH, VOC, PCB, and OCP compounds exceeding the laboratory detection limits. However, low concentrations (non-hazardous) of copper and vanadium were reported in one (copper) or all (vanadium) of the groundwater samples analyzed.

The soil vapor VOC data suggest general uniformity across the site and are in general agreement with and comparable to the ambient air data results. The magnitude of the compounds detected in the soil vapor suggests that there has not been a release of VOCs at the site. Neither methyl bromide nor methane gases were reported above laboratory practical quantitation limits in the soil vapor samples analyzed.

A screening level evaluation of the potential for chronic health risk and hazards from OCP-impacted soil was conducted consistent with DTSC PEA guidelines. Chemicals of potential concern (COPCs) were selected from compounds reported above background in the soil samples collected at 0.5, 2, and 4 feet bgs. The COPCs included as part of the PEA screening level evaluation were toxaphene, DDT, DDE, and DDD. The concentrations of the other OCPs detected were low and did not impact the risk evaluation conducted. The potential exposure pathways identified for the site were ingestion, dermal contact, and inhalation of contaminated soils or particulates.

The initial PEA phase screening level risk assessment yielded a cumulative excess cancer risk of greater than 1 in 1,000,000 ( $10^{-6}$ ) based on the ingestion and dermal contact pathways for surficial and subsurface soils impacted by toxaphene, DDT, DDE, and DDD (the range of risk for the site was between  $1.3 \times 10^{-7}$  and  $4.4 \times 10^{-6}$ ). The range of risks are near the threshold of  $10^{-6}$  and were determined using conservative (i.e., intentionally biased to be most protective) model assumptions that provide a reasonable maximum exposure to the COPCs in a residential setting. Based on the model assumptions, the inhalation pathway does not provide a significant cancer risk ( $>10^{-6}$ ) for soils impacted by toxaphene, DDT, DDE, and DDD.

Toxaphene and DDT provide the most significant individual contribution to the potential chronic health risk along the ingestion and dermal contact pathways. DDT, DDD, and DDE do not, individually, provide an excess cancer risk above  $10^{-6}$ .

At or below a concentration of 0.38 mg/kg in soil, toxaphene alone does not produce a risk greater than  $10^{-6}$ . This concentration represents the threshold value under the assumptions of exposure in the PEA model, that the State of California would typically consider as acceptable to protect human health. However, lower toxaphene concentrations, when combined with onsite DDD, DDE

and DDT combined, could yield cumulative health risk levels of greater than  $10^{-6}$ . Therefore, soils removal at the subject site was governed by site-specific combinations of DDD, DDE, DDT and toxaphene concentrations determined to result in a less than  $10^{-6}$  health risk.

The results of the second and third phases of the PEA were used to identify the initial required extent of the agricultural soil relocation program, to progressively guide the agricultural soil relocation program as it was being conducted, and to verify that the agricultural soil relocation program had excavated and relocated offsite fields, soils exhibiting DDD, DDE, DDT and toxaphene concentrations in excess of the various risk-based cleanup levels identified in Section 7.0 (i.e., identified where it was acceptable to stop excavating soil).

As discussed in this report, the results of the three phases of PEA soil sampling indicate that the agricultural soil relocation program conducted by Ag Land successfully removed the soil containing DDD, DDE, DDT, and toxaphene at concentrations in excess of the risk-based cleanup level that were present on the proposed Thurgood Marshall Elementary School site. This soil was relocated for agricultural reuse on nearby agricultural fields. The subject site is therefore, eligible for an No Further Action determination by the DTSC (as discussed in Section 8.0).



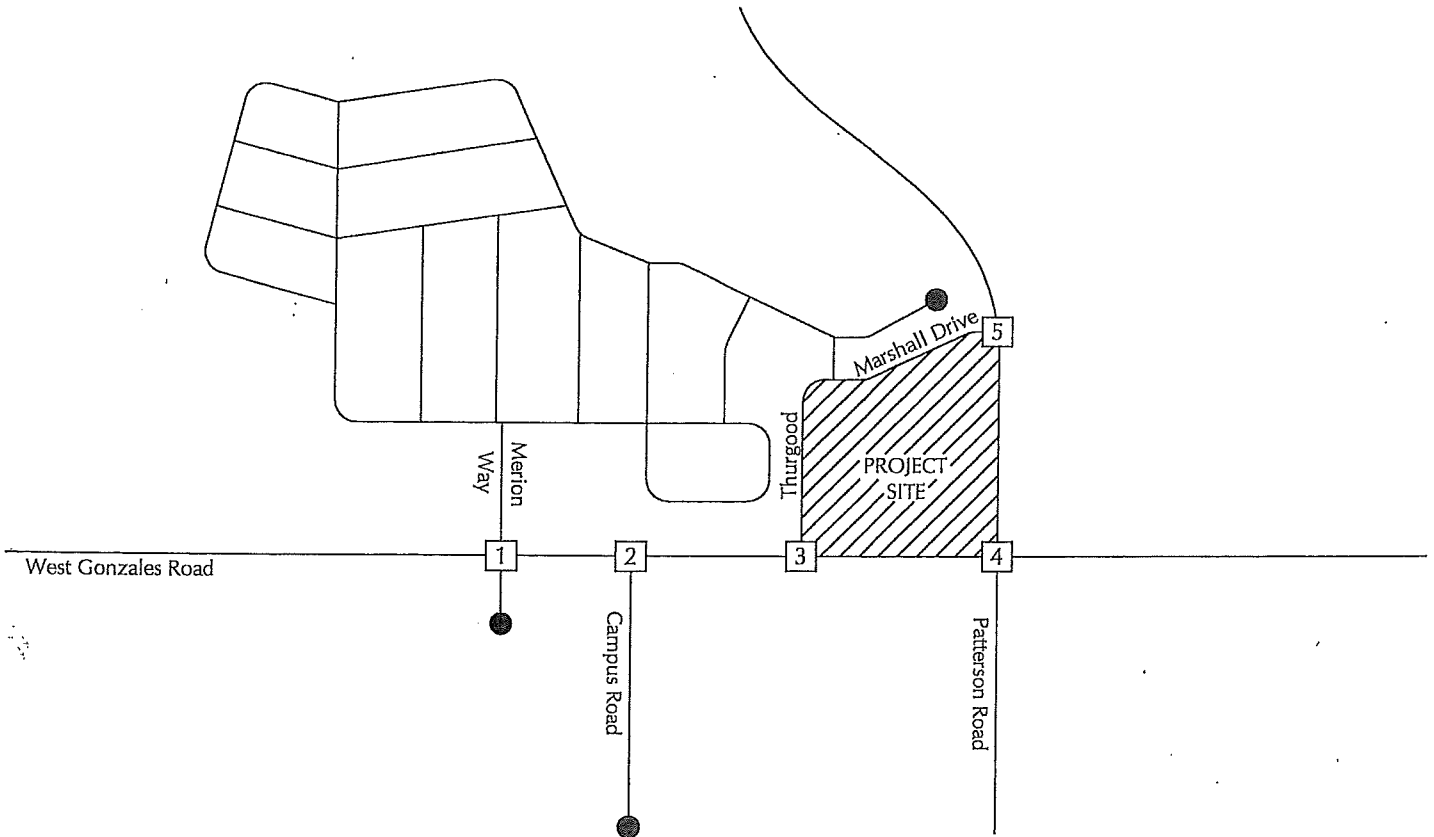
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**THURGOOD MARSHALL SCHOOL MND  
OXNARD, CALIFORNIA**

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***TRAFFIC AND CIRCULATION STUDY***

---



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March 18, 2016

ATE Project 15098

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Prepared for:

Tetra Tech  
5383 Hollister Avenue, Suite 130  
Santa Barbara, California 93111

---



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Since 1978

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March 18, 2016

Ms. Renee Longman  
Tetra Tech  
5383 Hollister Avenue, Suite 130  
Santa Barbara, California 93111

***TRAFFIC AND CIRCULATION STUDY FOR  
THE THURGOOD MARSHALL SCHOOL MND- CITY OF OXNARD***

Associated Transportation Engineers (ATE) is pleased to submit the following traffic and circulation study for the Thurgood Marshall School MND. It's our understanding that the results of the study will be used by the Oxnard School District to obtain CEQA clearance for the Thurgood Marshall School.

We appreciate the opportunity to assist the Tetra Tech with this project.

Associated Transportation Engineers

By:   
Scott A. Schell, AICP, PTP  
Vice President

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## INTRODUCTION

The following study contains an analysis of the potential traffic and circulation impacts associated with the Thurgood Marshall School, located in the City of Oxnard. The guidelines set forth in the City of Oxnard's Traffic Impact Study standards were utilized in formatting the various sections of the traffic study. The study provides information relative to existing, existing + project, cumulative (existing + approved/pending projects) and cumulative + project traffic conditions. Site access, circulation and parking are also reviewed in the study.

## PROJECT DESCRIPTION

As shown on Figure 1, the Thurgood Marshall School is located at 2900 Thurgood Marshall Drive in the northwestern section of the City of Oxnard. The existing elementary school accommodates 555 students in grades K-5. The Oxnard School District is proposing to add 12 classrooms for an additional 345 students in grades 6-8. The proposed project would add 12,821 square feet (sq. ft.) of teaching facilities and an additional 2,280 sq. ft. devoted to restroom (1,270 sq. ft.), storage (593 sq. ft.) and locker room (417 sq. ft.) facilities. This would increase building square footage at the Thurgood Marshall School by a total of 15,101 square feet. A total of 20 parking spaces would be added to the on-site parking supply increasing the total to 88 parking spaces. Access to the project site would be provided by the two existing driveway connections on Thurgood Marshall Drive. The school driveways are inbound and outbound only. The school site plan is illustrated on Figure 2.

## EXISTING CONDITIONS

### Existing Street Network

The project site is served by a circulation system comprised of arterial and collector streets, which are illustrated on Figure 1. The major roadways serving the site are discussed in the following text.

**Gonzales Road** is a 4- to 6-lane east-west arterial. Providing access to Downtown Oxnard from U.S. Highway 101, the road is primarily fronted by commercial uses. Gonzales Road also fronts the southern border of the Thurgood Marshall School, providing an access route to the site. Signals are located at Merion Way, Campus Road and Patterson Road within the study-area.

**Patterson Road** is a 2- to 4-lane arterial that runs north-south in the study-area. Patterson Road extends north from Channel Islands Boulevard then transitions eastward as Vineyard Road in north Oxnard. Patterson Road is signalized at Gonzales Road in the study-area.

**Thurgood Marshall Drive** is a 2- lane roadway that extends north from Gonzales Road to Patterson Road. Thurgood Marshall Drive provides access to the school and the adjacent residential community. Thurgood Marshall Drive is STOP-Sign controlled at Gonzales Road and Patterson Road.

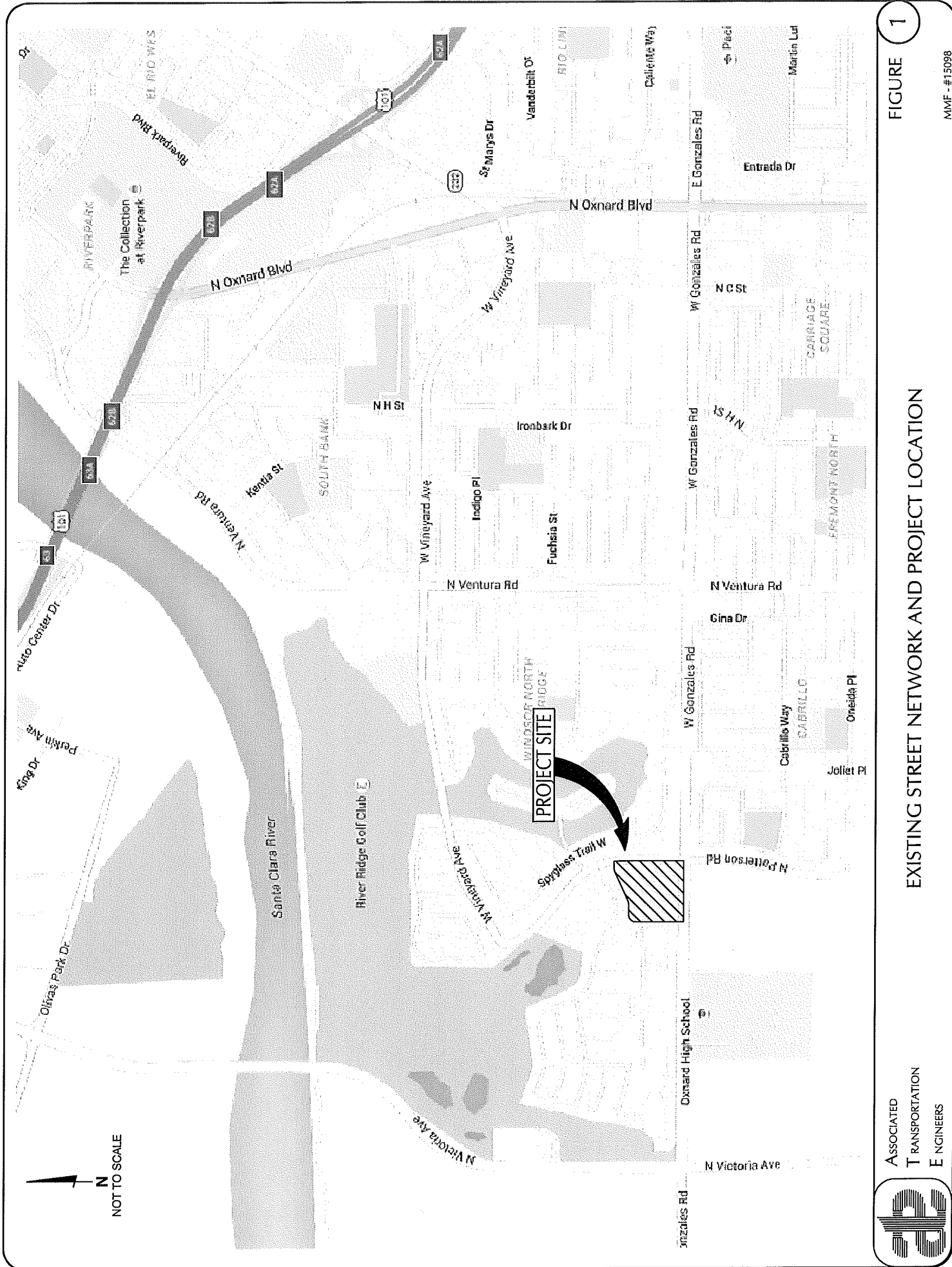


FIGURE 1

EXISTING STREET NETWORK AND PROJECT LOCATION



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## Existing Volumes and Intersection Levels of Service

Traffic flow on urban arterials is most constrained at intersections. Therefore, a detailed analysis of traffic flows must examine the operating conditions of critical intersections during peak travel periods. In rating intersection operations, "Levels of Service" (LOS) A through F are used, with LOS A indicating free flow operations and LOS F indicating congested operations (more complete definitions of levels of service are included in the Technical Appendix). LOS C is the minimum acceptable standard for intersection operations in the City of Oxnard.

Figure 3 illustrates the study-area intersections, the existing traffic controls and the lane geometries. Existing (2015) A.M. and P.M. peak hour period traffic volumes at the study-area intersections are illustrated on Figure 4. The intersection traffic counts were collected in December of 2015 for this study and are included in the Technical Appendix.

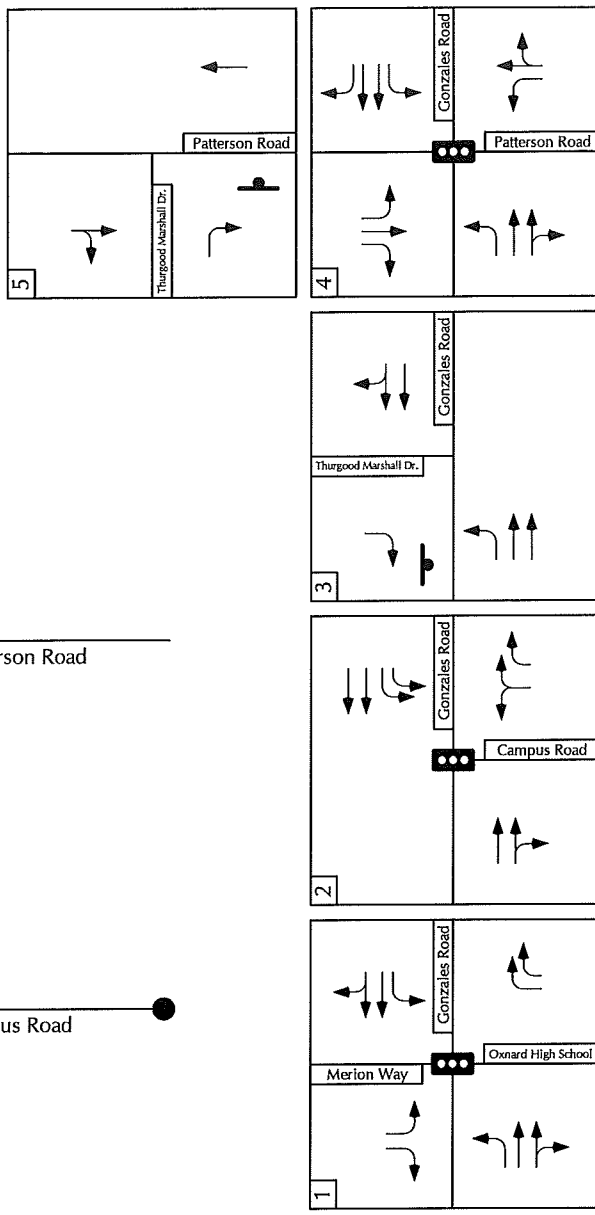
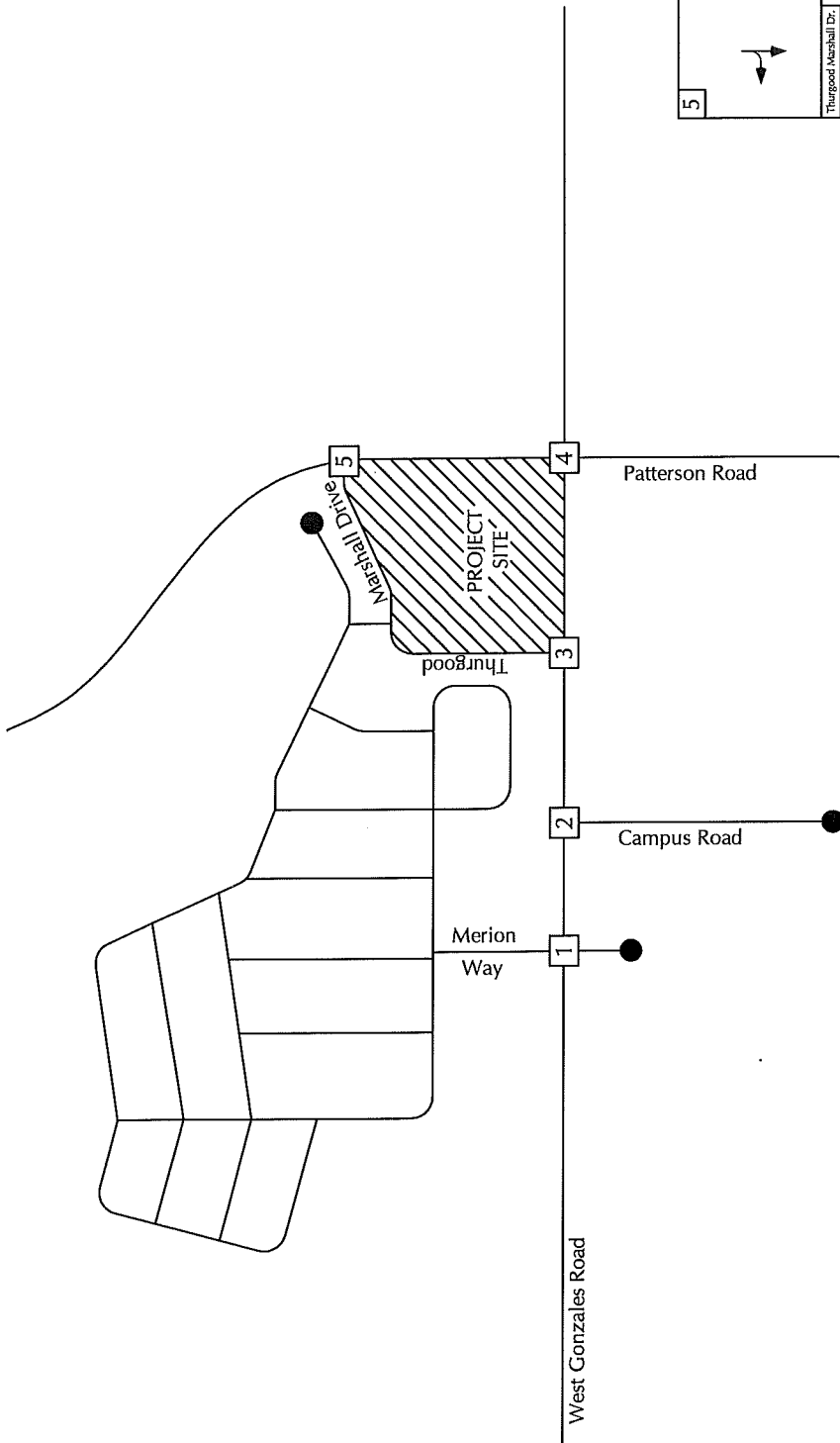
Existing levels of service were calculated for the study-area intersections using the Intersection Capacity Utilization (ICU) methodology for signalized intersections and the Highway Capacity Manual (HCM) methodology for unsignalized intersections, as required by the City of Oxnard. Worksheets illustrating the level of service calculations are contained in the Technical Appendix for reference. Table 1 lists the existing levels of service for the study-area intersections during the A.M. and P.M. peak hour periods.

**Table 1  
Existing Peak Hour Levels of Service**

Intersection	Control	A.M. Peak Hour	P.M. Peak Hour
		ICU-Delay/LOS	ICU/Delay/LOS
Gonzales Road/Marion Way	Signal	0.44/LOS A	0.38/LOS A
Gonzales Road/Campus Road	Signal	0.59/LOS A	0.45/LOS A
Gonzales Road/Thurgood Marshall Drive	STOP-Sign	14.8 sec./LOS B	10.6 sec./LOS B
Gonzales Road/Patterson Road	Signal	0.54/LOS A	0.47/LOS A
Patterson Road/Thurgood Marshall Drive	STOP-Sign	11.9 sec./LOS B	10.2 sec./LOS B

The data presented in Table 1 indicate that the study-area intersections currently operate at LOS B or better during the A.M. and P.M. peak hour periods, which meets the City's LOS C standard.

NOT TO SCALE



**LEGEND**

- Signalized Intersection
- Stopped Approach
- Lane Geometry

FIGURE 3

INTERSECTION LANE GEOMETRY AND TRAFFIC CONTROLS

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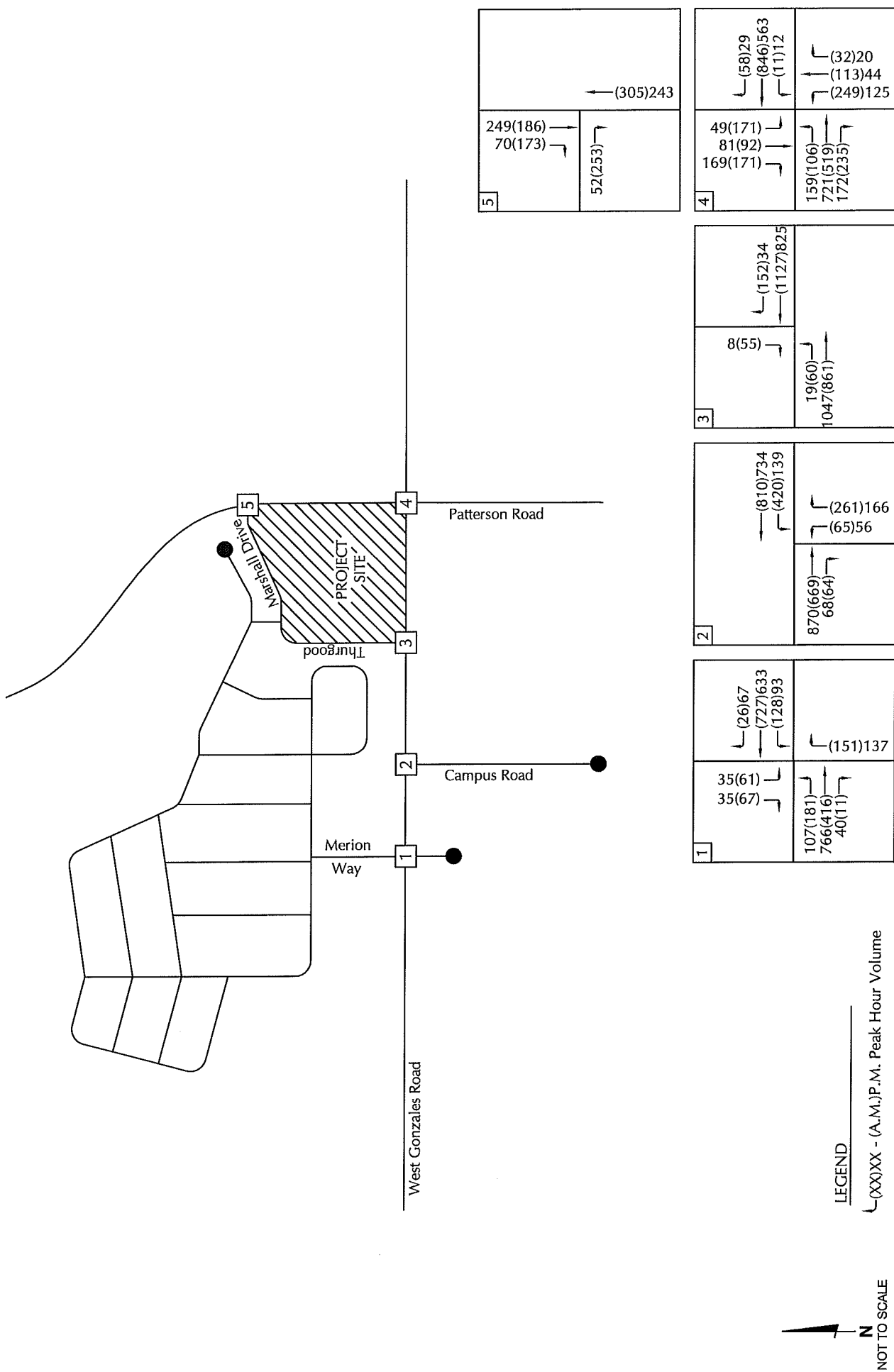
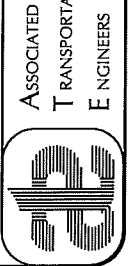


FIGURE 4

EXISTING TRAFFIC VOLUMES

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## IMPACT THRESHOLD CRITERIA

The City of Oxnard’s criteria for evaluating project impacts at intersections is based upon the change in ICU/LOS attributable to the project. The City of Oxnard has established LOS C as the threshold of significance for determining project impacts at intersections. If the addition of project traffic increases the ICU by 0.02 or more at an intersection operating at LOS C or worse, it should be mitigated to the ICU level identified without the project traffic.

## PROJECT-GENERATED TRAFFIC VOLUMES

### Project Trip Generation

Trip generation estimates were calculated for the project based on the rates published in the Institute of Transportation Engineers, Trip Generation, 9<sup>th</sup> Edition for Elementary School (Land Use Code #520) and Middle School/Junior High School (Land Use Code #522). Table 2 summarizes the average daily, A.M. and P.M. peak hour trips generated by the Thurgood Marshall School.

**Table 2  
Project Trip Generation**

Land Use	Size	Average Daily Trips		A.M. Peak Hour		P.M. Peak Hour	
		Rate	Trips	Rate	Trips (In/Out)	Rate	Trips (In/Out)
<u>Existing:</u> Elementary School	555 Students	1.29	716	0.45	250 (138/112)	0.15	83 (41/42)
<u>Proposed:</u> Middle School	345 Students	1.62	559	0.54	186 (102/84)	0.16	55 (27/28)

The data presented in Table 2 show that the existing elementary school generates 716 ADT, 250 A.M. peak hour trips, and 83 P.M. peak hour trips. The proposed middle school component would generate an additional 559 ADT, 186 A.M. peak hour trips, and 55 P.M. peak hour trips.

The Thurgood Marshall School currently operates a student bussing program. The school bussing program provides transportation to and from school for students that live more than 1.5 miles from school, and for overflow students and for special needs students. Currently 239 (43%) of the existing student enrollment are bussed to school. The bussing program reduces the number of private vehicle trips thus reducing congestion on City of Oxnard streets during the morning commute period. The bussing program will continue to operate when the school adds the 6<sup>th</sup>, 7<sup>th</sup> and 8<sup>th</sup> grades.

## Project Trip Distribution and Assignment

The A.M. and P.M. peak hour trips generated by the project were distributed and assigned to the study-area intersections based on school enrollment boundaries provided by the Oxnard School District, as well as a general knowledge of the residential areas in the City of Oxnard. Table 3 summarizes the trip distribution percentages developed for the project. Figure 5 illustrates the trip distribution and assignment for the project-generated trips.

**Table 3**  
**Project Trip Distribution**

Route	Origin/Destination	Percent
Gonzales Road	East	40%
	West	10%
Patterson Road	North	20%
	South	30%
<b>Total:</b>		<b>100%</b>

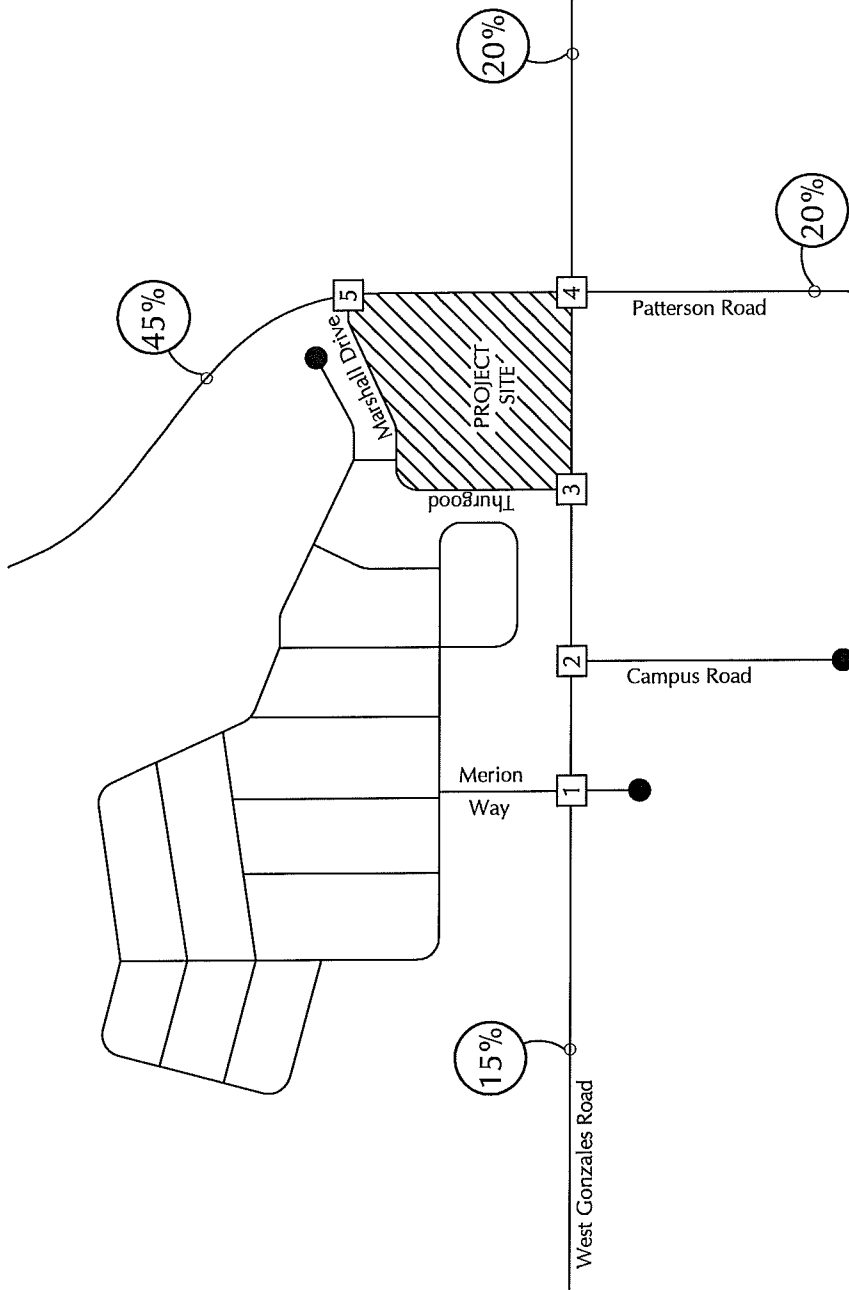
## EXISTING + PROJECT OPERATIONS

Levels of service were calculated for the study-area intersections assuming the existing + project volumes illustrated in Figure 6. Tables 4 and 5 show the results of the LOS calculations and identify the project's impacts based on the City of Oxnard's thresholds.

**Table 4**  
**Existing + Project A.M. Peak Hour Levels of Service**

Intersection	Existing		Existing + Project		Change	Impact?
	ICU/Delay	LOS	ICU/Delay	LOS		
Gonzales Road/Merion Way	0.44	LOS A	0.44	LOS A	0.00	No
Gonzales Road/Campus Road	0.59	LOS A	0.60	LOS A	0.01	No
Gonzales Road/Thurgood Marshall Drive	14.8 sec.	LOS B	15.6 sec.	LOS C	0.8 sec.	No
Gonzales Road/Patterson Road	0.54	LOS A	0.57	LOS A	0.03	No
Patterson Road/Thurgood Marshall Drive	11.9 sec.	LOS B	16.2 sec.	LOS C	4.3 sec.	No





1	4(15) →	→ (13)4	
2		→ (13)4	
3	4(13) →	→ (41)11	
4	18(54) → 6(17) →	→ (21)6	↙ (20)5
5	12(46) ↘ 24(71) ↘		← (38)13




 NOT TO SCALE  
**LEGEND**  
 - (A.M.)P.M. Peak Hour Volume  
 - Distribution Percentage

FIGURE 5

PROJECT TRIP DISTRIBUTION AND ASSIGNMENT



ASSOCIATED  
TRANSPORTATION  
ENGINEERS

MMF - #15098

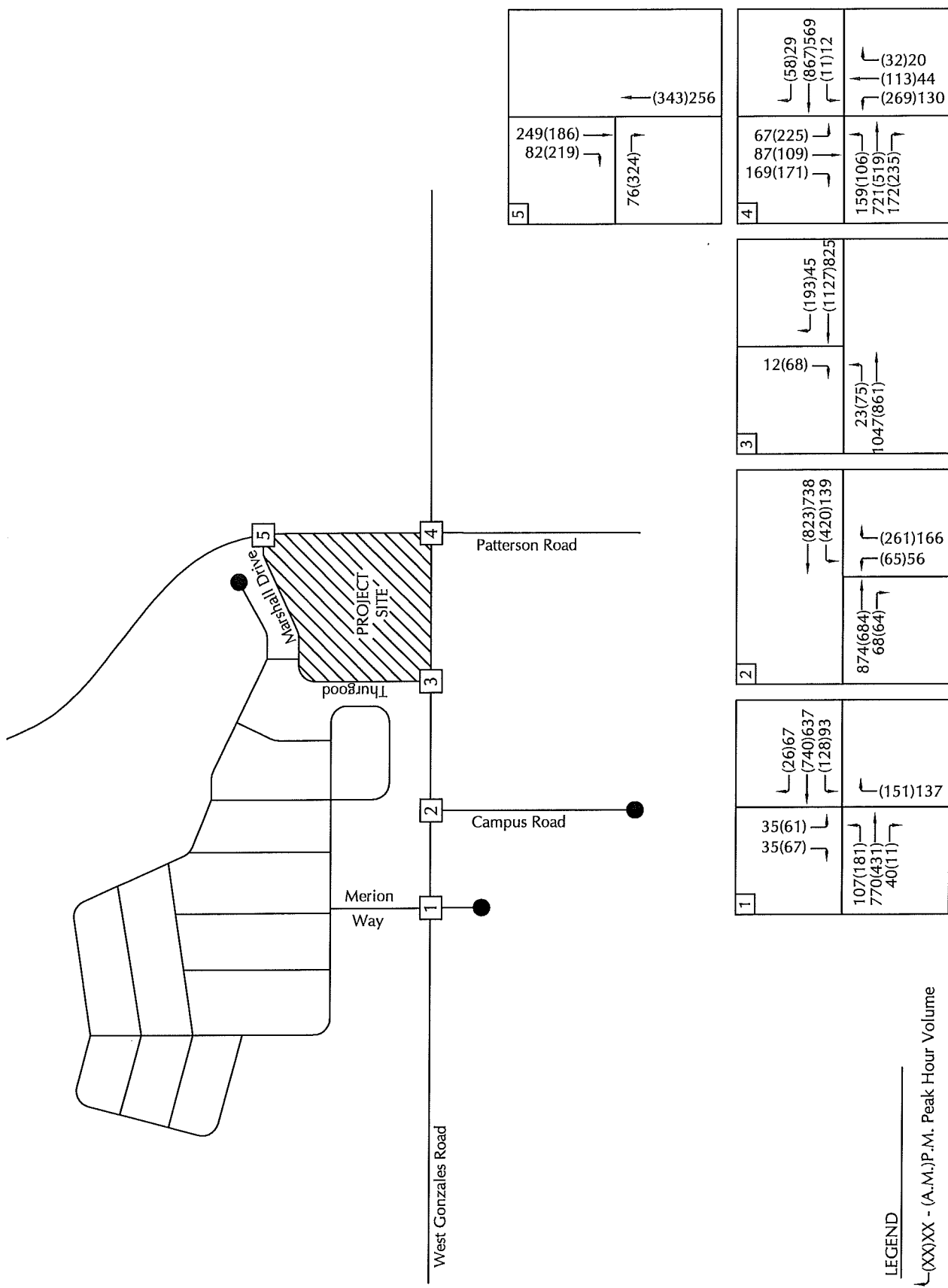
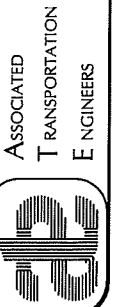


FIGURE 6

EXISTING + PROJECT TRAFFIC VOLUMES



MMF - #15098

**Table 5  
Existing + Project P.M. Peak Hour Levels of Service**

Intersection	Existing		Existing + Project		Change	Impact?
	ICU/Delay	LOS	ICU/Delay	LOS		
Gonzales Road/Merion Way	0.38	LOS A	0.38	LOS A	0.00	No
Gonzales Road/Campus Road	0.45	LOS A	0.45	LOS A	0.00	No
Gonzales Road/Thurgood Marshall Drive	10.6 sec.	LOS B	10.8 sec.	LOS B	0.2 sec.	No
Gonzales Road/Patterson Road	0.47	LOS A	0.47	LOS A	0.00	No
Patterson Road/Thurgood Marshall Drive	10.6 sec.	LOS B	10.7 sec.	LOS B	0.1 sec.	No

The data presented in Tables 4 and 5 indicate that the project would not significantly impact the study-area intersections based on City of Oxnard impact thresholds.

**CUMULATIVE CONDITIONS (EXISTING + APPROVED/PENDING PROJECTS)**

**Cumulative Trip Generation**

The City of Oxnard requires that intersections be analyzed assuming the addition of traffic generated by projects which have been approved or are pending within the project study-area. ATE and City staff identified 2 approved/pending projects in the vicinity which would add traffic to the study-area intersections. The trip generation estimates for the projects were obtained from the traffic studies prepared for each project. Table 6 summarizes the average daily, A.M. and P.M. peak hour trip generation estimates for the approved/pending projects.

**Table 6  
Approved/Pending Projects Trip Generation**

Project	Trip Generation		
	ADT	A.M. Peak Hour	P.M. Peak Hour
Teal Club Specific Plan	13,794	1,094	1,359
Ventura/Vineyard Homes	2,294	175	216
Total Trip Generation:	16,088	1,269	1,575

Note: A school site was evaluated in the Teal Club Specific Plan.

Table 6 indicates that the approved/pending projects would generate a total of 16,088 average daily trips, 1,269 A.M. peak hour trips and 1,575 P.M. peak hour trips. The traffic generated by the approved/pending projects was distributed and assigned to the study-area intersections based on the location of each project, recent traffic studies, existing traffic patterns as well as a general knowledge of the population, employment and commercial centers in Oxnard. Figure 7 illustrates the cumulative peak hour traffic volumes at the study-area intersections. Cumulative levels of service for the study-area intersections are shown in Table 7.

**Table 7  
Cumulative Levels of Service**

Intersection	A.M. Peak Hour		P.M. Peak Hour	
	ICU/Delay	LOS	ICU/Delay	LOS
Gonzales Road/Merion Way	0.44	LOS A	0.38	LOS A
Gonzales Road/Campus Road	0.60	LOS A	0.46	LOS A
Gonzales Road/Thurgood Marshall Drive	15.1 sec.	LOS C	10.8 sec.	LOS B
Gonzales Road/Patterson Road	0.56	LOS A	0.50	LOS A
Patterson Road/Thurgood Marshall Drive	14.1 sec.	LOS B	11.0 sec.	LOS B

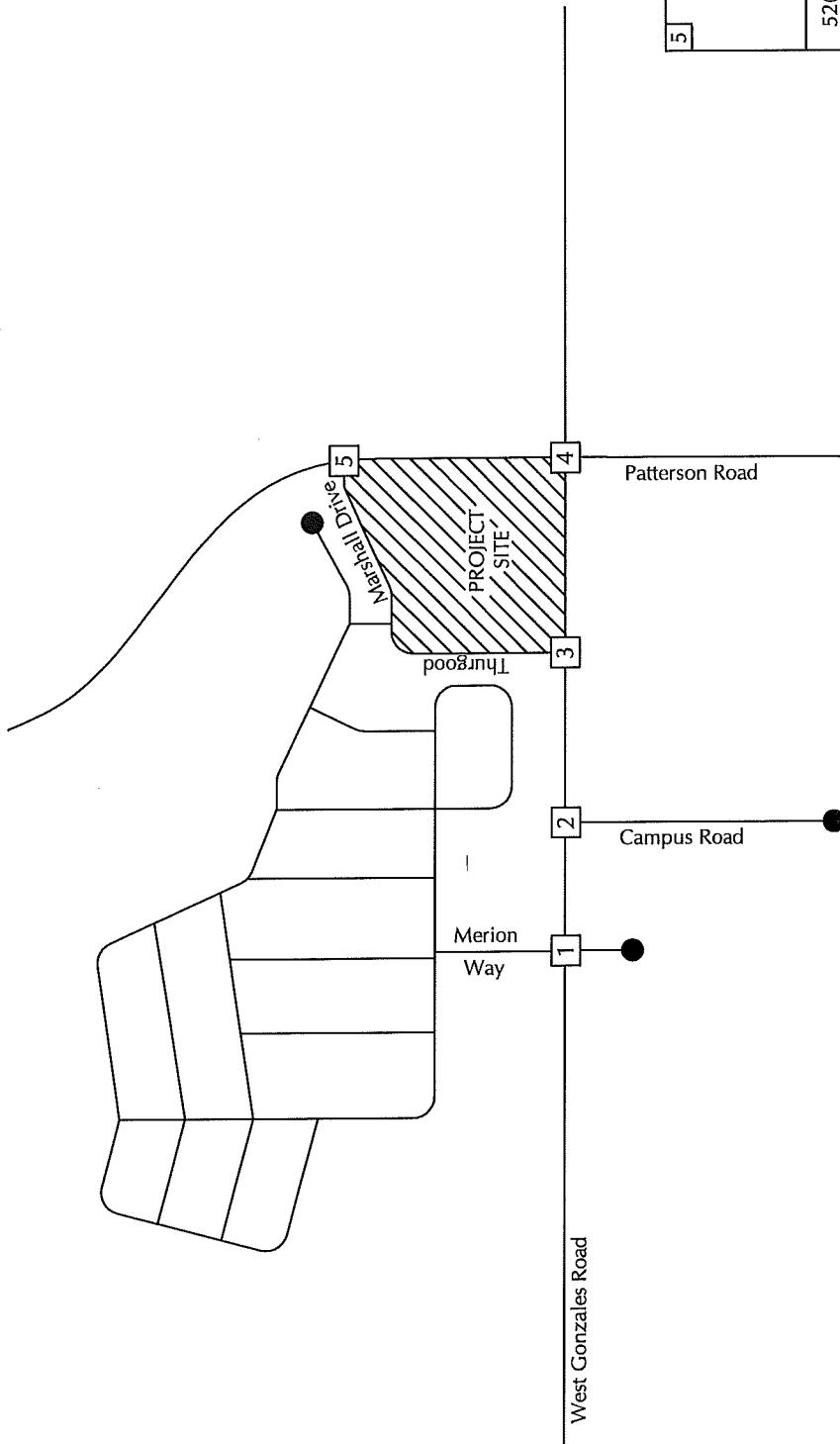
The data presented in Table 7 indicate that the study-area intersections would operate at LOS C or better during the A.M. peak hour and P.M. peak hour periods with the Cumulative traffic.

**CUMULATIVE + PROJECT OPERATIONS**

Level of service were calculated for the study-area intersections assuming the Cumulative + Project volumes illustrated on Figure 8. Tables 8 and 9 show the results of the calculations and identify the impacts of the project based on City of Oxnard thresholds.

**Table 8  
Cumulative + Project Levels of Service - A.M. Peak Hour**

Intersection	Cumulative		Cumulative + Project		Change	Impact?
	ICU/Delay	LOS	ICU/Delay	LOS		
Gonzales Road/Merion Way	0.44	LOS A	0.45	LOS A	0.01	No
Gonzales Road/Campus Road	0.60	LOS A	0.60	LOS A	0.00	No
Gonzales Road/Thurgood Marshall Drive	15.1 sec.	LOS C	16.0 sec.	LOS C	0.9 sec.	No
Gonzales Road/Patterson Road	0.56	LOS A	0.57	LOS A	0.01	No
Patterson Road/Thurgood Marshall Drive	14.1 sec.	LOS B	17.1 sec.	LOS C	3.0 sec.	No



<p>5</p> <p>265(208) →</p> <p>70(173) ↘</p> <p>52(253) ↗</p>	<p>(317)269</p>
<p>4</p> <p>49(171) ↘</p> <p>91(100) ↘</p> <p>175(185) ↘</p>	<p>(58)29 ↘</p> <p>(846)563 ↘</p> <p>(11)12 ↘</p>
<p>3</p> <p>8(55) ↘</p>	<p>(152)34 ↘</p> <p>(1150)867 ↘</p>
<p>2</p> <p>(26)67 ↘</p> <p>(758)705 ↘</p> <p>(128)93 ↘</p>	<p>(841)776 ↘</p> <p>(420)139 ↘</p>
<p>1</p> <p>35(61) ↘</p> <p>35(67) ↘</p>	<p>(151)137 ↘</p>
<p>174(110) ↘</p> <p>721(519) ↘</p> <p>185(253) ↘</p>	<p>(32)21 ↘</p> <p>(121)55 ↘</p> <p>(266)161 ↘</p>
<p>19(60) ↘</p> <p>1075(883) ↘</p>	<p>898(702) ↘</p> <p>68(64) ↘</p>

N  
 NOT TO SCALE  
 LEGEND  
 (XXX)XX - (A.M.)P.M. Peak Hour Volume

FIGURE 7

CUMULATIVE TRAFFIC VOLUMES



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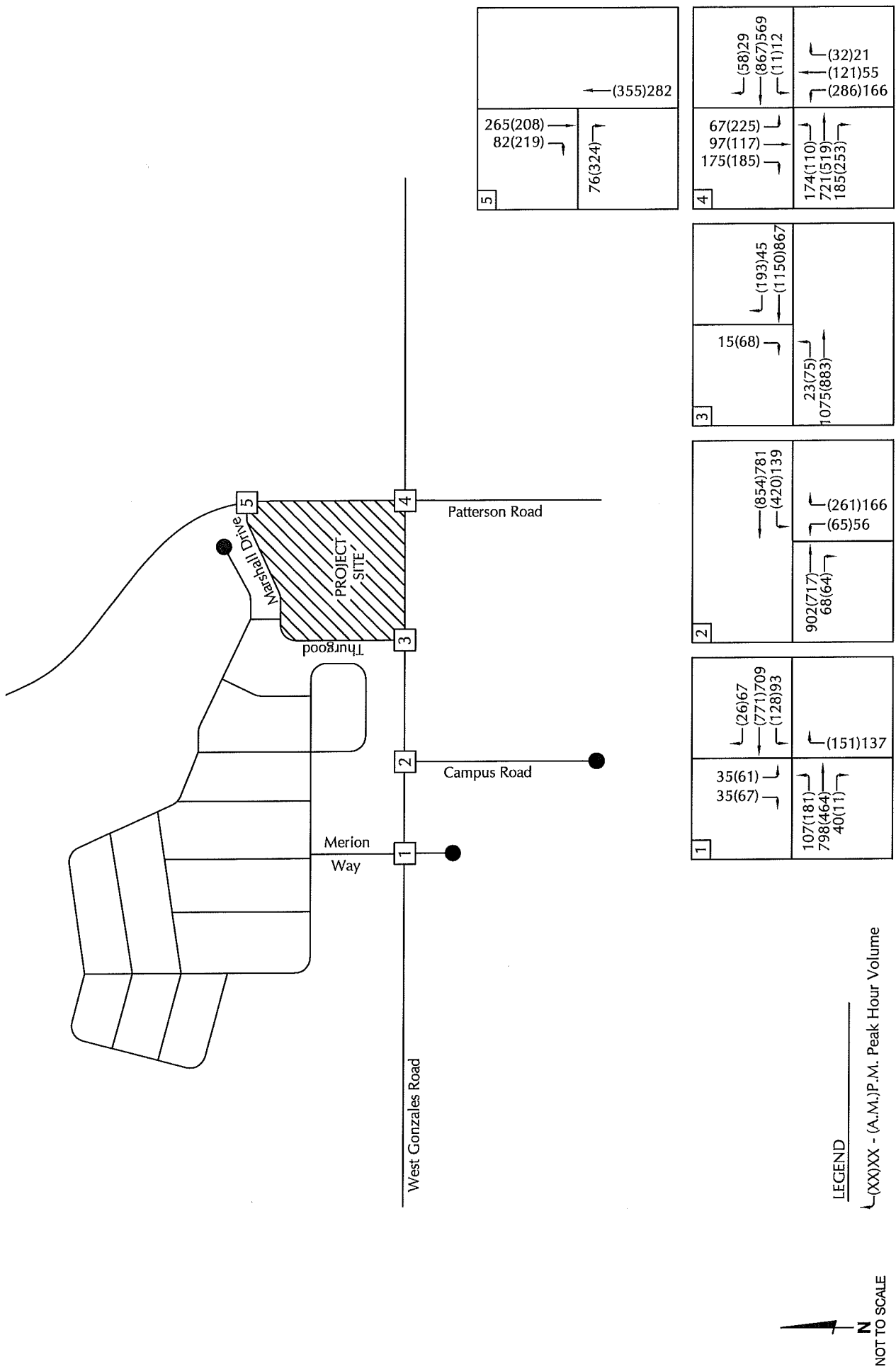
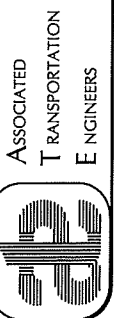


FIGURE 8

CUMULATIVE + PROJECT TRAFFIC VOLUMES



MMF - #15098

**Table 9  
Cumulative + Project Levels of Service - P.M. Peak Hour**

Intersection	Cumulative		Cumulative + Project		Change	Impact?
	ICU/Delay	LOS	ICU/Delay	LOS		
Gonzales Road/Merion Way	0.38	LOS A	0.39	LOS A	0.01	No
Gonzales Road/Campus Road	0.46	LOS A	0.46	LOS A	0.00	No
Gonzales Road/Thurgood Marshall Drive	10.8 sec.	LOS B	11.4 sec.	LOS B	0.6 sec.	No
Gonzales Road/Patterson Road	0.50	LOS A	0.50	LOS A	0.00	No
Patterson Road/Thurgood Marshall Drive	11.0 sec.	LOS B	11.3 sec.	LOS B	0.3 sec.	No

The data presented in Tables 8 and 9 indicate that the project would not contribute to a significant cumulative impact on the study-area intersections based on City of Oxnard impact thresholds.

### **SITE ACCESS AND CIRCULATION**

As illustrated on Figure 2, primary access to the project site would be provided by 2 driveway connections on Thurgood Marshall Drive. The project driveways on Thurgood Marshall Drive are inbound and outbound only providing a counter clockwise circulation pattern for pick-ups and drop-offs. The project parking lot is being modified to increase the parking supply from 68 parking spaces to 88 parking spaces, however there will be no modifications to the on-site circulation system. No additional site access or circulation improvements are planned as part of the school expansion.

#### Pedestrian Facilities

There are extensive pedestrian facilities (crosswalks/sidewalks etc.) located in the study-area. Existing sidewalks are provided along Gonzales Road, Patterson Road and Thurgood Marshall Drive. The sidewalks connect the school to the residential neighborhoods surrounding the school. Crosswalks are provided at each of the study-area intersections. A mid-block crosswalk with curb extensions is provided on the north-south segment of Thurgood Marshall Drive. An additional crosswalk with curb extensions is provided on Thurgood Marshall Drive at the Dora Canyon Drive intersection. These crosswalks connect the school with the adjacent residential community. No additional pedestrian facilities are planned as part of the school expansion.

Crossing guards are provided on Thurgood Marshall Drive near the entrance of the school. The School District may wish to consider additional crossing guards locations as part of the expansion project.

## Bicycle Facilities

Gonzales Road and Patterson Road are identified as part of the City of Oxnard Bikeway System. Class II bike lanes exist along Gonzales Road from Victoria Avenue to "C" Street. Class II bike lanes exist along Patterson Road from Doris Avenue to Gonzales Road. A multi-use path exists on Patterson Road from Gonzales Road to Vineyard Avenue. The multi-use path connects to the Class II bike lane on Vineyard Avenue. No additional bicycle facilities are planned as part of the school expansion.

## Parking Analysis

A total of 88 on-site parking spaces will be provided as part of the Thurgood Marshall School expansion. ATE evaluated the adequacy of the on-site parking supply based on a parking demand survey and empirical parking demand data to determine if the parking supply is sufficient to meet the peak parking demands.

Parking demands for the existing elementary school were qualified based on a parking survey conducted at the school. Peak demand estimates for the new school classrooms were developed based on parking rates for Middle School/Junior High School (Land Use Code 522) land uses published in the Institute of Transportation Engineers (ITE), Parking Generation, 4<sup>th</sup> Edition. Table 10 summarizes the results of the parking demand analysis.

**Table 10**  
**ITE Peak Parking Demand**

Site Component	Size	Parking Demand Ratio	Peak Parking Demand	Existing Parking Demand	Peak Parking Demand	Parking Provided
Middle School	345 students	1 space/0.09 students	31 spaces	42 spaces	73 spaces	88 spaces

The existing peak parking demand for the 555 student elementary school is 42 parking spaces. Based the ITE parking demand rates, the new 345 middle school students would generate a peak parking demand of 31 additional spaces. Based on the parking survey and the empirical parking demand data, the peak parking demand is 73 parking spaces. The 88 on-site parking spaces would accommodate the peak parking demands for the Thurgood Marshall School.

## **COLLISION ANALYSIS**

ATE staff reviewed collision data for the Gonzales Road/Merion Way, Gonzales Road/Campus Road, Gonzales Road/Thurgood Marshall Drive, Gonzales Road/Patterson Road and Patterson Road/Thurgood Marshall Drive intersections. The collision data covers a five-year period from January 2009 to December 2013. The collision data is contained in the Technical Appendix.



At the signalized Gonzales Road/Merion Way intersection, there were a total of 6 collisions with no reported fatalities. The accident rate calculated for the Gonzales Road/Merion Way intersection is 0.17 accidents per million entering vehicles. The statewide average collision rate for similar signalized intersections is 0.43. Table 11 summarizes the results of the collision analysis.

**Table 11  
Collision Data - Gonzales Road/Merion Way**

<b>Intersection</b>	<b>Collisions</b>	<b>Accident Rate</b>	<b>Statewide Average</b>
Gonzales Road/Merion Way	6	0.17	0.43

At the signalized Gonzales Road/Campus Road intersection, there were a total of 2 collisions with no reported fatalities. The accident rate calculated for the Gonzales Road/Campus Road intersection is 0.05 accidents per million entering vehicles. The statewide average collision rate for similar signalized intersections is 0.43. Table 12 summarizes the results of the collision analysis.

**Table 12  
Collision Data - Gonzales Road/Campus Road**

<b>Intersection</b>	<b>Collisions</b>	<b>Accident Rate</b>	<b>Statewide Average</b>
Gonzales Road/Campus Road	2	0.05	0.43

At the unsignalized Gonzales Road/Thurgood Marshall Drive intersection, there were a total of 4 collisions with no reported fatalities. The accident rate calculated for the Gonzales Road/Thurgood Marshall Drive intersection is 0.11 accidents per million entering vehicles. The statewide average collision rate for similar unsignalized intersections is 0.14. Table 13 summarizes the results of the collision analysis.

**Table 13  
Collision Data - Gonzales Road/Thurgood Marshall Drive**

<b>Intersection</b>	<b>Collisions</b>	<b>Accident Rate</b>	<b>Statewide Average</b>
Gonzales Road/Thurgood Marshall Drive	4	0.11	0.43

At the signalized Gonzales Road/Patterson Road intersection, there were a total of 21 collisions with no reported fatalities. The accident rate calculated for the Gonzales Road/Patterson Road intersection is 0.54 accidents per million entering vehicles. The

statewide average collision rate for similar signalized intersections is 0.43. Table 14 summarizes the results of the collision analysis. ATE utilized the Caltrans significance test to determine if the number of accidents at the Gonzales Road/Patterson Road intersection were significant. There were 21 reported accidents at the Gonzales Road/Patterson Road intersection which were found to be less than significant (29 accidents required to meet significance threshold).

**Table 14  
Collision Data - Gonzales Road/Patterson Road**

<b>Intersection</b>	<b>Collisions</b>	<b>Accident Rate</b>	<b>Statewide Average</b>
Gonzales Road/Patterson Road	21	0.54	0.43

At the unsignalized Patterson Road/Thurgood Marshall Drive intersection, there were a total of 2 collisions with no reported fatalities. The accident rate calculated for the Patterson Road/Thurgood Marshall Drive intersection is 0.30 accidents per million entering vehicles. The statewide average collision rate for similar unsignalized intersections is 0.14. Table 15 summarizes the results of the collision analysis. There were 2 reported accidents at the Patterson Road/Thurgood Marshall Drive intersection which were found to be less than significant (5 accidents required to meet significance threshold).

**Table 15  
Collision Data - Patterson Road/Thurgood Marshall Drive**

<b>Intersection</b>	<b>Collisions</b>	<b>Accident Rate</b>	<b>Statewide Average</b>
Patterson Road/Thurgood Marshall Drive	2	0.30	0.14

The accident rates for the majority of the study-area intersections are significantly less than the statewide accident rates for similar intersections. There was one collision involving a pedestrian reported. That collision occurred at the Gonzales Road/Patterson Road intersection at 8:00 A.M. during the morning school arrival period. Based on the Caltrans significance test, the number of accidents at the Gonzales Road/Patterson Road and Patterson Road/Thurgood Marshall Drive intersections were found to be less than significant.

### **VENTURA COUNTY GENERAL PLAN CONSISTENCY**

The City of Oxnard and Ventura County have executed a "Reciprocal Traffic Mitigation Agreement" wherein the City and the County agree that a pro-rata share of the cost of mitigations will be collected by each agency for identified traffic impacts in the other jurisdiction. The project would be consistent with the Ventura County General Plan by complying with the terms of the "Reciprocal Traffic Mitigation Agreement" between the City of Oxnard and the County of Ventura approved on February 2, 1993.

## VENTURA COUNTY CONGESTION MANAGEMENT PROGRAM

According to the County's Congestion Management Program (CMP), the minimum acceptable standard for traffic operations is LOS "E".<sup>1</sup> However, so that local jurisdictions are not unfairly penalized for existing congestion, CMP locations currently operating in the LOS "F" range are considered acceptable.

### Intersection Operation

The study-area intersections along Gonzales Road and Patterson Road are contained in the County's CMP. All of the intersections are forecast to operate at LOS C or better with Cumulative + Project peak hour volumes, and thus would not exceed the CMP LOS E standard.



---

<sup>1</sup> Traffic LOS Monitoring for Ventura County Congestion Management Program, Ventura County Transportation Commission, 2009.

## REFERENCES AND PERSONS CONTACTED

### Associated Transportation Engineers

Scott A. Schell, AICP, PTP, Principal Planner  
Darryl F. Nelson, PTP, Senior Transportation Planner  
Matthew Farrington, Transportation Planner

### Persons Contacted

Earnel Bihis, City of Oxnard

### References

Highway Capacity Manual, National Research Council, 2010.

Trip Generation, Institute of Transportation Engineers, 9th Edition, 2012.

Parking Generation, Institute of Transportation Engineers, 4th Edition, 2010.

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## TECHNICAL APPENDIX

### CONTENTS

INTERSECTION TRAFFIC COUNT DATA

INTERSECTION LEVEL OF SERVICE CRITERIA/DEFINITIONS

INTERSECTION LEVEL OF SERVICE CALCULATION WORKSHEETS

Reference 1 - Gonzales Road/Merion Way

Reference 2 - Gonzales Road/Campus Road

Reference 3 - Gonzales Road/Thurgood Marshall Drive

Reference 4 - Gonzales Road/Patterson Road

Reference 5 - Patterson Road/Thurgood Marshall Drive

CALTRANS COLLISION DATA

**INTERSECTION TRAFFIC COUNT DATA**

# ITM Peak Hour Summary

Prepared by:



National Data & Surveying Services

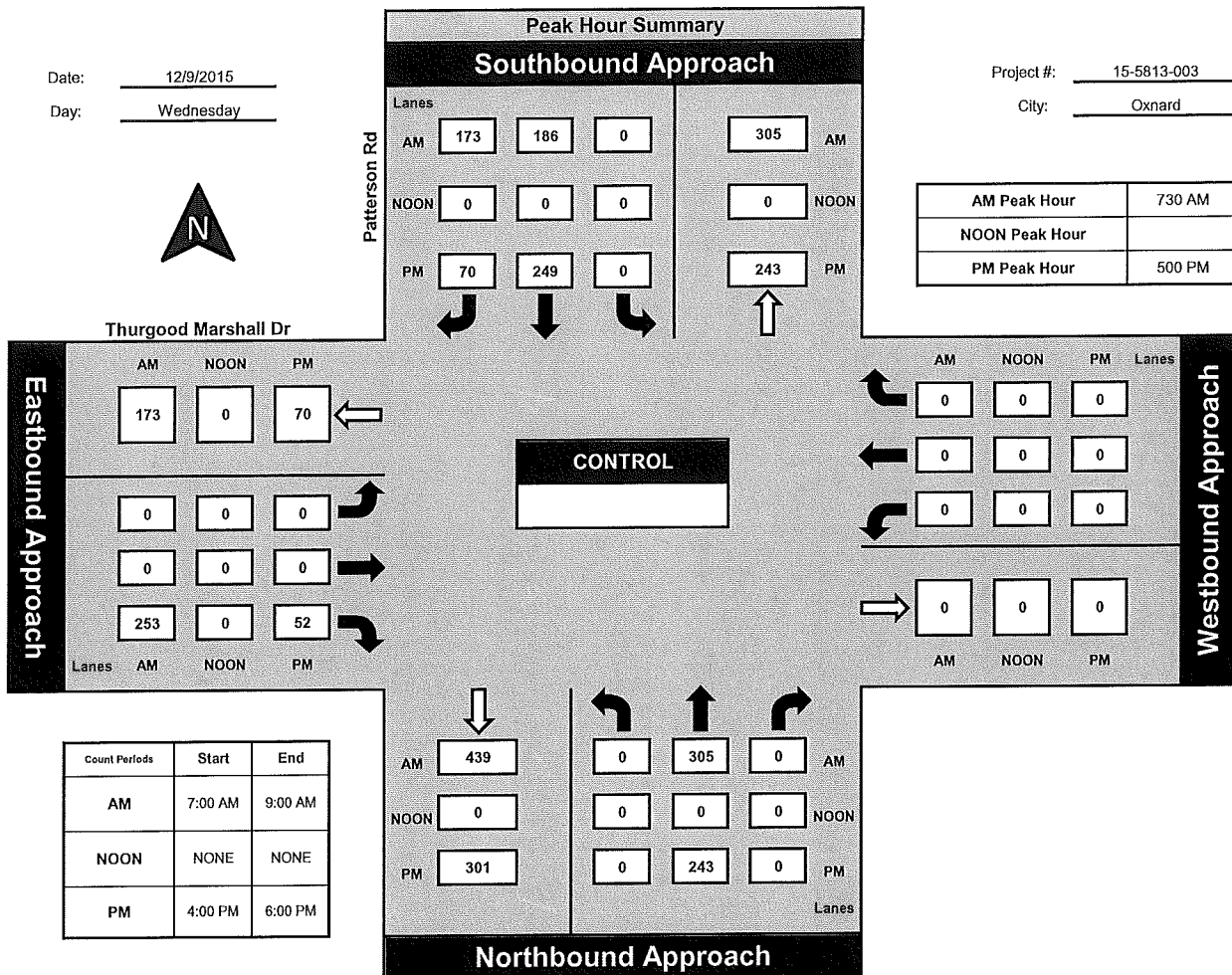
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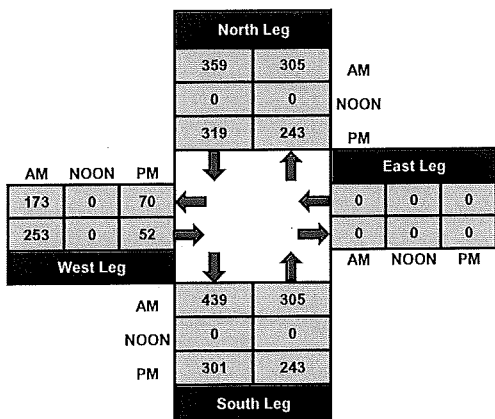
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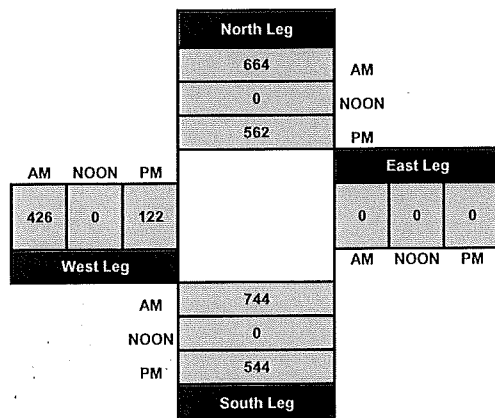
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### Total Ins & Outs



### Total Volume Per Leg



# ITM Peak Hour Summary

Prepared by:



National Data & Surveying Services

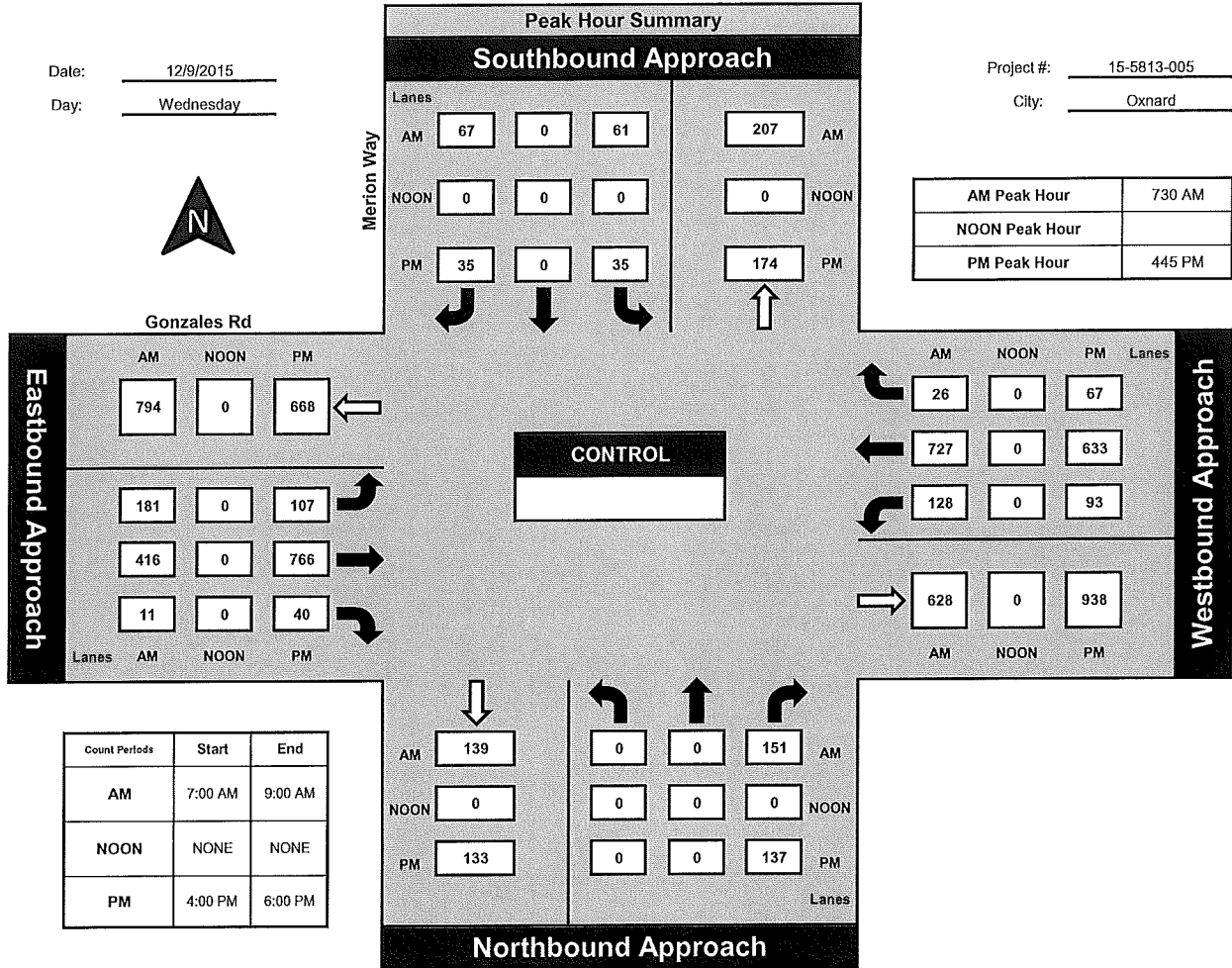
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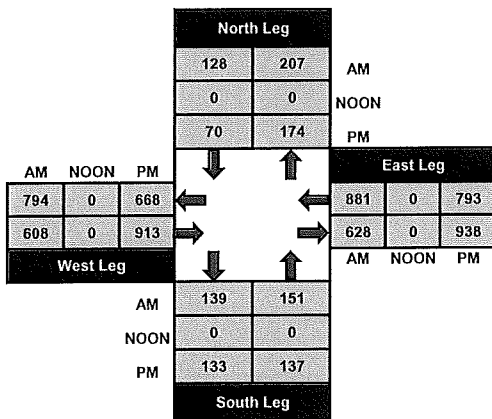
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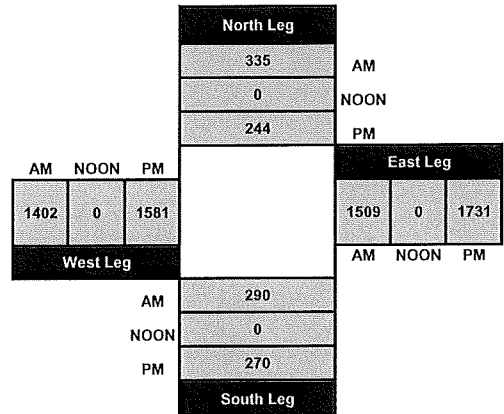
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### Total Ins & Outs



### Total Volume Per Leg





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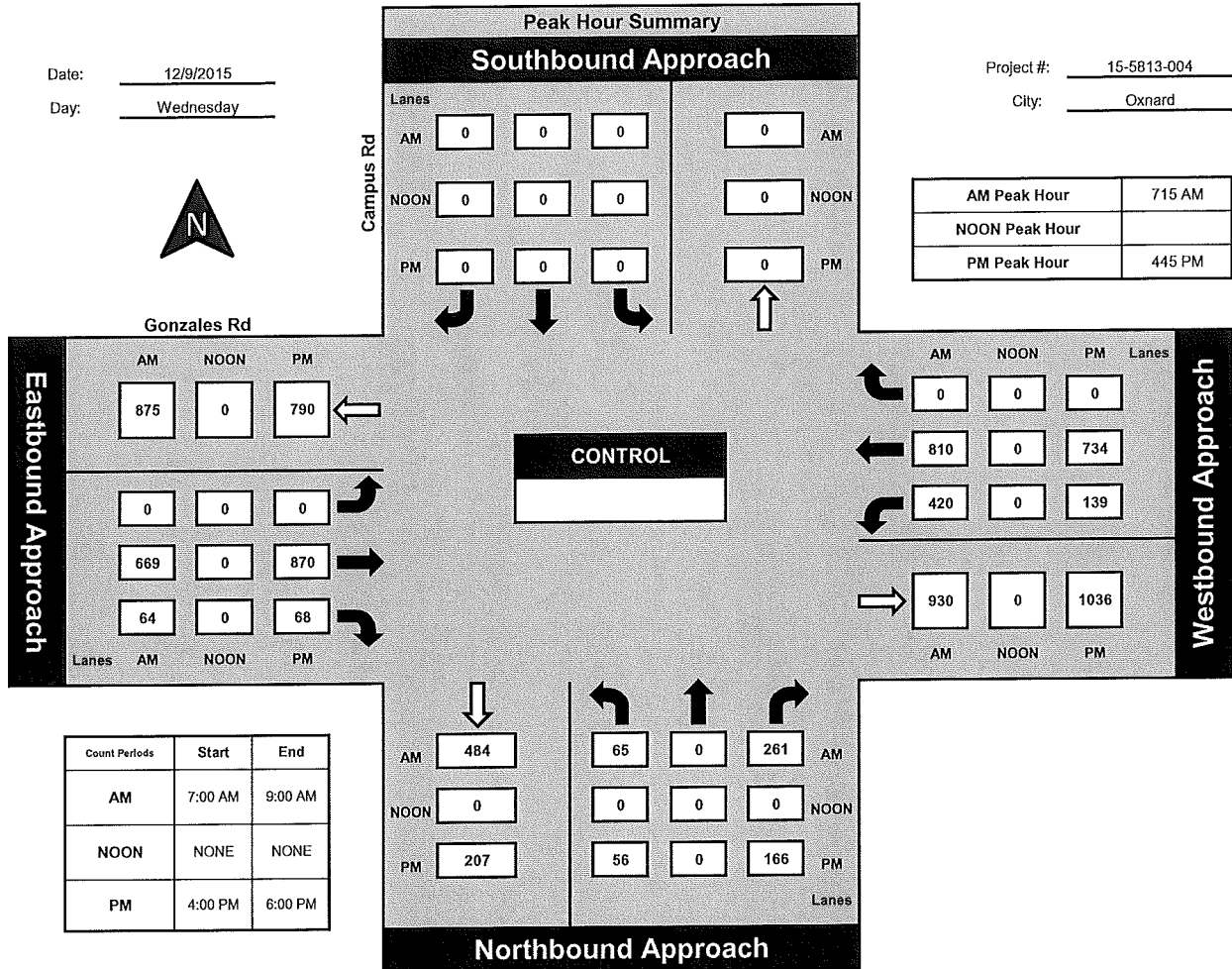


National Data & Surveying Services

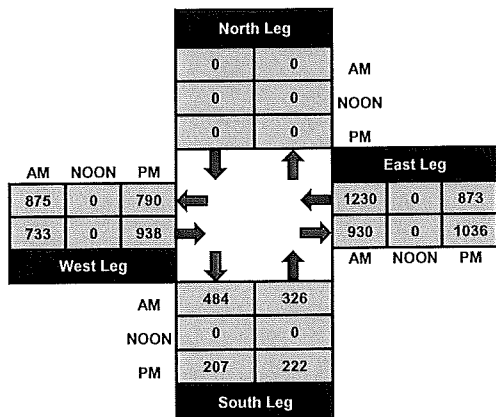
## Campus Rd and Gonzales Rd, Oxnard

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Day: Wednesday

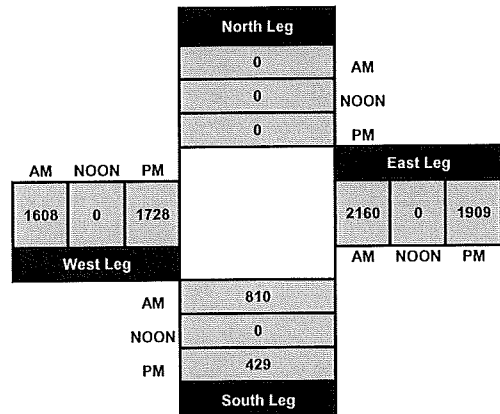
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City: Oxnard



### Total Ins & Outs



### Total Volume Per Leg



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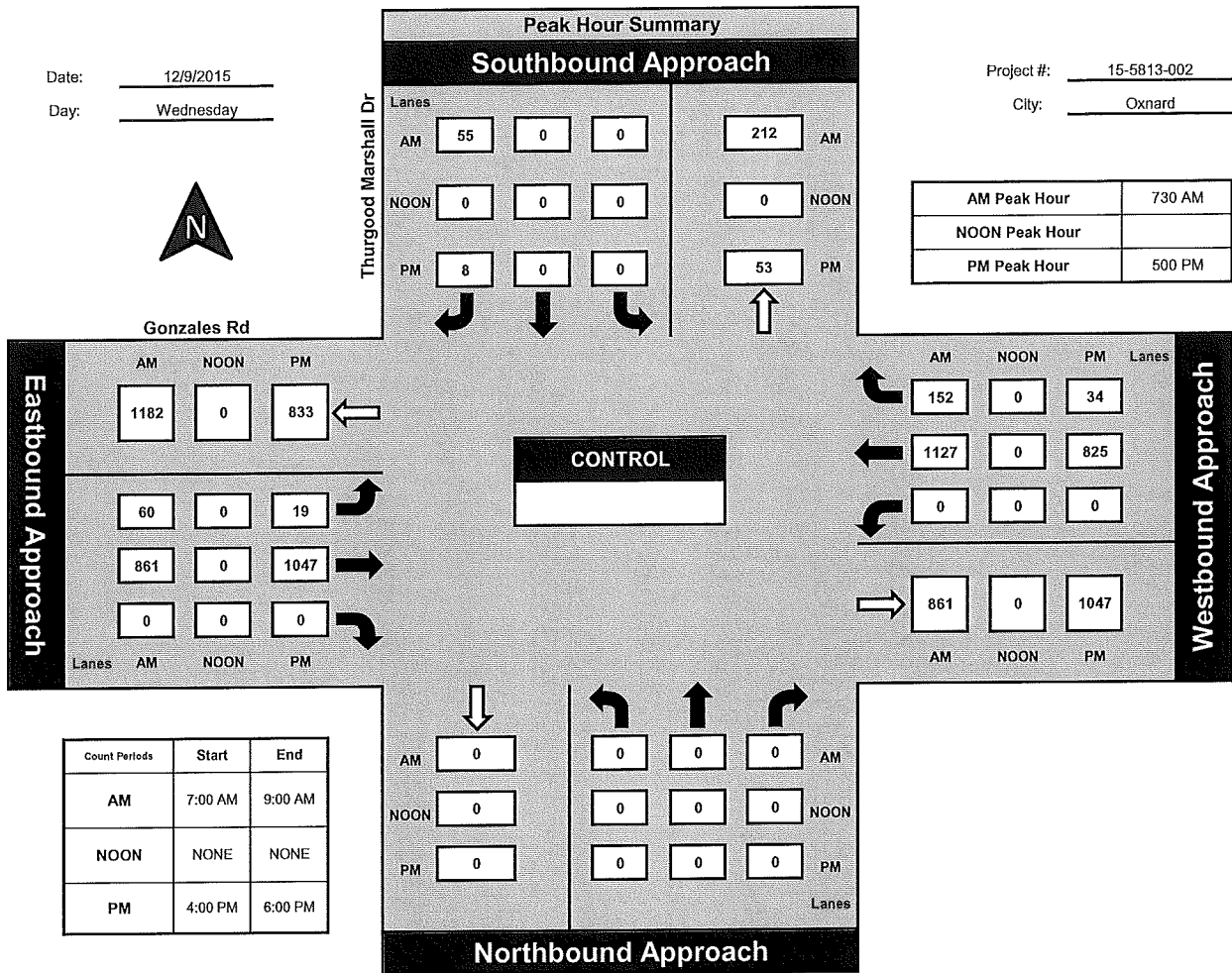


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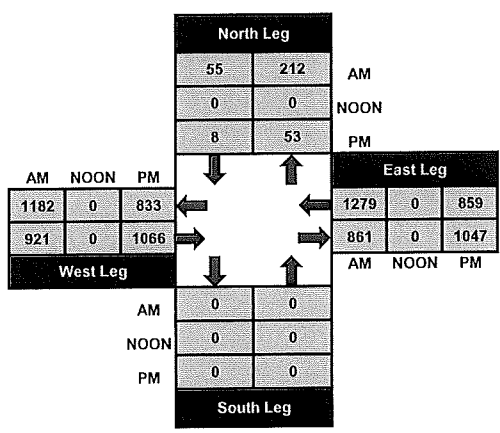
## Thurgood Marshall Dr and Gonzales Rd , Oxnard

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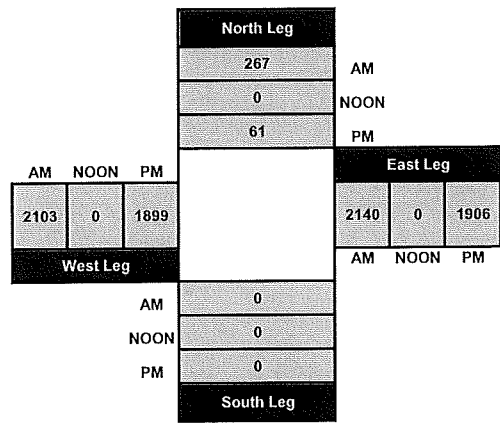
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City: Oxnard



### Total Ins & Outs



### Total Volume Per Leg



# ITM Peak Hour Summary

Prepared by:



National Data & Surveying Services

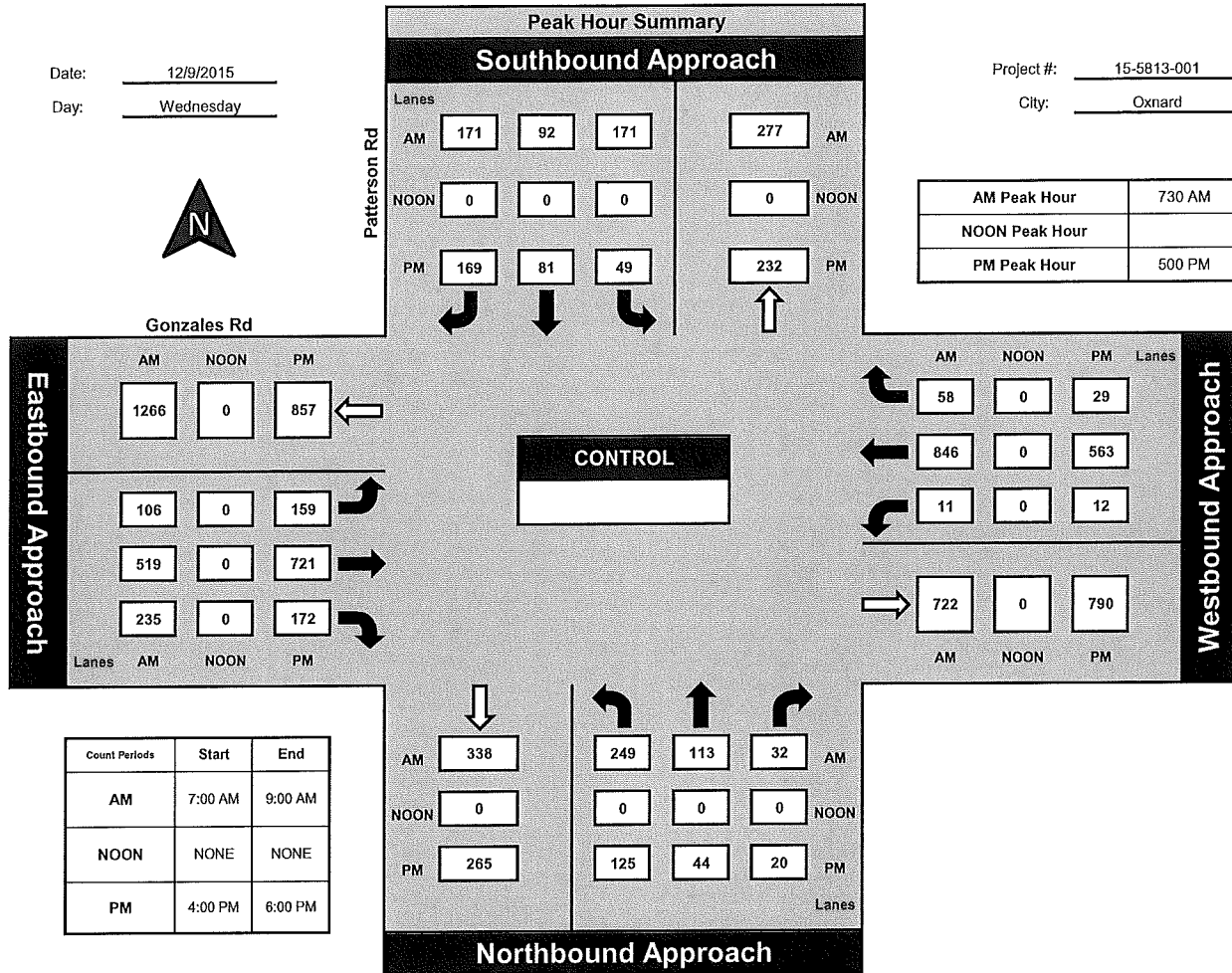
## Patterson Rd and Gonzales Rd, Oxnard

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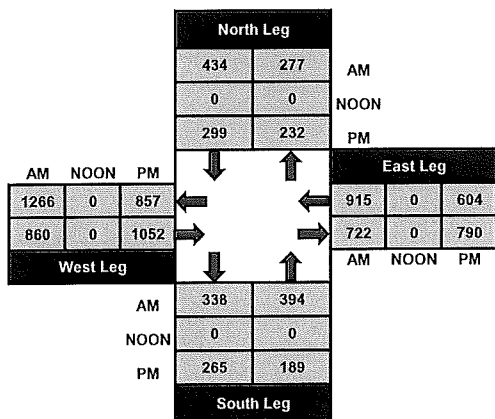
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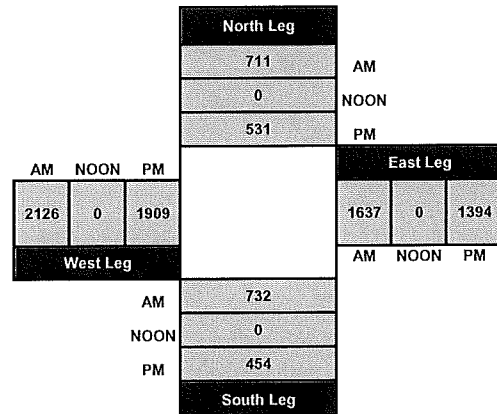
City: Oxnard



### Total Ins & Outs



### Total Volume Per Leg



## **INTERSECTION LEVEL OF SERVICE CRITERIA/DEFINITIONS**

## LEVEL OF SERVICE DEFINITIONS

"Levels of Service" (LOS) A through F are used to rate roadway and intersection operating conditions, with LOS A indicating very good operations and LOS F indicating poor operations. More complete level of service definitions are:

LOS	Definition
A	Low volumes; primarily free flow operations. Density is low and vehicles can freely maneuver within traffic stream. Drivers can maintain their desired speeds with little or no delay.
B	Stable flow with potential for some restriction of operating speeds due to traffic conditions. Maneuvering is only slightly restricted. Stopped delays are not bothersome and drivers are not subject to appreciable tension.
C	Stable operations, however the ability to maneuver is more restricted by the increase in traffic volumes. Relatively satisfactory operating speeds prevail but adverse signal coordination or longer queues cause delays.
D	Approaching unstable traffic flow where small increases in volume could cause substantial delays. Most drivers are restricted in their ability to maneuver and their selection of travel speeds. Comfort and convenience are low but tolerable.
E	Operations characterized by significant approach delays and average travel speeds of one-half to one-third of free flow speed. Flow is unstable and potential for stoppages of brief duration. High signal density, extensive queuing, or signal progression/timing are the typical causes of delays.
F	Forced flow operations with high approach delays at critical signalized intersections. Speeds are reduced substantially and stoppages may occur for short or long periods of time because of downstream congestion.

### Signalized Intersection Level of Service Definitions

LOS	Delay <sup>a</sup>	V/C Ratio	Definition
A	< 10.0	< 0.60	Progression is extremely favorable. Most vehicles arrive during the green phase. Many vehicles do not stop at all.
B	10.1 - 20.0	0.61 - 0.70	Good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of delay.
C	20.1 - 35.0	0.71 - 0.80	Only fair progression, longer cycle lengths, or both, result in higher cycle lengths. Cycle lengths may fail to serve queued vehicles, and overflow occurs. Number of vehicles stopped is significant, though many still pass through intersection without stopping.
D	35.1 - 55.0	0.81 - 0.90	Congestion becomes more noticeable. Unfavorable progression, long cycle lengths and high v/c ratios result in longer delays. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
E	55.1 - 80.0	0.91 - 1.00	High delay values indicate poor progression, long cycle lengths and high v/c ratios. Individual cycle failures are frequent
F	> 80.0	> 1.00	Considered unacceptable for most drivers, this level occurs when arrival flow rates exceed the capacity of lane groups, resulting in many individual cycle failures. Poor progression and long cycle lengths may also contribute to high delay levels.

<sup>a</sup> Average control delay per vehicle in seconds.

### Unsignalized Intersection Level of Service Definitions

The HCM<sup>1</sup> uses *control delay* to determine the level of service at unsignalized intersections. Control delay is the difference between the travel time actually experienced at the control device and the travel time that would occur in the absence of the traffic control device. Control delay includes deceleration from free flow speed, queue move-up time, stopped delay and acceleration back to free flow speed.

LOS	Control Delay Seconds per Vehicle
A	< 10.0
B	10.1 - 15.0
C	15.1 - 25.0
D	25.1 - 35.0
E	35.1 - 50.0
F	> 50.0

<sup>1</sup> Highway Capacity Manual, National Research Board, 2000

## DISCUSSION OF INTERSECTION CAPACITY UTILIZATION (ICU)

The ability of a roadway to carry traffic is referred to as capacity. The capacity is usually less at intersections because traffic flows continuously between them and only during the green phase at them. Capacity at intersections is best defined in terms of vehicles per lane per hour of green. The technique used to compare the volumes and capacity of an intersection is known as Intersection Capacity Utilization (ICU). ICU or volume-to-capacity ratio, usually expressed as a percentage, is the proportion of an hour required to provide sufficient capacity to accommodate all intersection traffic if all approaches operate at capacity. If an intersection is operating at 80 percent of capacity, then 20 percent of the signal cycle is not used.

The ICU calculation assumes that an intersection is signalized and that the signal is ideally timed. Although calculating ICU for an unsignalized intersection is invalid, the presumption is that a signal can be installed and the calculation shows whether the geometrics are capable of accommodating the expected volumes. It is possible to have an ICU well below 100 percent, yet have severe traffic congestion. This would occur if one or more movements is not getting sufficient time to satisfy its demand, and excess time exists on other movements. This is an operational problem which should be addressed.

Capacity is often defined in terms of roadway width. However, standard lanes have approximately the same capacity whether they are 11 or 14 feet wide. Data collected by Kunzman Associates indicates a typical lane, whether a through-lane or a left-turn lane, has a capacity of approximately 1,700 vehicles per hour, with nearly all locations showing a capacity greater than 1,600 vehicles per hour per lane. This finding is published in the August, 1978 issue of ITE Journal in the article entitled, "Another Look at Signalized Intersection Capacity" by William Kunzman. For this study, a capacity of 1,600 vehicles per hour per lane will be assumed for left-turn, through, and right-turn lanes as per City policy.

The yellow time can either be assumed to be completely used and no penalty applied, or it can be assumed to be only partially usable. Total yellow time accounts for less than 10 percent of a cycle, and a penalty of up to five percent is reasonable. On the other hand, during peak hour traffic operation, the yellow times are nearly completely used. In this study, no penalty will be applied for the yellow because the capacities have been assumed to be only 1,600 vehicles per hour per lane when in general they are 1,700-1,800 vehicles per hour per lane.

The ICU technique is an ideal tool to quantify existing as well as future intersection operations. The impact of adding a lane can be quickly determined by examining the effect the lane has on the intersection capacity utilization.

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Source: Oxnard Airport Business Park Traffic Study, Kunzman Assoc., City of Oxnard, 1985.

## **INTERSECTION LOS CALCULATION WORKSHEETS**

- Reference 1 - Gonzales Road/Merion Way**
- Reference 2 - Gonzales Road/Campus Road**
- Reference 3 - Gonzales Road/Thurgood Marshall Drive**
- Reference 4 - Gonzales Road/Patterson Road**
- Reference 5 - Patterson Road/Thurgood Marshall Drive**



**THURGOOD MARSHALL SCHOOL PROJECT (#15098)**  
 INTERSECTION CAPACITY UTILIZATION WORKSHEET  
 COUNT DATE: 12/16/2015  
 TIME PERIOD: A.M. PEAK HOUR  
 N/S STREET: MERION WAY  
 E/W STREET: GONZALES ROAD  
 CONTROL TYPE: SIGNAL

REF: 01 AM

**TRAFFIC VOLUME SUMMARY**

VOLUMES	NORTH BOUND			SOUTH BOUND			EAST BOUND			WEST BOUND		
	L	T	R	L	T	R	L	T	R	L	T	R
(A) EXISTING:	0	0	151	61	0	67	181	416	11	128	737	26
(B) PROJECT-ADDED:	0	0	0	0	0	0	0	15	0	0	13	0
(C) CUMULATIVE:	0	0	151	61	0	67	181	449	11	128	758	26

**GEOMETRICS**

LANE GEOMETRICS	NORTH BOUND		SOUTH BOUND		EAST BOUND		WEST BOUND	
	R	R	L	R	L	T	T	R

**TRAFFIC SCENARIOS**

SCENARIO 1 = EXISTING VOLUMES (A)  
 SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B)  
 SCENARIO 3 = CUMULATIVE (C)  
 SCENARIO 4 = CUMULATIVE + PROJECT VOLUMES (B+C)

**LEVEL OF SERVICE CALCULATIONS**

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES				SCENARIO V/C RATIOS					
			1	2	3	4	1	2	3	4		
NBL	0	0	0	0	0	0	-	-	-	-		
NBT	0	0	0	0	0	0	-	-	-	-		
NBR	2	3200	151	151	151	151	0.047 *	0.047 *	0.047 *	0.047 *		
SBL	1	1600	61	61	61	61	0.038 *	0.038 *	0.038 *	0.038 *		
SBT	0	0	0	0	0	0	-	-	-	-		
SBR	1	1600	67	67	67	67	0.042	0.042	0.042	0.042		
EBL	1	1600	181	181	181	181	0.113 *	0.113 *	0.113 *	0.113 *		
EBT	2	3200	416	431	449	464	0.133	0.138	0.144	0.148		
EBR	0	0	11	11	11	11	-	-	-	-		
WBL	1	1600	128	128	128	128	0.080	0.080	0.080	0.080		
WBT	2	3200	737	750	758	771	0.238 *	0.243 *	0.245 *	0.249 *		
WBR	0	0	26	26	26	26	-	-	-	-		
<b>TOTAL INTERSECTION CAPACITY UTILIZATION:</b>							<b>0.44</b>	<b>0.44</b>	<b>0.44</b>	<b>0.45</b>		
<b>SCENARIO LEVEL OF SERVICE:</b>							<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>		

NOTES:

THURGOOD MARSHALL SCHOOL PROJECT (#15098)  
 INTERSECTION CAPACITY UTILIZATION WORKSHEET  
 COUNT DATE: 12/16/2015  
 TIME PERIOD: P.M. PEAK HOUR  
 N/S STREET: MERION WAY  
 E/W STREET: GONZALES ROAD  
 CONTROL TYPE: SIGNAL

REF: 01 PM

TRAFFIC VOLUME SUMMARY

VOLUMES	NORTH BOUND			SOUTH BOUND			EAST BOUND			WEST BOUND		
	L	T	R	L	T	R	L	T	R	L	T	R
(A) EXISTING:	0	0	137	35	0	35	107	766	40	93	633	67
(B) PROJECT-ADDED:	0	0	0	0	0	0	0	4	0	0	4	0
(C) CUMULATIVE:	0	0	137	35	0	35	107	794	40	93	705	67

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND		SOUTH BOUND		EAST BOUND		WEST BOUND	
	R	R	L	R	L	T	T	R

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)  
 SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B)  
 SCENARIO 3 = CUMULATIVE (C)  
 SCENARIO 4 = CUMULATIVE + PROJECT VOLUMES (B+C)

LEVEL OF SERVICE CALCULATIONS

MOVE- MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES				SCENARIO V/C RATIOS					
			1	2	3	4	1	2	3	4		
NBL	0	0	0	0	0	0	-	-	-	-		
NBT	0	0	0	0	0	0	-	-	-	-		
NBR	2	3200	137	137	137	137	0.043 *	0.043 *	0.043 *	0.043 *		
SBL	1	1600	35	35	35	35	0.022 *	0.022 *	0.022 *	0.022 *		
SBT	0	0	0	0	0	0	-	-	-	-		
SBR	1	1600	35	35	35	35	0.022	0.022	0.022	0.022		
EBL	1	1600	107	107	107	107	0.067	0.067	0.067	0.067		
EBT	2	3200	766	770	794	798	0.252 *	0.253 *	0.261 *	0.262 *		
EBR	0	0	40	40	40	40	-	-	-	-		
WBL	1	1600	93	93	93	93	0.058 *	0.058 *	0.058 *	0.058 *		
WBT	2	3200	633	637	705	709	0.219	0.220	0.241	0.243		
WBR	0	0	67	67	67	67	-	-	-	-		
TOTAL INTERSECTION CAPACITY UTILIZATION:							0.38	0.38	0.38	0.39		
SCENARIO LEVEL OF SERVICE:							A	A	A	A		

NOTES:

**THURGOOD MARSHALL SCHOOL PROJECT (#15098)**  
 INTERSECTION CAPACITY UTILIZATION WORKSHEET  
 COUNT DATE: 12/16/2015  
 TIME PERIOD: A.M. PEAK HOUR  
 N/S STREET: CAMPUS ROAD  
 E/W STREET: GONZALES ROAD  
 CONTROL TYPE: SIGNAL

REF: 02 AM

**TRAFFIC VOLUME SUMMARY**

VOLUMES	NORTH BOUND			SOUTH BOUND			EAST BOUND			WEST BOUND		
	L	T	R	L	T	R	L	T	R	L	T	R
(A) EXISTING:	65	0	261	0	0	0	0	669	64	420	810	0
(B) PROJECT-ADDED:	0	0	0	0	0	0	0	15	0	0	13	0
(C) CUMULATIVE:	65	0	261	0	0	0	0	702	64	420	841	0

**GEOMETRICS**

LANE GEOMETRICS	NORTH BOUND L R R	SOUTH BOUND L R R	EAST BOUND T TR	WEST BOUND L T T
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**TRAFFIC SCENARIOS**

SCENARIO 1 = EXISTING VOLUMES (A)  
 SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B)  
 SCENARIO 3 = CUMULATIVE (C)  
 SCENARIO 4 = CUMULATIVE + PROJECT VOLUMES (B+C)

**LEVEL OF SERVICE CALCULATIONS**

MOVE- MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES				SCENARIO V/C RATIOS					
			1	2	3	4	1	2	3	4		
NBL	0	0	65	65	65	65	-	-	-	-		
NBT	2	3200	0	0	0	0	0.102 *	0.102 *	0.102 *	0.102 *		
NBR	0	0	261	261	261	261	-	-	-	-		
SBL	0	0	0	0	0	0	-	-	-	-		
SBT	0	0	0	0	0	0	-	-	-	-		
SBR	0	0	0	0	0	0	-	-	-	-		
EBL	0	0	0	0	0	0	-	-	-	-		
EBT	2	3200	669	684	702	717	0.229 *	0.234 *	0.239 *	0.244 *		
EBR	0	0	64	64	64	64	-	-	-	-		
WBL	1	1600	420	420	420	420	0.263 *	0.263 *	0.263 *	0.263 *		
WBT	2	3200	810	823	841	854	0.253	0.257	0.263	0.267		
WBR	0	0	0	0	0	0	-	-	-	-		
<b>TOTAL INTERSECTION CAPACITY UTILIZATION:</b>							<b>0.59</b>	<b>0.60</b>	<b>0.60</b>	<b>0.61</b>		
SCENARIO LEVEL OF SERVICE:							<b>A</b>	<b>A</b>	<b>A</b>	<b>B</b>		

NOTES:

**THURGOOD MARSHALL SCHOOL PROJECT (#15098)**  
 INTERSECTION CAPACITY UTILIZATION WORKSHEET  
 COUNT DATE: 12/16/2015  
 TIME PERIOD: P.M. PEAK HOUR  
 N/S STREET: CAMPUS ROAD  
 E/W STREET: GONZALES ROAD  
 CONTROL TYPE: SIGNAL

REF: 02 PM

**TRAFFIC VOLUME SUMMARY**

VOLUMES	NORTH BOUND			SOUTH BOUND			EAST BOUND			WEST BOUND		
	L	T	R	L	T	R	L	T	R	L	T	R
(A) EXISTING:	56	0	166	0	0	0	0	870	68	139	734	0
(B) PROJECT-ADDED:	0	0	0	0	0	0	0	4	0	0	4	0
(C) CUMULATIVE:	56	0	166	0	0	0	0	898	68	139	776	0

**GEOMETRICS**

LANE GEOMETRICS	NORTH BOUND		SOUTH BOUND		EAST BOUND		WEST BOUND	
	LR	R	L	R	T	TR	L	TT

**TRAFFIC SCENARIOS**

SCENARIO 1 = EXISTING VOLUMES (A)  
 SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B)  
 SCENARIO 3 = CUMULATIVE (C)  
 SCENARIO 4 = CUMULATIVE + PROJECT VOLUMES (B+C)

**LEVEL OF SERVICE CALCULATIONS**

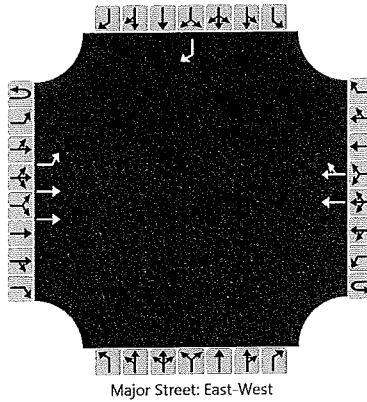
MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES				SCENARIO V/C RATIOS					
			1	2	3	4	1	2	3	4		
NBL	0	0	56	56	56	56	-	-	-	-		
NBT	2	3200	0	0	0	0	0.069 *	0.069 *	0.069 *	0.069 *		
NBR	0	0	166	166	166	166	-	-	-	-		
SBL	0	0	0	0	0	0	-	-	-	-		
SBT	0	0	0	0	0	0	-	-	-	-		
SBR	0	0	0	0	0	0	-	-	-	-		
EBL	0	0	0	0	0	0	-	-	-	-		
EBT	2	3200	870	874	898	902	0.293 *	0.294 *	0.302 *	0.303 *		
EBR	0	0	68	68	68	68	-	-	-	-		
WBL	1	1600	139	139	139	139	0.087 *	0.087 *	0.087 *	0.087 *		
WBT	2	3200	734	738	776	780	0.229	0.231	0.243	0.244		
WBR	0	0	0	0	0	0	-	-	-	-		
<b>TOTAL INTERSECTION CAPACITY UTILIZATION:</b>							<b>0.45</b>	<b>0.45</b>	<b>0.46</b>	<b>0.46</b>		
SCENARIO LEVEL OF SERVICE:							<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>		

NOTES:

# HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	Darryl F. Nelson	Intersection	Gonzales Road/TM Drive
Agency/Co.	ATE	Jurisdiction	City of Oxnard
Date Performed	12/15/2015	East/West Street	Gonzales Road
Analysis Year	2015	North/South Street	Thurgood Marshall Drive
Time Analyzed	A.M. Peak Hour	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Thurgood Marshall School		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	0	2	0		0	0	0		0	0	1
Configuration		L	T				T	TR								R
Volume (veh/h)		60	861				1127	152								55
Percent Heavy Vehicles		3														3
Proportion Time Blocked		0.000	0.000				0.000	0.000								0.000
Right Turn Channelized	No				No				No				No			
Median Type	Left Only															
Median Storage	1															

## Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		65														60
Capacity		483														381
v/c Ratio		0.13														0.16
95% Queue Length		0.5														0.6
Control Delay (s/veh)		13.6														16.2
Level of Service (LOS)		B														C
Approach Delay (s/veh)	0.9												16.2			
Approach LOS	A												C			

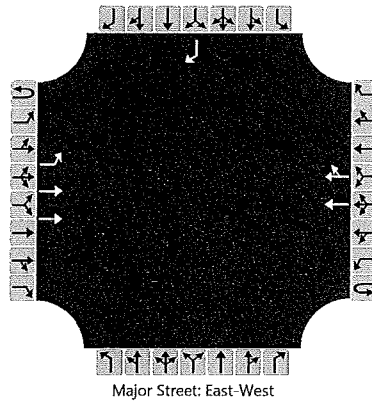
*Average weighted Delay = 14.8 sec.*

**LOS B-**

# HCS 2010 Two-Way Stop Control Summary Report

General Information				Site Information			
Analyst	Darryl F. Nelson			Intersection	Gonzales Road/TM Drive		
Agency/Co.	ATE			Jurisdiction	City of Oxnard		
Date Performed	12/15/2015			East/West Street	Gonzales Road		
Analysis Year	2015			North/South Street	Thurgood Marshall Drive		
Time Analyzed	A.M. Peak Hour			Peak Hour Factor	0.92		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	Thurgood Marshall School						

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	0	2	0		0	0	0		0	0	1
Configuration		L	T				T	TR								R
Volume (veh/h)		19	1047				825	34								8
Percent Heavy Vehicles		3														3
Proportion Time Blocked		0.000	0.000				0.000	0.000								0.000
Right Turn Channelized	No				No				No				No			
Median Type	Left Only															
Median Storage	1															

## Delay, Queue Length, and Level of Service

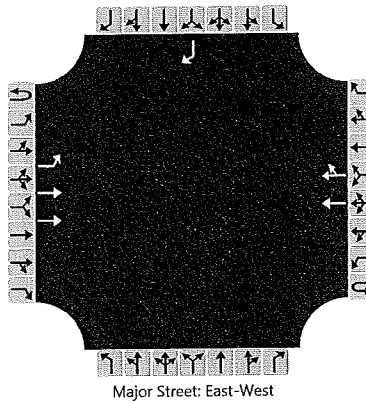
Flow Rate (veh/h)		21														9
Capacity		723														536
v/c Ratio		0.03														0.02
95% Queue Length		0.1														0.1
Control Delay (s/veh)		10.1														11.8
Level of Service (LOS)		B														B
Approach Delay (s/veh)	0.2												11.8			
Approach LOS	A												B			

*Average Weighted Delay = 10.6 sec. [LOS B]*

# HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	Darryl F. Nelson	Intersection	Gonzales Road/TM Drive
Agency/Co.	ATE	Jurisdiction	City of Oxnard
Date Performed	12/15/2015	East/West Street	Gonzales Road
Analysis Year	2015	North/South Street	Thurgood Marshall Drive
Time Analyzed	A.M. Peak Hour	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Thurgood Marshall School		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	1	2	0	0	0	2	0		0	0	0		0	0	1
Configuration		L	T				T	TR								R
Volume (veh/h)		75	861				1127	193								68
Percent Heavy Vehicles		3														3
Proportion Time Blocked		0.000	0.000				0.000	0.000								0.000
Right Turn Channelized	No				No				No				No			
Median Type	Left Only															
Median Storage	1															

## Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		82															74
Capacity		464															367
v/c Ratio		0.18															0.20
95% Queue Length		0.6															0.7
Control Delay (s/veh)		14.4															17.3
Level of Service (LOS)		B															C
Approach Delay (s/veh)		1.2														17.3	
Approach LOS		A														C	

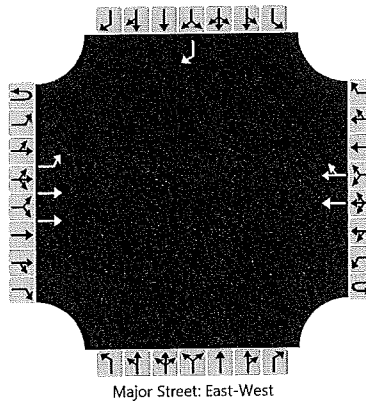
*Average Weighted Delay = 15.6 sec.*

**LOS C**

# HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	Darryl F. Nelson	Intersection	Gonzales Road/TM Drive
Agency/Co.	ATE	Jurisdiction	City of Oxnard
Date Performed	12/15/2015	East/West Street	Gonzales Road
Analysis Year	2015	North/South Street	Thurgood Marshall Drive
Time Analyzed	P.M. Peak Hour	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Thurgood Marshall School		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	1	2	0	0	0	2	0		0	0	0		0	0	1
Configuration		L	T				T	TR								R
Volume (veh/h)		23	1047				825	45								12
Percent Heavy Vehicles		3														3
Proportion Time Blocked		0.000	0.000				0.000	0.000								0.000
Right Turn Channelized	No				No				No				No			
Median Type	Left Only															
Median Storage	1															

## Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		25														13
Capacity		715														531
v/c Ratio		0.03														0.02
95% Queue Length		0.1														0.1
Control Delay (s/veh)		10.2														11.9
Level of Service (LOS)		B														B
Approach Delay (s/veh)	0.2												11.9			
Approach LOS	A												B			

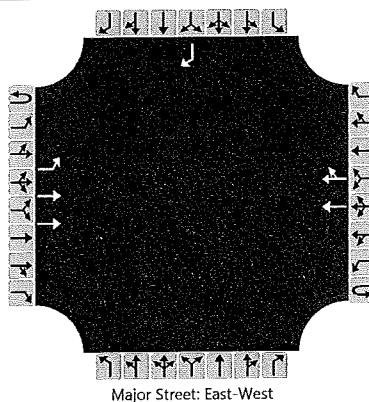
*Average weighted Delay = 10.8 sec. [LOS B]*



# HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	Darryl F. Nelson	Intersection	Gonzales Road/TM Drive
Agency/Co.	ATE	Jurisdiction	City of Oxnard
Date Performed	12/15/2015	East/West Street	Gonzales Road
Analysis Year	2015	North/South Street	Thurgood Marshall Drive
Time Analyzed	A.M. Peak Hour	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Thurgood Marshall School		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority	0	1	2	0	0	0	2	0		0	0	0		0	0	1
Configuration		L	T				T	TR								R
Volume (veh/h)		60	883				1150	152								55
Percent Heavy Vehicles		3														3
Proportion Time Blocked		0.000	0.000				0.000	0.000								0.000
Right Turn Channelized	No				No				No				No			
Median Type	Left Only															
Median Storage	1															

## Delay, Queue Length, and Level of Service

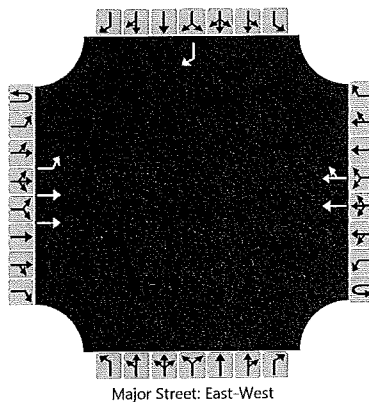
Flow Rate (veh/h)		65														60
Capacity		473														373
v/c Ratio		0.14														0.16
95% Queue Length		0.5														0.6
Control Delay (s/veh)		13.8														16.5
Level of Service (LOS)		B														C
Approach Delay (s/veh)		0.9													16.5	
Approach LOS		A													C	

*Average Weighted Delay = 15.1 sec. LOS C*

# HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	Darryl F. Nelson	Intersection	Gonzales Road/TM Drive
Agency/Co.	ATE	Jurisdiction	City of Oxnard
Date Performed	12/15/2015	East/West Street	Gonzales Road
Analysis Year	2015	North/South Street	Thurgood Marshall Drive
Time Analyzed	A.M. Peak Hour	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Thurgood Marshall School		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	1	2	0	0	0	2	0		0	0	0		0	0	1
Configuration		L	T				T	TR								R
Volume (veh/h)		19	1075				867	34								8
Percent Heavy Vehicles		3														3
Proportion Time Blocked		0.000	0.000				0.000	0.000								0.000
Right Turn Channelized	No				No				No				No			
Median Type	Left Only															
Median Storage	1															

## Delay, Queue Length, and Level of Service

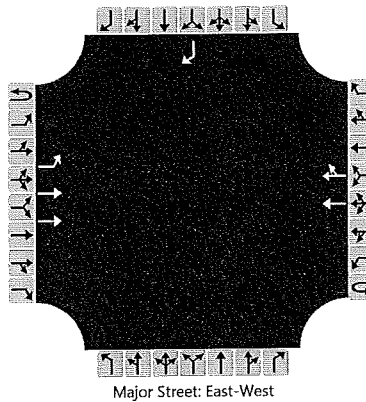
Flow Rate (veh/h)		21															9
Capacity		695															518
v/c Ratio		0.03															0.02
95% Queue Length		0.1															0.1
Control Delay (s/veh)		10.3															12.1
Level of Service (LOS)		B															B
Approach Delay (s/veh)		0.2															12.1
Approach LOS		A															B

*Average weighted Delay = 10.8 sec. [LOS B]*

# HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	Darryl F. Nelson	Intersection	Gonzales Road/TM Drive
Agency/Co.	ATE	Jurisdiction	City of Oxnard
Date Performed	12/15/2015	East/West Street	Gonzales Road
Analysis Year	2015	North/South Street	Thurgood Marshall Drive
Time Analyzed	A.M. Peak Hour	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Thurgood Marshall School		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	1	2	0	0	0	2	0		0	0	0		0	0	1
Configuration		L	T				T	TR								R
Volume (veh/h)		75	883				1150	193								68
Percent Heavy Vehicles		3														3
Proportion Time Blocked		0.000	0.000				0.000	0.000								0.000
Right Turn Channelized	No				No				No				No			
Median Type	Left Only															
Median Storage	1															

## Delay, Queue Length, and Level of Service

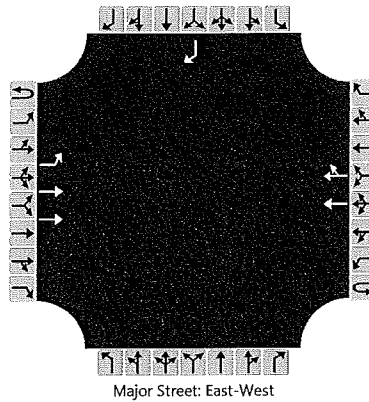
Flow Rate (veh/h)		82															74
Capacity		454															361
v/c Ratio		0.18															0.21
95% Queue Length		0.7															0.8
Control Delay (s/veh)		14.7															17.5
Level of Service (LOS)		B															C
Approach Delay (s/veh)		1.2														17.5	
Approach LOS		A														C	

*Average Weighted Delay = 14.0 sec. LOS C*

# HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	Darryl F. Nelson	Intersection	Gonzales Road/TM Drive
Agency/Co.	ATE	Jurisdiction	City of Oxnard
Date Performed	12/15/2015	East/West Street	Gonzales Road
Analysis Year	2015	North/South Street	Thurgood Marshall Drive
Time Analyzed	P.M. Peak Hour	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Thurgood Marshall School		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	1	2	0	0	0	2	0		0	0	0		0	0	1
Configuration		L	T				T	TR								R
Volume (veh/h)		23	1075				867	45								15
Percent Heavy Vehicles		3														3
Proportion Time Blocked		0.000	0.000				0.000	0.000								0.000
Right Turn Channelized	No				No				No				No			
Median Type	Left Only															
Median Storage	1															

## Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		25														16
Capacity		687														514
v/c Ratio		0.04														0.03
95% Queue Length		0.1														0.1
Control Delay (s/veh)		10.4														12.2
Level of Service (LOS)		B														B
Approach Delay (s/veh)	0.2												12.2			
Approach LOS	A												B			

*Average Weighted Delay = 11.1 sec. [LOS B]*

**THURGOOD MARSHALL SCHOOL PROJECT (#15098)**

REF: 04 AM

**INTERSECTION CAPACITY UTILIZATION WORKSHEET**

COUNT DATE: 12/16/2015  
 TIME PERIOD: A.M. PEAK HOUR  
 N/S STREET: PATTERSON ROAD  
 E/W STREET: GONZALES ROAD  
 CONTROL TYPE: SIGNAL

**TRAFFIC VOLUME SUMMARY**

VOLUMES	NORTH BOUND			SOUTH BOUND			EAST BOUND			WEST BOUND		
	L	T	R	L	T	R	L	T	R	L	T	R
(A) EXISTING:	249	113	32	71	92	171	106	519	235	11	846	58
(B) PROJECT-ADDED:	20	0	0	54	17	0	0	21	0	0	0	0
(C) CUMULATIVE:	266	121	32	171	100	185	110	519	253	11	846	58

**GEOMETRICS**

LANE GEOMETRICS	NORTH BOUND			SOUTH BOUND			EAST BOUND			WEST BOUND		
	L	T	R	L	T	R	L	T	R	L	T	R
	L	T	R	L	T	R	L	T	R	L	T	R

**TRAFFIC SCENARIOS**

SCENARIO 1 = EXISTING VOLUMES (A)  
 SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B)  
 SCENARIO 3 = CUMULATIVE (C)  
 SCENARIO 4 = CUMULATIVE + PROJECT VOLUMES (B+C)

**LEVEL OF SERVICE CALCULATIONS**

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES				SCENARIO V/C RATIOS					
			1	2	3	4	1	2	3	4		
NBL	1	1600	249	269	266	286	0.156 *	0.168 *	0.166 *	0.179 *		
NBT	1	1600	113	113	121	121	0.091	0.091	0.096	0.096		
NBR	0	0	32	32	32	32	-	-	-	-		
SBL	1	1600	71	125	171	225	0.044	0.078	0.107	0.141		
SBT	1	1600	92	109	100	117	0.058 *	0.068 *	0.063 *	0.073 *		
SBR	1	1600	171	171	185	185	0.107	0.107	0.116	0.116		
EBL	1	1600	106	106	110	110	0.066 *	0.066 *	0.069 *	0.069 *		
EBT	2	3200	519	540	519	540	0.236	0.242	0.241	0.248		
EBR	0	0	235	235	253	253	-	-	-	-		
WBL	1	1600	11	11	11	11	0.007	0.007	0.007	0.007		
WBT	2	3200	846	846	846	846	0.264 *	0.264 *	0.264 *	0.264 *		
WBR	1	1600	58	58	58	58	0.036	0.036	0.036	0.036		
<b>TOTAL INTERSECTION CAPACITY UTILIZATION:</b>							<b>0.54</b>	<b>0.57</b>	<b>0.56</b>	<b>0.59</b>		
<b>SCENARIO LEVEL OF SERVICE:</b>							<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>		

**NOTES:**

**THURGOOD MARSHALL SCHOOL PROJECT (#15098)**

REF: 04 PM

**INTERSECTION CAPACITY UTILIZATION WORKSHEET**

COUNT DATE: 12/16/2015  
 TIME PERIOD: P.M. PEAK HOUR  
 N/S STREET: PATTERSON ROAD  
 E/W STREET: GONZALES ROAD  
 CONTROL TYPE: SIGNAL

**TRAFFIC VOLUME SUMMARY**

VOLUMES	NORTH BOUND			SOUTH BOUND			EAST BOUND			WEST BOUND		
	L	T	R	L	T	R	L	T	R	L	T	R
(A) EXISTING:	125	44	20	49	81	169	159	721	172	12	563	29
(B) PROJECT-ADDED:	5	0	0	18	6	0	0	0	0	0	6	0
(C) CUMULATIVE:	161	55	21	49	91	175	174	721	185	12	563	29

**GEOMETRICS**

LANE GEOMETRICS	NORTH BOUND			SOUTH BOUND			EAST BOUND			WEST BOUND		
	L	T	R	L	T	R	L	T	R	L	T	R

**TRAFFIC SCENARIOS**

SCENARIO 1 = EXISTING VOLUMES (A)  
 SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B)  
 SCENARIO 3 = CUMULATIVE (C)  
 SCENARIO 4 = CUMULATIVE + PROJECT VOLUMES (B+C)

**LEVEL OF SERVICE CALCULATIONS**

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES				SCENARIO V/C RATIOS			
			1	2	3	4	1	2	3	4
NBL	1	1600	125	130	161	166	0.078 *	0.081 *	0.101 *	0.104 *
NBT	1	1600	44	44	55	55	0.040	0.040	0.048	0.048
NBR	0	0	20	20	21	21	-	-	-	-
SBL	1	1600	49	67	49	67	0.031	0.042	0.031	0.042
SBT	1	1600	81	87	91	97	0.051	0.054	0.057	0.061
SBR	1	1600	169	169	175	175	0.106 *	0.106 *	0.109 *	0.109 *
EBL	1	1600	159	159	174	174	0.099	0.099	0.109	0.109
EBT	2	3200	721	721	721	721	0.279 *	0.279 *	0.283 *	0.283 *
EBR	0	0	172	172	185	185	-	-	-	-
WBL	1	1600	12	12	12	12	0.008 *	0.008 *	0.008 *	0.008 *
WBT	2	3200	563	569	563	569	0.176	0.178	0.176	0.178
WBR	1	1600	29	29	29	29	0.018	0.018	0.018	0.018
<b>TOTAL INTERSECTION CAPACITY UTILIZATION:</b>							0.47	0.47	0.50	0.50
<b>SCENARIO LEVEL OF SERVICE:</b>							A	A	A	A

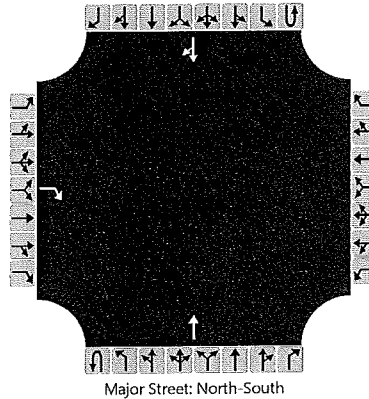
NOTES:



# HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	Darryl F. Nelson	Intersection	Patterson Road/TM Drive
Agency/Co.	ATE	Jurisdiction	City of Oxnard
Date Performed	12/15/2015	East/West Street	Thurgood Marshall Drive
Analysis Year	2015	North/South Street	Patterson Road
Time Analyzed	A.M. Peak Hour	Peak Hour Factor	0.92
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Thurgood Marshall School		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	1		0	0	0	0	0	1	0	0	0	1	0
Configuration				R							T					TR
Volume (veh/h)				253							305				186	0
Percent Heavy Vehicles				3												
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

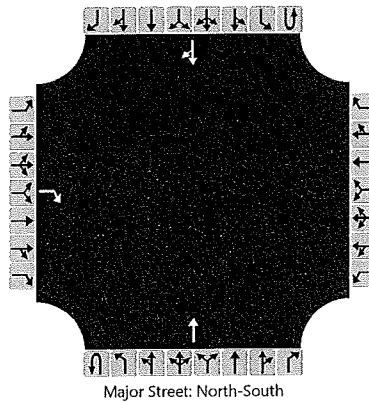
## Delay, Queue Length, and Level of Service

Flow Rate (veh/h)				275												
Capacity				798												
v/c Ratio				0.34												
95% Queue Length				1.5												
Control Delay (s/veh)				11.9												
Level of Service (LOS)				B												
Approach Delay (s/veh)	11.9															
Approach LOS	B															

# HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	Darryl F. Nelson	Intersection	Patterson Road/TM Drive
Agency/Co.	ATE	Jurisdiction	City of Oxnard
Date Performed	12/15/2015	East/West Street	Thurgood Marshall Drive
Analysis Year	2015	North/South Street	Patterson Road
Time Analyzed	A.M. Peak Hour	Peak Hour Factor	0.92
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Thurgood Marshall School		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	0	1		0	0	0	0	0	1	0	0	0	1	0	
Configuration				R							T						TR
Volume (veh/h)				52							243					249	0
Percent Heavy Vehicles				3													
Proportion Time Blocked																	
Right Turn Channelized	No				No				No				No				
Median Type	Undivided																
Median Storage																	

## Delay, Queue Length, and Level of Service

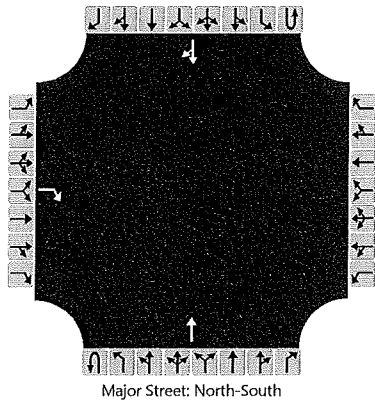
Flow Rate (veh/h)				57													
Capacity				755													
v/c Ratio				0.08													
95% Queue Length				0.2													
Control Delay (s/veh)				10.2													
Level of Service (LOS)				B													
Approach Delay (s/veh)	10.2																
Approach LOS	B																



# HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	Darryl F. Nelson	Intersection	Patterson Road/TM Drive
Agency/Co.	ATE	Jurisdiction	City of Oxnard
Date Performed	12/15/2015	East/West Street	Thurgood Marshall Drive
Analysis Year	2015	North/South Street	Patterson Road
Time Analyzed	A.M. Peak Hour	Peak Hour Factor	0.92
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Thurgood Marshall School		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	0	1		0	0	0	0	0	1	0	0	0	1	0	
Configuration				R							T						TR
Volume (veh/h)				324							343					186	219
Percent Heavy Vehicles				3													
Proportion Time Blocked																	
Right Turn Channelized	No				No				No				No				
Median Type	Undivided																
Median Storage																	

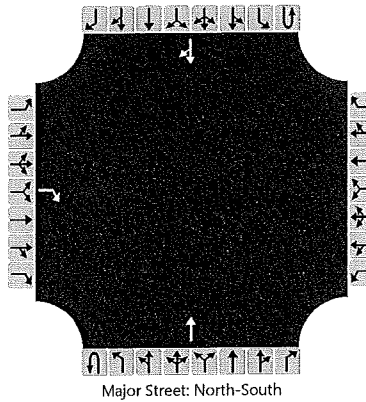
## Delay, Queue Length, and Level of Service

Flow Rate (veh/h)				352													
Capacity				669													
v/c Ratio				0.53													
95% Queue Length				3.1													
Control Delay (s/veh)				16.2													
Level of Service (LOS)				C													
Approach Delay (s/veh)	16.2																
Approach LOS	C																

# HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	Darryl F. Nelson	Intersection	Patterson Road/TM Drive
Agency/Co.	ATE	Jurisdiction	City of Oxnard
Date Performed	12/15/2015	East/West Street	Thurgood Marshall Drive
Analysis Year	2015	North/South Street	Patterson Road
Time Analyzed	P.M. Peak Hour	Peak Hour Factor	0.92
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Thurgood Marshall School		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	0	1		0	0	0	0	0	1	0	0	0	1	0	
Configuration				R							T						TR
Volume (veh/h)				76							256					249	82
Percent Heavy Vehicles				3													
Proportion Time Blocked																	
Right Turn Channelized	No				No				No				No				
Median Type	Undivided																
Median Storage																	

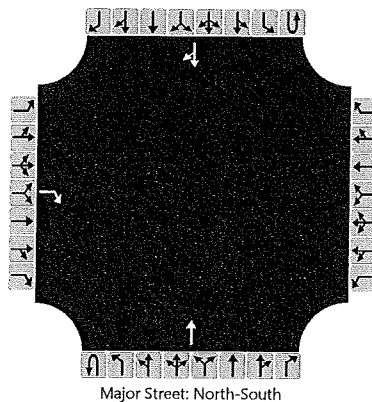
## Delay, Queue Length, and Level of Service

Flow Rate (veh/h)				83													
Capacity				712													
v/c Ratio				0.12													
95% Queue Length				0.4													
Control Delay (s/veh)				10.7													
Level of Service (LOS)				B													
Approach Delay (s/veh)	10.7																
Approach LOS	B																

# HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	Darryl F. Nelson	Intersection	Patterson Road/TM Drive
Agency/Co.	ATE	Jurisdiction	City of Oxnard
Date Performed	12/15/2015	East/West Street	Thurgood Marshall Drive
Analysis Year	2015	North/South Street	Patterson Road
Time Analyzed	A.M. Peak Hour	Peak Hour Factor	0.92
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Thurgood Marshall School		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	1		0	0	0	0	0	1	0	0	0	1	0
Configuration				R							T					TR
Volume (veh/h)				253							317					208
Percent Heavy Vehicles				3												
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

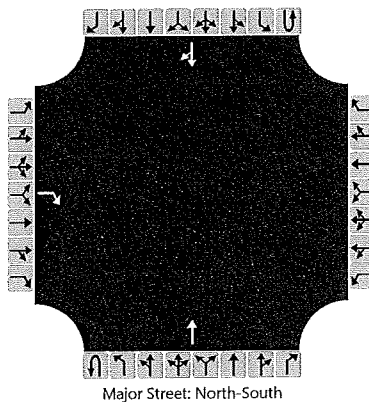
## Delay, Queue Length, and Level of Service

Flow Rate (veh/h)				275												
Capacity				670												
v/c Ratio				0.41												
95% Queue Length				2.0												
Control Delay (s/veh)				14.1												
Level of Service (LOS)				B												
Approach Delay (s/veh)	14.1															
Approach LOS	B															

# HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	Darryl F. Nelson	Intersection	Patterson Road/TM Drive
Agency/Co.	ATE	Jurisdiction	City of Oxnard
Date Performed	12/15/2015	East/West Street	Thurgood Marshall Drive
Analysis Year	2015	North/South Street	Patterson Road
Time Analyzed	P.M. Peak Hour	Peak Hour Factor	0.92
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Thurgood Marshall School		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	1		0	0	0	0	0	1	0	0	0	1	0
Configuration				R							T					TR
Volume (veh/h)				52							269				265	70
Percent Heavy Vehicles				3												
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

## Delay, Queue Length, and Level of Service

Flow Rate (veh/h)				57												
Capacity				657												
v/c Ratio				0.09												
95% Queue Length				0.3												
Control Delay (s/veh)				11.0												
Level of Service (LOS)				B												
Approach Delay (s/veh)	11.0															
Approach LOS	B															

# HCS 2010 Two-Way Stop Control Summary Report

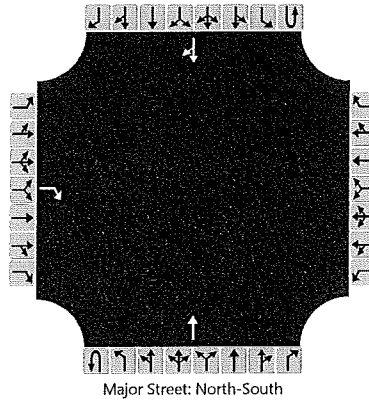
## General Information

Analyst	Darryl F. Nelson
Agency/Co.	ATE
Date Performed	12/15/2015
Analysis Year	2015
Time Analyzed	A.M. Peak Hour
Intersection Orientation	North-South
Project Description	Thurgood Marshall School

## Site Information

Intersection	Patterson Road/TM Drive
Jurisdiction	City of Oxnard
East/West Street	Thurgood Marshall Drive
North/South Street	Patterson Road
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	1		0	0	0	0	0	1	0	0	0	1	0
Configuration				R							T					TR
Volume (veh/h)				324							355				208	219
Percent Heavy Vehicles				3												
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

## Delay, Queue Length, and Level of Service

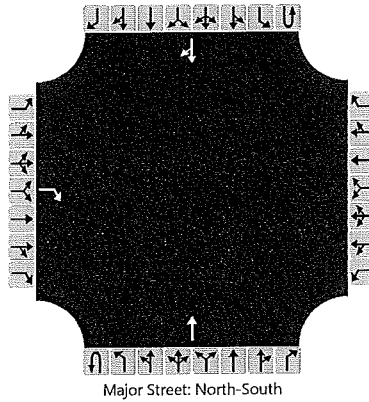
Flow Rate (veh/h)				352												
Capacity				645												
v/c Ratio				0.55												
95% Queue Length				3.3												
Control Delay (s/veh)				17.1												
Level of Service (LOS)				C												
Approach Delay (s/veh)	17.1															
Approach LOS	C															



# HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	Darryl F. Nelson	Intersection	Patterson Road/TM Drive
Agency/Co.	ATE	Jurisdiction	City of Oxnard
Date Performed	12/15/2015	East/West Street	Thurgood Marshall Drive
Analysis Year	2015	North/South Street	Patterson Road
Time Analyzed	P.M. Peak Hour	Peak Hour Factor	0.92
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Thurgood Marshall School		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	0	1		0	0	0	0	0	1	0	0	0	1	0	
Configuration				R							T						TR
Volume (veh/h)				76							282					265	82
Percent Heavy Vehicles				3													
Proportion Time Blocked																	
Right Turn Channelized	No				No				No				No				
Median Type	Undivided																
Median Storage																	

## Delay, Queue Length, and Level of Service

Flow Rate (veh/h)				83													
Capacity				651													
v/c Ratio				0.13													
95% Queue Length				0.4													
Control Delay (s/veh)				11.3													
Level of Service (LOS)				B													
Approach Delay (s/veh)	11.3																
Approach LOS	B																

**CALTRANS COLLISION DATA**







# ASSOCIATED TRANSPORTATION ENGINEERS

100 N. Hope Avenue, Suite 4, Santa Barbara, CA 93110 • (805) 687-4418 • (805) 682-8509-F

## ACCIDENT RATE CALCULATION SHEET - FOR INTERSECTIONS

**Project:** Thurgood Marshall School  
**Project #:** 015098  
**Analyst:** DFN  
**Date:** 2/17/2016

**File Name:** Accident Rate Wkst.exl

**N/S Street:** Merion Way  
**E/W Street:** Gonzales Road

**Weekday:**  
PM Peak Hour Entering Volume: 1913  
Peak Hour Factor: 10  
-----OR-----  
Total Approach ADT: N/A

**Weekend:**  
PM Peak Hour Entering Volume OR ADT: 100% (as a percentage of Weekday PM Peak Hour Entering Volume OR ADT)

**Period Analyzed (years):** 5

**Number of Accidents:** 6

**Million Entering Vehicle Miles:** 34.91 million entering vehicle miles (mevm)

**Accident Rate:** .17 accidents per million entering vehicle miles (mevm)

**Intersection Rate Group:**  
**California State Average Collision Rate:** 0.43

#151346(b) 2010 - AV. 2015 COLLISIONS ON GONZALES ROAD AND CAMPUS ROAD, IN THE CITY OF OXNARD, VENTURA COUNTY

Primary Rd	Distance (ft)	Direction	W	Secondary Rd	CAMPUS RD	NCIC 5604	State Hwy?	N	Route	Postmile Prefix	Postmile	Side of Hwy
City OXNARD	VENTURA	Population	6	Rpt Dist	Beat 564	Type	CalTrans Dist		Badge	4957	20101216	Day THU
Primary Collision Factor	UNSAFE SPEED	Violation	22350	Collision Type	REAR END	Severity	INJURY		# Killed	0	Tow Away?	20111213
Weather1	CLOUDY	Rdwy Surface	DRY	Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Loc Type	Spec Cond 0
Hit and Run		Motor Veh Involved With	OTHER MV	Lighting	DAYLIGHT	Ped Action			Cntrl Dev	NT PRSIFCTR	Loc Type	Ramp/Int
PARTY INFO												
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre Coll	Dir	SW	Veh	CHP	Veh	Make
1F	DRVR	55	M	A	HNB	PROC ST	E	-	00	MERCE	2000	-
2	DRVR	36	F	H	HNB	STOPPED	E	-	00	TOYOT	2007	-
Primary Rd	GONZALES RD	Distance (ft)	10	Secondary Rd	CAMPUS DR	NCIC 5604	State Hwy?	N	Route	Postmile Prefix	Postmile	Side of Hwy
City OXNARD	VENTURA	Population	6	Rpt Dist	Beat 011	Type	CalTrans Dist		Badge	5018	20111214	Day WED
Primary Collision Factor	UNSAFE SPEED	Violation	22350	Collision Type	REAR END	Severity	PDO		# Killed	0	Tow Away?	20130613
Weather1	CLEAR	Rdwy Surface	DRY	Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Loc Type	Spec Cond 0
Hit and Run	MSDMNR	Motor Veh Involved With	OTHER MV	Lighting	DAYLIGHT	Ped Action			Cntrl Dev	FUNCTNG	Loc Type	Ramp/Int
PARTY INFO												
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre Coll	Dir	SW	Veh	CHP	Veh	Make
1F	DRVR	16	M	H	HNB	PROC ST	E	-	00	HONDA	1991	-
2	DRVR	44	F	A	HNB	STOPPED	E	-	00	CHRY	2000	-
VICTIM INFO												
Role	Ext of Inj	Age	Sex	Seat Pos	Safety Equip	Ejected						
PASS		18	F	3	M	G						
PASS		16	F	3	M	G						
PASS		17	M	5	M	G						



# ASSOCIATED TRANSPORTATION ENGINEERS

100 N. Hope Avenue, Suite 4, Santa Barbara, CA 93110 • (805) 687-4418 • (805) 682-8509-F

## ACCIDENT RATE CALCULATION SHEET - FOR INTERSECTIONS

**Project:** Thurgood Marshall School  
**Project #:** 015098  
**Analyst:** DFN  
**Date:** 2/17/2016

**File Name:** Accident Rate Wkst.exl

**N/S Street:** Campus Road  
**E/W Street:** Gonzales Road

**Weekday:**

**PM Peak Hour Entering Volume:** 2033  
**Peak Hour Factor:** 10

-----OR-----

**Total Approach ADT:** N/A

**Weekend:**

**PM Peak Hour Entering Volume OR ADT:** 100% (as a percentage of Weekday PM Peak Hour Entering Volume OR ADT)

**Period Analyzed (years):** 5

**Number of Accidents:** 2

**Million Entering Vehicle Miles:** 37.1 million entering vehicle miles (mevm)

**Accident Rate:** .05 accidents per million entering vehicle miles (mevm)

**Intersection Rate Group:**

**California State Average Collision Rate:** 0.43





# ASSOCIATED TRANSPORTATION ENGINEERS

100 N. Hope Avenue, Suite 4, Santa Barbara, CA 93110 • (805) 687-4418 • (805) 682-8509-F

## ACCIDENT RATE CALCULATION SHEET - FOR INTERSECTIONS

**Project:** Thurgood Marshall School  
**Project #:** 015098  
**Analyst:** DFN  
**Date:** 2/17/2016

**File Name:** Accident Rate Wkst.exl

**N/S Street:** Thurgood Marshall Drive  
**E/W Street:** Gonzales Road

**Weekday:**

**PM Peak Hour Entering Volume:** 1933  
**Peak Hour Factor:** 10

-----OR-----

**Total Approach ADT:** N/A

**Weekend:**

**PM Peak Hour Entering Volume OR ADT:** 100% (as a percentage of Weekday PM Peak Hour Entering Volume OR ADT)

**Period Analyzed (years):** 5

**Number of Accidents:** 4

**Million Entering Vehicle Miles:** 35.28 million entering vehicle miles (mevm)

**Accident Rate:** **.11 accidents per million entering vehicle miles (mevm)**

**Intersection Rate Group:**

**California State Average Collision Rate:** 0.14



#151346(d) 2010 - AV. 2015 COLLISIONS ON GONZALES ROAD AND PATTERSON ROAD, IN THE CITY OF OXNARD, VENTURA COUNTY

Primary Rd	GONZALES RD	Distance (ft)	1	Direction	Secondary Rd	PATTERSON RD	NCIC 5604	State Hwy?	N	Route	Postmile	Postmile Prefix	Collision Date	20101020	Time	1551	Day	WED	Side of Hwy											
City	OXNARD	County	VENTURA	Population	6	Rpt Dist	11	Beat	011	Badge	4577	# Killed	0	Injured	1	Tow Away?	Y	Process Date	20111114	Spec Cond	0	Ramp/Int								
Weather1	CLOUDY	Weather2		Motor Veh Involved With	OTHER MV	Roadway Surface	DRY	Lighting	DAYLIGHT	Roadway Cond1	NO UNSUSL CND	Severity	INJURY	CalTrans Dist																
Hit and Run																														
<b>PARTY INFO</b>																														
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre Coll	Dir	SW	Veh	CHP	Veh	Make	Year	Sp	Info	0AF1	Viol	0AF2	Safety	Equip	Role	Ext	of Inj	Age	Sex	Seat	Pos	Safety	Equip	Ejected
1F	DRVR	59	F	W	HNBD	E	-	-	00	TOYOT	2003	A	-	N	-	M	G	-	M	G	DRVR	COMP	PN	53	M	1	M	G	0	
2	DRVR	53	M	H	HNBD	W	-	-	00	NISSA	1992	A	-	N	-	M	G	-	M	G	DRVR	COMP	PN	53	M	1	M	G	0	
<b>VICTIM INFO</b>																														
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre Coll	Dir	SW	Veh	CHP	Veh	Make	Year	Sp	Info	0AF1	Viol	0AF2	Safety	Equip	Role	Ext	of Inj	Age	Sex	Seat	Pos	Safety	Equip	Ejected
1F	DRVR	36	F	H	HNBD	E	-	-	00	FORD	1997	-	3	N	-	L	G	-	L	G	DRVR	OTH	VIS	36	F	1	L	G	0	
2	DRVR	31	M	H	HNBD	E	-	-	00	ACURA	1994	-	3	N	-	M	G	-	M	G	DRVR	COMP	PN	31	M	1	M	G	0	
3	DRVR	28	M	H	HNBD	E	-	-	00	NISSA	2005	-	3	N	-	M	G	-	M	G	PASS	COMP	PN	26	F	3	M	G	0	
<b>PARTY INFO</b>																														
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre Coll	Dir	SW	Veh	CHP	Veh	Make	Year	Sp	Info	0AF1	Viol	0AF2	Safety	Equip	Role	Ext	of Inj	Age	Sex	Seat	Pos	Safety	Equip	Ejected
1F	DRVR	22	M	H	HNBD	W	-	-	00	HONDA	1996	-	3	N	-	M	G	-	M	G	PASS	COMP	PN	17	F	3	M	G	0	
2	DRVR	43	F	W	HNBD	W	-	-	00	NISSA	2005	-	3	N	-	M	G	-	M	G	DRVR	COMP	PN	43	F	1	M	G	0	
																					PASS	COMP	PN	14	F	3	M	G	0	
																					PASS	COMP	PN	15	M	8	M	G	0	
<b>VICTIM INFO</b>																														
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre Coll	Dir	SW	Veh	CHP	Veh	Make	Year	Sp	Info	0AF1	Viol	0AF2	Safety	Equip	Role	Ext	of Inj	Age	Sex	Seat	Pos	Safety	Equip	Ejected
1F	DRVR	22	M	H	HNBD	W	-	-	00	HONDA	1996	-	3	N	-	M	G	-	M	G	PASS	COMP	PN	17	F	3	M	G	0	
2	DRVR	43	F	W	HNBD	W	-	-	00	NISSA	2005	-	3	N	-	M	G	-	M	G	DRVR	COMP	PN	43	F	1	M	G	0	
																					PASS	COMP	PN	14	F	3	M	G	0	
																					PASS	COMP	PN	15	M	8	M	G	0	
<b>PARTY INFO</b>																														
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre Coll	Dir	SW	Veh	CHP	Veh	Make	Year	Sp	Info	0AF1	Viol	0AF2	Safety	Equip	Role	Ext	of Inj	Age	Sex	Seat	Pos	Safety	Equip	Ejected
1F	DRVR	34	M	H	HNBD	E	-	-	00	TOYOT	2001	-	3	F	-	M	G	-	M	G	PASS	COMP	PN	50	F	3	M	G	0	
2	DRVR	25	F	H	HNBD	E	-	-	00	BUICK	1997	-	3	N	-	M	G	-	M	G	PASS	COMP	PN	21	F	6	M	G	0	
3	PRKD	998																			PASS	COMP	PN	21	F	6	M	G	0	
<b>VICTIM INFO</b>																														
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre Coll	Dir	SW	Veh	CHP	Veh	Make	Year	Sp	Info	0AF1	Viol	0AF2	Safety	Equip	Role	Ext	of Inj	Age	Sex	Seat	Pos	Safety	Equip	Ejected
1F	DRVR	34	M	H	HNBD	E	-	-	00	TOYOT	2001	-	3	F	-	M	G	-	M	G	PASS	COMP	PN	50	F	3	M	G	0	
2	DRVR	25	F	H	HNBD	E	-	-	00	BUICK	1997	-	3	N	-	M	G	-	M	G	PASS	COMP	PN	21	F	6	M	G	0	
3	PRKD	998																			PASS	COMP	PN	21	F	6	M	G	0	
<b>PARTY INFO</b>																														
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre Coll	Dir	SW	Veh	CHP	Veh	Make	Year	Sp	Info	0AF1	Viol	0AF2	Safety	Equip	Role	Ext	of Inj	Age	Sex	Seat	Pos	Safety	Equip	Ejected
1F	DRVR	24	M	B	HNBD	E	-	-	00	TOYOT	2000	-	3	N	-	M	G	-	M	G	DRVR	COMP	PN	54	M	1	M	G	0	
2	DRVR	54	M	H	HNBD	E	-	-	00	INTER	2006	-	3	N	-	M	G	-	M	G	DRVR	COMP	PN	54	M	1	M	G	0	
																					PASS	COMP	PN	21	F	6	M	G	0	
<b>VICTIM INFO</b>																														
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre Coll	Dir	SW	Veh	CHP	Veh	Make	Year	Sp	Info	0AF1	Viol	0AF2	Safety	Equip	Role	Ext	of Inj	Age	Sex	Seat	Pos	Safety	Equip	Ejected
1F	DRVR	24	M	B	HNBD	E	-	-	00	TOYOT	2000	-	3	N	-	M	G	-	M	G	DRVR	COMP	PN	54	M	1	M	G	0	
2	DRVR	54	M	H	HNBD	E	-	-	00	INTER	2006	-	3	N	-	M	G	-	M	G	DRVR	COMP	PN	54	M	1	M	G	0	

#151346(d) 2010 - AV. 2015 COLLISIONS ON GONZALES ROAD AND PATTERSON ROAD, IN THE CITY OF OXNARD, VENTURA COUNTY

Primary Rd	GONZALES RD	Distance (ft)	185	Direction	W	Secondary Rd	PATTERSON RD	NCIC	5604	State Hwy?	N	Route	Postmile	Prefix	Postmile	Collision Date	20120308	Time	0751	Day	THU	Side of Hwy	
City	OXNARD	County	VENTURA	Population	6	Rpt Dist	Beat 011	Type	CallTrans	Dist		Badge	5118	# Injured	2	Tow Away?	N	Process Date	20130725			Spec Cond	0
Primary Collision Factor	TOO CLOSE	Weather/2		Violation	21703	Collision Type	REAR END	Severity	INJURY			Rdwy Cond	0	Rdwy Cond	2								
Weather/1	CLEAR	Motor Veh Involved With	OTHER MV	Rdwy Surface	DRY	Lighting	DAYLIGHT																
Hit and Run																							
PARTY INFO																							
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre Coll	Dir	SW	Veh	CHP	Veh	Make	Year	Sp	Info	OAF1	Viol	OAF2	Safety	Equip	Equip	Ejected	
1F	DRVR	19	M	H	HNBD	PROCS	ST	W	-	-00	NISSA	1993	-	3	A	22350	N	L	G				
2	DRVR	45	F	H	HNBD	STOPPED	W	-	-00	TOYOT	2007	-	3	N									
3	DRVR	60	F	H	HNBD	PROCS	ST	W	-	-00	TOYOT	2008	-	3	N								
Primary Rd	GONZALES RD	Distance (ft)	1320	Direction	W	Secondary Rd	PATTERSON RD	NCIC	5604	State Hwy?	N	Route	Postmile	Prefix	Postmile	Collision Date	20120313	Time	0715	Day	TUE	Side of Hwy	
City	OXNARD	County	VENTURA	Population	6	Rpt Dist	Beat 011	Type	CallTrans	Dist		Badge	4610	# Injured	0	Tow Away?	N	Process Date	20130808				
Primary Collision Factor	IMPROP TURN	Weather/2		Violation	22107	Collision Type	SIDESWIPE	Severity	PDO			Rdwy Cond	0	Rdwy Cond	2								
Weather/1	CLEAR	Motor Veh Involved With	OTHER MV	Rdwy Surface	DRY	Lighting	DAYLIGHT																
Hit and Run	MSDMNR																						
PARTY INFO																							
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre Coll	Dir	SW	Veh	CHP	Veh	Make	Year	Sp	Info	OAF1	Viol	OAF2	Safety	Equip	Equip	Ejected	
1F	DRVR	53	M	W	HNBD	PASSING	W	-	-00	CHEVR	1999	-	3	N									
2	DRVR	56	M	W	HNBD	PROCS	ST	W	-	-00	FORD	1990	-	3	N								
Primary Rd	GONZALES RD	Distance (ft)	500	Direction	W	Secondary Rd	PATTERSON RD	NCIC	5604	State Hwy?	N	Route	Postmile	Prefix	Postmile	Collision Date	20120504	Time	0750	Day	FRI	Side of Hwy	
City	OXNARD	County	VENTURA	Population	6	Rpt Dist	Beat 011	Type	CallTrans	Dist		Badge	5313	# Injured	0	Tow Away?	N	Process Date	20131210				
Primary Collision Factor	LANE CHANGE	Weather/2		Violation	21658A	Collision Type	SIDESWIPE	Severity	PDO			Rdwy Cond	0	Rdwy Cond	2								
Weather/1	CLEAR	Motor Veh Involved With	OTHER MV	Rdwy Surface	DRY	Lighting	DAYLIGHT																
Hit and Run	MSDMNR																						
PARTY INFO																							
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre Coll	Dir	SW	Veh	CHP	Veh	Make	Year	Sp	Info	OAF1	Viol	OAF2	Safety	Equip	Equip	Ejected	
1	DRVR	43	M	H	HNBD	PROCS	ST	W	-	-00	MERCE	1999	-	3	N								
2F	DRVR	98	M	W	HNBD	IMP UNK	IMP UNK	CHANG	LN	W	-	-00	CHRY	2006	-	-	-	-	-	-	-	-	
Primary Rd	GONZALES RD	Distance (ft)	1	Direction	Secondary Rd	PATTERSON RD	NCIC	5604	State Hwy?	N	Route	Postmile	Prefix	Postmile	Collision Date	20120920	Time	0800	Day	THU	Side of Hwy		
City	OXNARD	County	VENTURA	Population	6	Rpt Dist	Beat 011	Type	CallTrans	Dist		Badge	5037	# Injured	1	Tow Away?	N	Process Date	20131211				
Primary Collision Factor	R-O-W PED	Weather/2		Violation	21950A	Collision Type	AUTOPEDE	Severity	INJURY			Rdwy Cond	0	Rdwy Cond	2								
Weather/1	CLEAR	Motor Veh Involved With	OTHER MV	Rdwy Surface	DRY	Lighting	DAYLIGHT																
Hit and Run	FELONY																						
PARTY INFO																							
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre Coll	Dir	SW	Veh	CHP	Veh	Make	Year	Sp	Info	OAF1	Viol	OAF2	Safety	Equip	Equip	Ejected	
1F	DRVR	98	F	H	HNBD	RGT TURN	E	-	-00	CHEVR	2006	-	-	-	-	-	-	-	-	-	-	-	
2	PED	15	M	W	HNBD	PROCS	ST	W	N	6000	-	-	3	N									
Primary Rd	GONZALES RD	Distance (ft)	200	Direction	W	Secondary Rd	PATTERSON AV	NCIC	5604	State Hwy?	N	Route	Postmile	Prefix	Postmile	Collision Date	20121004	Time	0748	Day	THU	Side of Hwy	
City	OXNARD	County	VENTURA	Population	6	Rpt Dist	Beat 011	Type	CallTrans	Dist		Badge	4998	# Injured	0	Tow Away?	N	Process Date	20140403				
Primary Collision Factor	UNSAFE SPEED	Weather/2		Violation	22350	Collision Type	REAR END	Severity	PDO			Rdwy Cond	0	Rdwy Cond	2								
Weather/1	CLEAR	Motor Veh Involved With	OTHER MV	Rdwy Surface	DRY	Lighting	DAYLIGHT																
Hit and Run																							
PARTY INFO																							
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre Coll	Dir	SW	Veh	CHP	Veh	Make	Year	Sp	Info	OAF1	Viol	OAF2	Safety	Equip	Equip	Ejected	
1F	DRVR	15	M	H	HNBD	PROCS	ST	W	-	-00	HONDA	1993	-	3	N								
2	DRVR	39	F	H	HNBD	STOPPED	W	-	-00	NISSA	2004	-	3	N									
Primary Rd	GONZALES RD	Distance (ft)	1	Direction	Secondary Rd	PATTERSON RD	NCIC	5604	State Hwy?	N	Route	Postmile	Prefix	Postmile	Collision Date	20121108	Time	1845	Day	THU	Side of Hwy		
City	OXNARD	County	VENTURA	Population	6	Rpt Dist	Beat 011	Type	CallTrans	Dist		Badge	4947	# Injured	2	Tow Away?	Y	Process Date	20140108				
Primary Collision Factor	R-O-W AUTO	Weather/2		Violation	21801A	Collision Type	BROADSIDE	Severity	INJURY			Rdwy Cond	0	Rdwy Cond	2								
Weather/1	CLOUDY	Motor Veh Involved With	OTHER MV	Rdwy Surface	DRY	Lighting	DARK - ST LTS																
Hit and Run																							
PARTY INFO																							
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre Coll	Dir	SW	Veh	CHP	Veh	Make	Year	Sp	Info	OAF1	Viol	OAF2	Safety	Equip	Equip	Ejected	
1F	DRVR	78	F	W	HNBD	LFT TURN	N	-	-00	NISSA	1997	-	3	N									
2	DRVR	27	M	H	HNBD	PROCS	ST	W	-	-00	NISSA	2005	-	3	N								



#151346(d) 2010 - AV. 2015 COLLISIONS ON GONZALES ROAD AND PATTERSON ROAD, IN THE CITY OF OXNARD, VENTURA COUNTY

Primary Rd	Distance (ft)	Direction	Secondary Rd	PATTERNSON RD	NCIC 5604	State Hwy?	N	Route	Postmile Prefix	Postmile	Side of Hwy								
GONZALES RD		Population 6	Rpt Dist	Beat 011	Type	CalTrans Dist		Badge 5118	Collision Date	20130118	Time 1239								
County VENTURA		Violation 21801A	Collision Type	BROADSIDE	Severity	INJURY		# Killed 0	Tow Away?	Y	Process Date 20140127								
City OXNARD		Rdwly Surface	DRY	Lighting	DAYLIGHT	Ped Action		Rdwly Cond1 NO UNUSL CND	Contrl Dev	FUNCTNG	Loc Type								
R-O-W AUTO		Weather2	OTHER MV	Motor Veh Involved With				Spec Cond 0	Ramp/Int										
Weather1 CLEAR		Motor Veh Involved With	OTHER MV	Lighting	DAYLIGHT	Ped Action													
Hit and Run		Motor Veh Involved With	OTHER MV	Lighting	DAYLIGHT	Ped Action													
Party Type	Age Sex	Race	Sobriety1	Sobriety2	Move Pre Coll Dir	SW Veh	CHP Veh	Make	Year	Sp Info	OAF1 Viol	OAF2 Safety Equip	Role	Ext of Inj	Age Sex	Seat Pos	Safety Equip	Ejected	
1F	DRVR 20 F	H	HNBD		LFT TURN	S	-00	HONDA	1997	-	3	N	M	G					0
2	DRVR 51 M	H	HNBD		PROC ST	E	-00	MITSU	2000	-	3	N	M	G					0
3	DRVR 39 F	A	HNBD		LFT TURN	N	-00	DODGE	2004	-	3	N	M	G					0
Primary Rd	GONZALES RD	Distance (ft)	1	Direction	Population 6	Rpt Dist	Secondary Rd	PATTERNSON RD	NCIC 5604	State Hwy?	N	Route	Postmile Prefix	Postmile	Side of Hwy				
County	OXNARD	Violation	21801A	Collision Type	BROADSIDE	Severity	INJURY		# Killed 0	Tow Away?	Y	Process Date	20140121						
City	OXNARD	Rdwly Surface	WET	Weather1	RAINING	Hit and Run	Motor Veh Involved With	OTHER MV	Lighting	DAYLIGHT	Ped Action								
Party Type	Age Sex	Race	Sobriety1	Sobriety2	Move Pre Coll Dir	SW Veh	CHP Veh	Make	Year	Sp Info	OAF1 Viol	OAF2 Safety Equip	Role	Ext of Inj	Age Sex	Seat Pos	Safety Equip	Ejected	
1F	DRVR 36 M	W	HNBD		LFT TURN	S	-00	GMC	2003	-	3	N	M	G					0
2	DRVR 19 M	H	HNBD		PROC ST	E	-00	LEXUS	1993	-	3	N	M	G					0
3	DRVR 47 M	H	HNBD		STOPPED	W	-00	FORD	2002	-	3	N	M	G					0
4	DRVR 57 F	H	HNBD		STOPPED	W	-00	HONDA	1998	-	3	N	M	G					0
Primary Rd	GONZALES RD	Distance (ft)	35	Direction	Population 6	Rpt Dist	Secondary Rd	PATTERNSON RD	NCIC 5604	State Hwy?	N	Route	Postmile Prefix	Postmile	Side of Hwy				
County	OXNARD	Violation	22350	Collision Type	SIDESWIPE	Severity	INJURY		# Killed 0	Tow Away?	Y	Process Date	20140226						
City	OXNARD	Rdwly Surface	DRY	Weather1	CLEAR	Hit and Run	Motor Veh Involved With	OTHER MV	Lighting	DAYLIGHT	Ped Action								
Party Type	Age Sex	Race	Sobriety1	Sobriety2	Move Pre Coll Dir	SW Veh	CHP Veh	Make	Year	Sp Info	OAF1 Viol	OAF2 Safety Equip	Role	Ext of Inj	Age Sex	Seat Pos	Safety Equip	Ejected	
1F	DRVR 37 M	H	HNBD		CHANG LN	W	-00	NISSA	1997	-	3	N	M	G					0
2	DRVR 20 M	H	HNBD		PROC ST	W	-00	LINCO	2006	-	3	N	M	G					0
3	DRVR 58 M	W	HNBD		PROC ST	W	-00	BMW	2011	-	3	N	M	G					0
Primary Rd	GONZALES RD	Distance (ft)	1	Direction	Population 6	Rpt Dist	Secondary Rd	PATTERNSON RD	NCIC 5604	State Hwy?	N	Route	Postmile Prefix	Postmile	Side of Hwy				
County	OXNARD	Violation	21801A	Collision Type	BROADSIDE	Severity	INJURY		# Killed 0	Tow Away?	Y	Process Date	20140312						
City	OXNARD	Rdwly Surface	DRY	Weather1	CLEAR	Hit and Run	Motor Veh Involved With	OTHER MV	Lighting	DAYLIGHT	Ped Action								
Party Type	Age Sex	Race	Sobriety1	Sobriety2	Move Pre Coll Dir	SW Veh	CHP Veh	Make	Year	Sp Info	OAF1 Viol	OAF2 Safety Equip	Role	Ext of Inj	Age Sex	Seat Pos	Safety Equip	Ejected	
1F	DRVR 45 F	W	HNBD		LFT TURN	N	-00	BMW	2000	-	3	N	L	G					0
2	DRVR 41 M	W	HNBD		PROC ST	W	-00	FORD	2001	-	3	N	M	G					0
Primary Rd	GONZALES RD	Distance (ft)	45	Direction	Population 6	Rpt Dist	Secondary Rd	PATTERNSON RD	NCIC 9765	State Hwy?	N	Route	Postmile Prefix	Postmile	Side of Hwy				
County	OXNARD	Violation	013943	Collision Date	20130828	Time	0810	Day	TUE	Process Date	20140321								
City	OXNARD	Rdwly Surface	DRY	Weather1	CLEAR	Hit and Run	Motor Veh Involved With	NON-CLSN	Lighting	DAYLIGHT	Ped Action								
Party Type	Age Sex	Race	Sobriety1	Sobriety2	Move Pre Coll Dir	SW Veh	CHP Veh	Make	Year	Sp Info	OAF1 Viol	OAF2 Safety Equip	Role	Ext of Inj	Age Sex	Seat Pos	Safety Equip	Ejected	
1	DRVR 45 F	H	HNBD		PROC ST	W	H	1700	THOMA	2000	-	3	N	M	G				0



# ASSOCIATED TRANSPORTATION ENGINEERS

100 N. Hope Avenue, Suite 4, Santa Barbara, CA 93110 • (805) 687-4418 • (805) 682-8509-F

## ACCIDENT RATE CALCULATION SHEET - FOR INTERSECTIONS

<b>Project:</b>	Thurgood Marshall School	<b>File Name:</b>	Accident Rate Wkst.exl
<b>Project #:</b>	015098		
<b>Analyst:</b>	DFN		
<b>Date:</b>	2/17/2016		
<b>N/S Street:</b>	Patterson Road		
<b>E/W Street:</b>	Gonzales Road		
<b>Weekday:</b>			
<b>PM Peak Hour Entering Volume:</b>	2144		
<b>Peak Hour Factor:</b>	10		
-----OR-----			
<b>Total Approach ADT:</b>	N/A		
<b>Weekend:</b>			
<b>PM Peak Hour Entering Volume OR ADT:</b>	100%	(as a percentage of Weekday PM Peak Hour Entering Volume OR ADT)	
<b>Period Analyzed (years):</b>	5		
<b>Number of Accidents:</b>	21		
<b>Million Entering Vehicle Miles:</b>	39.13 million entering vehicle miles (mevm)		
<b>Accident Rate:</b>	<b>.54 accidents per million entering vehicle miles (mevm)</b>		
<b>Intersection Rate Group:</b>			
<b>California State Average Collision Rate:</b>	0.43		

## DEFINITIONS

$$\text{Number Expected} = \frac{\text{ADT} \times \text{Time} \times \text{Rate Expected}}{1000000}$$

$$\text{Number Significant} = \text{Number Expected} + (2.576 \times \text{Number Expected}) + 1.329$$

NOTES: Number Significant using 99.5% confidence level.

For intersections, use annual number of entering vehicles in place of ADT and delete length. The NR is the same as for roadway segments.

---

## CALCULATIONS - GONZALES ROAD/PATTERSON ROAD (2010-2015)

$$\text{Number Expected} = \frac{21440 \times 1825 \times 0.43}{1000000} = 16.825$$

$$\text{Number Significant} = 28.7204$$

---





# ASSOCIATED TRANSPORTATION ENGINEERS

100 N. Hope Avenue, Suite 4, Santa Barbara, CA 93110 • (805) 687-4418 • (805) 682-8509-F

## ACCIDENT RATE CALCULATION SHEET - FOR INTERSECTIONS

**Project:** Thurgood Marshall School **File Name:** Accident Rate Wkst.exl  
**Project #:** 015098  
**Analyst:** DFN  
**Date:** 2/17/2016

**N/S Street:** Patterson Road  
**E/W Street:** Thurgood Marshall Drive

**Weekday:**  
**PM Peak Hour Entering Volume:** 371  
**Peak Hour Factor:** 10  
-----OR-----  
**Total Approach ADT:** N/A

**Weekend:**  
**PM Peak Hour Entering Volume OR ADT:** 100% (as a percentage of Weekday PM Peak Hour Entering Volume OR ADT)

**Period Analyzed (years):** 5

**Number of Accidents:** 2

**Million Entering Vehicle Miles:** 6.77 million entering vehicle miles (mevm)

**Accident Rate:** .3 accidents per million entering vehicle miles (mevm)

**Intersection Rate Group:**  
**California State Average Collision Rate:** 0.14

**DEFINITIONS**

$$\text{Number Expected} = \frac{\text{ADT} \times \text{Time} \times \text{Rate Expected}}{1000000}$$

$$\text{Number Significant} = \text{Number Expected} + (2.576 \times \text{Number Expected}) + 1.329$$

NOTES: Number Significant using 99.5% confidence level.  
For intersections, use annual number of entering vehicles in place of ADT and delete length. The NR is the same as for roadway segments.

---

**CALCULATIONS - PATTERSON ROAD/THURGOOD MARSHALL DRIVE (2010-2015)**

$$\text{Number Expected} = \frac{3710 \times 1825 \times 0.14}{1000000} = 0.94791$$

$$\text{Number Significant} = 4.78491$$

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## TECHNICAL APPENDIX

### CONTENTS

INTERSECTION TRAFFIC COUNT DATA

INTERSECTION LEVEL OF SERVICE CRITERIA/DEFINITIONS

INTERSECTION LEVEL OF SERVICE CALCULATION WORKSHEETS

- Reference 1 - Gonzales Road/Merion Way
- Reference 2 - Gonzales Road/Campus Road
- Reference 3 - Gonzales Road/Thurgood Marshall Drive
- Reference 4 - Gonzales Road/Patterson Road
- Reference 5 - Patterson Road/Thurgood Marshall Drive

CALTRANS COLLISION DATA

**INTERSECTION TRAFFIC COUNT DATA**



# ITM Peak Hour Summary

Prepared by:

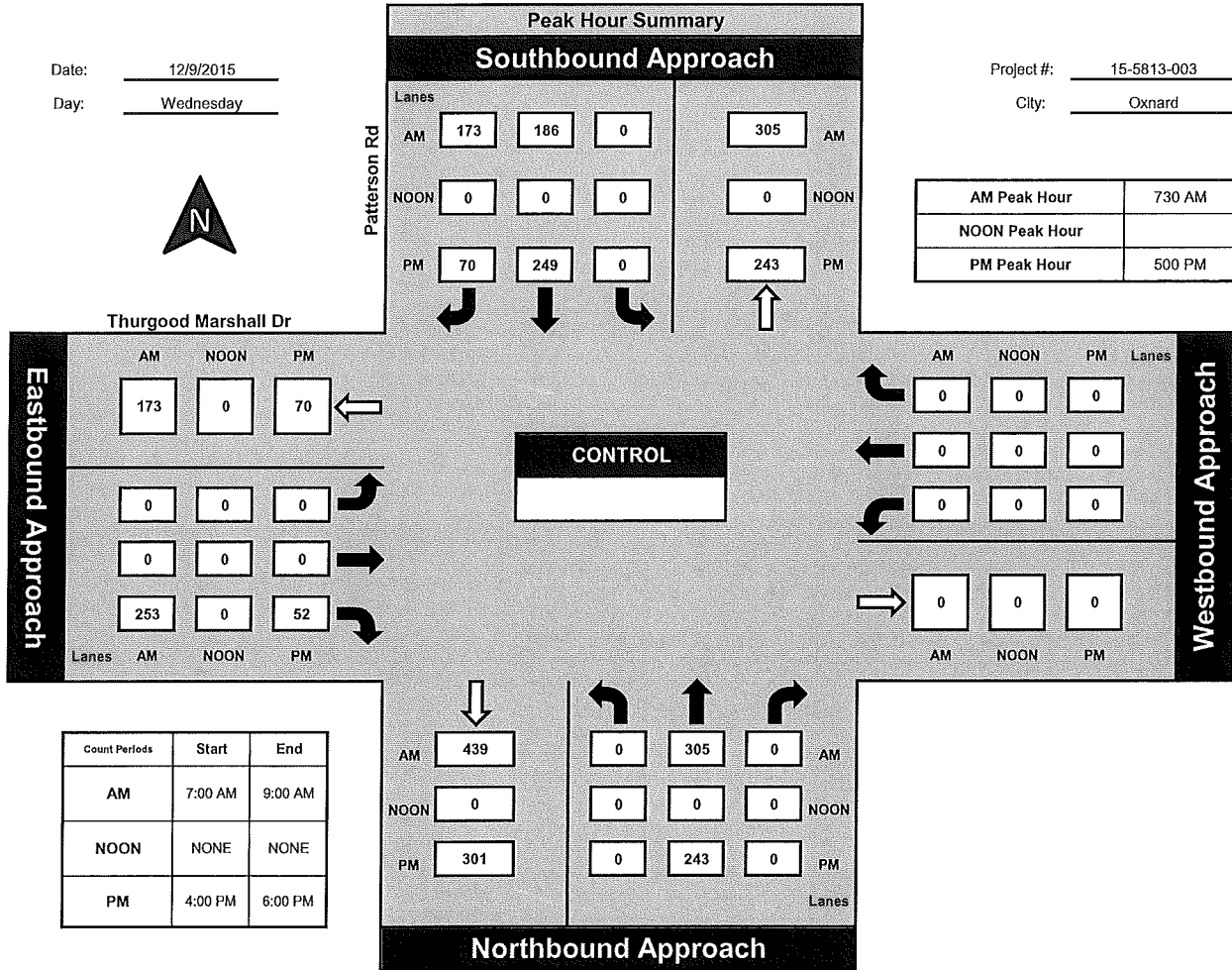


National Data & Surveying Services

## Patterson Rd and Thurgood Marshall Dr, Oxnard

Date: 12/9/2015  
Day: Wednesday

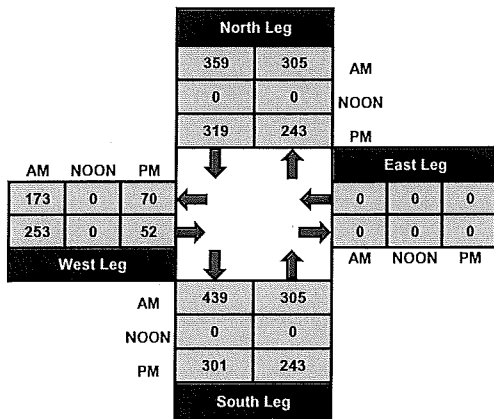
Project #: 15-5813-003  
City: Oxnard



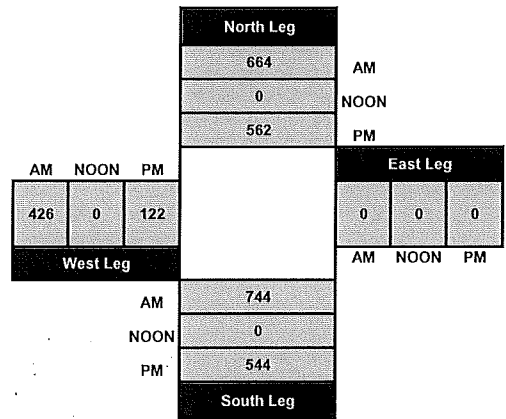
AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	NONE	NONE
PM	4:00 PM	6:00 PM

### Total Ins & Outs



### Total Volume Per Leg



# ITM Peak Hour Summary

Prepared by:

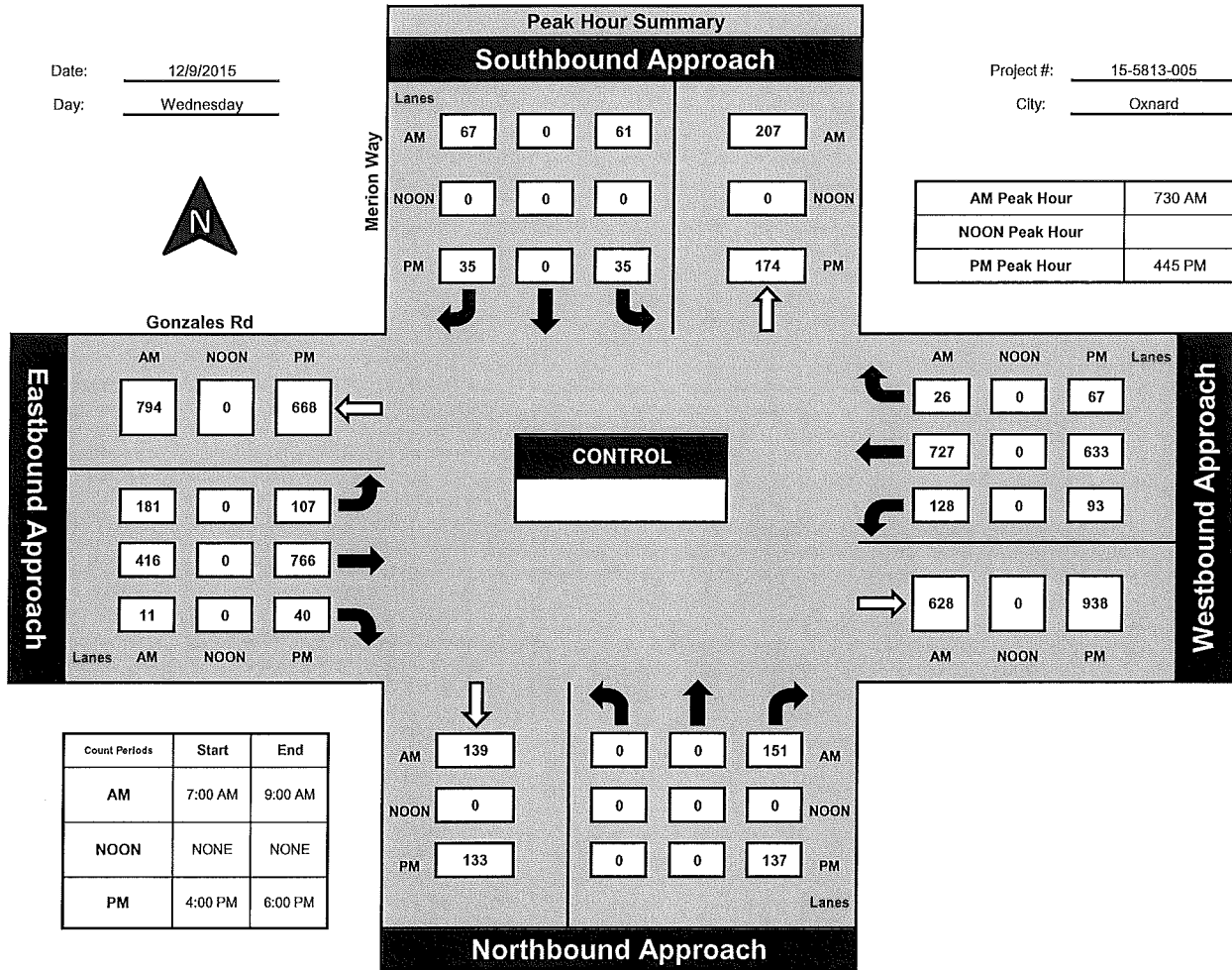


National Data & Surveying Services

## Merion Way and Gonzales Rd, Oxnard

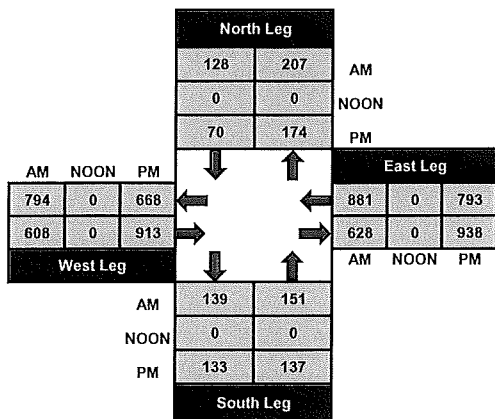
Date: 12/9/2015  
Day: Wednesday

Project #: 15-5813-005  
City: Oxnard

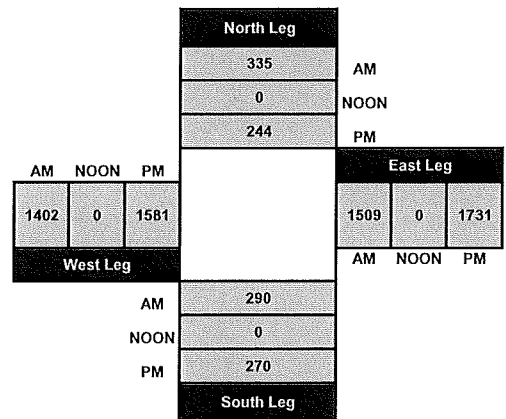


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	NONE	NONE
PM	4:00 PM	6:00 PM

### Total Ins & Outs



### Total Volume Per Leg





# ITM Peak Hour Summary

Prepared by:

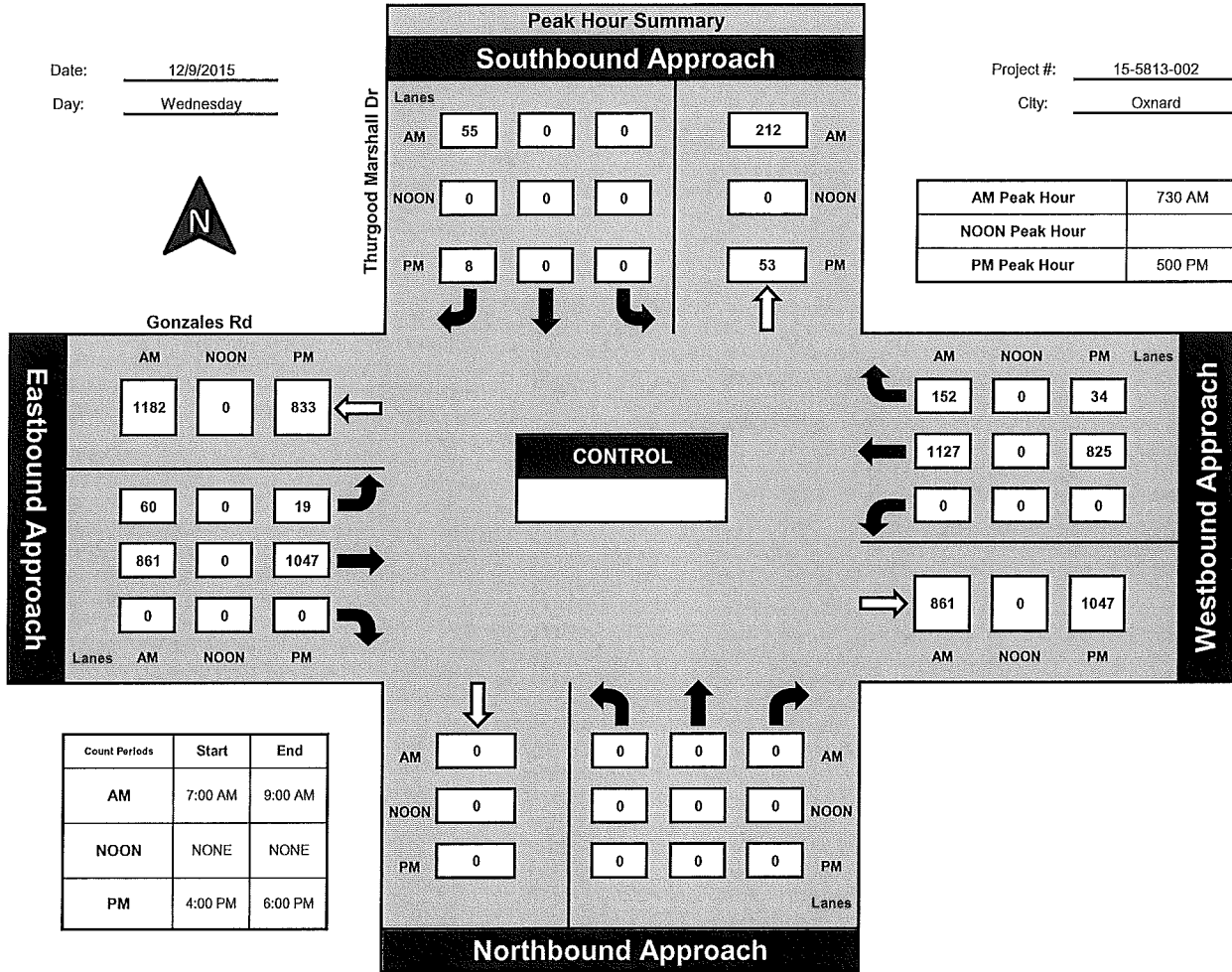


National Data & Surveying Services

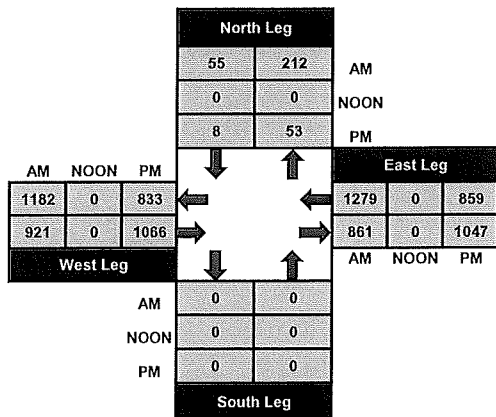
## Thurgood Marshall Dr and Gonzales Rd , Oxnard

Date: 12/9/2015  
Day: Wednesday

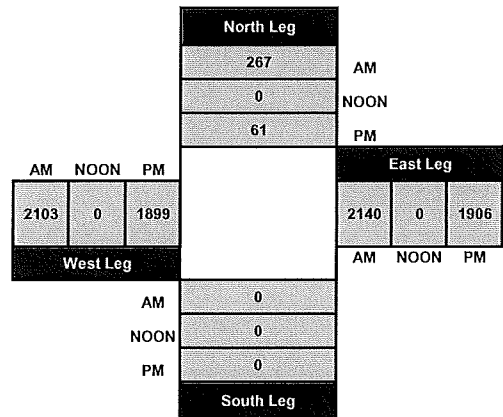
Project #: 15-5813-002  
City: Oxnard



### Total Ins & Outs



### Total Volume Per Leg



# ITM Peak Hour Summary

Prepared by:

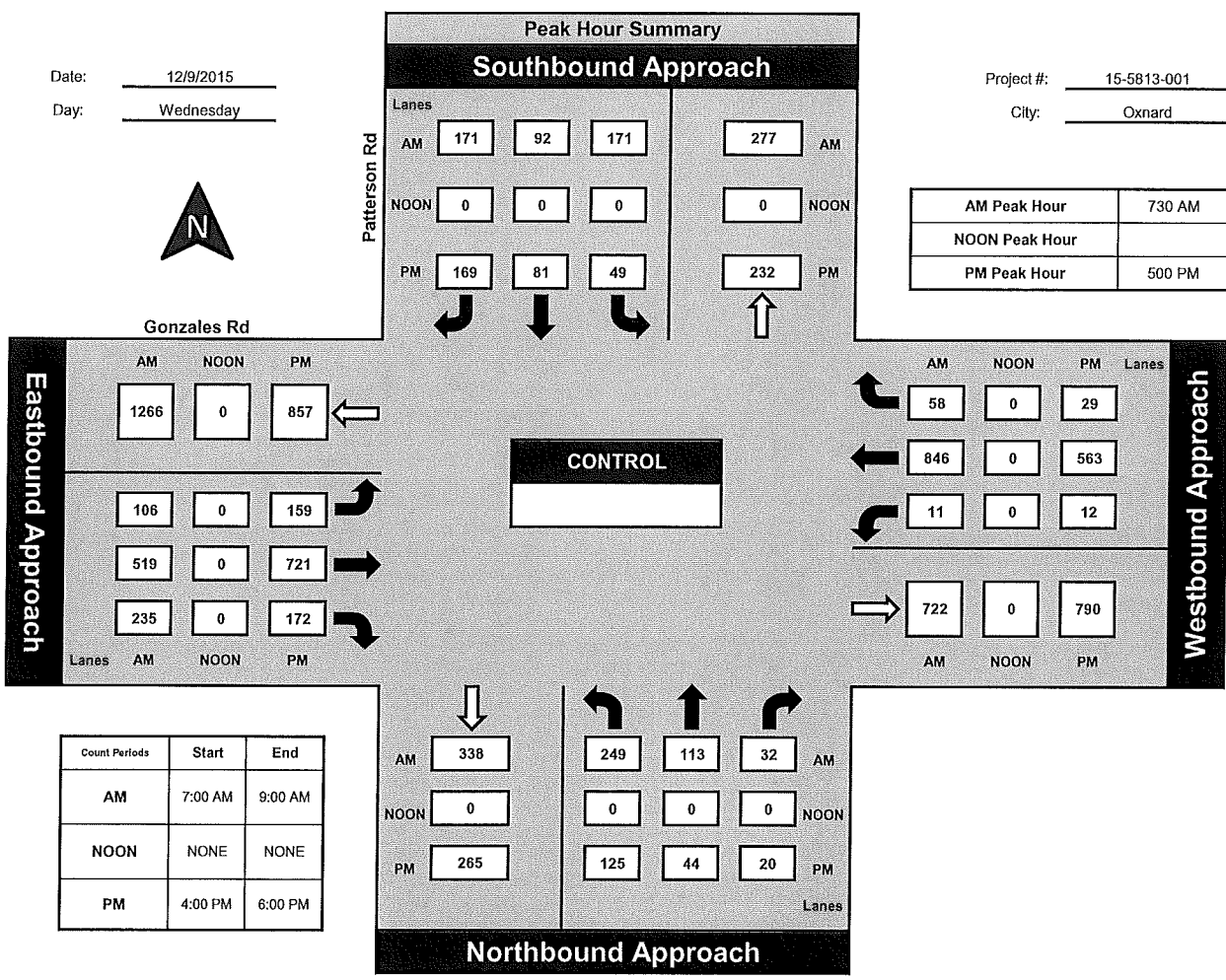


National Data & Surveying Services

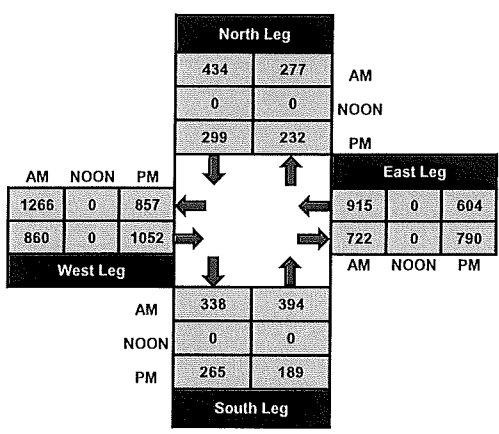
## Patterson Rd and Gonzales Rd, Oxnard

Date: 12/9/2015  
Day: Wednesday

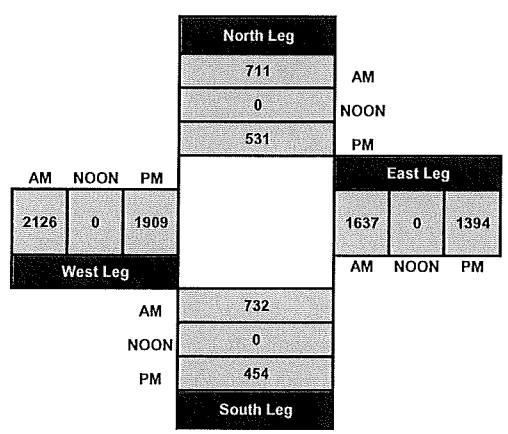
Project #: 15-5813-001  
City: Oxnard



### Total Ins & Outs



### Total Volume Per Leg



## **INTERSECTION LEVEL OF SERVICE CRITERIA/DEFINITIONS**

## LEVEL OF SERVICE DEFINITIONS

"Levels of Service" (LOS) A through F are used to rate roadway and intersection operating conditions, with LOS A indicating very good operations and LOS F indicating poor operations. More complete level of service definitions are:

LOS	Definition
A	Low volumes; primarily free flow operations. Density is low and vehicles can freely maneuver within traffic stream. Drivers can maintain their desired speeds with little or no delay.
B	Stable flow with potential for some restriction of operating speeds due to traffic conditions. Maneuvering is only slightly restricted. Stopped delays are not bothersome and drivers are not subject to appreciable tension.
C	Stable operations, however the ability to maneuver is more restricted by the increase in traffic volumes. Relatively satisfactory operating speeds prevail but adverse signal coordination or longer queues cause delays.
D	Approaching unstable traffic flow where small increases in volume could cause substantial delays. Most drivers are restricted in their ability to maneuver and their selection of travel speeds. Comfort and convenience are low but tolerable.
E	Operations characterized by significant approach delays and average travel speeds of one-half to one-third of free flow speed. Flow is unstable and potential for stoppages of brief duration. High signal density, extensive queuing, or signal progression/timing are the typical causes of delays.
F	Forced flow operations with high approach delays at critical signalized intersections. Speeds are reduced substantially and stoppages may occur for short or long periods of time because of downstream congestion.



### Signalized Intersection Level of Service Definitions

LOS	Delay <sup>a</sup>	V/C Ratio	Definition
A	< 10.0	< 0.60	Progression is extremely favorable. Most vehicles arrive during the green phase. Many vehicles do not stop at all.
B	10.1 - 20.0	0.61 - 0.70	Good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of delay.
C	20.1 - 35.0	0.71 - 0.80	Only fair progression, longer cycle lengths, or both, result in higher cycle lengths. Cycle lengths may fail to serve queued vehicles, and overflow occurs. Number of vehicles stopped is significant, though many still pass through intersection without stopping.
D	35.1 - 55.0	0.81 - 0.90	Congestion becomes more noticeable. Unfavorable progression, long cycle lengths and high v/c ratios result in longer delays. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
E	55.1 - 80.0	0.91 - 1.00	High delay values indicate poor progression, long cycle lengths and high v/c ratios. Individual cycle failures are frequent
F	> 80.0	> 1.00	Considered unacceptable for most drivers, this level occurs when arrival flow rates exceed the capacity of lane groups, resulting in many individual cycle failures. Poor progression and long cycle lengths may also contribute to high delay levels.

<sup>a</sup> Average control delay per vehicle in seconds.

### Unsignalized Intersection Level of Service Definitions

The HCM<sup>1</sup> uses *control delay* to determine the level of service at unsignalized intersections. Control delay is the difference between the travel time actually experienced at the control device and the travel time that would occur in the absence of the traffic control device. Control delay includes deceleration from free flow speed, queue move-up time, stopped delay and acceleration back to free flow speed.

LOS	Control Delay Seconds per Vehicle
A	< 10.0
B	10.1 - 15.0
C	15.1 - 25.0
D	25.1 - 35.0
E	35.1 - 50.0
F	> 50.0

<sup>1</sup> Highway Capacity Manual, National Research Board, 2000



## DISCUSSION OF INTERSECTION CAPACITY UTILIZATION (ICU)

The ability of a roadway to carry traffic is referred to as capacity. The capacity is usually less at intersections because traffic flows continuously between them and only during the green phase at them. Capacity at intersections is best defined in terms of vehicles per lane per hour of green. The technique used to compare the volumes and capacity of an intersection is known as Intersection Capacity Utilization (ICU). ICU or volume-to-capacity ratio, usually expressed as a percentage, is the proportion of an hour required to provide sufficient capacity to accommodate all intersection traffic if all approaches operate at capacity. If an intersection is operating at 80 percent of capacity, then 20 percent of the signal cycle is not used.

The ICU calculation assumes that an intersection is signalized and that the signal is ideally timed. Although calculating ICU for an unsignalized intersection is invalid, the presumption is that a signal can be installed and the calculation shows whether the geometrics are capable of accommodating the expected volumes. It is possible to have an ICU well below 100 percent, yet have severe traffic congestion. This would occur if one or more movements is not getting sufficient time to satisfy its demand, and excess time exists on other movements. This is an operational problem which should be addressed.

Capacity is often defined in terms of roadway width. However, standard lanes have approximately the same capacity whether they are 11 or 14 feet wide. Data collected by Kunzman Associates indicates a typical lane, whether a through-lane or a left-turn lane, has a capacity of approximately 1,700 vehicles per hour, with nearly all locations showing a capacity greater than 1,600 vehicles per hour per lane. This finding is published in the August, 1978 issue of ITE Journal in the article entitled, "Another Look at Signalized Intersection Capacity" by William Kunzman. For this study, a capacity of 1,600 vehicles per hour per lane will be assumed for left-turn, through, and right-turn lanes as per City policy.

The yellow time can either be assumed to be completely used and no penalty applied, or it can be assumed to be only partially usable. Total yellow time accounts for less than 10 percent of a cycle, and a penalty of up to five percent is reasonable. On the other hand, during peak hour traffic operation, the yellow times are nearly completely used. In this study, no penalty will be applied for the yellow because the capacities have been assumed to be only 1,600 vehicles per hour per lane when in general they are 1,700-1,800 vehicles per hour per lane.

The ICU technique is an ideal tool to quantify existing as well as future intersection operations. The impact of adding a lane can be quickly determined by examining the effect the lane has on the intersection capacity utilization.

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Source: Oxnard Airport Business Park Traffic Study, Kunzman Assoc., City of Oxnard, 1985.

## **INTERSECTION LOS CALCULATION WORKSHEETS**

- Reference 1 - Gonzales Road/Merion Way**
- Reference 2 - Gonzales Road/Campus Road**
- Reference 3 - Gonzales Road/Thurgood Marshall Drive**
- Reference 4 - Gonzales Road/Patterson Road**
- Reference 5 - Patterson Road/Thurgood Marshall Drive**

**THURGOOD MARSHALL SCHOOL PROJECT (#15098)**

REF: 01 AM

**INTERSECTION CAPACITY UTILIZATION WORKSHEET**

COUNT DATE: 12/16/2015  
 TIME PERIOD: A.M. PEAK HOUR  
 N/S STREET: MERION WAY  
 E/W STREET: GONZALES ROAD  
 CONTROL TYPE: SIGNAL

**TRAFFIC VOLUME SUMMARY**

VOLUMES	NORTH BOUND			SOUTH BOUND			EAST BOUND			WEST BOUND		
	L	T	R	L	T	R	L	T	R	L	T	R
(A) EXISTING:	0	0	151	61	0	67	181	416	11	128	737	26
(B) PROJECT-ADDED:	0	0	0	0	0	0	0	15	0	0	13	0
(C) CUMULATIVE:	0	0	151	61	0	67	181	449	11	128	758	26

**GEOMETRICS**

LANE GEOMETRICS	NORTH BOUND		SOUTH BOUND		EAST BOUND		WEST BOUND	
	R	R	L	R	L	T	T	R

**TRAFFIC SCENARIOS**

SCENARIO 1 = EXISTING VOLUMES (A)  
 SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B)  
 SCENARIO 3 = CUMULATIVE (C)  
 SCENARIO 4 = CUMULATIVE + PROJECT VOLUMES (B+C)

**LEVEL OF SERVICE CALCULATIONS**

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES				SCENARIO V/C RATIOS			
			1	2	3	4	1	2	3	4
NBL	0	0	0	0	0	0	-	-	-	-
NBT	0	0	0	0	0	0	-	-	-	-
NBR	2	3200	151	151	151	151	0.047 *	0.047 *	0.047 *	0.047 *
SBL	1	1600	61	61	61	61	0.038 *	0.038 *	0.038 *	0.038 *
SBT	0	0	0	0	0	0	-	-	-	-
SBR	1	1600	67	67	67	67	0.042	0.042	0.042	0.042
EBL	1	1600	181	181	181	181	0.113 *	0.113 *	0.113 *	0.113 *
EBT	2	3200	416	431	449	464	0.133	0.138	0.144	0.148
EBR	0	0	11	11	11	11	-	-	-	-
WBL	1	1600	128	128	128	128	0.080	0.080	0.080	0.080
WBT	2	3200	737	750	758	771	0.238 *	0.243 *	0.245 *	0.249 *
WBR	0	0	26	26	26	26	-	-	-	-
<b>TOTAL INTERSECTION CAPACITY UTILIZATION:</b>							<b>0.44</b>	<b>0.44</b>	<b>0.44</b>	<b>0.45</b>
<b>SCENARIO LEVEL OF SERVICE:</b>							<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>

**NOTES:**

**THURGOOD MARSHALL SCHOOL PROJECT (#15098)**

REF: 01 PM

**INTERSECTION CAPACITY UTILIZATION WORKSHEET**

COUNT DATE: 12/16/2015  
 TIME PERIOD: P.M. PEAK HOUR  
 N/S STREET: MERION WAY  
 E/W STREET: GONZALES ROAD  
 CONTROL TYPE: SIGNAL

**TRAFFIC VOLUME SUMMARY**

VOLUMES	NORTH BOUND			SOUTH BOUND			EAST BOUND			WEST BOUND		
	L	T	R	L	T	R	L	T	R	L	T	R
(A) EXISTING:	0	0	137	35	0	35	107	766	40	93	633	67
(B) PROJECT-ADDED:	0	0	0	0	0	0	0	4	0	0	4	0
(C) CUMULATIVE:	0	0	137	35	0	35	107	794	40	93	705	67

**GEOMETRICS**

LANE GEOMETRICS	NORTH BOUND		SOUTH BOUND		EAST BOUND		WEST BOUND	
	R	R	L	R	L	T	T	R

**TRAFFIC SCENARIOS**

SCENARIO 1 = EXISTING VOLUMES (A)  
 SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B)  
 SCENARIO 3 = CUMULATIVE (C)  
 SCENARIO 4 = CUMULATIVE + PROJECT VOLUMES (B+C)

**LEVEL OF SERVICE CALCULATIONS**

MOVE- MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES				SCENARIO V/C RATIOS					
			1	2	3	4	1	2	3	4		
NBL	0	0	0	0	0	0	-	-	-	-		
NBT	0	0	0	0	0	0	-	-	-	-		
NBR	2	3200	137	137	137	137	0.043 *	0.043 *	0.043 *	0.043 *		
SBL	1	1600	35	35	35	35	0.022 *	0.022 *	0.022 *	0.022 *		
SBT	0	0	0	0	0	0	-	-	-	-		
SBR	1	1600	35	35	35	35	0.022	0.022	0.022	0.022		
EBL	1	1600	107	107	107	107	0.067	0.067	0.067	0.067		
EBT	2	3200	766	770	794	798	0.252 *	0.253 *	0.261 *	0.262 *		
EBR	0	0	40	40	40	40	-	-	-	-		
WBL	1	1600	93	93	93	93	0.058 *	0.058 *	0.058 *	0.058 *		
WBT	2	3200	633	637	705	709	0.219	0.220	0.241	0.243		
WBR	0	0	67	67	67	67	-	-	-	-		
<b>TOTAL INTERSECTION CAPACITY UTILIZATION:</b>							<b>0.38</b>	<b>0.38</b>	<b>0.38</b>	<b>0.39</b>		
<b>SCENARIO LEVEL OF SERVICE:</b>							<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>		

**NOTES:**

**THURGOOD MARSHALL SCHOOL PROJECT (#15098)**

REF: 02 AM

**INTERSECTION CAPACITY UTILIZATION WORKSHEET**

COUNT DATE: 12/16/2015  
 TIME PERIOD: A.M. PEAK HOUR  
 N/S STREET: CAMPUS ROAD  
 E/W STREET: GONZALES ROAD  
 CONTROL TYPE: SIGNAL

**TRAFFIC VOLUME SUMMARY**

VOLUMES	NORTH BOUND			SOUTH BOUND			EAST BOUND			WEST BOUND		
	L	T	R	L	T	R	L	T	R	L	T	R
(A) EXISTING:	65	0	261	0	0	0	0	669	64	420	810	0
(B) PROJECT-ADDED:	0	0	0	0	0	0	0	15	0	0	13	0
(C) CUMULATIVE:	65	0	261	0	0	0	0	702	64	420	841	0

**GEOMETRICS**

LANE GEOMETRICS	NORTH BOUND LR R	SOUTH BOUND L R	EAST BOUND T TR	WEST BOUND L T T
-----------------	---------------------	--------------------	--------------------	---------------------

**TRAFFIC SCENARIOS**

SCENARIO 1 = EXISTING VOLUMES (A)  
 SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B)  
 SCENARIO 3 = CUMULATIVE (C)  
 SCENARIO 4 = CUMULATIVE + PROJECT VOLUMES (B+C)

**LEVEL OF SERVICE CALCULATIONS**

MOVE- MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES				SCENARIO V/C RATIOS					
			1	2	3	4	1	2	3	4		
NBL	0	0	65	65	65	65	-	-	-	-		
NBT	2	3200	0	0	0	0	0.102 *	0.102 *	0.102 *	0.102 *		
NBR	0	0	261	261	261	261	-	-	-	-		
SBL	0	0	0	0	0	0	-	-	-	-		
SBT	0	0	0	0	0	0	-	-	-	-		
SBR	0	0	0	0	0	0	-	-	-	-		
EBL	0	0	0	0	0	0	-	-	-	-		
EBT	2	3200	669	684	702	717	0.229 *	0.234 *	0.239 *	0.244 *		
EBR	0	0	64	64	64	64	-	-	-	-		
WBL	1	1600	420	420	420	420	0.263 *	0.263 *	0.263 *	0.263 *		
WBT	2	3200	810	823	841	854	0.253	0.257	0.263	0.267		
WBR	0	0	0	0	0	0	-	-	-	-		
<b>TOTAL INTERSECTION CAPACITY UTILIZATION:</b>							0.59	0.60	0.60	0.61		
<b>SCENARIO LEVEL OF SERVICE:</b>							A	A	A	B		

NOTES:

**THURGOOD MARSHALL SCHOOL PROJECT (#15098)**

REF: 02 PM

**INTERSECTION CAPACITY UTILIZATION WORKSHEET**

COUNT DATE: 12/16/2015  
 TIME PERIOD: P.M. PEAK HOUR  
 N/S STREET: CAMPUS ROAD  
 E/W STREET: GONZALES ROAD  
 CONTROL TYPE: SIGNAL

**TRAFFIC VOLUME SUMMARY**

VOLUMES	NORTH BOUND			SOUTH BOUND			EAST BOUND			WEST BOUND		
	L	T	R	L	T	R	L	T	R	L	T	R
(A) EXISTING:	56	0	166	0	0	0	0	870	68	139	734	0
(B) PROJECT-ADDED:	0	0	0	0	0	0	0	4	0	0	4	0
(C) CUMULATIVE:	56	0	166	0	0	0	0	898	68	139	776	0

**GEOMETRICS**

LANE GEOMETRICS	NORTH BOUND LR R	SOUTH BOUND L R	EAST BOUND T TR	WEST BOUND L T T
-----------------	---------------------	--------------------	--------------------	---------------------

**TRAFFIC SCENARIOS**

SCENARIO 1 = EXISTING VOLUMES (A)  
 SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B)  
 SCENARIO 3 = CUMULATIVE (C)  
 SCENARIO 4 = CUMULATIVE + PROJECT VOLUMES (B+C)

**LEVEL OF SERVICE CALCULATIONS**

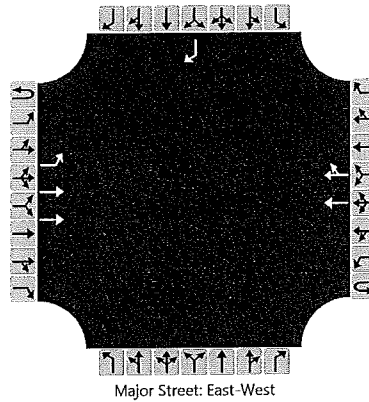
MOVE- MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES				SCENARIO V/C RATIOS			
			1	2	3	4	1	2	3	4
NBL	0	0	56	56	56	56	-	-	-	-
NBT	2	3200	0	0	0	0	0.069 *	0.069 *	0.069 *	0.069 *
NBR	0	0	166	166	166	166	-	-	-	-
SBL	0	0	0	0	0	0	-	-	-	-
SBT	0	0	0	0	0	0	-	-	-	-
SBR	0	0	0	0	0	0	-	-	-	-
EBL	0	0	0	0	0	0	-	-	-	-
EBT	2	3200	870	874	898	902	0.293 *	0.294 *	0.302 *	0.303 *
EBR	0	0	68	68	68	68	-	-	-	-
WBL	1	1600	139	139	139	139	0.087 *	0.087 *	0.087 *	0.087 *
WBT	2	3200	734	738	776	780	0.229	0.231	0.243	0.244
WBR	0	0	0	0	0	0	-	-	-	-
<b>TOTAL INTERSECTION CAPACITY UTILIZATION:</b>							<b>0.45</b>	<b>0.45</b>	<b>0.46</b>	<b>0.46</b>
<b>SCENARIO LEVEL OF SERVICE:</b>							<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>

NOTES:

# HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	Darryl F. Nelson	Intersection	Gonzales Road/TM Drive
Agency/Co.	ATE	Jurisdiction	City of Oxnard
Date Performed	12/15/2015	East/West Street	Gonzales Road
Analysis Year	2015	North/South Street	Thurgood Marshall Drive
Time Analyzed	A.M. Peak Hour	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Thurgood Marshall School		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	1	2	0	0	0	2	0		0	0	0		0	0	1
Configuration		L	T				T	TR								R
Volume (veh/h)		60	861				1127	152								55
Percent Heavy Vehicles		3														3
Proportion Time Blocked		0.000	0.000				0.000	0.000								0.000
Right Turn Channelized	No				No				No				No			
Median Type	Left Only															
Median Storage	1															

## Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		65														60
Capacity		483														381
v/c Ratio		0.13														0.16
95% Queue Length		0.5														0.6
Control Delay (s/veh)		13.6														16.2
Level of Service (LOS)		B														C
Approach Delay (s/veh)	0.9												16.2			
Approach LOS	A												C			

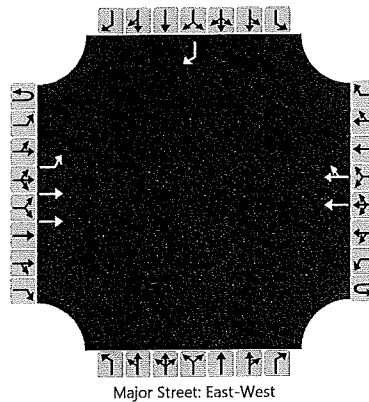
*Average weighted Delay = 14.8 sec.*

**LOS B-**

# HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	Darryl F. Nelson	Intersection	Gonzales Road/TM Drive
Agency/Co.	ATE	Jurisdiction	City of Oxnard
Date Performed	12/15/2015	East/West Street	Gonzales Road
Analysis Year	2015	North/South Street	Thurgood Marshall Drive
Time Analyzed	A.M. Peak Hour	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Thurgood Marshall School		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	0	2	0		0	0	0		0	0	1
Configuration		L	T				T	TR								R
Volume (veh/h)		19	1047				825	34								8
Percent Heavy Vehicles		3														3
Proportion Time Blocked		0.000	0.000				0.000	0.000								0.000
Right Turn Channelized	No				No				No				No			
Median Type	Left Only															
Median Storage	1															

## Delay, Queue Length, and Level of Service

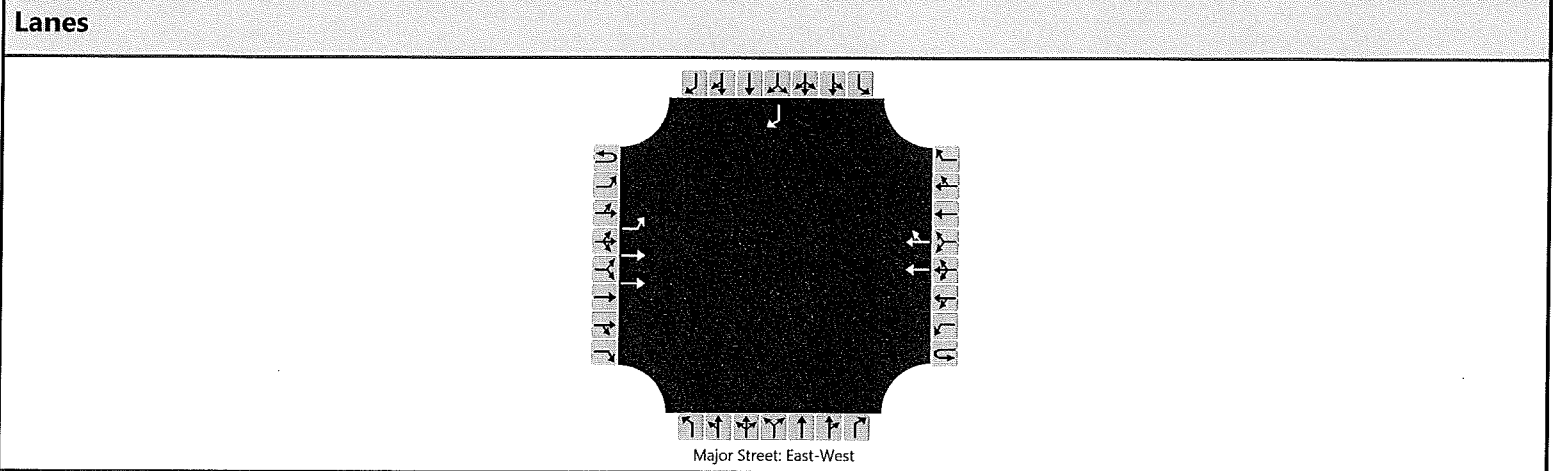
Flow Rate (veh/h)		21														9
Capacity		723														536
v/c Ratio		0.03														0.02
95% Queue Length		0.1														0.1
Control Delay (s/veh)		10.1														11.8
Level of Service (LOS)		B														B
Approach Delay (s/veh)	0.2												11.8			
Approach LOS	A												B			

*Average Weighted Delay = 10.6 sec. [LOS B]*



# HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	Darryl F. Nelson	Intersection	Gonzales Road/TM Drive
Agency/Co.	ATE	Jurisdiction	City of Oxnard
Date Performed	12/15/2015	East/West Street	Gonzales Road
Analysis Year	2015	North/South Street	Thurgood Marshall Drive
Time Analyzed	A.M. Peak Hour	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Thurgood Marshall School		



**Vehicle Volumes and Adjustments**

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	0	2	0		0	0	0		0	0	1
Configuration		L	T				T	TR								R
Volume (veh/h)		75	861				1127	193								68
Percent Heavy Vehicles		3														3
Proportion Time Blocked		0.000	0.000				0.000	0.000								0.000
Right Turn Channelized	No				No				No				No			
Median Type	Left Only															
Median Storage	1															

**Delay, Queue Length, and Level of Service**

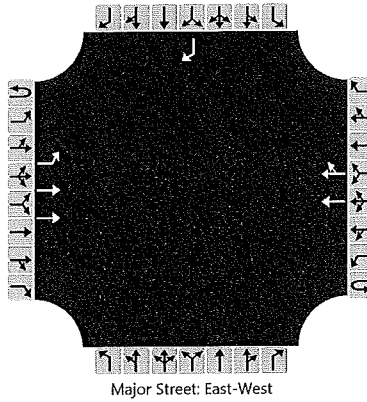
Flow Rate (veh/h)		82														74
Capacity		464														367
v/c Ratio		0.18														0.20
95% Queue Length		0.6														0.7
Control Delay (s/veh)		14.4														17.3
Level of Service (LOS)		B														C
Approach Delay (s/veh)	1.2												17.3			
Approach LOS	A												C			

*Average Weighted Delay = 15.6 sec.*      LOS C

# HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	Darryl F. Nelson	Intersection	Gonzales Road/TM Drive
Agency/Co.	ATE	Jurisdiction	City of Oxnard
Date Performed	12/15/2015	East/West Street	Gonzales Road
Analysis Year	2015	North/South Street	Thurgood Marshall Drive
Time Analyzed	P.M. Peak Hour	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Thurgood Marshall School		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	1	2	0	0	0	2	0		0	0	0		0	0	1
Configuration		L	T				T	TR								R
Volume (veh/h)		23	1047				825	45								12
Percent Heavy Vehicles		3														3
Proportion Time Blocked		0.000	0.000				0.000	0.000								0.000
Right Turn Channelized	No				No				No				No			
Median Type	Left Only															
Median Storage	1															

## Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		25														13
Capacity		715														531
v/c Ratio		0.03														0.02
95% Queue Length		0.1														0.1
Control Delay (s/veh)		10.2														11.9
Level of Service (LOS)		B														B
Approach Delay (s/veh)	0.2												11.9			
Approach LOS	A												B			

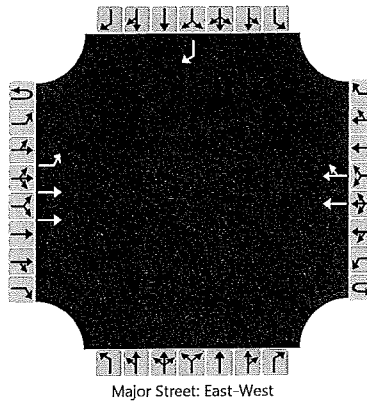
Average Weighted Delay = 10.8 sec.

LOS B

# HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	Darryl F. Nelson	Intersection	Gonzales Road/TM Drive
Agency/Co.	ATE	Jurisdiction	City of Oxnard
Date Performed	12/15/2015	East/West Street	Gonzales Road
Analysis Year	2015	North/South Street	Thurgood Marshall Drive
Time Analyzed	A.M. Peak Hour	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Thurgood Marshall School		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	1	2	0	0	0	2	0		0	0	0		0	0	1
Configuration		L	T				T	TR								R
Volume (veh/h)		60	883				1150	152								55
Percent Heavy Vehicles		3														3
Proportion Time Blocked		0.000	0.000				0.000	0.000								0.000
Right Turn Channelized	No				No				No				No			
Median Type	Left Only															
Median Storage	1															

## Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		65														60
Capacity		473														373
v/c Ratio		0.14														0.16
95% Queue Length		0.5														0.6
Control Delay (s/veh)		13.8														16.5
Level of Service (LOS)		B														C
Approach Delay (s/veh)		0.9													16.5	
Approach LOS		A													C	

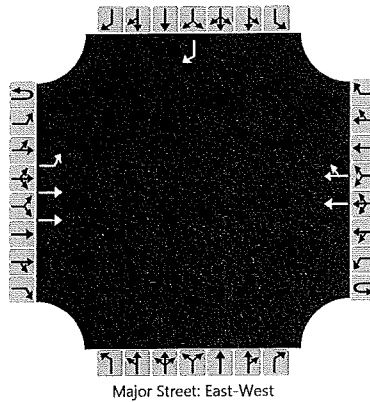
*Average Weighted Delay = 15.1 sec.*

**LOS C**

# HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	Darryl F. Nelson	Intersection	Gonzales Road/TM Drive
Agency/Co.	ATE	Jurisdiction	City of Oxnard
Date Performed	12/15/2015	East/West Street	Gonzales Road
Analysis Year	2015	North/South Street	Thurgood Marshall Drive
Time Analyzed	A.M. Peak Hour	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Thurgood Marshall School		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	1	2	0	0	0	2	0		0	0	0		0	0	1
Configuration		L	T				T	TR								R
Volume (veh/h)		19	1075				867	34								8
Percent Heavy Vehicles		3														3
Proportion Time Blocked		0.000	0.000				0.000	0.000								0.000
Right Turn Channelized	No				No				No				No			
Median Type	Left Only															
Median Storage	1															

## Delay, Queue Length, and Level of Service

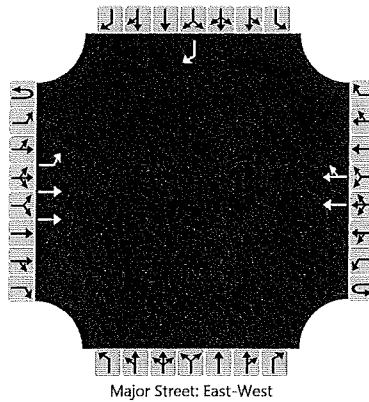
Flow Rate (veh/h)		21														9
Capacity		695														518
v/c Ratio		0.03														0.02
95% Queue Length		0.1														0.1
Control Delay (s/veh)		10.3														12.1
Level of Service (LOS)		B														B
Approach Delay (s/veh)	0.2												12.1			
Approach LOS	A												B			

*Average Weighted Delay = 10.8 sec. [LOS B]*

# HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	Darryl F. Nelson	Intersection	Gonzales Road/TM Drive
Agency/Co.	ATE	Jurisdiction	City of Oxnard
Date Performed	12/15/2015	East/West Street	Gonzales Road
Analysis Year	2015	North/South Street	Thurgood Marshall Drive
Time Analyzed	A.M. Peak Hour	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Thurgood Marshall School		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	1	2	0	0	0	2	0		0	0	0		0	0	1
Configuration		L	T				T	TR								R
Volume (veh/h)		75	883				1150	193								68
Percent Heavy Vehicles		3														3
Proportion Time Blocked		0.000	0.000				0.000	0.000								0.000
Right Turn Channelized	No				No				No				No			
Median Type	Left Only															
Median Storage	1															

## Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		82														74
Capacity		454														361
v/c Ratio		0.18														0.21
95% Queue Length		0.7														0.8
Control Delay (s/veh)		14.7														17.5
Level of Service (LOS)		B														C
Approach Delay (s/veh)	1.2												17.5			
Approach LOS	A												C			

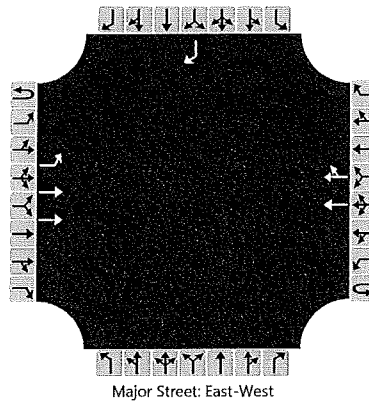
*Average Weighted Delay = 14.0 sec. [LOS C]*



# HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	Darryl F. Nelson	Intersection	Gonzales Road/TM Drive
Agency/Co.	ATE	Jurisdiction	City of Oxnard
Date Performed	12/15/2015	East/West Street	Gonzales Road
Analysis Year	2015	North/South Street	Thurgood Marshall Drive
Time Analyzed	P.M. Peak Hour	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Thurgood Marshall School		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6	7	8	9		10	11	12	
Priority																
Number of Lanes	0	1	2	0	0	0	2	0	0	0	0		0	0	0	1
Configuration		L	T				T	TR								R
Volume (veh/h)		23	1075				867	45								15
Percent Heavy Vehicles		3														3
Proportion Time Blocked		0.000	0.000				0.000	0.000								0.000
Right Turn Channelized	No				No				No				No			
Median Type	Left Only															
Median Storage	1															

## Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		25														16
Capacity		687														514
v/c Ratio		0.04														0.03
95% Queue Length		0.1														0.1
Control Delay (s/veh)		10.4														12.2
Level of Service (LOS)		B														B
Approach Delay (s/veh)	0.2												12.2			
Approach LOS	A												B			

*Average Weighted Delay = 11.1 sec. [LOS B]*

**THURGOOD MARSHALL SCHOOL PROJECT (#15098)**  
 INTERSECTION CAPACITY UTILIZATION WORKSHEET  
 COUNT DATE: 12/16/2015  
 TIME PERIOD: A.M. PEAK HOUR  
 N/S STREET: PATTERSON ROAD  
 E/W STREET: GONZALES ROAD  
 CONTROL TYPE: SIGNAL

REF: 04 AM

**TRAFFIC VOLUME SUMMARY**

VOLUMES	NORTH BOUND			SOUTH BOUND			EAST BOUND			WEST BOUND		
	L	T	R	L	T	R	L	T	R	L	T	R
(A) EXISTING:	249	113	32	71	92	171	106	519	235	11	846	58
(B) PROJECT-ADDED:	20	0	0	54	17	0	0	21	0	0	0	0
(C) CUMULATIVE:	266	121	32	171	100	185	110	519	253	11	846	58

**GEOMETRICS**

LANE GEOMETRICS	NORTH BOUND			SOUTH BOUND			EAST BOUND			WEST BOUND		
	L	T	R	L	T	R	L	T	R	L	T	R

**TRAFFIC SCENARIOS**

SCENARIO 1 = EXISTING VOLUMES (A)  
 SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B)  
 SCENARIO 3 = CUMULATIVE (C)  
 SCENARIO 4 = CUMULATIVE + PROJECT VOLUMES (B+C)

**LEVEL OF SERVICE CALCULATIONS**

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES				SCENARIO V/C RATIOS					
			1	2	3	4	1	2	3	4		
NBL	1	1600	249	269	266	286	0.156 *	0.168 *	0.166 *	0.179 *		
NBT	1	1600	113	113	121	121	0.091	0.091	0.096	0.096		
NBR	0	0	32	32	32	32	-	-	-	-		
SBL	1	1600	71	125	171	225	0.044	0.078	0.107	0.141		
SBT	1	1600	92	109	100	117	0.058 *	0.068 *	0.063 *	0.073 *		
SBR	1	1600	171	171	185	185	0.107	0.107	0.116	0.116		
EBL	1	1600	106	106	110	110	0.066 *	0.066 *	0.069 *	0.069 *		
EBT	2	3200	519	540	519	540	0.236	0.242	0.241	0.248		
EBR	0	0	235	235	253	253	-	-	-	-		
WBL	1	1600	11	11	11	11	0.007	0.007	0.007	0.007		
WBT	2	3200	846	846	846	846	0.264 *	0.264 *	0.264 *	0.264 *		
WBR	1	1600	58	58	58	58	0.036	0.036	0.036	0.036		
<b>TOTAL INTERSECTION CAPACITY UTILIZATION:</b>							<b>0.54</b>	<b>0.57</b>	<b>0.56</b>	<b>0.59</b>		
<b>SCENARIO LEVEL OF SERVICE:</b>							<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>		

NOTES:

**THURGOOD MARSHALL SCHOOL PROJECT (#15098)**  
 INTERSECTION CAPACITY UTILIZATION WORKSHEET  
 COUNT DATE: 12/16/2015  
 TIME PERIOD: P.M. PEAK HOUR  
 N/S STREET: PATTERSON ROAD  
 E/W STREET: GONZALES ROAD  
 CONTROL TYPE: SIGNAL

REF: 04 PM

**TRAFFIC VOLUME SUMMARY**

VOLUMES	NORTH BOUND			SOUTH BOUND			EAST BOUND			WEST BOUND		
	L	T	R	L	T	R	L	T	R	L	T	R
(A) EXISTING:	125	44	20	49	81	169	159	721	172	12	563	29
(B) PROJECT-ADDED:	5	0	0	18	6	0	0	0	0	0	6	0
(C) CUMULATIVE:	161	55	21	49	91	175	174	721	185	12	563	29

**GEOMETRICS**

LANE GEOMETRICS	NORTH BOUND			SOUTH BOUND			EAST BOUND			WEST BOUND		
	L	T	R	L	T	R	L	T	R	L	T	R

**TRAFFIC SCENARIOS**

SCENARIO 1 = EXISTING VOLUMES (A)  
 SCENARIO 2 = EXISTING + PROJECT VOLUMES (A+B)  
 SCENARIO 3 = CUMULATIVE (C)  
 SCENARIO 4 = CUMULATIVE + PROJECT VOLUMES (B+C)

**LEVEL OF SERVICE CALCULATIONS**

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES				SCENARIO V/C RATIOS					
			1	2	3	4	1	2	3	4		
NBL	1	1600	125	130	161	166	0.078 *	0.081 *	0.101 *	0.104 *		
NBT	1	1600	44	44	55	55	0.040	0.040	0.048	0.048		
NBR	0	0	20	20	21	21	-	-	-	-		
SBL	1	1600	49	67	49	67	0.031	0.042	0.031	0.042		
SBT	1	1600	81	87	91	97	0.051	0.054	0.057	0.061		
SBR	1	1600	169	169	175	175	0.106 *	0.106 *	0.109 *	0.109 *		
EBL	1	1600	159	159	174	174	0.099	0.099	0.109	0.109		
EBT	2	3200	721	721	721	721	0.279 *	0.279 *	0.283 *	0.283 *		
EBR	0	0	172	172	185	185	-	-	-	-		
WBL	1	1600	12	12	12	12	0.008 *	0.008 *	0.008 *	0.008 *		
WBT	2	3200	563	569	563	569	0.176	0.178	0.176	0.178		
WBR	1	1600	29	29	29	29	0.018	0.018	0.018	0.018		
<b>TOTAL INTERSECTION CAPACITY UTILIZATION:</b>							0.47	0.47	0.50	0.50		
SCENARIO LEVEL OF SERVICE:							A	A	A	A		

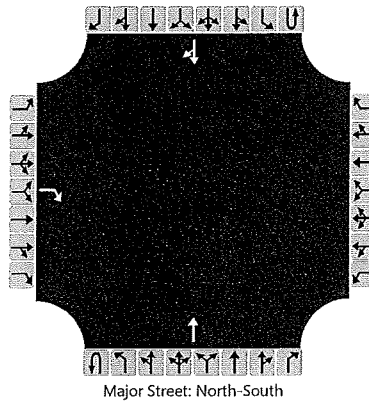
NOTES:



# HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	Darryl F. Nelson	Intersection	Patterson Road/TM Drive
Agency/Co.	ATE	Jurisdiction	City of Oxnard
Date Performed	12/15/2015	East/West Street	Thurgood Marshall Drive
Analysis Year	2015	North/South Street	Patterson Road
Time Analyzed	A.M. Peak Hour	Peak Hour Factor	0.92
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Thurgood Marshall School		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	0	1		0	0	0	0	0	1	0	0	0	1	0	
Configuration				R							T						TR
Volume (veh/h)				253							305					186	0
Percent Heavy Vehicles				3													
Proportion Time Blocked																	
Right Turn Channelized	No				No				No				No				
Median Type	Undivided																
Median Storage																	

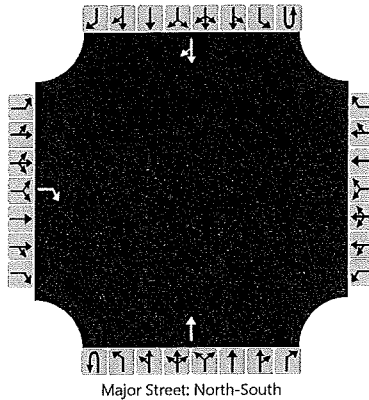
## Delay, Queue Length, and Level of Service

Flow Rate (veh/h)				275													
Capacity				798													
v/c Ratio				0.34													
95% Queue Length				1.5													
Control Delay (s/veh)				11.9													
Level of Service (LOS)				B													
Approach Delay (s/veh)	11.9																
Approach LOS	B																

# HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	Darryl F. Nelson	Intersection	Patterson Road/TM Drive
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Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Thurgood Marshall School		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	0	1		0	0	0	0	0	1	0	0	0	1	0	
Configuration				R							T						TR
Volume (veh/h)				52							243					249	0
Percent Heavy Vehicles				3													
Proportion Time Blocked																	
Right Turn Channelized	No				No				No				No				
Median Type	Undivided																
Median Storage																	

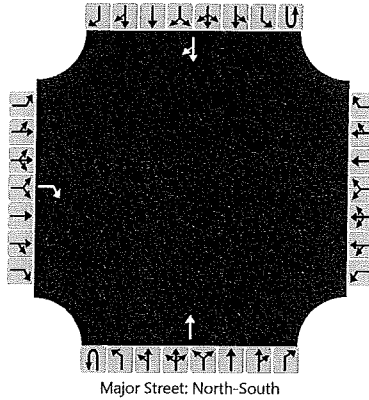
## Delay, Queue Length, and Level of Service

Flow Rate (veh/h)				57													
Capacity				755													
v/c Ratio				0.08													
95% Queue Length				0.2													
Control Delay (s/veh)				10.2													
Level of Service (LOS)				B													
Approach Delay (s/veh)	10.2																
Approach LOS	B																

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Project Description	Thurgood Marshall School		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	0	1		0	0	0	0	0	1	0	0	0	1	0	
Configuration				R							T						TR
Volume (veh/h)				324							343						186 219
Percent Heavy Vehicles				3													
Proportion Time Blocked																	
Right Turn Channelized	No				No				No				No				
Median Type	Undivided																
Median Storage																	

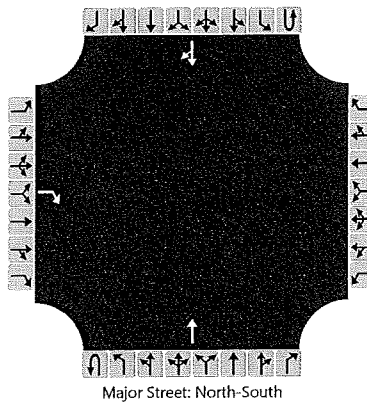
## Delay, Queue Length, and Level of Service

Flow Rate (veh/h)				352													
Capacity				669													
v/c Ratio				0.53													
95% Queue Length				3.1													
Control Delay (s/veh)				16.2													
Level of Service (LOS)				C													
Approach Delay (s/veh)	16.2																
Approach LOS	C																

# HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
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Agency/Co.	ATE	Jurisdiction	City of Oxnard
Date Performed	12/15/2015	East/West Street	Thurgood Marshall Drive
Analysis Year	2015	North/South Street	Patterson Road
Time Analyzed	P.M. Peak Hour	Peak Hour Factor	0.92
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Thurgood Marshall School		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	0	1		0	0	0	0	0	1	0	0	0	1	0	
Configuration				R							T						TR
Volume (veh/h)				76							256					249	82
Percent Heavy Vehicles				3													
Proportion Time Blocked																	
Right Turn Channelized	No				No				No				No				
Median Type	Undivided																
Median Storage																	

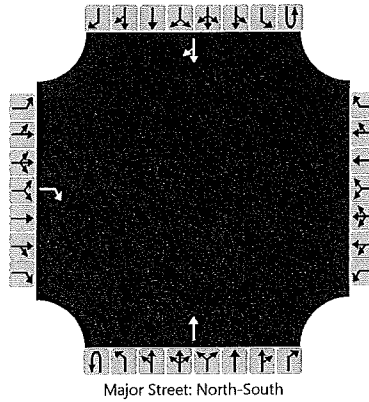
## Delay, Queue Length, and Level of Service

Flow Rate (veh/h)				83													
Capacity				712													
v/c Ratio				0.12													
95% Queue Length				0.4													
Control Delay (s/veh)				10.7													
Level of Service (LOS)				B													
Approach Delay (s/veh)	10.7																
Approach LOS	B																

# HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
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Time Analyzed	A.M. Peak Hour	Peak Hour Factor	0.92
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Thurgood Marshall School		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	0	1		0	0	0	0	0	1	0	0	0	1	0	
Configuration				R							T						TR
Volume (veh/h)				253							317					208	173
Percent Heavy Vehicles				3													
Proportion Time Blocked																	
Right Turn Channelized	No				No				No				No				
Median Type	Undivided																
Median Storage																	

## Delay, Queue Length, and Level of Service

Flow Rate (veh/h)				275													
Capacity				670													
v/c Ratio				0.41													
95% Queue Length				2.0													
Control Delay (s/veh)				14.1													
Level of Service (LOS)				B													
Approach Delay (s/veh)	14.1																
Approach LOS	B																



# HCS 2010 Two-Way Stop Control Summary Report

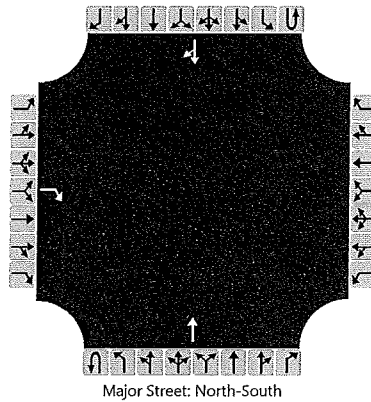
## General Information

Analyst	Darryl F. Nelson
Agency/Co.	ATE
Date Performed	12/15/2015
Analysis Year	2015
Time Analyzed	P.M. Peak Hour
Intersection Orientation	North-South
Project Description	Thurgood Marshall School

## Site Information

Intersection	Patterson Road/TM Drive
Jurisdiction	City of Oxnard
East/West Street	Thurgood Marshall Drive
North/South Street	Patterson Road
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	1		0	0	0	0	0	1	0	0	0	1	0
Configuration				R							T					TR
Volume (veh/h)				52							269				265	70
Percent Heavy Vehicles				3												
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

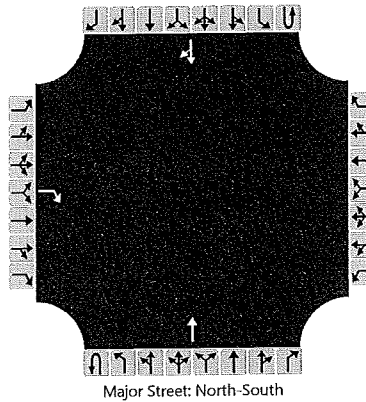
## Delay, Queue Length, and Level of Service

Flow Rate (veh/h)				57												
Capacity				657												
v/c Ratio				0.09												
95% Queue Length				0.3												
Control Delay (s/veh)				11.0												
Level of Service (LOS)				B												
Approach Delay (s/veh)	11.0															
Approach LOS	B															

# HCS 2010 Two-Way Stop Control Summary Report

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Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Thurgood Marshall School		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	0	1		0	0	0	0	0	1	0	0	0	1	0	
Configuration				R							T						TR
Volume (veh/h)				324							355					208	219
Percent Heavy Vehicles				3													
Proportion Time Blocked																	
Right Turn Channelized	No				No				No				No				
Median Type	Undivided																
Median Storage																	

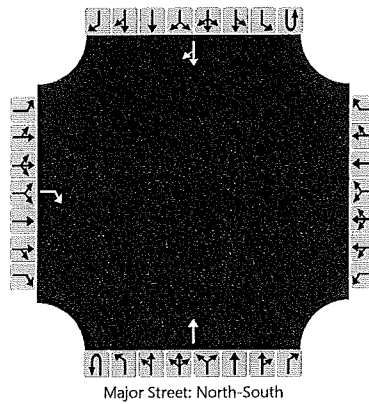
## Delay, Queue Length, and Level of Service

Flow Rate (veh/h)				352													
Capacity				645													
v/c Ratio				0.55													
95% Queue Length				3.3													
Control Delay (s/veh)				17.1													
Level of Service (LOS)				C													
Approach Delay (s/veh)	17.1																
Approach LOS	C																

# HCS 2010 Two-Way Stop Control Summary Report

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Analysis Year	2015	North/South Street	Patterson Road
Time Analyzed	P.M. Peak Hour	Peak Hour Factor	0.92
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Thurgood Marshall School		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	0	1		0	0	0	0	0	1	0	0	0	1	0	
Configuration				R							T						TR
Volume (veh/h)				76							282					265	82
Percent Heavy Vehicles				3													
Proportion Time Blocked																	
Right Turn Channelized	No				No				No				No				
Median Type	Undivided																
Median Storage																	

## Delay, Queue Length, and Level of Service

Flow Rate (veh/h)				83													
Capacity				651													
v/c Ratio				0.13													
95% Queue Length				0.4													
Control Delay (s/veh)				11.3													
Level of Service (LOS)				B													
Approach Delay (s/veh)	11.3																
Approach LOS	B																



**CALTRANS COLLISION DATA**





# ASSOCIATED TRANSPORTATION ENGINEERS

100 N. Hope Avenue, Suite 4, Santa Barbara, CA 93110 • (805) 687-4418 • (805) 682-8509-F

## ACCIDENT RATE CALCULATION SHEET - FOR INTERSECTIONS

**Project:** Thurgood Marshall School **File Name:** Accident Rate Wkst.exl  
**Project #:** 015098  
**Analyst:** DFN  
**Date:** 2/17/2016

**N/S Street:** Merion Way  
**E/W Street:** Gonzales Road

**Weekday:**  
**PM Peak Hour Entering Volume:** 1913  
**Peak Hour Factor:** 10  
-----OR-----  
**Total Approach ADT:** N/A

**Weekend:**  
**PM Peak Hour Entering Volume OR ADT:** 100% (as a percentage of Weekday PM Peak Hour Entering Volume OR ADT)

**Period Analyzed (years):** 5

**Number of Accidents:** 6

**Million Entering Vehicle Miles:** 34.91 million entering vehicle miles (mevm)

**Accident Rate:** .17 accidents per million entering vehicle miles (mevm)

**Intersection Rate Group:**  
**California State Average Collision Rate:** 0.43

Primary Rd GONZALES RD Distance (ft) 70 Direction W Secondary Rd CAMPUS RD Beat 564 NCIC 5604 State Hwy? N Route 4957 Postmile Prefix 20101216 Time 0808 Side of Hwy  
 City OXNARD County VENTURA Population 6 Rpt Dist Violation 22350 Collision Type REAR END Type Severity INJURY # Killed 0 # Injured 1 Tow Away? N Process Date 20111213  
 Primary Collision Factor UNSAFE SPEED Weather?2 Motor Veh Involved With OTHER MV Lighting DAYLIGHT Rwy Cond1 NO UNUSL CND Rwy Cond2 Ped Action  
 Weather1 CLOUDY Motor Veh Involved With OTHER MV Lighting DAYLIGHT Rwy Cond1 NO UNUSL CND Rwy Cond2 Ped Action  
 Hit and Run

PARTY INFO										VICTIM INFO																				
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move	Pre Coll	Dir	SW	Veh	CHP	Veh	Make	Year	Sp	Info	OAF1	Viol	OAF2	Safety	Equip	Role	Ext of Inj	Age	Sex	Seat	Pos	Safety	Equip	Ejected
1F	DRVR	55	M	A	HNBD	PROC	ST	E	-	-00	MERCE	2000	-	3	N	-	-	M	G	-	-	DRVR	COMP	PN	36	F	1	M	G	0
2	DRVR	36	F	H	HNBD	STOPPED	E	-	-00	TOYOT	2007	-	3	N	-	-	M	G	-	-	DRVR	COMP	PN	36	F	1	M	G	0	

Primary Rd GONZALES RD Distance (ft) 10 Direction E Secondary Rd CAMPUS DR Beat 011 NCIC 5604 State Hwy? N Route 5018 Postmile Prefix 20111214 Time 1515 Side of Hwy  
 City OXNARD County VENTURA Population 6 Rpt Dist Violation 22350 Collision Type REAR END Type Severity PDO # Killed 0 # Injured 0 Tow Away? Y Process Date 20130613  
 Primary Collision Factor UNSAFE SPEED Weather?2 Motor Veh Involved With OTHER MV Lighting DAYLIGHT Rwy Cond1 NO UNUSL CND Rwy Cond2 Ped Action  
 Weather1 CLEAR Motor Veh Involved With OTHER MV Lighting DAYLIGHT Rwy Cond1 NO UNUSL CND Rwy Cond2 Ped Action  
 Hit and Run MSDMNR

PARTY INFO										VICTIM INFO																				
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move	Pre Coll	Dir	SW	Veh	CHP	Veh	Make	Year	Sp	Info	OAF1	Viol	OAF2	Safety	Equip	Role	Ext of Inj	Age	Sex	Seat	Pos	Safety	Equip	Ejected
1F	DRVR	16	M	H	HNBD	PROC	ST	E	-	-00	HONDA	1991	-	3	N	-	-	M	G	-	-	PASS	18	F	3	M	G	0		
2	DRVR	44	F	A	HNBD	STOPPED	E	-	-00	CHRY	2000	-	3	N	-	-	M	G	-	-	PASS	16	F	3	M	G	0			
																						PASS	17	M	5	M	G	0		



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## ACCIDENT RATE CALCULATION SHEET - FOR INTERSECTIONS

**Project:** Thurgood Marshall School **File Name:** Accident Rate Wkst.exl  
**Project #:** 015098  
**Analyst:** DFN  
**Date:** 2/17/2016

**N/S Street:** Campus Road  
**E/W Street:** Gonzales Road

**Weekday:**  
**PM Peak Hour Entering Volume:** 2033  
**Peak Hour Factor:** 10  
-----OR-----  
**Total Approach ADT:** N/A

**Weekend:**  
**PM Peak Hour Entering Volume OR ADT:** 100% (as a percentage of Weekday PM Peak Hour Entering Volume OR ADT)

**Period Analyzed (years):** 5

**Number of Accidents:** 2

**Million Entering Vehicle Miles:** 37.1 million entering vehicle miles (mevm)

**Accident Rate:** .05 accidents per million entering vehicle miles (mevm)

**Intersection Rate Group:**  
**California State Average Collision Rate:** 0.43





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## ACCIDENT RATE CALCULATION SHEET - FOR INTERSECTIONS

**Project:** Thurgood Marshall School  
**Project #:** 015098  
**Analyst:** DFN  
**Date:** 2/17/2016

**File Name:** Accident Rate Wkst.exl

**N/S Street:** Thurgood Marshall Drive  
**E/W Street:** Gonzales Road

**Weekday:**

**PM Peak Hour Entering Volume:** 1933

**Peak Hour Factor:** 10

-----OR-----

**Total Approach ADT:** N/A

**Weekend:**

**PM Peak Hour Entering Volume OR ADT:** 100% (as a percentage of Weekday PM Peak Hour Entering Volume OR ADT)

**Period Analyzed (years):** 5

**Number of Accidents:** 4

**Million Entering Vehicle Miles:** 35.28 million entering vehicle miles (mevm)

**Accident Rate:** .11 accidents per million entering vehicle miles (mevm)

**Intersection Rate Group:**

**California State Average Collision Rate:** 0.14

Primary Rd	GONZALES RD	Distance (ft)	1	Direction	Secondary Rd	PATTERSON RD	NCIC 5604	State Hwy?	N	Route	Postmile Prefix	Postmile	Side of Hwy																
City	OXNARD	County	VENTURA	Population	6	Rpt Dist	Beat 011	CalTrans Dist		Badge	4249	Collision Date	20100112	Time	1530	Day	TUE												
Primary Collision Factor	R-O-W AUTO	Weather?	Weather?	Violation	21801A	Collision Type	BROADSIDE	Severity	INJURY	# Killed	0	# Injured	1	Tow Away?	N	Process Date	20101028												
Weather?1	CLEAR	Motor Veh Involved	With	Other MV	Lighting	DAYLIGHT	Rdwy Cond1	NO UNUSL	CND	Ped Action		Rdwy Cond2		Loc Type		Spec Cond	0	Ramp/Int											
Hit and Run																													
<b>PARTY INFO</b>																													
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre Coll	Dir	SW	Veh	CHP	Veh	Make	Year	Sp	Info	OAF1	Viol	OAF2	Safety	Equip	Equip	Ejected							
1F	DRVR	24	F	H	HNBD	LFT	TURN	S	-	-	00	FORD	2006	-	3	N	-	-	M	G									
2	DRVR	21	M	H	HNBD	PROC	ST	N	-	-	00	GMC	2007	-	3	N	-	-	M	G	DRVR	COMP	PN	21	M	1	M	G	0
																					PASS			9	M	4	M	G	0
																					PASS			9	M	4	M	G	0
																					PASS			10	M	8	M	G	0
																					PASS			10	M	9	M	G	0
<b>PARTY INFO</b>																													
Primary Rd	PATTERSON RD	Distance (ft)	10	Direction	Secondary Rd	GONZALES RD	NCIC 5604	State Hwy?	N	Route	Postmile Prefix	Postmile	Side of Hwy																
City	OXNARD	County	VENTURA	Population	6	Rpt Dist	Beat 011	CalTrans Dist		Badge	5189	Collision Date	20100209	Time	1501	Day	TUE												
Primary Collision Factor	R-O-W AUTO	Weather?	Weather?	Violation	21801A	Collision Type	BROADSIDE	Severity	INJURY	# Killed	0	# Injured	0	Tow Away?	N	Process Date	20101123												
Weather?1	CLOUDY	Motor Veh Involved	With	Other MV	Lighting	DAYLIGHT	Rdwy Cond1	NO UNUSL	CND	Ped Action		Rdwy Cond2		Loc Type		Spec Cond	0	Ramp/Int											
Hit and Run																													
<b>PARTY INFO</b>																													
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre Coll	Dir	SW	Veh	CHP	Veh	Make	Year	Sp	Info	OAF1	Viol	OAF2	Safety	Equip	Equip	Ejected							
1F	DRVR	19	F	H	HNBD	LFT	TURN	S	-	-	00	JEEP	1996	-	3	N	-	-	M	G									
2	DRVR	22	F	W	HNBD	PROC	ST	N	-	-	00	DODGE	2001	-	3	N	-	-	M	G									
																					PASS			10	M	3	M	G	0
																					PASS			10	M	4	M	G	0
																					PASS			7	M	6	M	G	0
<b>PARTY INFO</b>																													
Primary Rd	GONZALES RD	Distance (ft)	0	Direction	Secondary Rd	PATTERSON RD	NCIC 5604	State Hwy?	N	Route	Postmile Prefix	Postmile	Side of Hwy																
City	OXNARD	County	VENTURA	Population	6	Rpt Dist	Beat 011	CalTrans Dist		Badge	4591	Collision Date	20100420	Time	2305	Day	TUE												
Primary Collision Factor	DRVR ALCIDRG	Weather?	Weather?	Violation	23152A	Collision Type	SIDESWIPE	Severity	INJURY	# Killed	0	# Injured	4	Tow Away?	Y	Process Date	20110413												
Weather?1	CLEAR	Motor Veh Involved	With	Other MV	Lighting	DARK - ST LTS	Rdwy Cond1	NO UNUSL	CND	Ped Action		Rdwy Cond2		Loc Type		Spec Cond	0	Ramp/Int											
Hit and Run																													
<b>PARTY INFO</b>																													
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre Coll	Dir	SW	Veh	CHP	Veh	Make	Year	Sp	Info	OAF1	Viol	OAF2	Safety	Equip	Equip	Ejected							
1F	DRVR	23	M	H	HBD-UI	PROC	ST	W	-	-	00	CHEVR	2001	-	3	A	22107	-	-	L	B								
																					DRVR	OTH	VIS	23	M	1	G	H	0
																					PASS			28	M	6	L	H	0
																					PASS			16	M	5	G	M	0
																					PASS			25	M	3	M	C	0
<b>PARTY INFO</b>																													
Primary Rd	GONZALES RD	Distance (ft)	1	Direction	Secondary Rd	PATTERSON RD	NCIC 5604	State Hwy?	N	Route	Postmile Prefix	Postmile	Side of Hwy																
City	OXNARD	County	VENTURA	Population	6	Rpt Dist	Beat 011	CalTrans Dist		Badge	5275	Collision Date	20100827	Time	0857	Day	FRI												
Primary Collision Factor	DRVR ALCIDRG	Weather?	Weather?	Violation	23152A	Collision Type	BROADSIDE	Severity	INJURY	# Killed	0	# Injured	2	Tow Away?	Y	Process Date	20110816												
Weather?1	CLEAR	Motor Veh Involved	With	Other MV	Lighting	DAYLIGHT	Rdwy Cond1	NO UNUSL	CND	Ped Action		Rdwy Cond2		Loc Type		Spec Cond	0	Ramp/Int											
Hit and Run																													
<b>PARTY INFO</b>																													
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre Coll	Dir	SW	Veh	CHP	Veh	Make	Year	Sp	Info	OAF1	Viol	OAF2	Safety	Equip	Equip	Ejected							
1F	DRVR	48	F	W	HNBD	PROC	ST	W	-	-	00	FORD	2001	-	3	A	-	-	L	G									
2	DRVR	21	F	W	HNBD	PROC	ST	N	-	-	00	NISSA	2005	-	3	N	-	-	L	G	DRVR	COMP	PN	21	F	1	L	G	0
																					DRVR	COMP	PN	48	F	1	L	G	0
<b>PARTY INFO</b>																													
Primary Rd	GONZALES RD	Distance (ft)	250	Direction	Secondary Rd	PATTERSON RD	NCIC 5604	State Hwy?	N	Route	Postmile Prefix	Postmile	Side of Hwy																
City	OXNARD	County	VENTURA	Population	6	Rpt Dist	Beat 011	CalTrans Dist		Badge	4750	Collision Date	20100901	Time	1500	Day	WED												
Primary Collision Factor	UNSAFE SPEED	Weather?	Weather?	Violation	22350	Collision Type	REAR END	Severity	INJURY	# Killed	0	# Injured	1	Tow Away?	Y	Process Date	20111028												
Weather?1	CLEAR	Motor Veh Involved	With	Other MV	Lighting	DAYLIGHT	Rdwy Cond1	NO UNUSL	CND	Ped Action		Rdwy Cond2		Loc Type		Spec Cond	0	Ramp/Int											
Hit and Run																													
<b>PARTY INFO</b>																													
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre Coll	Dir	SW	Veh	CHP	Veh	Make	Year	Sp	Info	OAF1	Viol	OAF2	Safety	Equip	Equip	Ejected							
1F	DRVR	20	M	H	HNBD	PROC	ST	E	-	-	00	NISSA	1988	-	3	N	-	-	M	G									
2	DRVR	40	F	H	HNBD	STOPPED															DRVR	COMP	PN	40	F	1	M	G	0











# ASSOCIATED TRANSPORTATION ENGINEERS

100 N. Hope Avenue, Suite 4, Santa Barbara, CA 93110 • (805) 687-4418 • (805) 682-8509-F

## ACCIDENT RATE CALCULATION SHEET - FOR INTERSECTIONS

**Project:** Thurgood Marshall School  
**Project #:** 015098  
**Analyst:** DFN  
**Date:** 2/17/2016

**File Name:** Accident Rate Wkst.exl

**N/S Street:** Patterson Road  
**E/W Street:** Gonzales Road

**Weekday:**

**PM Peak Hour Entering Volume:** 2144  
**Peak Hour Factor:** 10

-----OR-----

**Total Approach ADT:** N/A

**Weekend:**

**PM Peak Hour Entering Volume OR ADT:** 100% (as a percentage of Weekday PM Peak Hour Entering Volume OR ADT)

**Period Analyzed (years):** 5

**Number of Accidents:** 21

**Million Entering Vehicle Miles:** 39.13 million entering vehicle miles (mevm)

**Accident Rate:** .54 accidents per million entering vehicle miles (mevm)

**Intersection Rate Group:**

**California State Average Collision Rate:** 0.43

## DEFINITIONS

$$\text{Number Expected} = \frac{\text{ADT} \times \text{Time} \times \text{Rate Expected}}{1000000}$$

$$\text{Number Significant} = \text{Number Expected} + (2.576 \times \text{Number Expected}) + 1.329$$

NOTES: Number Significant using 99.5% confidence level.

For intersections, use annual number of entering vehicles in place of ADT and delete length. The NR is the same as for roadway segments.

---

## CALCULATIONS - GONZALES ROAD/PATTERSON ROAD (2010-2015)

$$\text{Number Expected} = \frac{21440 \times 1825 \times 0.43}{1000000} = 16.825$$

$$\text{Number Significant} = 28.7204$$

---





# ASSOCIATED TRANSPORTATION ENGINEERS

100 N. Hope Avenue, Suite 4, Santa Barbara, CA 93110 • (805) 687-4418 • (805) 682-8509-F

## ACCIDENT RATE CALCULATION SHEET - FOR INTERSECTIONS

**Project:** Thurgood Marshall School **File Name:** Accident Rate Wkst.exl  
**Project #:** 015098  
**Analyst:** DFN  
**Date:** 2/17/2016

**N/S Street:** Patterson Road  
**E/W Street:** Thurgood Marshall Drive

**Weekday:**  
**PM Peak Hour Entering Volume:** 371  
**Peak Hour Factor:** 10  
-----OR-----  
**Total Approach ADT:** N/A

**Weekend:**  
**PM Peak Hour Entering Volume OR ADT:** 100% (as a percentage of Weekday PM Peak Hour Entering Volume OR ADT)

**Period Analyzed (years):** 5

**Number of Accidents:** 2

**Million Entering Vehicle Miles:** 6.77 million entering vehicle miles (mevm)

**Accident Rate:** .3 accidents per million entering vehicle miles (mevm)

**Intersection Rate Group:**  
**California State Average Collision Rate:** 0.14

## DEFINITIONS

$$\text{Number Expected} = \frac{\text{ADT} \times \text{Time} \times \text{Rate Expected}}{1000000}$$

$$\text{Number Significant} = \text{Number Expected} + (2.576 \times \text{Number Expected}) + 1.329$$

NOTES: Number Significant using 99.5% confidence level.

For intersections, use annual number of entering vehicles in place of ADT and delete length. The NR is the same as for roadway segments.

---

## CALCULATIONS - PATTERSON ROAD/THURGOOD MARSHALL DRIVE (2010-2015)

$$\text{Number Expected} = \frac{3710 \times 1825 \times 0.14}{1000000} = 0.94791$$

$$\text{Number Significant} = 4.78491$$

---



BOARD AGENDA ITEM

Name of Contributor(s): **Dr. Jesus Vaca**      Date of Meeting: **May 18, 2016**

Closed Session: \_\_\_\_\_

- A. Preliminary \_\_\_\_\_
- B. Hearing   X
- C. Consent Agenda \_\_\_\_\_
- D. Action Items \_\_\_\_\_
- E. Reports/Discussion Items (no action) \_\_\_\_\_
- F. Board Policies 1<sup>st</sup> Reading \_\_\_\_\_ 2<sup>nd</sup> Reading \_\_\_\_\_

**Conduct Public Hearing re: Sunshine of the Oxnard Educators Association (OEA)  
and the Oxnard School District's (District) Initial Proposals for 2016-2017  
Negotiations, Pursuant to Government Code Section 3547 (Vaca)**

---

**EXECUTIVE SUMMARY (description of item):**

In accordance with Article XXVIII, Term, of the current collective bargaining agreement between the Oxnard Educators Association (OEA) and the Oxnard School District (District), the District and OEA would like to enter into contract negotiations for the 2016-2017 school year and any additional years as may be mutually agreed upon by the parties. The proposals must have a public hearing before the parties meet to negotiate the following:

- Article VI: Leaves of Absence
- Article VII: Transfers & Reassignments
- Article IX: Evaluation
- Article XI: Working Hours
- Article XIII: Calendar
- Article XIV: Partial & School-Wide Contract Variance
- Article XVI: Safety Conditions
- Article XIX: Salaries
- Article XX: Employee Benefits
- Article XXVIII: Term of Agreement
- New Article: Special Education

**FISCAL IMPACT:**

None.

**RECOMMENDATION:**

Following this public hearing, it is the recommendation of the Assistant Superintendent of Human Resources that the Board of Trustees authorize the District to enter into contract negotiations with OEA for the 2016-17 school year and any additional years as may be mutually agreed upon by the parties.

**ADDITIONAL MATERIAL(S): (Attached)**

- Letter to Board of Trustees President dated 4/15/16
- Letter to OEA Bargaining Chair dated 4/15/16
- District's Initial Bargaining Proposals to OEA for 2016-17
- Letter dated 4/15/16 from OEA Bargaining Chair to District, including OEA 2016-17 Proposals
- Notice of Public Hearing dated 5/6/16



# OXNARD SCHOOL DISTRICT

11051 South "A" Street • Oxnard, California 93030 • 805/385-1501

**Dr. Jesus Vaca**  
**Assistant Superintendent**  
**Human Resources and Support Services**

**Jonathan Koch**  
**Director**  
**Classified Human Resources**

April 15, 2016

Veronica Robles-Solis  
President, Board of Trustees  
c/o Oxnard School District  
1051 South A Street  
Oxnard, California 93030

*Re: Sunshine of OEA and District Initial Proposals, Pursuant to Govt. Code Section 3547*

Dear President Veronica Robles-Solis,

In accordance with Article XVIII, Term of Agreement, of the current collective bargaining agreement between the Oxnard Educators Association (OEA) and the Oxnard School District (District), the District would like to enter into contract negotiations for the 2016-2017 school year and any additional years as may be mutually agreed upon by the parties.

The District's negotiating team will continue to have the following members:

Dr. Jesus Vaca, Assistant Superintendent, Human Resources, Chief Negotiator  
Lisa Cline, Deputy Superintendent, Business Services  
Teri Gern, Director, Certificated Human Resources  
Kelly Castillo, Principal, Elementary School Representative  
Greg Brisbine, Principal, Middle School Representative  
Anna Thomas, Director, CIA

The District is requesting to negotiate Article VI (Leaves of Absence), Article IX (Evaluation), Article XI (Working Hours), Article XIX (Salaries), Article XX (Employee Benefits), Article XXVIII (Term of Agreement), and any other issues mutually agreed upon by the parties at the time of negotiations.

Pursuant to Article XVIII, Term of Agreement, in the current OEA bargaining agreement, no sooner than March 15, 2015 or March 15 of any successive year, and no later than April 15, 2015 or April 15 of any successive year, the party wishing to terminate, modify, or amend the

agreement shall submit in writing its request to do so, accompanied by its initial proposals for a successor agreement.

Pursuant to the provisions of Government Code Section 3547, the District is submitting its intent to meet the public notice provision of the Educational Employment Rights Act. Upon completion of the public notice provisions, the District looks forward to initiating a good faith bargaining effort with OEA.

Sincerely,



**DR. JESUS VACA**  
Assistant Superintendent  
Human Resources and Support Services

JV/pp

Cc: Lisa Cline, Deputy Superintendent, Business Services  
Teri Gern, Director, Certificated Human Resources  
Kelly Castillo, Principal, Curren School  
Greg Brisbine, Principal, Fremont School  
Anna Thomas, Director, CIA



# OXNARD SCHOOL DISTRICT

11051 South "A" Street • Oxnard, California 93030 • 805/385-1501

**Dr. Jesus Vaca**  
**Assistant Superintendent**  
**Human Resources and Support Services**

**Jonathan Koch**  
**Director**  
**Classified Human Resources**

April 15, 2016

Diana Duarte  
Oxnard Educators Association, Bargaining Chair  
2775 North Ventura Road, # 108  
Oxnard, California 93036

*Re: Sunshine of OEA and District Initial Proposals, Pursuant to Govt. Code Section 3547*

Dear Ms. Duarte,

In accordance with Article XXVIII, Term of Agreement, of the current collective bargaining agreement between the Oxnard Educators Association (OEA) and the Oxnard School District (District), the District would like to enter into contract negotiations for the 2016-2017 school year and any additional years as may be mutually agreed upon by the parties.

The District's negotiating team will continue to have the following members:

Dr. Jesus Vaca, Assistant Superintendent, Human Resources, Chief Negotiator  
Lisa Cline, Deputy Superintendent, Business Services  
Teri Gern, Director, Certificated HR  
Kelly Castillo, Principal, K-8 School Representative  
Greg Brisbane, Principal, Intermediate School Representative  
Anna Thomas, Director, CIA

The District is requesting to negotiate Article VI (Leaves of Absence), Article IX (Evaluation), Article XI (Working Hours), Article XIX (Salaries), Article XX (Employee Benefits), Article XXVIII (Term of Agreement), and any other issues mutually agreed upon by the parties at the time of negotiations.

Pursuant to Article XXVIII, Term of Agreement, in the current OEA bargaining agreement, no sooner than March 15, 2015, or March 15 of any successive year, and no later than April 15, 2015 or April 15 of any successive year, the party wishing to terminate, modify, or amend the agreement shall submit in writing its request to do so, accompanied by its initial proposals for a successor agreement.

Pursuant to the provisions of Government Code Section 3547, the District is submitting its intent to meet the public notice provision of the Educational Employment Rights Act. Upon completion of the public notice provisions, the District looks forward to initiating a good faith bargaining effort with OEA.

Sincerely,



**DR. JESUS VACA**  
Assistant Superintendent  
Human Resources and Support Services

JV/pp

Enclosure

Cc: Dr. Cesar Morales, Superintendent  
Oxnard School District Board of Trustees  
Mary Jordan, CTA Representative  
Robin Lefkovits, OEA President

INITIAL COLLECTIVE BARGAINING PROPOSAL  
FROM THE  
OXNARD SCHOOL DISTRICT  
TO THE  
OXNARD EDUCATORS ASSOCIATION  
FOR A TERM COMMENCING IN THE  
2016-2017 SCHOOL YEAR

April 15, 2016

Pursuant to Article XXVIII (Term) of the collective bargaining agreement between the Oxnard School District (the "District") and the Oxnard Educators Association (the "Association") the District hereby identifies the articles it wishes to negotiate for a new collective bargaining agreement with a term commencing July 1, 2016 as follows:

ARTICLE VI: LEAVES OF ABSENCE

The district seeks to enter into discussions regarding catastrophic leave.

ARTICLE IX: EVALUATION

The District seeks to enter into discussions regarding the evaluation process for teachers.

ARTICLE XI: WORKING HOURS

The District seeks to enter into discussion related to working hours.

ARTICLE XIX: SALARIES

The District seeks to enter into discussion related to salaries.

ARTICLE XX: EMPLOYEE BENEFITS

The District seeks to enter into discussion regarding employee benefits.

ARTICLE XXVIII: TERM OF AGREEMENT

Among other things, the District seeks to bargain the term for the collective bargaining agreement.

# OEA

Oxnard Educators Association

2775 North Ventura Road, #108 Oxnard, California 93036 (805) 981-6424

April 15, 2016

Dr. Cesar Morales, Superintendent  
Oxnard Elementary School District  
1051 South "A" Street  
Oxnard CA 93030

Dear Superintendent Morales,

The Oxnard Educators Association is presenting bargaining proposals for the successor 2016 - 2017 Collective Bargaining Agreement. We are requesting that these proposals be recommended for public review and hearing at the next regular Board of Trustees' meeting.

Thank you for your attention to this matter.

Sincerely,



Diana Duarte, Bargaining Chair  
Oxnard Educators Association

Enclosure

cc: Jesus Vaca, Assistant Superintendent,  
Human Resources and Support Services  
Mary Jordan, CTA Uniserv Staff  
Robin Lefkovits, OEA President

OXNARD EDUCATORS ASSOCIATION  
CONTRACT PROPOSALS TO THE COLLECTIVE BARGAINING  
AGREEMENT 2016-2017

April 15, 2016

The Oxnard Educators Association makes the following proposals to modify, add or delete language to the existing contract. All agreements reached on individual items shall be tentative, subject to final agreement.

- 1. Article VI: Leaves of Absence**
- 2. Article VII: Transfer**
- 3. Article XI: Working Hours**
- 4. Article XIII: Calendar**
- 5. Article XIV: Partial and School-Wide Contract Variance**
- 6. Article XVI: Safety**
- 7. Article XIX: Salaries**
- 8. Article XX: Employee Benefits**
- 9. Article XXVIII: Term**
- 10. New Article: Special Education**





# OXNARD SCHOOL DISTRICT

1051 South A Street • Oxnard, CA 93030 • (805) 385-1501 • [www.oxnardsd.org](http://www.oxnardsd.org)

## NOTICE OF PUBLIC HEARING

May 6, 2016

The Board of Trustees of the Oxnard School District will hold a Public Hearing on Wednesday, May 18, 2016 at 7:00 p.m. in the Board Room of the Educational Services Center Building of the Oxnard School District, located at 1051 S. "A" Street, Oxnard, California to Sunshine the Oxnard Educators Association's (**OEA**) and the Oxnard School District's Initial Proposals for 2016-17 Negotiations, pursuant to Govt. Code Section 3547.

By: Dr. Jesus Vaca  
Assistant Superintendent  
Human Resources & Support Services  
(805) 385-1501, ext. 2050

**BOARD AGENDA ITEM**

**Name of Contributor(s):** Robin I. Freeman

**Date of Meeting:** 5/18/16

- Study Session: \_\_\_\_\_
- Closed Session: \_\_\_\_\_
- A. Preliminary \_\_\_\_\_
- B. Hearing:   X
- C. Consent Agenda \_\_\_\_\_
- D. Action Items \_\_\_\_\_
- E. Reports/Discussion Items (no action) \_\_\_\_\_
- F. Board Policies   1<sup>st</sup> Reading \_\_\_\_\_ 2<sup>nd</sup> Reading \_\_\_\_\_

**PUBLIC HEARING: EDUCATOR EFFECTIVENESS GRANT 2015-18 (FREEMAN)**

In keeping with the requirements of Senate Bill 103, Section 8 – Educator Effectiveness Grant, a public hearing will be held for the Board to announce the opening of the public comment period to receive input on the Educator Effectiveness Grant prior to its adoption at the June 1, 2016 Board meeting.

**RECOMMENDATION:**

It is the recommendation of the Assistant Superintendent Educational Services, that the Board of Trustees open the public comment period for the Educator Effectiveness Grant.

**ADDITIONAL MATERIAL(S):**

Attached: Budget (1 page)

## LOCAL PLAN FOR THE EDUCATOR EFFECTIVENESS FUND

The Educator Effectiveness (EE) Fund is based on an equal amount of funding per certificated Full Time Employee (FTE) as reported in CALPADS during the 2014-2015 fiscal year. The 2015-2016 calculated funding rate is approximately \$1466 per certificated FTE. The amount available for professional development is \$1,319,679.

Considering the number of new teachers and administrators hired in the 2015-16 school year, the bulk of the funding will be spent on the Beginning Teacher Support and Assessment program – BTSA. BTSA had previously been supported by the state with designated funding. BTSA is one purpose for which the funds may be used.

Remaining funds will be used to support teacher professional development in the areas of effective teaching and learning strategies.

### Oxnard School District Educator Effectiveness Funds Budget

	<u>2015-2016</u>	<u>2016-2017</u>	<u>2017-2018</u>
Beginning Teacher Support and Assessment (BTSA)	\$332,000	\$300,000	\$300,000
Training for certificated staff to support effective teaching and learning	<u>\$120,000</u>	<u>\$134,679</u>	<u>\$ 133,000</u>
	\$452,000	\$434,679	\$433,000
Total Expenditures: \$1,319,679			

**BOARD AGENDA ITEM**

**Name of Contributor:** Robin Freeman

**Date of Meeting:** 5/18/16

**STUDY SESSION** \_\_\_\_\_

**CLOSED SESSION** \_\_\_\_\_

**SECTION B: HEARINGS** \_\_\_\_\_

**SECTION C: CONSENT**     **X**    

**SECTION D: ACTION** \_\_\_\_\_

**SECTION E: REPORTS/DISCUSSION** \_\_\_\_\_

**SECTION F: BOARD POLICIES** 1<sup>st</sup> Reading \_\_\_\_\_ 2<sup>nd</sup> Reading \_\_\_\_\_

**Approval of Agreement #15-235 – Oxnard College (Freeman/Wennes)**

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This agreement is for Lemonwood School's 8<sup>th</sup> Grade Promotion ceremony which will be held at the Performing Arts Theatre at Oxnard College, on Monday, June 13, 2016 at 9:00am. The ceremony will be held at Oxnard College due to site construction currently occurring at Lemonwood School.

**FISCAL IMPACT:**

Not to Exceed \$595.00 – General Fund

**RECOMMENDATION:**

It is the recommendation of the Principal, Lemonwood School, and the Assistant Superintendent, Educational Services, that the Board of Trustees approve Agreement #15-235 with Oxnard College.

**ADDITIONAL MATERIALS:**

**Attached:** Agreement #15-235, Oxnard College (9 Pages)  
Cost Estimate (1 Page)

Ventura County Community College District  
Application and permit for use of College Facilities  
Under Ed Code 82537-82548 – Civic Center

↑ VENTURA COLLEGE  
Civic Center Office  
4667 Telegraph Road  
Ventura, Ca 93003  
805-654-6400 Ext 2232

↑ MOORPARK COLLEGE  
Business Services Office  
7075 Campus Road  
Moorpark, Ca 93021  
805-378-1400 Ext 1878

OXNARD COLLEGE  
Civic Center Office  
4000 So Rose Ave.  
Oxnard, Ca 93033  
805-986-5822

**Submit completed form to campus the event is being held**

Name of Organization \_\_\_\_\_

Address of Organization \_\_\_\_\_

Organization Phone Number \_\_\_\_\_ Organization Email: \_\_\_\_\_

Name of Person Submitting Application \_\_\_\_\_ Email: \_\_\_\_\_

Relationship to Organization: \_\_\_\_\_ Phone Number: \_\_\_\_\_

<u>Facility</u>	<u>Day/Dates</u>	<u>Hours of use</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

Description of Event: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Will admission be charged for event:       No     Yes – Amount to be charged \$ \_\_\_\_\_

Expected Attendance (includes audience, participants and performers) \_\_\_\_\_

The proceeds will be used for \_\_\_\_\_

The following special arrangements are requested \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Required Certification:**

1. Applicant hereby agrees to indemnify, defend, and hold the Ventura County Community College District, its Board of Trustees, the individual members thereof, and all district officers, agents and employees free and harmless from any and all claims, losses, damages, liability, cause of action and demands, including reasonable attorney fees and costs, or expenses that may arise during or be caused in any way by such use or occupancy of school property. Applicant further states that he has read the rules and regulations on the reverse side of this application and agrees to abide by and enforce the same.
2. The District assumes no liability or responsibility for any personal property of applicant or of its employees, agents, representatives, guests, or invitees, brought on to the premise during the term of this agreement.
3. The undersigned, as a duly authorized representative of the Organization, states that to the best of his/her knowledge the school property for use of which application is hereby made will not be used for any unlawful means.
4. Any change in this agreement shall be made in writing at least five (5) working days prior to date of event and is subject to District approval.

5. Applicant shall deliver the required Certificate of Insurance and Additional Insured Endorsement at least two weeks in advance of the facility use, or the facility permit will automatically be canceled.
6. By my signature below, I acknowledge that I am authorized on behalf of the Organization and bind the Organization to the terms of this Agreement. I understand and agree to all terms, conditions, rules and regulations in this agreement.

Applicant:

College Vice President, Business Services  
or designee

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

Rates/Charges:

**VCCCD Sponsored event (no charge)**

**Group 1**

**Group 2**

Estimated Charges:

Facility Use \$ \_\_\_\_\_  
Grounds \$ \_\_\_\_\_  
Audio Visual \$ \_\_\_\_\_

Custodial \$ \_\_\_\_\_  
Lighting \$ \_\_\_\_\_  
Security \$ \_\_\_\_\_

Other Charges

\_\_\_\_\_ \$ \_\_\_\_\_  
\_\_\_\_\_ \$ \_\_\_\_\_  
\_\_\_\_\_ \$ \_\_\_\_\_

Total Estimated Charges \$ \_\_\_\_\_

Deposit Due \$ \_\_\_\_\_

Date Received \_\_\_\_\_

Additional Payment: \$ \_\_\_\_\_

Date Received \_\_\_\_\_

Additional Payment \$ \_\_\_\_\_

Date Received \_\_\_\_\_

Total Final Charges \$ \_\_\_\_\_ Balance Due \$ \_\_\_\_\_ Date Received \_\_\_\_\_  
(To Be Determined after event)

**VENTURA COUNTY COMMUNITY COLLEGE DISTRICT  
RULES, REGULATIONS AND POLICIES REGARDING THE USE OF COLLEGE FACILITIES**

**Fire and Safety Regulations**

1. At no time will there be more persons admitted to the auditorium, classrooms or other assembly rooms that the legal seating capacity will accommodate.
2. Flammable decorations, including stage scenery, will be fire resistant or flame proofed in accordance with the requirements of the State Health and Safety Code.
3. No device, which produces flame, sparks, smoke, and explosives, will be used in the auditorium, classrooms, or assembly rooms.

**General Rules**

1. Sections 82537-82548 of the Education Code of the State of California provide the basis for these rules and are hereby incorporated in this application even though not herein duplicated.
2. The applicant will be a member of the organization, society, or group requesting the use of college facilities; and unless he is an officer of such group, he will present written authorization from the appropriate officers of the group to make such applications. The applicant and signature on the form must be from an adult, at least 18 years of age or order.
3. The applicant will state the date of the use requested, the hour of opening and closing, the names of the speaker or speakers, the topic of discussion, the title and nature of the entertainment (if entertainment), the name of the organization for which the application is made, and the name of the owner, producer, or controlling agency if other than the applicant.
4. Deposits may be required in order to reserve college facilities. Deposits may be refundable with a minimum of a two week cancellation notice. Non-refundable deposits may be required for use of theatres and athletic facilities.
5. The remainder of any unpaid fees, as determined after the last scheduled event, is due in full to the District within seven business days.
6. Use and occupancy of college property will be primarily for public school purposes. Any authorized use of occupancy of the property for other than public school purposes will be secondary and subordinate to this primary purpose.
7. Permits for recreational use of facilities after regular school hours will be determined by mutual agreement with the appropriate college administrator.
8. Any permit may be revoked without previous notice where conflicted dates have resulted, or where need of the property for public school purposes have subsequently developed. For other causes, permits may be revoked at any time upon reasonable notice.
9. This permit is not transferable and may not be assigned to any other agency.
10. No permit will be issued to extend later than 12 o'clock midnight.
11. Juvenile organizations must have adequate adult sponsorship and supervision.
12. Each organization will properly supervise people on the stage and in the audience.
13. College employees in charge of events will have the power of a peace officer to carry out the provision and intents and purposes of the chapter; or in the absence of a college employee, the District police have the power to carry out the provision and intents and purposes of the Education Code 82537-82548.
14. Smoking will be permitted only in designated areas. Intoxicants or narcotics will not be used, nor will profane language, quarreling or gambling be permitted. Violations of this rule or any other rule on this form during occupancy will be sufficient cause for denying further use of college premises to the organization.
15. The program offered during the use of any school premises will at no time contain matter which might tend to cause a breach of the peace, or which constitutes subversive doctrine or seditious utterances, or which agitates for changes in our form of government or social order by violence or unlawful methods.
16. College furniture, equipment or apparatus will not be moved or displaced by any applicant without permission from, and under the supervision of, the college district employee in charge.
17. When the stage is to be used, equipment and personnel are to be furnished by the college and appropriate charges will be made.
18. If free use is granted as provided in the Civic Center Act, the meeting will be nonexclusive and will be open to the public.
19. A public school district will not make any appropriation or pay from any public funds whatsoever, or grant anything to or in aid of any religious sect, church, creed, or sectarian purpose.
20. No sectarian or denominational doctrine may be taught or instructions thereon be permitted, directly or indirectly, in a public school, except for on a temporary basis where the church or organization has no suitable meeting place for the conduct of these services. (ED 82542)

21. The administrator in charge of scheduling facilities, or his/her designated representative, is authorized to issue all permits for the use and occupancy of school property by authorized individuals, groups, or organizations, during non-school hours.
22. A certificate of insurance and Additional Insured endorsement shall be submitted to the college no less than two weeks prior to event.
23. Large events or events that could be potentially high risk, may require additional insurance, and terms and conditions than those stated in the Civic Center Application, Rules, Regulations and Policies.



## Rules and Regulations Governing the Use of College Facilities for Public Purposes (Per Ed Code §82537-82548)

All use of college facilities for public purposes will be granted in conformance with the California Education Code.

As delegated by the chancellor, the college may grant the use of college facilities for public purposes in accordance with the rules adopted by the Governing Board.

Groups may not use college facilities for purposes which shall be inconsistent with college purposes or which will interfere with college operation.

Rental charges shall conform to the schedule adopted by the Governing Board. This schedule is subject to change at the will of the Board.

The use of college facilities shall *not* be granted to persons, firms, corporations, groups, clubs or associations:

1. Which desire the overthrow of the government of the United States or the State of California by force of violence.
2. When such use may be reasonably expected to expose the property of the district to damage through riots, mobs, or violence.
3. When such use of the property would be contrary to the best interests of the district.

Use of college property shall be under supervision of an authorized representative of the VCCCD, who shall have authority to open facilities upon presentation of the applicant's copy bearing approval of the authorized college administrator.

Smoking is not permitted on campus or in buildings except in designated areas. Intoxicants or narcotics shall not be used, nor shall profane language, quarreling, or gambling be permitted. Violations of this or any other of these regulations during occupancy shall be sufficient cause for denying further use of college premises of the organizations.

The number of people present shall not exceed the posted seating capacity for the building. This is a FIRE REGULATION. The use of any material or device, which constitutes a fire hazard, is expressly prohibited.

College facilities will be available contingent upon appropriate supervision and security as determined by the respective college. Fees for these facilities will be assessed based upon the specific needs of the organizations requesting use. Special arrangements must be made for use of equipment, supplies, etc. and appropriate charges will be made. All additional property and/or equipment not owned by the College, but provided or rented by lessee must meet all applicable city, county, state, and federal safety requirements.

### MOORPARK COLLEGE

7075 Campus Road  
Moorpark, CA 93021  
For information contact Leanne Colvin  
Phone (805) 378-1400, ext. 1878

### OXNARD COLLEGE

4000 South Rose Avenue  
Oxnard, CA 93033  
For information contact Darlene Inda  
Phone (805) 986-5813

### VENTURA COLLEGE

4667 Telegraph Road  
Ventura, CA 93003  
For information contact  
Phone (805) 654-6400 Ext. 2232

Use by religious groups for fundraising and other purposes, not religious in nature, shall be processed in the regular manner, with the Group 1 rate applied. Use of school buildings or grounds may be granted to any church or religious organization for the conduct of religious services for temporary periods where the church or organization has no suitable meeting place. Such use may be provided and charges at least equal to the fair rental value of the facilities or grounds must be levied.

Adequate adult supervision and sponsorship is required of all juvenile and youth groups requesting facilities.

Equipment, materials or supplies of any nature that is the property of the VCCCD is not to be loaned to outside organizations for use away from the college premises.

Any privilege granted by the VCCCD shall be revocable at any time by the chancellor or the respective college president, and such privilege shall be revoked when any application contains false statements or any organization or any member of the group willfully violates the rules and regulations governing the use of college facilities.

College property must be protected from damage and mistreatment and ordinary precautions of cleanliness maintained. Groups shall be responsible for returning any furniture or equipment, which has been moved from its proper place. In cases where college property has been damaged or abused beyond normal wear, the same shall be paid for by the organization involved.

# VENTURA COUNTY COMMUNITY COLLEGE DISTRICT

## Use of Facilities

As Authorized by the  
California Education  
Code §82537-82548 at:



MOORPARK COLLEGE



Oxnard College



Rates Effective July 1, 2013

## USE OF FACILITIES

In accordance with the provisions of the Education Code §82537-82548 the Board of Trustees of the Ventura County Community College District will grant the use of school buildings and grounds for public, literary, scientific, recreational, educational or public agency meetings for the discussion of matters of general or public interest. The terms and conditions of such use will be determined by the board-approved administrative procedures and other applicable limitations, requirements and restrictions contained in the Education Code.

## TYPES OF USE

**GROUP 1** - Group 1 users may include nonprofit organizations, and groups and associations organized for general educational or welfare purposes, such as:

- Off campus student clubs and organizations.
- Fundraising entertainments or meetings where admission fees charged or contributions solicited are expended for the welfare of the students of the district.
- Parent-Teachers' associations.
- School-community advisory councils.
- Campfire girls, Girl Scout and Boy Scout troops.
- Senior citizens' organizations.
- Other public agencies with reciprocal use agreements.
- Organizations, clubs, or associations organized for cultural activities and general character building or welfare purposes
- Registered political organizations are permitted to use facilities at no charge providing their presence is educational in nature and or does not interfere with the normal operations of the college. ID # Required

## GROUP 2

- Churches or religious organizations using college facilities or grounds for the conduct of religious services (EC 82537 & 82542).
- Commercial (profit-making) organizations.
- Any group holding a meeting/entertainment where admission fees are charged or contributions solicited which are not expended for the welfare of VCCCD students or for charitable purposes.
- Paid petition gathering.

## Insurance Requirements

The Ventura County Community College District requires that any individual, group, or organization requesting the use of district property submit a Certificate of Insurance naming the District as an additional insured with property damage and liability limits of not less than one million dollars. Higher limits of property damage or liability may be required by the District depending upon the nature and scope of activities to be performed.

## Fee Schedule

(Fees are for facilities only and are subject to change without notice.)

	Group 1	Group 2
<b>GENERAL EVENTS - Facility Charge Per Hour:</b> (Minimum two hours unless otherwise specified):		
1. Performing Arts Center Theatre/Stage	\$150	\$270
2. Small Theater/Forum/Black Box	\$40	\$80
3. Smart Classroom (AV/Computers) and Conference rooms	\$40	\$100

## Fee Schedule (continued)

### Group 1

### Group 2

4. Amphitheater (OC)	\$20	\$35
5. Observatory (MC)	\$50	\$100
6. Student Dining Area	\$35	\$75
<i>(Does Not Include Kitchen Facilities)</i>		
7. Choral Music Room	\$22	\$40
8. Guthrie Hall/Wright Event Center (VC)	\$40	\$75
9. Outside Quad - Table (Daily Rate)	\$20	\$40
10. TV Editing Room & Equipment (OC)	\$300	\$600
11. LRC Patio/Kitchen (VC)	\$200	\$300
12. Specialized Labs/Classrooms/Computer Labs	\$200	\$300
13. Fire Technology Simulation Room	\$200	\$300
14. Parking Lot Rental (per space)	\$2	\$2

## PHYSICAL EDUCATION/ATHLETIC - Facility Charge Per Hour:

(Minimum two hours unless otherwise specified):

1. Large Gym (MC, VC, OC)	\$80	\$150
2. Small Gym (VC)	\$40	\$80
3. Dance Studio	\$40	\$80
4. Locker Room (each)	\$40	\$80
5. Football Practice Field (MC)	\$35	\$50
6. Track & Field and Football Practice Fields	\$75	\$120
7. Baseball/Softball Competition Fields	\$40	\$80
8. Baseball/Softball Practice Fields	\$20	\$40
9. Baseball/Softball Batting Cages	\$15	\$20
10. Field Hockey/Soccer Practice Fields	\$45	\$80
11. Stadium (MC, VC, OC) - ALL DAY RATE	\$450	\$800
12. Stadium (MC, VC, OC) - PER HOUR	\$150	\$325
13. Stadium (in-field only) - PER HOUR	\$75	\$120
14. Youth Size Soccer Field (OC)	\$30	\$60
15. Soccer Field (OC - Practice Fields)	\$50	\$100
16. Soccer Field (OC - Premium Competitive)	\$75	\$150
17. Golf/Driving Range	\$35	\$60
18. Golf Putting Green	\$20	\$30
19. Basketball Courts (outside/OC)	\$15	\$25
20. Volleyball Courts (outside)	\$15	\$25
21. Tennis Courts (per court)	\$15	\$20
22. Racquetball Courts (per court)	\$12	\$20

(Lighting Outdoor Facilities is an Additional Charge)

## ADDITIONAL EVENT SERVICES - Facility Charge Per Hour:

(Minimum two hours unless otherwise specified):

1. Theatre/Projector/Audio System	\$15	\$15
2. Classroom Projector/Audio System	\$10	\$10
3. Portable Projector	\$50	\$50
4. Choral & Band Risers (3 steps - 6" sections) Per Day Rate	\$100	\$100
5. Teleconference Fee	\$100	\$125
6. Stadium Lights	\$80	\$80
7. Performing Arts/Theatre Audio Set-up & Use	\$50	minimum
8. Performing Arts/Theatre Lighting Set-up & Use	\$50	minimum

Event Staff, Custodial, Grounds, Security or other personnel services will be charged actual rates

**Filming Fees are Negotiable**

## How to File for Use of Facilities

The application for use of college facilities shall be made on the forms provided by the College. An authorized representative of the group applying must certify the application.

The application must be submitted at least two weeks prior to requested date, unless waived by the college president as an emergency. Permission to use facilities will be granted only for the current semester unless and until the needs for instructional purposes for the following semester have been determined.

The application shall contain:

- The name of the organization
- Name, address, title and telephone number of the authorized representative.
- Type or purpose of the organization.
- Facilities requested and the date and time of use.
- Purpose for all admission and parking charges.

## RENTAL CONDITIONS

- Proof of Insurance shall be required for all organizations using VCCCD facilities.
- Only the organization whose name is on the application is approved to use the facility.
- Parking fee of \$2.00 per day (each vehicle)
- The use of restrooms is included in each rental.
- Additional charges may be required for labor (e.g., custodial, security, etc.)
- Charges for additional equipment, preparation of athletic fields, supplies and personnel will be determined by the responsible supervisor based on the nature of the event and the facilities requested.
- The rules and regulations shall be read, and the groups must agree to hold the VCCCD harmless from any liability or damage, which may result from the use of college facilities.

## PAYMENT OF FEES

\*Deposits may be required in order to reserve college facilities. Deposits may be refundable with a minimum of a two week cancellation notice. Non-refundable deposits may be required for use of theatres and athletic facilities.

\*Payment of fees must be made at least one week prior to the first scheduled use or permit will be cancelled.

# Sample Certificate of Insurance

**Facility User's Insurance Broker**

**PRODUCER**  
 Agency Manager, Inc.  
 2600 Bond Street  
 University Park, IL 60468  
 Phone No. 800-555-5388  
 FAX No.

**Facility User, Inc.**  
 One Big Street  
 Anytown, CA 92606

**Name of Facility User (It should match the name as written in the Facility Use Agreement)**

**COMPANIES AFFORDING COVERAGE**  
 COMPANY A: Tahiti Mutual Insurance Company  
 COMPANY B: Indemnity Insurance  
 COMPANY C: State Compensation Insurance Fund  
 COMPANY D:

**Claims Made or Modified Occurrence is not acceptable**

**TYPE OF INSURANCE**  
 GENERAL LIABILITY  
 COMMERCIAL GENERAL LIABILITY  
 CLAIMS MADE  OCCUR  
 OWNERS & CONTRACTORS

**The two "each occurrence" boxes should total at least as much as required in your contract**

**POLICY NUMBER**  
 12345678  
 234567891  
 456789123  
 345678912

**The totals in each box should be at least \$1 million**

**LIMITS**  
 GENERAL LIABILITY \$ 1,000,000  
 PRODUCTS COMP OR AGS \$ 1,000,000  
 FORMAL & NON-FORMAL \$ 1,000,000  
 EACH OCCURRENCE \$ 1,000,000  
 THIS DAMAGE (Any one box) \$ 50,000  
 Hired EMP (Any other person) \$ 5,000  
 COMBINED SINGLE LIMIT \$ 1,000,000  
 BODILY INJURY (Per person) \$  
 BODILY INJURY (Per accident) \$  
 PROPERTY DAMAGE \$  
 AUTO ONLY - EA ACCIDENT \$  
 OTHER THAN AUTO ONLY \$  
 EACH ACCIDENT \$  
 AGGREGATE \$  
 EACH OCCURRENCE \$ 1,000,000  
 AGGREGATE \$ 1,000,000  
 W.C. STATUS-LIMITS  
 OTHER \$  
 EL-EMPLOYEE \$ 1,000,000  
 EL-DISEASE-POLICY LIMIT \$ 1,000,000  
 EL-DISEASE-TA EMPLOYEE \$ 1,000,000

**This section should reference the job number, project name, and/or location**

**CANCELLATION**  
 SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENSURE TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE COMPANY, ITS AGENTS OR REPRESENTATIVES.  
 AUTHORIZED REPRESENTATIVE

**This wording should be "X"d out**

**DESCRIPTION OF OPERATIONS/LOCATIONS/EXCLUSIONS ADDED BY ENDORSEMENT(S)/SPECIAL PROVISIONS**  
 Certificate of Insurance provided for activities detailed in Facilities Use Agreement #12345 for events 7/2001 - 8/2001.  
 General Liability - Certificate Holder is an Additional Insured per attached Form CG 20 10 11 85.  
**CERTIFICATE HOLDER**  
 Ventura County Community College District  
 255 W. Stanley Ave., Suite 150  
 Ventura, CA 93001

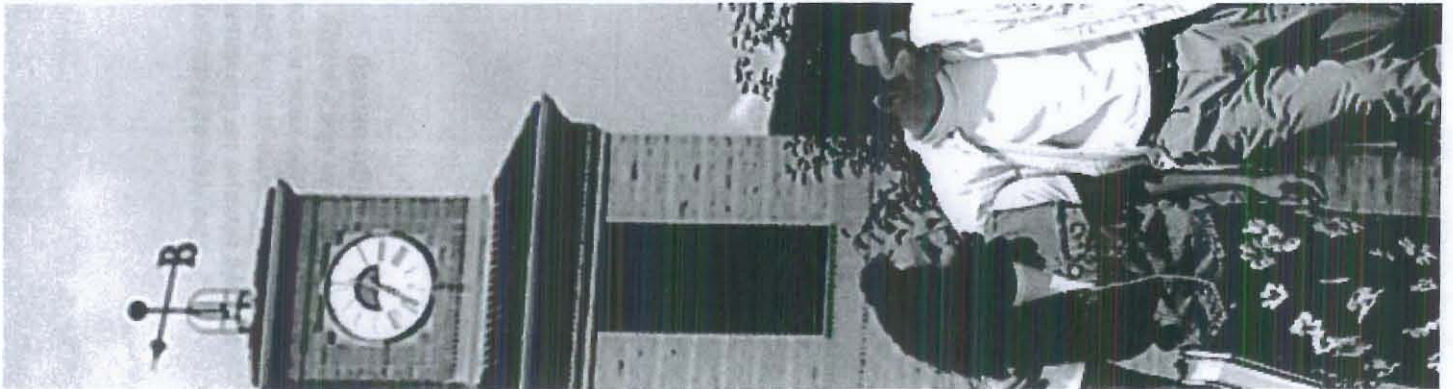
**This should name your appropriate company entity with proper address**

**ACORD 25-S (07/97)**  
 ACORD CORPORATION 1999

**Signed by the Broker only**

**Location:**  
 Oxnard College  
 4000 S. Rose Avenue  
 Oxnard, CA 93033





## IMPORTANT

If the certificate holder is an **ADDITIONAL INSURED**, the policy(ies) must be endorsed. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

If **SUBROGATION IS WAIVED**, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

## DISCLAIMER

The Certificate of Insurance on the reverse side of this form does not constitute a contract between the issuing insurer(s), authorized representative or producer, and the certificate holder, nor does it affirmatively or negatively amend, extend or alter the coverage afforded by the policies listed thereon.

# Sample Additional Insured Endorsement

The Named Insured should always be the same as the "Insured" name on the Certificate (it should also read exactly the same as in the Facility Use Agreement)

This policy number should be the same as that listed for General Liability on the Certificate of Insurance

POLICY NUMBER:  COMMERCIAL GENERAL LIABILITY

NAMED INSURED:

THIS ENDORSEMENT CHANGES THE POLICY, PLEASE READ IT CAREFULLY

**ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS (Form B)**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART.

Name of Person or Organization:  SCHEDULE

(If no entry appears above, information required to complete this endorsement will be shown in the Declarations as applicable to this endorsement.)

**WHO IS AN INSURED (Section II)** is amended to include as an insured the person or organization shown in the Schedule, but only with respect to liability arising out of "your work" for that insured by or for you.

It is further agreed that such insurance as is afforded by this policy for the benefit of the above Additional Insured(s) shall be primary insurance as respects any claim, loss or liability arising out of the Named Insured's operations, and any other insurance maintained by the Additional Insured(s) shall be excess and non-contributory with the insurance provided hereunder.

It is agreed that the above policy contains a standard cross liability or severability of interest clause.

CG 20 10 1185

Copyright, Insurance Services Office, Inc. 1984

This should always reference Form B - there is a Form A, but it provides inadequate coverage

This is where all the Additional Insureds should be listed by name  
Ventura County Community College District  
255 W. Stanley Ave., Suite 150  
Ventura, CA 93001

Should list out the project, name, location, and/or project number that the Facility Use Agreement refers to

This is the standard endorsement number (CG 20-10) and 1185 edition date is required by the Facility Use / Subcontract Agreement

The primary wording, as required in the contract, is usually typed onto the Additional Insured Endorsement Here. The severability of Interest clause is often typed here too



Oxnard College  
 Civic Center-Facility Rentals  
 4000 S. Rose Avenue  
 Oxnard CA 93033  
 Phone: 805-986-5813 / Fax: 805-986-5885

## COST ESTIMATE

<b>Group</b>	<b>Reservation:</b>	12662
Lydia Alvara Oxnard School District 1051 South A Street Oxnard, CA 93030	<b>Event Name:</b>	OSD - LEMONWOOD SCHOOL
	<b>Status:</b>	Pending
	<b>Phone:</b>	805-385-1501
	<b>Email Address:</b>	lalvara@oxnardsd.org
	<b>Event Type:</b>	Civic Center

Bookings / Details	Quantity	Price	Amount
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**INSURANCE REQUIREMENTS:**

*A Certificate of Liability Insurance and Additional Insured Endorsement must name Ventura County Community College District, 255 W. Stanley Ave., Suite 150, Ventura, CA 93001 as the certificate holder and additional insured. The location must read Oxnard College, 4000 S. Rose Ave., Oxnard, CA 93033. These documents must be received no later than (2) weeks prior to the event.*

**PAYMENT REQUIREMENTS:**

*Payment in full must be made no later than (7) days prior to the event.*

**Monday, June 13, 2016**

<b>8:00 AM - 11:00 AM OSD - LEMONWOOD SCHOOL (Pending 5/13/2016) 2-PAB AUD Auditorium</b>			
Room Charge: (3 hours @ \$150.00/hr)	1	\$450.00	\$450.00
<b>Fees:</b>			
Theater Technician(3 hours @ \$25.00/hr)	1	\$75.00	\$75.00
Custodial Services(2 hours @ \$35.00/hr)	1	\$70.00	\$70.00
<b>Subtotal</b>			<b>\$595.00</b>
<b>Grand Total</b>			<b>\$595.00</b>

**BOARD AGENDA ITEM**

**Name of Contributor:** Robin Freeman

**Date of Meeting:** 5/18/16

**STUDY SESSION** \_\_\_\_\_

**CLOSED SESSION** \_\_\_\_\_

**SECTION B: HEARINGS** \_\_\_\_\_

**SECTION C: CONSENT**   **X**  

**SECTION D: ACTION** \_\_\_\_\_

**SECTION E: REPORTS/DISCUSSION** \_\_\_\_\_

**SECTION F: BOARD POLICIES**

1<sup>st</sup> Reading \_\_\_\_\_ 2<sup>nd</sup> Reading \_\_\_\_\_

**Approval of Agreement/MOU #15-236 – Mad Science of Los Angeles (Freeman/Elisondo)**

In an effort to support the Ramona Elementary School strand focus, Mad Science of Los Angeles will provide assemblies, class science workshops and summer camps during the period of June 7, 2016 through June 24, 2016.

**FISCAL IMPACT:**

Not to exceed \$13,720.00 – Title 1

**RECOMMENDATION:**

It is the recommendation of the Principal, Ramona School, and the Assistant Superintendent, Educational Services, that the Board of Trustees approve Agreement/MOU #15-236 with Mad Science of Los Angeles.

**ADDITIONAL MATERIAL(S):**

**Attached:** Agreement/MOU #15-236, Mad Science of Los Angeles (2 Pages)

**AGREEMENT/MOU #15-236 BETWEEN  
MAD SCIENCE AND OXNARD SCHOOL DISTRICT  
FOR CLASSROOM PRESENTATIONS  
FOR RAMONA ELEMENTARY SCHOOL**

The scope of this document is to define the roles and responsibilities of Mad Science in providing lessons and activities for Ramona Elementary School in the Oxnard School District (OSD). The purpose is to provide the Mad Science in-class and parent workshops and summer camps for the TK/K-5<sup>th</sup> grade students at Ramona Elementary School in all classrooms.

This serves as a Memorandum of Understanding and Responsibility Agreement that the Mad Science and **Oxnard School District** will work together toward promoting and providing age appropriate science activities for the students at Ramona Elementary School. Both the agency and consultant, according to its defined role, agrees to participate in coordinating, providing and financing the following services for the purpose of this agreement.

1. **Mad Science agrees to:**
  - a. Provide Science lessons from their CCSS/NGSS aligned curriculum.
  - b. Provide pre and post presentation activities to be completed by participating students.
  - c. Certify that presenters have been fingerprinted and TB tested.
  - d. Carry insurance that conforms to the district requirements for liability, workers compensation, abuse and molestation.
  
2. **Oxnard School District agrees to:**
  - a. Compensate Mad Science for two workshops per classroom, 2<sup>nd</sup>-5<sup>th</sup> grades and two assemblies for TK/K-1<sup>st</sup> grades of science instruction at Ramona Elementary School at the following rates:

1 Workshop:	Mad Machines	6/7/16, 8:45 AM, 25 Kids, Balderas	\$ 185.00
1 Workshop:	Mad Machines	6/7/16, 10:30 AM, 25 Kids, Hunt	\$ 185.00
1 Workshop:	Mad Machines	6/7/16, 8:45 AM, 25 Kids, Mendoza	\$ 185.00
1 Workshop:	Mad Machines	6/7/16, 10:30 AM, 25 Kids, Hernandez	\$ 185.00
<b>100 Materials Fee (Mad Machines) - 20 student minimum \$2.00/EA</b>			<b>\$ 200.00</b>
1 Workshop:	Weather	6/7/16, 8:45 AM, 25 Kids, Garza	\$ 185.00
1 Workshop:	Weather	6/7/16, 10:30 AM, 25 Kids, Gomez	\$ 185.00
1 Workshop:	Weather	6/7/16, 10:30 AM, 25 Kids, Johnson	\$ 205.00
1 Workshop:	Magnets	6/7/16, 8:45 AM, 35 Kids, Sims	\$ 225.00
1 Workshop:	Magnets	6/7/16, 9:00 AM, 35 Kids, Magallanes	\$ 205.00
1 Workshop:	Magnets	6/7/16, 10:45 AM, 35 Kids, Morales	\$ 205.00
1 Workshop:	B & B Oceans	6/7/16, 9:00 AM, 35 Kids, Hudson	\$ 205.00
1 Workshop:	B & B Oceans	6/7/16, 10:45 AM, 35 Kids, Weilbacher	\$ 205.00
1 Workshop:	Slime Time	6/9/16, 8:45 AM, 25 Kids, Balderas	\$ 185.00
1 Workshop:	Slime Time	6/9/16, 10:30 AM, 25 Kids, Hunt	\$ 185.00
1 Workshop:	Slime Time	6/9/16, 8:45 AM, 25 Kids, Mendoza	\$ 185.00
1 Workshop:	Slime Time	6/9/16, 10:30 AM, 25 Kids, Hernandez	\$ 185.00
1 Workshop:	Energy Burst	6/9/16, 8:45 AM, 25 Kids, Garza	\$ 185.00
1 Workshop:	Energy Burst	6/9/16, 10:30 AM, 25 Kids, Gomez	\$ 185.00
1 Workshop:	Energy Burst	6/9/16, 10:30 AM, 25 Kids, Johnson	\$ 205.00
1 Workshop:	Electricity	6/9/16, 8:45 AM, 35 Kids, Sims	\$ 225.00
1 Workshop:	Electricity	6/9/16, 9:00 AM, 35 Kids, Magallanes	\$ 205.00
1 Workshop:	Electricity	6/9/16, 10:45 AM, 35 Kids, Morales	\$ 205.00
1 Workshop:	Matter of Fact	6/9/16, 9:00 AM, 35 Kids, Hudson	\$ 205.00
1 Workshop:	Matter of Fact	6/9/16, 10:45 AM, 35 Kids, Weilbacher	\$ 205.00
<b>12 Travel Fee</b>			<b>\$50.00/EA</b>
			<b>\$ 600.00</b>
1 Event A	(Fire & Ice)	6/14/16, 8:20 AM, 150 Kids	\$ 425.00
1 Event A	(Fire & Ice)	6/14/16, 9:50 AM, 150 Kids	\$ 325.00
<b>1 Travel Fee</b>			<b>\$50.00/EA</b>
			<b>\$ 50.00</b>

**SUB-TOTAL: \$6,320.00**



- b. Compensate Mad Science for two camps for 2<sup>nd</sup> & 3<sup>rd</sup> grade science instruction at Ramona Elementary School at the following rates:

Eureka Camp: 6/20/16-6/24/16, 9:00AM - 12:00 Noon  
(2 Classes – 20 students per class - \$40.00 per student) \$7,400.00

**TOTAL:** **\$13,720.00**

This Memorandum of Understanding and Responsibility Agreement shall be effective upon signature and implemented May 19, 2016 through June 30, 2016.

**OXNARD SCHOOL DISTRICT:**

\_\_\_\_\_  
*Lisa A. Franz, Director, Purchasing*

\_\_\_\_\_  
*Date:*

**MAD SCIENCE OF LOS ANGELES:**

\_\_\_\_\_  
*Lisa Balmain-Nadasdy, Sales Representative*

*Mad Science of Los Angeles*

*Sparking, Imaginative, Learning*

15815 Monte St. Unit 101

Sylmar, CA 91342

Phone: 818-909-6777

Fax: 818-909-6771

<http://www.madscience.org/losangeles>

\_\_\_\_\_  
*Date:*

**BOARD AGENDA ITEM**

**Name of Contributor:** Robin Freeman

**Date of Meeting:** 5/18/16

**STUDY SESSION** \_\_\_\_\_

**CLOSED SESSION** \_\_\_\_\_

**SECTION B: HEARINGS** \_\_\_\_\_

**SECTION C: CONSENT**     **X**    

**SECTION D: ACTION** \_\_\_\_\_

**SECTION E: REPORTS/DISCUSSION** \_\_\_\_\_

**SECTION F: BOARD POLICIES** 1<sup>st</sup> Reading \_\_\_\_\_ 2<sup>nd</sup> Reading \_\_\_\_\_

**Approval of Agreement #15-237 – Oxnard Performing Arts & Convention Center (Freeman/Bond)**

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This agreement is for the “Haydock Spring Showcase 2016” which will be held at the PAC on Wednesday, May 25, 2016 from 6:00pm – 8:00pm.

**FISCAL IMPACT:**

Not to Exceed \$1,550.00 – School Site Funds-Targeted

**RECOMMENDATION:**

It is the recommendation of the Principal, Haydock Middle School, and the Assistant Superintendent, Educational Services, that the Board of Trustees approve Agreement #15-237 with the Oxnard Performing Arts & Convention Center.

**ADDITIONAL MATERIALS:**

**Attached:** Agreement #15-237, Oxnard Performing Arts & Convention Center (11 Pages)

PERFORMING ARTS AND CONVENTION CENTER  
 LICENSE AGREEMENT - THEATER

This Performing Arts and Convention Center License Agreement (“Agreement”) is made and entered into in the County of Ventura, State of California, this 18<sup>th</sup> day of May 2016, by and between the Oxnard Performing Arts Center Corporation, a nonprofit corporation, (“PACC”), and “Oxnard School District”, (“Licensee”).

WHEREAS, PACC operates and maintains the Oxnard Performing Arts and Convention Center for use by various organizations, entities and persons for conventions, trade shows, exhibitions, theatrical performances, meetings, concerts, and similar activities; and

WHEREAS, PACC hereby desires to make the Oxnard Performing Arts and Convention Center Theater available to Licensee for a license fee.

NOW, THEREFORE, PACC and Licensee agree as follows:

1. Facilities Provided

a. PACC hereby authorizes Licensee to use the Oxnard Performing Arts and Convention Center Theater (“Theater”) as more particularly LOCATED AT 800 Hobson Way, Oxnard, California 93030.

b. PACC agrees to provide Licensee with standard furnishings and equipment including heating, air conditioning, general lighting, use of the stage, dressing rooms and orchestra pit.

c. PACC agrees to provide Theater for Licensee’s use including the following services: Necessary custodial services, utilities, general supervision by Stage Manager, one public address set-up with three microphones, and one lighting set-up.

d. PACC agrees to provide Licensee with the following special equipment/ supplies and personnel:

(1) Equipment/Supplies

(a) General Lighting	\$	<u>0.00</u>
(b) House Sound System		<u>0.00</u>
(c) Shure SLX24 Wireless handheld (3)		<u>0.00</u>
(d) Stage Playback Monitors (2)		<u>0.00</u>

(2) Personnel

(a) Stage Technicians	\$	<u>1,288.00</u>
(b) House Manager		<u>200.00</u>
(c) Ushers		<u>0.00</u>
(d) Box Office		<u>N/A</u>

2. Coordination of Use

All uses of Theater are to be coordinated with the PACC Executive Director or designee ("Executive Director") and shall be under the general direction of Executive Director.

3. License Period

PACC agrees that Licensee may use the entire complex on the following dates, during the hours specified below:

Moving In: Wednesday May 25, 2016 1:00 pm

Moving Out: Wednesday May 25, 2016 9:30 pm

Actual Program: Wednesday May 25, 2016 6 pm-8 pm

4. Reservation Fee

Licensee agrees to pay PACC a non-refundable reservation fee in the amount of \_\_\_\_\_ to Executive Director. The PACC shall credit the reservation fee toward payment of other fees and charges owed by Licensee.

5. License Fee

a. Licensee agrees to pay PACC the following fees for the use of Theater and the use of any special equipment/supplies and personnel:

(1) License Fee	\$ <u>No Charge</u>
(2) Equipment/Supplies	<u>0.00</u>
(3) Personnel	<u>1,488.00</u>
(4) Insurance	<u>OWN</u>
(5) Non-Refundable Processing Fee	<u>25.00</u>
Total	<u>1,513.00</u>
 GRAND TOTAL	 <u><b>\$1,013.00</b></u>

b. Licensee agrees to pay any addendum charges for additional services or equipment related to Licensee's use of the Theater. An estimate of any addendum charges is attached hereto as Exhibit A and incorporated herein by this reference. The actual addendum charges will be determined after the PACC has actually provided the services or equipment.

6. Gross Receipts Fees

If the license fee is based on gross receipts, gross receipts shall mean the total sums, exclusive of taxes, collected from patrons by Licensee.

7. No Free Passes

Licensee may not issue free passes or admissions to Licensee's event without the written consent of Executive Director.

8. Maintenance of Records

Licensee shall maintain true and accurate records of receipts of admissions and concession sales, if any, and shall satisfactorily and thoroughly account for the receipt thereof. Executive Director shall have the right to inspect such records.

9. Proposed Event

The event to be presented by Licensee shall consist of "Haydock Spring Showcase 2016". Licensee's use of Theater shall be limited to the event as described herein.

10. Fee for Admission

a. PACC agrees that Licensee may charge admission during the proposed use of Theater by Licensee.

b. (1) Licensee agrees to include in the price of admission to Theater a Facility Restoration Fee of \$1.00 per ticket for tickets priced \$10.00 to \$14.99 and \$2.00 per ticket for tickets priced \$15.00 or more. The Facility Restoration Fee is for the exclusive benefit of the PACC Facility Restoration Fund.

(2) All advertising for Licensee's event at Theater shall include the following statement: "A Facility Restoration Fee shall be added to each ticket."

(3) Licensee agrees, that for general admission events without tickets for sale, Licensee shall pay a \$.50 per admission Facility Restoration Fee as an addendum charge.

11. Removal of Property

a. Licensee agrees to remove from Theater, on or before 8:00am on the 26<sup>th</sup> day of May 2016, all property, goods, equipment, supplies and effects belonging to Licensee or caused by Licensee to be brought to Theater.

b. If any such property is not removed by the above stated time, Licensee authorizes Executive Director to sell the property in any manner Executive Director deems appropriate and to hold the proceeds from the sale for Licensee, less any costs incurred by PACC.

c. Executive Director may, in his or her sole discretion, store, or cause to be stored, any such property not removed by the above stated time. Licensee agrees to pay PACC all costs associated with such storage.

12. PACC Not Liable For Licensee's Property

In the receipt, handling, care or custody of property of any kind shipped or otherwise delivered to Theater either prior to, during, or subsequent to the use of Theater by Licensee, PACC and its officers, agents and employees shall act solely for the accommodations of Licensee; and neither PACC nor its officers, agents or employees shall be liable for any loss, damage or injury to such property.

13. Handling of Funds

a. In the handling, control, custody and keeping of funds whether the funds are received through the PACC box office or otherwise, Licensee agrees that PACC is acting for the accommodation of Licensee, and as to such funds PACC shall not be liable to Licensee or to any other person for any loss, theft or defalcation thereof, whether such loss, theft, or defalcation is caused or done by officers, employees or agents of the PACC.

b. No PACC officer, employee or agent shall be liable for any loss, theft or defalcation of such funds unless PACC willfully causes or permits the same or unless the loss, theft or defalcation was caused by the gross negligence of an officer, employee or agent of PACC.

14. Prop Entrance

Licensee shall bring all prop articles, fixtures, materials, displays into or out of Theater only at such entrances as may be designated by Executive Director.

15. Care of Theater

Licensee will not drive any nails, screws, tacks, pins, or other objects into the floors, walls, ceilings, partitions, doors, door or window casings, or woodwork of Theater and will not in any manner change or move any of the fixtures of Theater except as may be authorized by Executive Director.

16. Electrical Work and Plans

Licensee shall file with Executive Director a description of all electrical work and a plan or description of any structures, or decorations to be erected for the event. Licensee will not construct or erect such electrical work, structures, or decorations without prior written approval by Executive Director.

17. Animals Prohibited

Licensee agrees that no domestic or wild animals or birds shall be taken into, or kept in or about Theater, or any part thereof, without the written consent of Executive Director.

18. Signs Require Permission

Licensee agrees that no signs or advertisements shall be placed in, on, or about Theater without the consent of Executive Director.

19. Televising Requires Permission

No event presented in Theater shall be broadcast, televised, or in any manner recorded for reproduction without the written consent of Executive Director.

20. Conduct of Persons

a. Licensee agrees to comply with all ordinances, statutes, rules and regulations applicable to the conduct or operation of the activities of Licensee herein permitted. Licensee shall provide adequate security protection to maintain order in and about Theater.

b. Licensee shall be solely responsible for the orderly conduct of all persons using Theater by invitation, either expressed or implied, during all times covered by this Agreement.

c. Licensee shall not permit intoxicated persons or alcoholic beverages at Theater by invitation, either expressed or implied, during all times covered by this Agreement.

d. PACC reserves the right to eject or cause to be ejected from Theater any person making loud, personal, impertinent, profane or slanderous remarks so as to disrupt an event at Theater.

21. Control of Theater

a. The keys to Theater shall at all times be in the possession and control of Executive Director. PACC shall lock and unlock the entrance and exits of Theater at such times as may be required for Licensee's use. Licensee, at its own expense, must at all times place proper security at all entrances and exits when the same are unlocked.

b. PACC and all duly authorized representatives of PACC shall have the right to enter Theater and all parts thereof at all times.

22. Lost Articles

PACC or its representatives shall have the sole right to collect and have the custody of articles left in Theater by persons attending any event. Licensee or any person in Licensee's employ shall not collect nor interfere with the collection or custody of such articles.

23. Flammable Materials

Licensee may not use flammable materials such as bunting, tissue paper, crepe paper, for decorations. All materials used for decorative purposes must be treated with flame proofing and approved by the Fire Marshall.

24. Entertainment Standards

Licensee shall not conduct any event in Theater and Complex that is illegal or obscene.

25. Concession Sales by PACC

PACC reserves the sole right:

a. To contract for the sale of programs, librettos, periodicals, books, magazines, newspapers, soft drinks, flowers, tobacco, candies, food, novelties or any related merchandise commonly sold or dispensed in Theater and Complex; opera glasses, cushions, and other articles; and photographs.

b. To operate the parking lots, and check rooms; provided, however, that Executive Director may, in writing, authorize Licensee to do any of the aforesaid upon such terms as Executive Director deems proper under the circumstances, subject to the provisions of any existing contracts.

26. Sales by Licensee

a. Licensee may sell from the Theater only those items approved in writing by Executive Director. Licensee shall provide Executive Director with an accounting of such sales and shall pay PACC fifteen percent (15%) of the gross amount of sales, exclusive of sales tax.

b. Licensee shall not serve food or beverages for the event except by agreement with caterers approved by Executive Director.

27. Use of PACC Box Office

Licensee agrees that PACC shall be responsible for ordering and selling tickets sold at the PACC box office at fees so designated on the Box Office Agreement attached hereto as Exhibit B. If a computerized ticket system is used, Licensee agrees to use PACC's designated ticket agency.

28. Complimentary Tickets

a. Licensee agrees not to issue more than fifty (50) complimentary tickets to the Licensee's event without the written consent of Executive Director.



29. Copyright

Licensee agrees to assume all costs and obligations arising from the use of patented and/or copyrighted materials, equipment, devices, processes or dramatic rights furnished or used or incorporated in the event. Licensee agrees to obtain and pay for all appropriate BMI, ASCAP, and SESAC licenses for the event.

30. Assignment

Licensee shall not assign this Agreement in whole or in part, nor may any right hereunder granted to Licensee be granted in turn to any other person without the written consent of Executive Director.

31. Occupancy Interruption

a. In case Theater or any part thereof shall be destroyed or damaged by fire or any other cause, or if any other casualty or unforeseen occurrence, including strikes, labor disputes, war, or acts of military authorities, shall render the fulfillment of this Agreement difficult or impossible of performance, this Agreement shall be immediately terminated.

b. PACC shall not in any such case be held liable or responsible to Licensee for any damage caused by termination of this Agreement. PACC shall be relieved from any further liability by reason of this Agreement, and no claims or compensation or damage shall be made against the PACC by Licensee. Any fee for the unused portion of the Agreement shall under such circumstances be refunded to Licensee.

32. Indemnity

Licensee agrees to indemnify and hold harmless PACC, the City of Oxnard, its City Council and their respective officers, directors, employees, and agents, against any and all claims, demands, causes of action, damage (including damages to PACC's property), costs, and liabilities (including cost and liabilities of PACC with respect to its employees), in law or in equity of every kind and nature whatsoever, directly or proximately resulting from or caused by the use and occupation of Theater, whether such use is authorized or not, or from any act or omission of Licensee or any of its officers, agents, employees, guests, patrons, or invitees. Licensee shall, at its sole risk and expense, defend any and all suits, actions, or other legal proceedings that may be brought or instituted against PACC, the City of Oxnard and their respective officers, directors, agents and employees on any such claim, demand or cause of action, and Licensee shall pay and satisfy any judgment or decree which may be rendered against PACC, the City of Oxnard and their respective officers, directors, employees, and agents in any such suit, action or other legal proceedings. Licensee shall pay for any and all damages to property of PACC, for loss or theft of such property, done or caused by Licensee, its officers, agents, employees, guests, patrons and invitees.

33. Insurance

a. Licensee shall obtain and maintain in full force and effect during the use and occupation of Theater under this Agreement the insurance coverage's as specified in Exhibit C, attached hereto and incorporated in full herein by this reference, issued by a company satisfactory to Executive Director, unless Executive Director, waives, in writing, the requirement that Licensee obtain and maintain such insurance coverage's.

b. Licensee shall, prior to the use and occupation of Theater, file with Executive Director evidence of insurance coverage as specified in Exhibit D. Evidence of insurance coverage shall be forwarded to Executive Director, addressed as specified in Exhibit D.

c. Maintenance of proper insurance coverage's by Licensee is a material element of this Agreement. Licensee's failure to maintain or renew insurance coverage's or to provide evidence of renewal may be considered as a material breach of this Agreement.

#### 34. Maintenance and Repair

Licensee agrees to maintain Theater and other portions of the premises of PACC to which Licensee, its employees, agents, licensees or any member of the public has access to by reason of this Agreement in good condition, reasonable wear and tear, damage by the elements, act of God, or casualties beyond the control of Licensee only excepted. Licensee agrees to return Theater in the same condition as before use of the same was permitted, ordinary wear and tear, damage by the elements, acts of God, or casualties beyond the control of Licensee excepted.

#### 35. Default

a. Should Licensee default in the performance of any of the terms and conditions Of this Agreement, PACC, at its option, may terminate the Agreement. Licensee shall be liable for the full amount of the fee provided for herein less fees received from others for use of Theater at the time, or times, specified in this Agreement.

b. Any deposit made by Licensee to PACC shall be retained by PACC.

#### 36. Cancellation by PACC

a. In addition to the right to terminate this Agreement upon Licensee's default, PACC shall have the right:

(1) To terminate this Agreement at any time when Theater is required by public necessity or emergency use.

(2) To terminate this Agreement at any time, without liability to PACC, upon ten days written notice when Licensee proposes a special service event for which no fee is to be charged.

(3) To terminate this Agreement at any time without liability to PACC, upon

21 days written notice, in all other instances.

b. Upon termination by PACC, any deposit made by Licensee shall be refunded.

c. Licensee hereby waives any claim Licensee may have against PACC stemming from any cancellation of this Agreement by PACC prior to the date of the event.

37. Cancellation by Licensee

No cancellation by Licensee shall be accepted by Executive Director if less than 21 days prior to the date of the event. Failure to cancel prior to this time will subject Licensee to payment of all fees.

38. Attorneys' Fees

Licensee and PACC agree that the prevailing party's reasonable costs, attorneys' fees and expenses, including investigation fees and expert witness fees, shall be paid by the non-prevailing party in any dispute involving the terms and conditions of this Agreement.

39. Entire Agreement

Licensee and PACC agree that this Agreement constitutes the entire agreement of the parties regarding the subject matter described herein and supersedes all prior communications, agreements, and promises, either oral or written.

OXNARD PERFORMING ARTS  
CENTER CORPORATION

LICENSEE

\_\_\_\_\_  
Oxnard Performing Arts Center Manager

\_\_\_\_\_

NOTE: This License Agreement is a standard agreement previously approved as to form by the City Attorney and the General Counsel.



**EXHIBIT A**

Name of Event: Haydock Spring Showcase Date: May 25, 2016 Time: 6 PM

**Equipment Rental Fees:** 0

**Recap of Personal Fees:**

Stage Technicians \$1,288.00

House Manager \$200.00

Ushers 0

Box Office Fee N/A

<b>Total Personnel Fees:</b>	<b>\$1,488.00</b>
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**Contract Total Fees:**

Rental Fee NO CHARGE (OSD)

Equipment/ Supplies Fee 0

Personnel Charges \$1,488.00

Insurance own

Ticket Printing N/A

Non-Refundable Processing Fee \$25.00

Security Guards Fee (2) 0

Oxnard Police Dept. Fees N/A

<b>Total Contract Fees:</b>	<b>\$1,513.00</b>
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Less Deposit Paid: \_\_\_\_\_

<b>Total Due PACC:</b>	<b>\$1,513.00</b>
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Prepared by: Brad McElmurry / Technical Requirements/ Phone: (805) 385-8162

Prepared by: Jose Becerra / Rental Information / Phone: (805) 766-8535



# ESTIMATE ONLY

Date Proce...	Estimate #
5/25/2016	271

<b>Bill To</b>
O.E.S.D. Haydock Academy

<b>Event Name</b>
Haydock Spring Showcase

Time Of Event	Date Of Event	Tech Info
6pm	5/25/2016	YES

Description	Time	Qty / ...	Rate	OT ...	Amount
General Lighting, no colour, no specials, white light only.			0.00		0.00
House Sound System			0.00		0.00
Shure SLX 24 Wireless Handheld Microphone		3	0.00		0.00
Stage Playback Monitors (2) Mackie S215			0.00		0.00
EQUIPMENT RENTAL            SUBTOTAL					0.00
Wed. 5/25/2016 Setup, Perf. & Strike					
Stage Technical Director	1p - 9p	8	28.00		224.00
Lighting Technician	1p - 9p	8	19.00		152.00
Sound Technician	1p - 9p	8	19.00		152.00
Stagehand / Fly's (3ea)	1p - 9p	24	19.00		456.00
Spotlight Op	1p - 9p	8	19.00		152.00
Stage Desk / Curtain Op	1p - 9p	8	19.00		152.00
STAGE TECHNICAL LABOR            SUBTOTAL					1,288.00

Brad McElmurry Technical Director	PACC Does Not Provide Ladders/ Please Do Not Affix Signs To Painted Surfaces:	<b>Total</b>	\$1,288.00
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**BOARD AGENDA ITEM**

**Name of Contributor:** Robin Freeman

**Date of Meeting:** 5/18/16

**STUDY SESSION** \_\_\_\_\_

**CLOSED SESSION** \_\_\_\_\_

**SECTION B: HEARINGS** \_\_\_\_\_

**SECTION C: CONSENT**     **X**    

**SECTION D: ACTION** \_\_\_\_\_

**SECTION E: REPORTS/DISCUSSION** \_\_\_\_\_

**SECTION F: BOARD POLICIES**

1<sup>st</sup> Reading \_\_\_\_\_ 2<sup>nd</sup> Reading \_\_\_\_\_

**Approval of Agreement/MOU #15-238 – Malibu Foundation for Environmental Education (Freeman/Duran)**

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Malibu Foundation for Environmental Education will provide three (3) 45 minute assemblies for McAuliffe School students. This comprehensive environmental education program is designed to motivate children to care about the beaches, oceans and neighborhoods. The program utilizes a classic teaching model that is a very simple and direct way to educate and motivate children to get involved.

**FISCAL IMPACT:**

Not to exceed \$900.00 – PTA

**RECOMMENDATION:**

It is the recommendation of the Principal, McAuliffe School, and the Assistant Superintendent, Educational Services, that the Board of Trustees approve Agreement/MOU #15-238 with Malibu Foundation for Environmental Education.

**ADDITIONAL MATERIAL(S):**

**Attached:** Agreement/MOU #15-238, Malibu Foundation for Environmental Education (1 Page)  
Description of Assembly Program (2 Pages)  
Certificate of Insurance (2 Pages)

**AGREEMENT/MOU #15-238  
BETWEEN  
MALIBU FOUNDATION FOR ENVIRONMENTAL EDUCATION AND OXNARD SCHOOL DISTRICT  
FOR MCAULIFFE SCHOOL**

This serves as a Memorandum of Understanding and Responsibility Agreement that Malibu Foundation for Environmental Education and **Oxnard School District** will work together toward promoting and providing three (3) assemblies for the students at McAuliffe School. Both the agency and consultant, according to its defined role, agrees to participate in coordinating, providing and financing the following services for the purpose of this agreement.

1. **Malibu Foundation for Environmental Education agrees to:**
  - a. Provide three (3) assemblies for students at McAuliffe School on Friday, June 3, 2016.
  - b. Malibu Foundation for Environmental Education **HAS** provided a certificate of insurance that names the Oxnard School District as “additional insured” and conforms to the district requirements for liability and workers compensation.
  
2. **Oxnard School District agrees to:**
  - a. Compensate Malibu Foundation for Environmental Education for three (3) assemblies at McAuliffe School at the following rate:
    - i. Compensate Malibu Foundation for Environmental Education in the amount of \$900.00.

This Memorandum of Understanding and Responsibility Agreement shall be effective upon signature and implemented June 2, 2016 through June 3, 2016.

**OXNARD SCHOOL DISTRICT:**

\_\_\_\_\_  
*Lisa A. Franz, Director, Purchasing*

\_\_\_\_\_  
*Date*

**MALIBU FOUNDATION FOR ENVIRONMENTAL EDUCATION:**

\_\_\_\_\_  
*Michael Klubock*

\_\_\_\_\_  
*Date*

## DESCRIPTION OF ASSEMBLY PROGRAM

This comprehensive environmental education program is designed to motivate children to care about the beaches, oceans and neighborhoods. The program utilizes a classic teaching model that is a very simple and direct way to educate and motivate children to get involved.

1. Showing something that is loved. (Beaches, oceans, animals, clean water.)
2. Giving reasons for loving it. (Source of air, food, and recreation.)
3. Showing damage being done to it. (Entangled animals, dirty neighborhoods and beaches)
4. Showing how it is being damaged. (People littering neighborhoods and showing storm drain connection.)
5. Giving people something to do about it. (Reduce litter, recycle, do a beach clean-up, do a neighborhood clean-up.)
6. Participate in our annual KIDS OCEAN DAY Adopt-A-Beach Clean-Up and Aerial Art Project.

We are speaking to two very primal needs:

- 1) To be near the ocean.
- 2) To take care of animals.

Our program is standards based. The curriculum from the Coastal Commission is aligned with California standards and the Malibu Foundation has developed a Matrix that shows K-5 teachers where the slides introduce standards.

This incredibly complicated phenomenon of pollution and sustainability is presented in a format easily understood by children.

We swim in the ocean. We sail on the ocean. We fish in the ocean. We walk our dogs beside the ocean. The sea pulls more and more of us to live by the ocean.

Two-thirds of the world's population lives within 50 miles of the ocean. Thirteen of the sixteen biggest cities are located the ocean. Half the new homes in the USA are built near the ocean.

Inexplicably and unfortunately we pelt it with plastic.

The Foundation's Assembly Program incorporates one of the most important issues of our community: Stormwater Run-Off and the effect on water quality and marine life. This issue is a central one to the storm drain-stenciling program that The City of Los Angeles and Heal the Bay has developed.



This photo says what the program is really about. To bring awareness to children about the impact of litter on the streets.



“Just because you cannot see it, doesn’t mean it is not there.”

The 45 minute assembly is an entertaining and interactive slide presentation of happy fish and animals in clean water and then shows them tangled in the plastic, nets and debris. The slides show how the beaches and oceans get dirty by highlighting the storm drain connection between the urban environment and the beaches and oceans. It illustrates how everyday behavior causes stormwater pollution. It presents how pollution impacts coastal quality and local marine life and promotes alternative behaviors that can reduce pollution. The assembly builds on classroom lessons and inspires kids to care and motivates them to act.

This assembly also utilizes READING and LITERACY techniques:

- Repetition.
- New Vocabulary.
- Definition and Repeat.
- Review Main Idea.
- Cause and Effect.
- Audience Participation.



## ADDITIONAL INSURED – DESIGNATED PERSON OR ORGANIZATION

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

### SCHEDULE

**Name Of Additional Insured Person(s) Or Organization(s):**

Oxnard School District  
1051 South A Street  
Oxnard, CA 93030

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

**Section II – Who Is An Insured** is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by your acts or omissions or the acts or omissions of those acting on your behalf:

- A. In the performance of your ongoing operations; or
- B. In connection with your premises owned by or rented to you.

**BOARD AGENDA ITEM**

**Name of Contributor(s):** Dr. Jesus Vaca

**Date of Meeting:** 5/18/16

**STUDY SESSION** \_\_\_\_\_  
**CLOSED SESSION** \_\_\_\_\_  
**SECTION B: HEARINGS** \_\_\_\_\_  
**SECTION C: CONSENT**   **X**    
**SECTION D: ACTION** \_\_\_\_\_  
**SECTION E: REPORTS/DISCUSSION** \_\_\_\_\_  
**SECTION F: BOARD POLICIES** 1<sup>st</sup> Reading \_\_\_\_\_ 2<sup>nd</sup> Reading \_\_\_\_\_

**Approval of Agreement #16-06 – Tabbara Corporation (Vaca/Magana)**

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Tabbara Corporation will conduct asbestos re-inspection of two middle schools and 11 elementary schools:

- Visual re-inspection of all known or assumed friable ACBM
- Visual and touch inspection of previously considered non-friable ACBM
- Identification of homogeneous areas of material that have become friable since the initial AHERA inspection
- Provide detailed records in compliance with section 763.85(b)

This is a routine re-inspection that is conducted every three years as required by the Federal Asbestos Hazard Emergency Response Act (AHERA).

**FISCAL IMPACT:**

Not to exceed \$2,830.00 – Safety Credits

**RECOMMENDATION:**

It is recommended by the Risk Manager, and the Assistant Superintendent, Human Resources & Support Services, that the Board of Trustees approve Agreement #16-06 with Tabbara Corporation, in the amount not to exceed \$2,830.00.

**ADDITIONAL MATERIAL(S):**

**Attached:** Agreement #16-06, Tabbara Corporation (13 Pages)  
Proposal (3 Pages)  
Certificate of Insurance (2 Pages)

**OXNARD SCHOOL DISTRICT**

**Agreement #16-06**

**AGREEMENT FOR CONSULTANT SERVICES**

This Agreement for Consultant Services (“Agreement”) is entered into as of this 18th day of May, 2016 by and between the Oxnard School District (“District”) and Tabbara Corporation (“Consultant”). District and Consultant are sometimes hereinafter individually referred to as “Party” and hereinafter collectively referred to as the “Parties.”

**RECITALS**

- A. District is authorized by *California Government Code* Section 53060, and Board Policy 4368, to contract with independent contractors for the furnishing of services concerning financial, economic, accounting, engineering, legal, administrative and other matters. District has sought, by issuance of a Request for Proposals or Invitation for Bids, the performance of the Services, as defined and described particularly on **Exhibit A**, attached to this Agreement.
- B. Following submission of a proposal or bid for the performance of the Services, Consultant was selected by the District to perform the Services.
- C. The Parties desire to formalize the selection of Consultant for performance of the Services and desire that the terms of that performance be as particularly defined and described herein.

**OPERATIVE PROVISIONS**

NOW, THEREFORE, in consideration of the mutual promises and covenants made by the Parties and contained here and other consideration, the value and adequacy of which are hereby acknowledged, the parties agree as follows:

- 1. **Incorporation of Recitals and Exhibits.** The Recitals set forth above and all exhibits attached to this Agreement, as hereafter amended, are incorporated by this reference as if fully set forth herein.
- 2. **Term of Agreement.** Subject to earlier termination as provided below, this Agreement shall remain in effect from July 11, 2016 through August 15, 2016 (the “Term”). This Agreement may be extended only by amendment, signed by the Parties, prior to the expiration of the Term.
- 3. **Time for Performance.** The scope of services set forth in **Exhibit A** shall be completed during the Term pursuant to the schedule specified **Exhibit A**. Should the scope of services not be completed pursuant to that schedule, the Consultant shall be deemed to be in Default as provided below. The District, in its sole discretion, may choose not to enforce the Default provisions of this Agreement and may instead allow Consultant to continue performing the Services.
- 4. **Compensation and Method of Payment.** Subject to any limitations set forth below or elsewhere in this Agreement, District agrees to pay Consultant the amounts specified in **Exhibit B** “Compensation”. The total compensation shall not exceed Two Thousand Eight Hundred Thirty Dollars (\$2,830.00), unless additional compensation is approved in writing by the District.

- a. Each month Consultant shall furnish to District an original invoice for all work performed and expenses incurred during the preceding month. The invoice shall detail charges by the following categories: labor (by sub-category), travel, materials, equipment, supplies, and sub-consultant contracts. Sub-consultant charges, if any, shall be detailed by the following categories: labor, travel, materials, equipment and supplies. District shall independently review each invoice submitted by the Consultant to determine whether the work performed and expenses incurred are in compliance with the provisions of this Agreement. In the event that no charges or expenses are disputed, the invoice shall be approved and paid according to the terms set forth in subsection b. In the event any charges or expenses are disputed by District, the original invoice shall be returned by District to Consultant for correction and resubmission.
- b. Except as to any charges for work performed or expenses incurred by Consultant which are disputed by District, District will use its best efforts to cause Consultant to be paid within forty-five (45) days of receipt of Consultant's correct and undisputed invoice.
- c. Payment to Consultant for work performed pursuant to this Agreement shall not be deemed to waive any defects in work performed by Consultant.

5. **Termination.** This Agreement may be terminated at any time by mutual agreement of the Parties or by either Party as follows:

- a. District may terminate this Agreement, with or without cause, at any time by giving thirty (30) days written notice of termination to Consultant. In the event such notice is given, Consultant shall cease immediately all work in progress; or
- b. Consultant may terminate this Agreement for cause at any time upon thirty (30) days written notice of termination to District.

6. **Inspection and Final Acceptance.** District may, at its discretion, inspect and accept or reject any of Consultant's work under this Agreement, either during performance or when within sixty (60) days after submitted to District. If District does not reject work by a timely written explanation, Consultant's work shall be deemed to have been accepted. District's acceptance shall be conclusive as to such work except with respect to latent defects, fraud and such gross mistakes as amount to fraud. Acceptance of any of Consultant's work by District shall not constitute a waiver of any of the provisions of this Agreement including, but not limited to indemnification and insurance provisions.

7. **Default.** Failure of Consultant to perform any Services or comply with any provisions of this Agreement may constitute a default. The District may give notice to Consultant of the default and the reasons for the default. District shall not have any obligation or duty to continue compensating Consultant for any work performed after the date of the notice until the default is cured. The notice shall include the timeframe in which Consultant may cure the default. This timeframe is presumptively thirty (30) days, but may be extended, though not reduced, at the discretion of the District. During the period of time that Consultant is in default, the District shall hold all invoices and shall, when the default is cured, proceed with payment on the invoices. In the alternative, the District may, in its sole discretion, elect to pay some or all of the outstanding invoices during the period of default. If Consultant does not cure the default, the District may terminate this Agreement as provided above. Any failure on the part of the District to give notice of the Consultant's default shall not be deemed to result in a waiver of the District's legal rights or any rights arising out of any provision of this Agreement.

8. **Ownership of Documents.** All maps, models, designs, drawings, photographs, studies, surveys, reports, data, notes, computer files, files and other documents prepared, developed or discovered by Consultant in the course of providing any services pursuant to this Agreement (collectively and individually, the "Documents") shall

become the sole property of District and may be used, reused or otherwise disposed of by District without the permission of the Consultant. Upon completion, expiration or termination of this Agreement, Consultant shall turn over to District all such Documents.

9. **Use of Documents by District.** If and to the extent that District utilizes for any purpose not related to this Agreement any Documents, Consultant's guarantees and warrants related to Standard of Performance under this Agreement shall not extend to such use of the Documents.

10. **Consultant's Books and Records.** Consultant shall maintain any and all documents and records demonstrating or relating to Consultant's performance of services pursuant to this Agreement for a minimum of three years after termination or expiration of this Agreement, or longer if required by law.

- a. Consultant shall maintain any and all ledgers, books of account, invoices, vouchers, canceled checks, or other documents or records evidencing or relating to work, services, expenditures and disbursements charged to District pursuant to this Agreement for a minimum of three years, or longer if required by law, all in accordance with generally accepted accounting principles and with sufficient detail so as to permit an accurate evaluation of the services provided by Consultant pursuant to this Agreement.
- b. Any and all such records or documents shall be made available for inspection, audit and copying, at any time during regular business hours, upon request by District or its designated representative. Copies of such documents or records shall be provided directly to the District for inspection, audit and copying when it is practical to do so; otherwise, unless an alternative is mutually agreed upon, such documents and records shall be made available at Consultant's address indicated for receipt of notices in this Agreement.
- c. District has the right to acquire custody of such records by written request if Consultant decides to dissolve or terminate its business. Consultant shall deliver or cause to be delivered all such records and documents to District within sixty (60) days of receipt of the request.

11. **Independent Contractor.** Consultant is and shall at all times remain a wholly independent contractor and not an officer, employee or agent of District.

- a. The personnel performing the services under this Agreement on behalf of Consultant shall at all times be under Consultant's exclusive direction and control. Consultant, its agents or employees shall not at any time or in any manner represent that Consultant or any of Consultant's officers, employees, or agents are in any manner officials, officers, employees or agents of District. Neither Consultant, nor any of Consultant's officers, employees or agents, shall, by virtue of services rendered under this Agreement, obtain any rights to retirement, health care or any other benefits which may otherwise accrue to District's employees. Consultant will be responsible for payment of all Consultant's employees' wages, payroll taxes, employee benefits and any amounts due for federal and state income taxes and Social Security taxes since these taxes will not be withheld from payment under this agreement.
- b. Consultant shall have no authority to bind District in any manner, or to incur any obligation, debt or liability of any kind on behalf of or against District, whether by contract or otherwise, unless such authority is expressly conferred in writing by District, or under this Agreement.

12. **Standard of Performance.** Consultant represents and warrants that it has the qualifications, experience and facilities necessary to properly perform the services required under this Agreement in a thorough, competent and professional manner. Consultant shall at all times faithfully, competently and to the best of its ability, experience and talent, perform all services described herein. In meeting its obligations under this Agreement,

Consultant shall employ, at a minimum, generally accepted standards and practices utilized by persons engaged in providing services similar to those required of Consultant under this Agreement.

13. **Confidential Information.** All information gained during performance of the Services and all Documents or other work product produced by Consultant in performance of this Agreement shall be considered confidential. Consultant shall not release or disclose any such information, Documents or work product to persons or entities other than District without prior written authorization from the Superintendent of the District, except as may be required by law.

- a. Consultant shall promptly notify District if it is served with any summons, complaint, subpoena or other discovery request, court order or other request from any party regarding this Agreement or the work performed hereunder.
- b. District retains the right, but has no obligation, to represent Consultant or be present at any deposition, hearing or similar proceeding. Consultant agrees to cooperate fully with District and to provide District with the opportunity to review any response to discovery requests provided by Consultant; provided that this does not imply or mean the right by District to control, direct, or rewrite said response.

14. **Conflict of Interest; Disclosure of Interest.** Consultant covenants that neither it, nor any officer or principal of its firm, has or shall acquire any interest, directly or indirectly, which would conflict in any manner with the interests of District or which would in any way hinder Consultant's performance of services under this Agreement. Consultant further covenants that in the performance of this Agreement, no person having any such interest shall be employed by it as an officer, employee, agent or subcontractor without the express written consent of the District.

- a. Consultant agrees to at all times avoid conflicts of interest or the appearance of any conflicts of interest with the interests of District in the performance of this Agreement.
- b. Bylaws of the Board 9270 BB and 9270(BB) E, as hereinafter amended or renumbered, require that a Consultant that qualifies as a "designated employee" must disclose certain financial interests by filing financial interest disclosures. By its initials below, Consultant represents that it has received and reviewed a copy of the Bylaws of the Board 9270 BB and 9270(BB) E and that it [\_\_\_\_] does [X] does not qualify as a "designated employee".

\_\_\_\_\_ (Initials)

Consultant agrees to notify the Superintendent, in writing, if Consultant believes that it is a "designate employee" and should be filing financial interest disclosures, but has not been required to do so by the District.

\_\_\_\_\_ (Initials)

15. **Compliance with Applicable Laws.** In connection with the Services and its operations, Consultant shall keep itself informed of and comply with all applicable federal, state and local laws, statutes, codes, ordinances, regulations and rules in effect during the Term. Consultant shall obtain any and all licenses, permits and authorizations necessary to perform the Services. Neither District, nor any elected or appointed boards, officers, officials, employees or agents of District shall be liable, at law or in equity, as a result of any failure of Consultant to comply with this section.

- a. Without limiting the generality of the foregoing, Consultant shall comply with any applicable fingerprinting requirements as set forth in the Education Code of the State of California.

\_\_\_\_\_ (Initials)



16. **Unauthorized Aliens.** Consultant hereby promises and agrees to comply with all of the provisions of the Federal Immigration and Nationality Act, 8 U.S.C.A. §§ 1101, et seq., as amended, and in connection therewith, shall not employ “unauthorized aliens” as that term is defined in 8 U.S.C.A. §1324a(h)(3). Should Consultant so employ such individuals for the performance of work and/or services covered by this Agreement, and should any liability or sanctions be imposed against District for such employment, Consultant hereby agrees to and shall reimburse District for the cost of all such liabilities or sanctions imposed, together with any and all costs, including attorneys' fees, incurred by District.

17. **Non-Discrimination.** Consultant shall abide by the applicable provisions of the United States Civil Rights Act of 1964 and other provisions of law prohibiting discrimination and shall not discriminate, in any way, against any person on the basis of race, color, religious creed, national origin, ancestry, sex, age, physical handicap, medical condition or marital status in connection with or related to the performance of this Agreement.

18. **Assignment.** The expertise and experience of Consultant are material considerations for this Agreement. District has an interest in the qualifications of and capability of the persons and entities that will fulfill the duties and obligations imposed upon Consultant under this Agreement. In recognition of that interest, Consultant shall not assign or transfer this Agreement or any portion of this Agreement or the performance of any of Consultant’s duties or obligations under this Agreement without the prior written consent of the Board of Directors of the District. Any attempted assignment shall be ineffective, null and void, and shall constitute a material breach of this Agreement entitling District to any and all remedies at law or in equity, including summary termination of this Agreement.

19. **Subcontracting.** Notwithstanding the above, Consultant may utilize subcontractors in the performance of its duties pursuant to this Agreement, but only with the prior written consent of the District. The Consultant shall be as fully responsible to the District for the acts and omissions of his Subcontractors, and of persons either directly or indirectly employed by him/her, as if the acts and omissions were performed by him/her directly.

20. **Continuity of Personnel.** Consultant shall make every reasonable effort to maintain the stability and continuity of Consultant’s staff and subcontractors, if any, assigned to perform the services required under this Agreement.

- a. Consultant shall insure that District has a current list of all personnel and sub-contractors providing services under this Agreement.
- b. Consultant shall notify District of any changes in Consultant’s staff and subcontractors, if any, assigned to perform the services required under this Agreement, prior to and during any such performance. The list notice shall include the following information: (1) all full or part-time staff positions by title, including volunteer positions whose direct services are required to provide the services described herein; (2) a brief description of the functions of each such position and the hours each position works each week or, for part-time positions, each day or month, as appropriate; (3) the professional degree, if applicable, and experience required for each position; and (4) the name of the person responsible for fulfilling the terms of this Agreement.

21. **Indemnification.**

- a. Indemnification for Professional Liability. Where the law establishes a professional standard of care for Consultant’s Services, to the fullest extent permitted by law, Consultant shall indemnify, protect, defend and hold harmless District and any and all of its officials, elected board members, employees and agents (“Indemnified Parties”) from and against any and all losses, liabilities, damages, costs and expenses, including attorney’s fees and costs to the extent same are caused in whole or in part by any negligent or wrongful act, error or omission of Consultant, its officers, agents, employees or sub-

consultants (or any entity or individual that Consultant shall bear the legal liability thereof) in the performance of professional services under this Agreement.

- b. Indemnification for Other than Professional Liability. To the full extent permitted by law, Consultant shall indemnify, protect, defend and hold harmless the Indemnified Parties from and against any liability (including liability for claims, suits, actions, arbitration proceedings, administrative proceedings, regulatory proceedings, losses, expenses or costs of any kind, whether actual, alleged or threatened, including attorneys fees and costs, court costs, interest, defense costs, and expert witness fees), arising out of or in any way attributable to the performance of this Agreement by Consultant or by any individual or entity for which Consultant is legally liable, including but not limited to officers, agents, employees or sub-contractors of Consultant.
- c. General Indemnification Provisions. Consultant agrees to obtain executed indemnity Agreements with provisions identical to those set forth here in this section from each and every sub-contractor or any other person or entity involved by, for, with or on behalf of Consultant in the performance of this Agreement. In the event Consultant fails to obtain such indemnity obligations from others as required here, Consultant agrees to be fully responsible according to the terms of this section. Failure of District to monitor compliance with these requirements imposes no additional obligations on District and will in no way act as a waiver of any rights hereunder. This obligation to indemnify and defend District as set forth here is binding on the successors, assigns or heirs of Consultant and shall survive the termination of this Agreement.

\_\_\_\_\_ (Initials)
- d. The provisions of this section do not apply to claims occurring as a result of District's sole negligence or willful acts or omissions.

22. **Insurance.** Consultant agrees to obtain and maintain in full force and effect during the term of this Agreement the insurance policies set forth in Exhibit C "Insurance" and made a part of this Agreement. All insurance policies shall be subject to approval by District as to form and content. These requirements are subject to amendment or waiver if so approved in writing by the District Superintendent. Consultant agrees to provide District with copies of required policies upon request.

23. **Notices.** All notices required or permitted to be given under this Agreement shall be in writing and shall be personally delivered, or sent by telecopier or certified mail, postage prepaid and return receipt requested, addressed as follows:

**To District:** Oxnard School District  
1051 South A Street  
Oxnard, California, 93030  
Attention: Jesus Vaca  
Phone: (805) 385.1501 x2051  
Fax: (805) 486.3408

**To Consultant:** Tabbara Corporation  
317 Morgan Hill Street  
Simi Valley, CA 93065  
Phone: (805) 484.3388  
Fax: \_\_\_\_\_

Notice shall be deemed effective on the date personally delivered or transmitted by facsimile (provided confirmation of successful facsimile transmission shall be retained) or, if mailed, three (3) days after deposit of the same in the custody of the United States Postal Service.

24. **Excusable Delays.** Consultant shall not be liable for damages, including liquidated damages, if any, caused by delay in performance or failure to perform due to causes beyond the control of Consultant. Such causes include, but are not limited to, acts of God, acts of the public enemy, acts of federal, state or local governments, acts of District, court orders, fires, floods, epidemics, strikes, embargoes, and unusually severe weather. The term and price of this Agreement shall be equitably adjusted for any delays due to such causes.

25. **Authority to Execute.** The person or persons executing this Agreement on behalf of Consultant represents and warrants that he/she/they has/have the authority to so execute this Agreement and to bind Consultant to the performance of its obligations hereunder.

26. **Administration.** DR. JESUS VACA shall be in charge of administering this Agreement on behalf of the District. The Administrator has completed Exhibit D "Conflict of Interest Check" attached hereto.

27. **Binding Effect.** This Agreement shall be binding upon the heirs, executors, administrators, successors and assigns of the parties.

28. **Entire Agreement.** This Agreement and the exhibits and documents incorporated herein constitute the entire agreement and understanding between the parties in connection with the matters covered herein. This Agreement supersedes any prior understanding or agreement, oral or written, of the parties with respect to said matters.

29. **Amendment.** No amendment to or modification of this Agreement shall be valid or binding unless made in writing by the Consultant and by the District. The parties agree that this requirement for written modifications cannot be waived and that any attempted waiver shall be void.

30. **Waiver.** Waiver by any party to this Agreement of any term, condition, or covenant of this Agreement shall not constitute a waiver of any other term, condition, or covenant. Waiver by any party of any breach of the provisions of this Agreement shall not constitute a waiver of any other provision or a waiver of any subsequent breach or violation of any provision of this Agreement. Acceptance by District of any work or services by Consultant shall not constitute a waiver of any of the provisions of this Agreement.

31. **Governing Law.** This Agreement shall be interpreted, construed and governed according to the laws of the State of California. In the event of litigation between the parties, venue in state trial courts shall lie exclusively in the County of Ventura, California.

32. **Arbitration.** Any dispute arising out of the performance of this Agreement shall be resolved by binding arbitration in accordance with rules and procedures of the American Arbitration Association.

33. **Severability.** If any term, condition or covenant of this Agreement is declared or determined by any court of competent jurisdiction to be invalid, void or unenforceable, the remaining provisions of this Agreement shall not be affected thereby and the Agreement shall be read and construed without the invalid, void or unenforceable provision(s).

[THE REMAINDER OF THIS PAGE IS INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, the District and Consultant have executed and delivered this agreement for consultant services as of the date first written above.

**OXNARD SCHOOL DISTRICT:**

**TABBARA CORPORATION:**

\_\_\_\_\_  
*Signature*

\_\_\_\_\_  
*Signature*

Lisa A. Franz, Director, Purchasing  
\_\_\_\_\_  
*Typed Name/Title*

\_\_\_\_\_  
*Typed Name/Title*

\_\_\_\_\_  
*Date*

\_\_\_\_\_  
*Date*

Tax Identification Number: 95-6002318

Tax Identification Number: \_\_\_\_\_

- Not Project Related  
 Project #16-06

**EXHIBIT A**  
**TO AGREEMENT FOR CONSULTANT SERVICES #16-06**

**SERVICES**

I. Consultant will perform the following Services under the Captioned Agreement:

**Conduct asbestos re-inspection of two middle schools and 11 elementary schools per attached proposal dated 4/20/16**

II. As part of the Services, Consultant will prepare and deliver the following tangible work products to the District:

N/A

III. During performance of the Services, Consultant will keep the District appraised of the status of performance by delivering the following status reports under the indicated schedule:

<b>STATUS REPORT FOR ACTIVITY:</b>	<b>DUE DATE</b>
A. N/A	
B.	
C.	
D.	

V. Consultant will utilize the following personnel to accomplish the Services:

- None.  
 See attached list.

VI. Consultant will utilize the following subcontractors to accomplish the Services (check one):

- None.  
 See attached list.

**VII. AMENDMENT**

The Scope of Services, including services, work product, and personnel, are subject to change by mutual Agreement. In the absence of mutual Agreement regarding the need to change any aspects of performance, Consultant shall comply with the Scope of Services as indicated above

- Not Project Related  
 Project #16-06

**EXHIBIT B**  
**TO AGREEMENT FOR CONSULTANT SERVICES #16-06**

**COMPENSATION**

**I. Consultant shall use the following rates of pay in the performance of the Services:**

Total compensation Not to Exceed \$2,830.00

**II. Consultant may not utilize subcontractors as indicated in this Agreement. The hourly rate for any subcontractor is not to exceed \$0.00 per hour without written authorization from the District Superintendent or his designee.**

**III. The District will compensate Consultant for the Services performed upon submission of a valid invoice. Each invoice is to include:**

- A. Line items for all personnel describing the work performed, the number of hours worked, and the hourly rate.
- B. Line items for all supplies properly charged to the Services.
- C. Line items for all travel properly charged to the Services.
- D. Line items for all equipment properly charged to the Services.
- E. Line items for all materials properly charged to the Services.
- F. Line items for all subcontractor labor, supplies, equipment, materials, and travel properly charged to the Services.

**IV. The total compensation for the Services shall not exceed \$2,830.00, as provided in Section 4 of this Agreement.**

**EXHIBIT C**  
**TO AGREEMENT FOR CONSULTANT SERVICES #16-06**

**INSURANCE**

I. Insurance Requirements. Consultant shall provide and maintain insurance, acceptable to the District Superintendent or District Counsel, in full force and effect throughout the term of this Agreement, against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by Consultant, its agents, representatives or employees. Insurance is to be placed with insurers authorized to conduct business in the State of California and with a current A.M. Best's rating of no less than A, as rated by the Current edition of Best's Key Rating Guide, published by A.M. Best Company, Oldwick, New Jersey 08858. Consultant shall provide the following scope and limits of insurance:

A. Minimum Scope of Insurance. Coverage shall be at least as broad as:

(1) Commercial General Liability coverage of not less than two million dollars (\$2,000,000) Aggregate and one million dollars (\$1,000,000) per occurrence.

(2) Auto liability insurance with limits of not less than one million dollars (\$1,000,000).

(3) Insurance coverage should include:

1. owned, non-owned and hired vehicles;
2. blanket contractual;
3. broad form property damage;
4. products/completed operations; and
5. personal injury.

~~————— (4) Workers' Compensation insurance as required by the laws of the State of California.~~

~~————— (5) Abuse and Molestation coverage of not less than two million dollars (\$2,000,000) per occurrence and five million dollars (\$5,000,000) Aggregate.~~

~~————— (6) Professional liability (Errors and Omissions) insurance, including contractual liability, as appropriate to the Consultant's profession, in an amount of not less than the following:~~

~~————— Accountants, Attorneys, Education Consultants, \$1,000,000  
————— Nurses, Therapists~~

~~————— Architects \$1,000,000 or \$2,000,000~~

~~————— Physicians and Medical Corporations \$5,000,000~~

~~**Failure to maintain professional liability insurance is a material breach of this Agreement and grounds for immediate termination**~~

II. Other Provisions. Insurance policies required by this Agreement shall contain the following provisions:

Not Project Related

Project #16-06

A. All Policies. Each insurance policy required by this Agreement shall be endorsed and state the coverage shall not be suspended, voided, cancelled by the insurer or either party to this Agreement, reduced in coverage or in limits except after 30 days' prior written notice by Certified mail, return receipt requested, has been given to District

B. General Liability, Automobile Liability, and ~~Abuse/Molestation~~ Coverages.

(1) District, and its respective elected and appointed officers, officials, employees and volunteers are to be covered as additional insureds (collectively, "additional insureds") as respects the following: liability arising out of activities Consultant performs; products and completed operations of Consultant; premises owned, occupied or used by Consultant ; automobiles owned, leased, hired or borrowed by Consultant, and ~~Abuse/Molestation~~. The coverage shall contain no special limitations on the scope of protection afforded to additional insureds.

(2) Each policy shall state that the coverage provided is primary and any insurance carried by any additional insured is in excess to and non-contributory with Consultant's insurance.

(3) Consultant's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

(4) Any failure to comply with the reporting or other provisions of the policies including breaches of warranties shall not affect coverage provided to any additional insured.

III. Other Requirements. Consultant agrees to deposit with District, at or before the effective date of this contract, certificates of insurance necessary to satisfy District that the insurance provisions of this contract have been complied with. The District may require that Consultant furnish District with copies of original endorsements effecting coverage required by this Section. The certificates and endorsements are to be signed by a person authorized by that insurer to bind coverage on its behalf. District reserves the right to inspect complete, certified copies of all required insurance policies, at any time.

A. If any Services are performed by subcontractor, Consultant shall furnish certificates and endorsements from each subcontractor identical to those Consultant provides.

B. Any deductibles or self-insured retentions must be declared to and approved by District. At the option of District, either the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects District or its respective elected or appointed officers, officials, employees and volunteers or the Consultant shall procure a bond guaranteeing payment of losses and related investigations, claim administration, defense expenses and claims.

C. The procuring of any required policy or policies of insurance shall not be construed to limit Consultant's liability hereunder nor to fulfill the indemnification provisions and requirements of this Agreement.



Not Project Related

Project #16-06

**EXHIBIT D**  
**TO AGREEMENT FOR CONSULTANT SERVICES #16-06**

**CONFLICT OF INTEREST CHECK**

Bylaws of the Board 9270(BB)E requires that the Superintendent or a designee make a determination, on a case by case basis, concerning whether disclosure will be required from a consultant to comply with the District's Conflict of Interest Code (commencing with Bylaws of the Board 9270 BB).

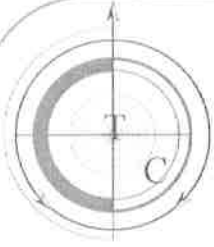
Consultants are required to file disclosures when, pursuant to a contract with the District, the Consultant will make certain specified government decisions or will perform the same or substantially the same duties for the District as a staff person would.

The services to be performed by Consultant under the Agreement to which this Exhibit D is attached [\_\_\_] constitute [X] do not constitute governmental decisions or staff services within the meaning of the Conflict of Interest Code. Therefore, the Consultant, **TABBARA CORPORATION**, who will provide Services under the Agreement, [\_\_\_] is [X] is not subject to disclosure obligations.

Date: \_\_\_\_\_

By: \_\_\_\_\_

Lisa A. Franz  
Director, Purchasing



## Tabbara Corporation

317 Morgan Hill Street  
Simi Valley, Ca 93065  
805-484-3388  
www.tabbaracorp.com

April 20, 2016

Ms. Norma Magaña  
Risk Manager  
Oxnard School District

Re: Joint RFP by Office of Education/Ventura County  
Proposal for AHERA Reinspection  
Several Schools

Dear Ms. Magaña:

This proposal was originally prepared in response to the joint RFP on behalf of various local education agencies in Ventura County that was requested by the Office of Education on March 13, 2016. Pursuant to been the successful bidder, Tabbara Corporation (TC) has prepared this proposal to provide AHERA Reinspection services at several schools in your district as per the attached list. TC has described the scope of work below, and the fee and scheduling information associated with the project.

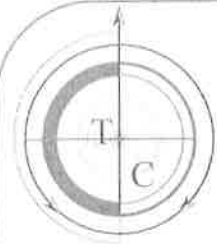
### ***PROJECT APPROACH***

TC has highly qualified California Certified asbestos consultant available to perform the necessary management services. Throughout the duration of our services, the assigned staff members will perform the following services.

### ***SCOPE OF WORK***

TC's personnel that possess the Asbestos Hazard Emergency Response Act (AHERA) accreditation will conduct the reinspection of two middle schools and 11 elementary schools. The Reinspection will comply with the AHERA three (3) year reinspection requirements 40CFR Part 763 sections 763.85 and 763.88 and consist of the following components:

- a) Visual reinspection of all known or assumed friable ACBM.
- b) Visual and touch inspection of previously considered non friable ACBM.
- c) Identification of homogeneous areas of material that have become friable since the initial AHERA inspection.
- d) Providing detailed records in compliance with section 763.85 (b).



## Tabbara Corporation

317 Morgan Hill Street  
Simi Valley, Ca 93065  
805-484-3388  
www.tabbaracorp.com

### ***FEE PROPOSAL***

The following fees represent the cost of doing the AHERA Reinspection:

11 Elementary Schools  
2 Middle Schools

Total                      \$2,830.00

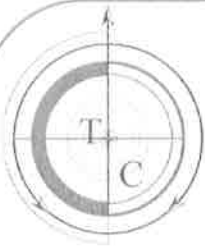
### ***SCHEDULE***

Project Duration is 60 days.

TC appreciates the opportunity to submit this proposal and looks forward to working with Oxnard School District. If you need clarification on any of the material presented herein, please do not hesitate to contact me at (805) 484-3388.

Sincerely,  
***Tabbara Corporation***

Mike S Tabbara  
CEO/President



## **List of Schools**

Chavez Elementary School  
Curren School  
Driffill Elementary School  
Elm Street Elementary School  
Harrington Elementary School Building 1  
Kamala Elementary School Building 1  
Lemonwood School  
Marina West Elementary School Building 1  
McKinna Elementary School Building 1  
Rose Avenue Elementary School Building 1  
Sierra Linda Elementary School  
Fremont Intermediate School  
Haydock Intermediate School Building 1



# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

04/26/2016

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

**IMPORTANT:** If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

<b>PRODUCER</b> CLA Insurance CA Lic #0F59142 355 N. Lantana St. #514 Camarillo, CA 93010	<b>CONTACT NAME:</b> Cheryl Atkins <b>PHONE (A/C, No, Ext):</b> 805-383-2936 <b>E-MAIL ADDRESS:</b> cherylatkins.insurance@yahoo.com <b>FAX (A/C, No):</b>
	<b>INSURER(S) AFFORDING COVERAGE</b>
<b>INSURED</b>  Tabbara Corporation 350 N. Lantana Street #224 Camarillo, CA 93010	<b>INSURER A :</b> Evanston Insurance Co.
	<b>INSURER B :</b> Progressive
	<b>INSURER C :</b> SCIF
	<b>INSURER D :</b>
	<b>INSURER E :</b>
	<b>INSURER F :</b>

**COVERAGES** **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

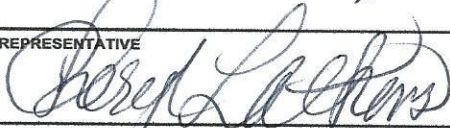
INSR LTR	TYPE OF INSURANCE	ADDL SUBR INSD WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY	X	15PKGWE00726	08/14/2015	08/14/2016	EACH OCCURRENCE \$ 1,000,000	
	<input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR					DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 50,000	
	<input checked="" type="checkbox"/> Contractors Pollution					MED EXP (Any one person) \$ 5,000	
	<input checked="" type="checkbox"/> Professional Liability					PERSONAL & ADV INJURY \$ 1,000,000	
GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:						GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000	
B	<b>AUTOMOBILE LIABILITY</b>	X	03726549-0	05/22/2015	05/22/2016	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000	
	<input type="checkbox"/> ANY AUTO					BODILY INJURY (Per person) \$	
	<input checked="" type="checkbox"/> OWNED AUTOS ONLY <input checked="" type="checkbox"/> SCHEDULED AUTOS					BODILY INJURY (Per accident) \$	
	<input checked="" type="checkbox"/> HIRED AUTOS ONLY <input checked="" type="checkbox"/> NON-OWNED AUTOS ONLY					PROPERTY DAMAGE (Per accident) \$	
						\$	
	<b>UMBRELLA LIAB</b>					EACH OCCURRENCE \$	
	<b>EXCESS LIAB</b>					CLAIMS-MADE	AGGREGATE \$
	DED					RETENTION \$	\$
C	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b>	N/A	9152205-16	02/04/2016	02/04/2017	PER STATUTE OTH-ER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)					E.L. EACH ACCIDENT \$ 1,000,000	
	If yes, describe under DESCRIPTION OF OPERATIONS below					E.L. DISEASE - EA EMPLOYEE \$ 1,000,000	
						E.L. DISEASE - POLICY LIMIT \$ 1,000,000	

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Certificate holder, Oxnard School District, its Officers, Agents, Directors, Employees and/or Volunteers are named as additional insureds as respects insured by agreement, schedule, permit or contract. (CG2037)

\*10 Day Notice of Cancellation

**CERTIFICATE HOLDER** **CANCELLATION**

Oxnard School District Risk Management 1051 South A Street Oxnard, CA 93030	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. *
	AUTHORIZED REPRESENTATIVE 

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THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY

**ADDITIONAL INSURED-OWNERS, LESSEES OR CONTRACTORS  
COMPLETED OPERATIONS**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART  
PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART

Schedule

Oxnard School District, its Officers, Agents, Directors, Employees and/or Volunteers

Information required to complete this Schedule, if not shown above, will be shown in the Declarations

A. **Section II-Who Is an Insured** is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury" or "property damage" caused, in whole or in part, by "your work" at the location designated and described in the Schedule of this endorsement performed for that additional insured and included in the "products-completed operations hazard".

However:

1. The insurance afforded to such additional insured only applies to the extent permitted by law; and
2. If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

B. With respect to the insurance afforded to these additional insureds, the following is added to Section III-Limits of Insurance:

If coverage provided to the additional insured is required by a contract or agreement, the most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the contract or agreement; or
2. Available under the applicable Limits of Insurance shown in the Declarations; whichever is less.

This endorsement shall not increase the applicable Limits of Insurance in the Declarations.

**Board Agenda Item**

**NAME OF CONTRIBUTOR:** Robin Freeman

**DATE OF MEETING:** 5/18/16

**STUDY SESSION** \_\_\_\_\_  
**CLOSED SESSION** \_\_\_\_\_  
**SECTION B: HEARINGS** \_\_\_\_\_  
**SECTION C: CONSENT**   X    
**SECTION D: ACTION** \_\_\_\_\_  
**SECTION E: REPORTS/DISCUSSION** \_\_\_\_\_  
**SECTION F: BOARD POLICIES** 1st Reading \_\_\_\_\_ 2<sup>nd</sup> Reading \_\_\_\_\_

**Approval of Agreement/MOU #16-07 – NAMI Ventura County (Freeman/Ridge)**

Parents and Teachers as Allies Program, an initiative of NAMI Ventura County, will provide meetings, trainings, and other communication to assist in understanding how mental illness impacts family members as well as individuals with mental illness. The program helps families and educators learn to identify early warnings of mental illness and it provides them with a basic knowledge of resources that are available to them in their communities. Each party will appoint a person to serve as the official contact and coordinate the activities of each organization.

**FISCAL IMPACT:**

None

**RECOMMENDATION:**

It is recommended by the Director, Pupil Services, and the Assistant Superintendent, Educational Services, that the Board of Trustees approve Agreement/MOU #16-07 with NAMI Ventura County.

**ADDITIONAL MATERIALS:**

**Attached:** Agreement/MOU #16-07, NAMI Ventura County (2 Pages)



## **PARENTS AND TEACHERS AS ALLIES**

Memorandum of Understanding  
Between  
**Oxnard School District**  
And  
**NAMI Ventura County**

This Memorandum of Understanding (MOU) establishes a partnership between Oxnard School District and NAMI Ventura County to implement the components of the Parents and Teachers as Allies program. NAMI Ventura County will be responsible for coordinating this NAMI program within your school district.

### **VALUE:**

NAMI Ventura County is dedicated to the education and empowerment of all people affected by mental health illness. We believe that education and support is an effective means toward outreaching, educating and supporting mental health systems in a culturally competent way. The Parents and Teachers as Allies program will provide an understanding of the way mental illness impacts family members as well as individuals with mental illness. The program helps families and educators to learn to identify early warning signs of mental illness and it provides them with a basic knowledge of resources that are available to them in their communities.

### **RESPONSIBILITIES:**

Each party will appoint a person to serve as the official contact and coordinate the activities of each organization in carrying out this MOU. The initial appointees of each organization are:

#### **Oxnard School District:**

Chris Ridge  
1051 South "A" Street  
Oxnard, CA 93030  
Primary Phone: 805-385-1501 ext.2161  
Email Address: [mridge@oxnardsd.org](mailto:mridge@oxnardsd.org)

#### **NAMI Ventura County:**

Coordinator Name: David Deutsch  
Mailing Address: P.O. Box 1613  
Camarillo, CA 93011-1613  
Primary Phone: 805-641-2426  
Email Address: [david@namiventura.org](mailto:david@namiventura.org)



**AFFILIATE EXPECTATIONS:**

NAMI Ventura County is responsible for:

- 1) Provide coordination for the program.
- 2) Program coordinator will be available to Oxnard School District for various meetings, trainings, and other communications.
- 3) Work with Oxnard School District to determine the number of presentations to be provided.

The term of this MOU is from May 19, 2016 - June 30, 2017. Either organization may terminate this MOU for any or no reason upon thirty (30) days written notice without penalties or liabilities. Progress will be reviewed regularly and continued participation in this project will be based on progress toward goals.

All materials created as a function of this project are property of NAMI Ventura County and cannot be reused or distributed without the written consent of the Executive Director.

**AUTHORIZATION**

The signing of this MOU is not a formal undertaking. It implies that the signatories will strive to reach, to the best of their ability, the objectives stated in the MOU. On behalf of the organization I represent, I wish to sign this MOU and contribute to its further development.

**NAMI Ventura County:**

---

David Deutsch, Executive Director

Date

**Oxnard School District:**

---

Lisa A. Franz, Director, Purchasing

Date

**BOARD AGENDA ITEM**

**Name of Contributor(s):** Lisa Cline

**Date of Meeting:** 5/18/16

**STUDY SESSION** \_\_\_\_\_  
**CLOSED SESSION** \_\_\_\_\_  
**SECTION B: HEARINGS** \_\_\_\_\_  
**SECTION C: CONSENT AGENDA**   X    
**SECTION D: ACTION** \_\_\_\_\_  
**SECTION E: REPORTS/DISCUSSION** \_\_\_\_\_  
**SECTION F: BOARD POLICIES** 1st Reading \_\_\_\_\_ 2nd Reading \_\_\_\_\_

**Ratification of Amendment #1 to Agreement #14-88 with Mobile Modular Corporation (Cline/CFW)**

At the July 23, 2014 Board meeting, the Board of Trustees approved Agreement #14-88 with Mobile Modular Corporation for an eighteen (18) month lease of one (1) each 24' x 60' portable classroom building for use by the CDI/NFL preschool program as a part of the interim preschool facilities that were constructed with the Harrington Elementary School Reconstruction Project.

The plans for the permanent Early Childhood Development Center are currently with the Division of the State Architect undergoing review, thus requiring extension of the lease of Mobile Modular Corporation's 24'x60' portable classroom building.

**FISCAL IMPACT:**

Thirteen Thousand One Hundred Fifty-Two Dollars and No Cents (\$13,152.00) – Measure R

**RECOMMENDATION:**

It is the recommendation of the Deputy Superintendent, Business and Fiscal Services, in consultation with Caldwell Flores Winters, Inc, that the Board of Trustees ratify Amendment #1 to Agreement #14-88 for a twelve (12) month extension of the Leased Portable Building initially leased for use at the Harrington Elementary School Interim Preschool Facility.

**ADDITIONAL MATERIAL(S):**

- Amendment #1 (1 Page)
- Mobile Modular Corporation Agreement #14-88 (6 Pages)



**Mobile Modular Management Corporation**

11450 Mission Blvd, Mira Loma, CA 91752

Ph (951) 360-6600 Fax (951) 360-6622

[www.MobileModularRents.com](http://www.MobileModularRents.com)

**Contract Addendum**

Date: 4/1/2016

**Customer : Oxnard ESD**  
**Billing Address:** 1901 South Victoria Ave Ste 106  
**City/State/Zip:** Oxnard, CA 93035

**Attn:** Pavan Bhatia  
**Phone :** 805-385-1514 x2501  
**Fax:**  
**E-mail:** [pbhatia@oxnardsd.org](mailto:pbhatia@oxnardsd.org)

**Project Name : Harrington Elementary School**  
**Site Address :** 2501 Gisler Avenue  
**City/State/Zip:** Oxnard, CA 93033

This will serve as an addendum to the contract agreement entered into between **Oxnard ESD** (Lessee) and MOBILE MODULAR MANAGEMENT CORPORATION (Lessor).

**ALL OTHER TERMS AND CONDITIONS TO REMAIN THE SAME.**

**Please sign and return an acknowledgement copy to our office as soon as possible. Thank you.**

**Renewal Information**

Contract No.	Original Term	Original Start Rent Date	Building ID	Item Description	Addendum Start Date	Addendum Stop Date	Term	Monthly Rental Rate
220014721	18	10/15/2014	43396	Classroom 24X60 DSA (NonStd)	4/7/2016	4/1/2017	12 months	\$ 1,096.00

**Any edits to this Contract Addendum will void entire addendum.**

- Rental rates do not include any applicable taxes. Return delivery and preparing equipment for return will be quoted at time of return.
- This contract agreement defines a month as 30 calendar days. Bill Frequency for this contract is Monthly

**Additional Contract Addendum Notes:**

**Mobile Modular Management Corporation**

\_\_\_\_\_  
 Printed Name

\_\_\_\_\_  
 Title

\_\_\_\_\_  
 Signature

\_\_\_\_\_  
 Date

**Oxnard ESD**

\_\_\_\_\_  
 Lisa A. Franz  
 Printed Name

\_\_\_\_\_  
 Director, Purchasing  
 Title

\_\_\_\_\_  
 Signature

\_\_\_\_\_  
 Date

**Call (951) 360-5156 with any questions or comments, ask for Maggy Espinoza**

**Thank you for contacting Mobile Modular.**

**\*\*Note:** Contract addendum valid only when executed, offer expires 30 days from addendum date if not executed.



**OXNARD SCHOOL DISTRICT - AGREEMENT #14-88**  
**Mobile Modular Management Corporation**  
 11450 Mission Blvd.  
 Mira Loma, CA 91752  
 Phone: (951) 360-6600 Fax: (951) 360-6622  
 www.MobileModularRents.com

**Lease Agreement**

Contract: 220014721.1  
**Contract Term: 18 Months**  
 Date Printed: 07/11/2014  
 Start Rent Date: 07/24/2014

*Handwritten signatures and initials: SPT, SA, 12/12*

Customer & Site Information		Mobile Modular Contact
<b>Customer Information:</b> Oxnard ESD 1051 S. A Street Oxnard, CA 93030	<b>Site Information:</b> Oxnard ESD 2501 Gisler Avenue Harrington Elementary School Oxnard, CA 93033 Taylor Middlestad	<b>Questions?</b>  Please Contact: Byron King Byron.King@MobileModularRents.com Direct Phone: 951-360-6600 All other inquiries: (951) 360-6600
<b>Customer PO/Reference:</b> Exp: // By:		

Product Information				
	Qty	Monthly Rent	Extended Monthly Rent	Taxable
Classroom, 24x60 DSA (NonStd) <i>Non-Standard Configuration. Tackboard interior.</i>	1	\$1,096.00 ✓	\$1,096.00	N

Charges Upon Delivery:				
	Qty	Charge Each	Total One Time	Taxable
Classroom, 24x60 DSA (NonStd) Block and Level Building (B6) (PW) <i>Prevailing Wage Cert. Payroll</i>	1	\$5,520.00 ✓	\$5,520.00	N
Delivery Haulage Lowboy 12 wide	2	\$1,641.50	\$3,283.00 ✓	N
			<b>\$8,803.00</b>	

Taxes on One-Time Charges: \$0.00  
 Estimated Charges upon Delivery (incl Taxes): \$8,803.00  
 First Months Rent (incl Taxes): \$1,096.00 ✓  
 Security Deposit: \$0.00  
**Estimated Initial Invoice\*: \$9,899.00**

Charges Upon Return:				
	Qty	Charge Each	Total One Time	Taxable
Classroom, 24x60 DSA (NonStd) Prepare Equipment For Removal (B6)	1	\$3,300.00	\$3,300.00	N
Return Haulage Lowboy 12 wide	2	\$1,641.50	\$3,283.00	N
			<b>\$6,583.00</b>	

**Special Notes**

**Yes - Prevailing Wage:** Pricing includes prevailing wage and certified payroll for installation work performed on site.  
**DSA Classrooms include:** (2) 8040 marker boards, (1) fire extinguisher at each exit, empty back box with conduit stubbed to ceiling for future pull station & horn, skirting for perimeter of building only, standard factory ramp, and wood sill foundation for level site.  
**PPE and Taxes:** Applicable PPE and taxes are not reflected in the pricing provided in this quote. Prior to issuing a purchase order or other agreement, please consult with the sales representative to ensure that all PPE and taxes applicable to the products and services outlined herein are appropriately identified and included.  
**Used building rental:** Quotation is for a used or refurbished modular building. There may be variations in wall paneling, flooring, or other exterior and interior finishes. Dimensions are nominal unless otherwise stated.  
**Additional Note:**  
**DSA Classrooms w/ standard 5 ft by 7 ft landing and 4 ft by 11 ft ramps** (transition to grade and hand rail extensions, if required, are the responsibility of the Customer). DSA carpet will be provided. Stand-alone foundation system. Site plan required. Installation pricing may be adjusted due to site conditions. Site to have building corners marked by the District prior to delivery. Temporary fencing is the responsibility of the District. Transportation permits are included here, pilot cars are excluded. However, if pilot cars are required, this fee will be added to your initial bill. All final electrical connections are the responsibility of the District. Mobile Modular accepts no responsibility for site work,



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**Lease Agreement**

Contract: 220014721.1  
**Contract Term: 18 Months**  
 Date Printed: 07/11/2014  
 Start Rent Date: 07/24/2014

utilities, permits, and fire protection done on site by the District. Exclusions: Any items not specifically noted in this agreement. This proposal is based on existing inventory and is good for 14 days.

**Special Terms & Important Contractual Information**

- A minimum cleaning charge of \$125 per floor will apply for modular buildings and for containers with offices. No minimum cleaning charge applies for storage containers. If assessed, cleaning charges will be based on the condition of the returned unit.
- Prices will be adjusted for unknown circumstances, e.g. driver waiting time, pilot car requirements, special transport permits, difficult site, increase in fuel price, etc. Customer's site must be dry, compacted, level and accessible by normal truck delivery.
- This transaction is subject to credit approval. Security deposit or payment in advance may be required. Security deposit will be applied against account balance at the end of the contract.
- Unless noted, prices do not include permits, ramps, stairs, seismic foundation systems, temporary power, skirting, engineering, taxes or utilities or related installation and/or removal of same. Pricing quote for set up or installation (of building, skirting, earth anchors, ramps, etc.) does not include dismantle or removal unless otherwise noted. Except for skirting and earth anchors, unless noted, ownership of all installed or supplied items is retained by Lessor.
- Please treat our equipment with respect. All damages other than normal usage will be billed for at the end of lease.
- Contract subject to terms & conditions attached and made a part of this agreement by reference herein. Customer acknowledges that he/she has received and read and affirms that he/she is duly authorized to execute and commit to this agreement for the above named customer.
- Rent will be billed in advance every 30 calendar days.
- **Unless otherwise noted, prices do not include prevailing wages, Davis-Bacon wages, or other special or certified wages.**

**Insurance Requirements**

Please send, or have your insurance company send, a Certificate of Insurance to us. We require liability coverage (minimum of \$1,000,000) listing Mobile Modular Management Corporation as an additional insured and property coverage for the value of the unit(s) leased listing Mobile Modular Management Corporation as loss payee.

Item & Description	Qty	Item Code	Ins. Value
Classroom, 24x60 DSA (NonStd)	1	1234	\$72,000.00



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**Lease Agreement**  
 Contract: 220014721.1  
 Contract Term: 18 Months  
 Date Printed: 07/11/2014  
 Start Rent Date: 07/24/2014

**Incorporation by Reference**  
 The Supplemental Lease Terms and Conditions and Additional Advisory Information for Lessee or Buyer provisions are hereby incorporated by reference in their entirety, as updated from time to time by Lessor, in its sole discretion, and can be reviewed in the e-Customer Services section of the Lessor's web site at (<http://www.MobileModularRents.com/ContractTerms>). The Lessee hereby confirms that he/she has read in its entirety and understands the Supplemental Lease Terms and Conditions and Additional Advisory Information.

Please sign below, and fax or email this document to the fax number shown above or the email address you received the document from.

The parties hereto, MOBILE MODULAR MANAGEMENT CORPORATION, a California corporation, as lessor (the "Lessor") and lessee ("Lessee", as described above in the section titled "Customer Information") hereby agree to this Lease Agreement and the terms and conditions set forth in the Lease Terms and Conditions, attached hereto as Attachment A, which are hereby incorporated by reference. The individual signing this Lease Agreement affirms that he/she is duly authorized to execute and commit to this Lease Agreement for the above named Lessee.

<p><b>LESSOR:</b>          Mobile Modular Management Corporation</p> <p>By: <u>Dawn Harrison</u>          Name: <u>DAWN HARRISON</u>          Title: <u>Operations Manager</u>          Date: <u>7-29-14</u></p>	<p><b>LESSEE:</b>          Oxnard ESD</p> <p>By: <u>Lisa A. Franz</u>          Name: <u>Lisa A. Franz</u>          Title: <u>Director, Purchasing</u>          Date: <u>7-24-14</u></p>
--	---

**ATTACHMENT A**

**LEASE TERMS AND CONDITIONS**

- 1. LEASE.** Lessor leases to Lessee, and Lessee leases from Lessor, the equipment listed on any Lease Agreement hereto (the "Equipment") on the terms and conditions set forth herein. Each such Lease Agreement (an "Agreement") and the lease provisions on the Lessor's website at (<http://www.MobileModularRents.com>) (the "Incorporated Provisions"), to the extent incorporated by reference into such Agreement, together with these Lease Terms and Conditions (the "Lease Agreement"), to the extent incorporated by reference into such Agreement, shall constitute a separate and independent lease (a "Lease") of the Equipment listed in such Agreement under "Product Information". Capitalized terms used but not defined in this Master Lease Agreement shall have the meanings set forth in the applicable Agreement. In the event of a conflict between this Master Lease Agreement or the Incorporated Provisions and the Agreement, the Agreement shall control.
- 2. LEASE TERM.** The Lease shall commence on the Start Rent Date specified in the Agreement (which may be adjusted by mutual agreement of Lessee and Lessor), and shall continue thereafter for the number of months specified in the Agreement as the "Contract Term" (the "Lease Term"). Lessee is responsible for paying the Monthly Rent specified in the Agreement (as such may be adjusted pursuant to Section 4) for each month during the Lease Term. Lessee shall have no right to terminate the Lease prior to the expiration of the Lease Term; provided that, in the event that Lessee surrenders the Equipment to Lessor prior to the completion of the Lease Term, the Lease Term shall cease upon the later to occur of (i) the date when Lessee shall have complied with Section 3 and (ii) Lessee has paid to Lessor an early termination fee to be determined by Lessor in its sole discretion. Lessor shall not be liable to Lessee for any failure or delay in obtaining, delivering or setting up the Equipment. In the event Lessor is responsible for delay in obtaining, delivering or setting up the Equipment, the Start Rent Date shall be deemed to be revised to the date that Lessor substantially completes setting up the Equipment. If any delay in obtaining, delivering or setting up the Equipment is caused by failure of the site to be ready or for any other reason not solely the responsibility of Lessor, the Lease shall commence as of the Start Rent Date originally stated notwithstanding such delay.
- 3. RETURN OF EQUIPMENT.** Regardless of the stated Lease Term, Lessee must provide a minimum of 30 days' prior notice for return delivery of Equipment (except that Equipment consisting of containers requires only 10 days' notice). Please review the Incorporated Provisions on the website at (<http://www.MobileModularRents.com>) for the conditions under which the Equipment must be returned.
- 4. HOLDING OVER; LEASE EXTENSION.** If Lessee (a) fails to notify Lessor of the intended return of Equipment as required under Section 4(a) of the Incorporated Provisions, (b) fails to prepare the Equipment for dismantle as required under Section 4(a) of the Incorporated Provisions or (c) fails to pay the charges upon return as required under Section 4(b) of the Incorporated Provisions, the Lease Term shall be extended; on a month-to-month basis, beyond the Lease Term stated above. In this event, Lessor may establish a revised rental rate for such extended Lease Term, which revised rental rate shall constitute the Monthly Rent for such extended Lease Term following completion of the



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## Lease Agreement

Contract: 220014721.1  
Contract Term: 18 Months  
Date Printed: 07/11/2014  
Start Rent Date: 07/24/2014

Initial Lease Term. Dismantle, charges upon return and other charges related to the return of the Equipment may also be revised by Lessor for such extended Lease Term.

### 5. LESSEE AGREEMENTS. Lessee agrees that:

- (a) Lessor may insert in the applicable Agreement the serial number and other identification data relating to the Equipment when ascertained by Lessor; and
- (b) Lessor (or its agents, employees or contractors) may, from time to time at any reasonable time, enter upon the premises of Lessee for the purposes of (1) inspecting the Equipment or posting "Notices of Non-Responsibility" or similar notices thereon, or (2) photographing the Equipment, including any items or occupants within or surrounding the Equipment, for promotional or other purposes. If Lessor determines that repairs to the Equipment are needed, Lessee shall grant access for said repairs. Lessor shall bear the expense of any repairs that it determines are needed to ameliorate normal wear and tear; the expense of all other repairs (including any repairs requested by Lessee) shall be borne by Lessee. If Lessee does not grant access for such repairs between 8:00 a.m. and 5:00 p.m., Monday through Friday, Lessee shall bear the cost of repair rates for labor at the applicable overtime rates.

6. **SECURITY DEPOSIT.** Upon the signing of any Agreement, Lessee shall provide to Lessor the Security Deposit specified in such Agreement. The Security Deposit shall be held by Lessor (who shall have no obligation to collect or pass through to Lessee any interest thereon) as security for Lessee's faithful performance of the terms and conditions of the applicable Lease, including without limitation Lessee's indemnification obligations under Section 12. If an Event of Default occurs, Lessor may apply the Security Deposit to payment of its costs, expenses and attorney fees in enforcing the terms of the Lease and to indemnify Lessor against any costs, expenses or damages sustained by Lessor in connection with the Lease (provided, however, nothing herein contained shall be construed to mean that the recovery of damages by Lessor shall be limited to the amount of the Security Deposit). In the event all or any portion of the Security Deposit is applied as aforesaid, Lessee shall deposit additional amounts with Lessor so that the Security Deposit shall always be maintained at the amount specified in the Agreement. At the end of the Lease Term, Lessor shall apply any remaining balance of the Security Deposit to the payment of any monies owed to Lessor under the Lease. Thereafter, if no Event of Default has occurred and is continuing and Lessee has complied with Section 3, Lessor shall return to Lessee any remaining balance of the Security Deposit.

7. **ASSIGNMENT.** Lessee will not assign, convey, transfer, or hypothecate its interest, or any part thereof, in and to any Lease or the Equipment, whether voluntarily or involuntarily, without the prior written consent of Lessor; and any such attempted assignment, conveyance, transfer, or hypothecation, whether voluntary or involuntary, shall be null and void, and upon any such attempted assignment, conveyance, transfer, or hypothecation, Lessor may, at its option, terminate the Lease. Lessor may, at its option and without the prior approval of Lessee, transfer, convey, assign or hypothecate its interest or any part thereof, in and to the Lease. It is understood and agreed by Lessee that Lessor may be acting as an agent for the true owner of the Equipment (the "Principal"), and that such Principal, if any, shall have all the rights and protection of Lessor hereunder.

8. **PAYMENTS.** Lessee agrees to pay to Lessor (at the office of Lessor or to such other person or at such other place as Lessor may from time to time designate to Lessee in writing) each payment specified herein on a net invoice basis without demand by Lessor. All payments due from Lessee pursuant to the terms of the Lease shall be made by Lessee without any abatement or setoff of any kind whatsoever arising from any cause whatsoever. If any payment is not received by Lessor within five (5) days from the date due, Lessee shall pay Lessor interest at the rate of EIGHTEEN PERCENT (18%) per annum (or at the maximum rate permitted by applicable law, if less) on such payment until received. In order to reimburse Lessor for resulting administrative expenses, Lessee shall also pay a late charge of TWENTY-FIVE (\$25.00) for each delinquent payment each and every month that such payment(s) remain(s) delinquent.

9. **TAXES AND LIENS.** Lessee agrees to keep the Equipment free of all levies, liens or encumbrances. Lessee shall, in the manner directed by Lessor, (a) make and file all declarations and returns in connection with all charges, fees and taxes (local, state and federal) levied or assessed either upon Lessee or Lessor, or upon the ownership, leasing, rental, sale, possession, use, or operation of the Equipment, and (b) pay all such charges, fees and taxes. However, Lessor shall pay all local, state or federal net income taxes relating to the Lease. If Lessee fails to pay taxes and charges as required by this Section, Lessor shall have the right, but not the obligation, to make such payments. In the event that Lessor makes any such payments, Lessee shall reimburse Lessor for such costs as deemed appropriate by Lessor and as invoiced by Lessor.

10. **LOSS OR DAMAGE.** Until the Equipment is returned to Lessor, Lessee assumes all risk of loss or damage to the Equipment. Subject to Section 12(b), should any Equipment damaged be capable of repair, the Lease shall not terminate, but Lessee shall cause the Equipment to be repaired and restored to its condition existing prior to such damage, at Lessee's sole expense. Lessee shall be entitled to the benefit of the proceeds from any insurance recovery received by Lessor, up to an amount equal to that paid to Lessor pursuant to this paragraph.

### 11. INSURANCE.

(a) Lessee shall provide, maintain, and pay all premiums for insurance covering the loss, theft, destruction, or damage to the Equipment in an amount not less than the full replacement value thereof, naming Lessor as loss payee of the proceeds. Lessee shall also provide, maintain, and pay all premiums for public liability insurance (minimum of \$1,000,000 per occurrence), naming Lessor as an additional insured. All insurance shall be in a form and with a company satisfactory to Lessor, and shall not be subject to cancellation without thirty-(30) day's prior written notice to Lessor. Lessee shall deliver to Lessor insurance policies, or evidence of insurance related thereto, meeting the above requirements. Proceeds of such insurance shall, at Lessor's option, be applied either towards replacement, restoration or repair of the Equipment or towards payment of Lessee's obligations under the Lease. Lessor may require Lessee's insurance carrier to be licensed to do business in the state where the Equipment is being leased.

(b) Should Lessee fail to provide satisfactory proof of insurance prior to delivery of Equipment or at any time during the Lease Term, Lessor shall have the right, but not the obligation, to obtain such insurance and/or make such payments. In the event that Lessor makes such



Mobile Modular Management Corporation  
11450 Mission Blvd.  
Mira Loma, CA 91752  
Phone: (951) 360-6600 Fax: (951) 360-6622  
www.MobileModularRents.com

## Lease Agreement

Contract: 220014721.1  
Contract Term: 18 Months  
Date Printed: 07/11/2014  
Start Rent Date: 07/24/2014

payment(s), Lessee shall reimburse Lessor for such insurance as deemed appropriate by Lessor and as invoiced by Lessor. In any event, Lessor will not and does not provide insurance for any of Lessee's personal property that may be in or on any Equipment.

### 12. WAIVER AND INDEMNIFICATION.

(a) Lessee hereby waives and releases all claims against Lessor for (i) loss of or damage to all property, goods, wares and merchandise in, upon or about the Equipment, (ii) injuries to Lessee, Lessee's agents and third persons, and (iii) the use, misuse, or malfunction of any security screens provided with the Equipment, in each case, irrespective of the cause of such loss, damage or injury. Under no circumstances shall Lessor be liable to Lessee for any special, incidental or consequential damages of any kind (including, but not limited to damages for loss of use, or profit, by Lessee or for any collateral damages), whether or not caused by Lessor's negligence or delay, resulting from the Lease or the manufacture, delivery, installation, removal or use of the Equipment, or in connection with the services rendered by Lessor hereunder, even if the parties have been advised of the possibility of such damages.

(b) Lessee agrees to indemnify and hold harmless Lessor from and against any and all losses, liabilities, costs, expenses (including attorney fees), claims, actions, demands, fines, forfeitures, seizures or penalties (collectively, "Claims") arising out of (i) the maintenance, possession or use of the Equipment by Lessee, its employees, agents or any person invited, suffered or permitted by Lessee to use or be in, on or about the Equipment, including to the extent arising from Lessor's negligence, (ii) Lessee's failure to comply with any of the terms of the Lease (including without limitation Sections 5(a)(ii) and 5(f)(i) of the incorporated Provisions, and Sections 6, 14 and 15 hereto), and (iii) any theft or destruction of, or damage to, the Equipment. If the foregoing obligations are not enforceable against Lessee under applicable law, Lessee agrees to indemnify and hold harmless Lessor from and against any and all Claims to the maximum extent permitted by applicable law. Lessee shall make all payments due under this Section upon demand by Lessor.

### 13. EVENTS OF DEFAULT.

(a) Each of the following shall constitute an "Event of Default": (1) default by Lessee in making any required payment to Lessor and the continuance of such default for ten (10) consecutive days; (2) any default or breach by Lessee of Section 7, (3) default by Lessee in the performance of any obligation, covenant or liability contained in the Lease or any other agreement or document with Lessor and the continuance of such default for ten (10) days after written notice, thereof by Lessor to Lessee; (4) any warranty, representation or statement made or furnished to Lessor by or on behalf of Lessee proves to have been false in any material respect when made or furnished; (5) loss, theft, damage, destruction or the attempted sale or encumbrance by Lessee of any of the Equipment, or any levy, seizure or attachment thereof or thereon; or (6) Lessee's dissolution, termination of existence, discontinuance of business, insolvency, or business failure; or the appointment of a receiver of any part of, the assignment for the benefit of creditors by, or the commencement of any proceedings under any bankruptcy, reorganization or arrangement laws by or against, Lessee. Lessee acknowledges that any Event of Default will substantially impair the lease value hereof.

(b) **REMEDIES OF LESSOR:** Upon the occurrence of any Event of Default and any time thereafter, Lessor may, without notice, exercise one or more of the following remedies, as Lessor, in its sole discretion shall elect: (1) declare all unpaid lease payments under the Lease to be immediately due and payable; (2) terminate the Lease as to any or all items of the Equipment; (3) take possession of the Equipment wherever found, and for this purpose enter upon any premises of Lessee and remove the Equipment, without any liability for suit, action or other proceedings by Lessee; (4) direct Lessee at its expense to promptly prepare the Equipment for pickup by Lessor; (5) use, hold, sell, lease or otherwise dispose of the Equipment or any item thereof on the site specified on the applicable Agreement or any other location without affecting the obligations of Lessee as provided in the Lease; (6) sell or lease the Equipment or any part thereof by public or private sale or lease at such time or times and upon such terms as Lessor may determine, free and clear of any rights of Lessee (if notice of sale is required by law, notice in writing not less than ten (10) days prior to the date thereof shall constitute reasonable notice to Lessee); (7) proceed by appropriate action either in law or in equity to enforce performance by Lessee of the terms of the Lease or to recover damages for the breach hereof; (8) apply the Security Deposit to payment of Lessor's costs, expenses and attorney fees in enforcing the terms of the Lease and to indemnify Lessor against any damages sustained by Lessor (provided, however, nothing herein shall be construed to mean that the recovery of damages by Lessor shall be limited to the amount of the Security Deposit); (9) exercise any and all rights accruing to Lessor under any applicable law upon an Event of Default. In addition, Lessor shall be entitled to recover immediately as damages, and not as a penalty, a sum equal to the aggregate of the following: (i) all unpaid payments as are due and payable for any items of Equipment up to the date of repossession by Lessor; (ii) any expenses paid or incurred by Lessor in connection with the repossession, holding, repair and subsequent sale, lease or other disposition of the Equipment, including attorney's fees and other reasonable costs and expenses; (iii) an amount equal to the excess of (a) all unpaid payments for any item of Equipment repossessed by Lessor from the date thereof to the end of the term of the Lease over (b) the fair market lease value of such item or items of Equipment for such unexpired lease period (provided however, that the fair market lease value shall be deemed to not exceed the proceeds of any sale of the Equipment or lease thereof by Lessor for a period substantially similar to the unexpired lease period); and (iv) the replacement cost of any item of Equipment which Lessee fails to prepare for return to Lessor as provided above or converts or is destroyed, or which Lessor is unable to repossess.

**14. OWNERSHIP AND MARKING OF EQUIPMENT.** Title to the Equipment shall remain in Lessor (or its Principal). Excepting only as may be granted in a separate writing signed by Lessor, no option or other right to purchase the Equipment is granted or implied by the Lease to Lessee or any other person. The Equipment shall remain and be deemed to be personal property of Lessor, whether attached to realty or not, and upon termination of the Lease or the occurrence of an Event of Default, Lessee shall have the duty and Lessor shall have the right to remove the Equipment whether or not affixed to any realty or building without any liability to Lessor for damage to the realty or building caused by the removal of the Equipment. Any replacement, substitutes, accessories or parts, whether placed in or upon the Equipment or not, whether made a component part thereof or not, shall be the property of Lessor and shall be included under the terms of the Lease.

**15. COMPLIANCE WITH LAW.** Lessee assumes all responsibility for any and all licenses, clearances, permits and other certificates as may be required for Lessee's lawful operation, use, possession and occupancy of the Equipment. Lessee agrees to fully comply with all laws, rules, regulations and orders of all local, state and federal governmental authorities which in any way relate to the Equipment. Lessee shall pay the





Mobile Modular Management Corporation  
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### Lease Agreement

Contract: 220014721.1  
Contract Term: 18 Months  
Date Printed: 07/11/2014  
Start Rent Date: 07/24/2014

cost of all license and registration fees and renewals thereof.

**16. GOVERNING LAW.** Lessee and Lessor agree that the Lease shall be governed in all respects by, and interpreted in accordance with the laws of, the State of California, without regard to its conflicts of laws provisions.

**17. JURISDICTION.**

(a) In any case where the Equipment is located in the State of Maryland or the State of Virginia, it is agreed that the venue for a legal action relating to the Lease shall be proper if brought in Alameda County, State of California. Subject to Section 12, the prevailing party shall be entitled to recover reasonable attorneys' fees and court costs, whether or not the action proceeds to judgment.

(b) In all other cases, the Federal District Courts located within the State of California shall have non-exclusive jurisdiction over any lawsuit brought by Lessee or Lessor as a result of any dispute regarding matters arising in connection with the Lease. Further, it is agreed that the venue for a legal action relating to the Lease shall be proper if brought in Alameda County, State of California. Subject to Section 12, the prevailing party shall be entitled to recover reasonable attorneys' fees and court costs, whether or not the action proceeds to judgment.

**18. MEDIATION; ARBITRATION.** Lessee agrees to abide by Lessor's option (if Lessor shall so choose) to have any claims, disputes, or controversies arising out of or in relation to the performance, interpretation, application, or enforcement of the Lease, including but not limited to breach thereof, referred to mediation before, and as a condition precedent to, the initiation of any adjudicative action or proceeding, including arbitration. If mediation fails to resolve the claims, disputes or controversies between Lessor and Lessee, Lessee agrees to abide by Lessor's option (if Lessor shall so choose) to have the claims, disputes or controversies referred to binding arbitration. The parties hereto acknowledge that the subject matter of the Lease is a matter of interstate commerce.

**19. CREDIT CARD AUTHORIZATION.** Lessee hereby gives authorization to Lessor to charge against credit card provided all amounts billed for this transaction including applicable taxes, shipping and handling charges. For a rental/lease transaction, charges may be recurring and additional billing and charges will occur until such time as all Equipment and respective accessories are returned and the rental is terminated.

**20. HAZARDOUS MATERIALS.** Lessee agrees that no water, paint or chemicals, and no illegal, hazardous, controlled, toxic, explosive, flammable, restricted, contaminated or other dangerous materials, shall be maintained or stored in or on the Equipment.

**21. MISCELLANEOUS.** Time is of the essence of each and every provision of the Lease. Failure of Lessor to enforce any term or condition of the Lease shall not constitute a waiver of subsequent defaults by Lessee, nor shall it, in any manner, affect the rights of Lessor to enforce any of the provisions hereunder. The invalidity or unenforceability of any provision of the Lease shall not affect the validity or enforceability of any other provision.

**22. ENTIRE AGREEMENT.** The Lease constitutes the entire agreement between Lessor and Lessee with respect to the subject matter hereof and, except for the Incorporated Provisions that may be updated by Lessor from time to time in its sole discretion, may not be amended, altered or modified except by a writing signed by both Lessor and Lessee.

Lease Terms and Conditions, Rev. 7/20/11

**BOARD AGENDA ITEM**

Name of Contributor: Robin Freeman

Date of Meeting: 5/18/16

STUDY SESSION \_\_\_\_\_

CLOSED SESSION \_\_\_\_\_

SECTION B: HEARINGS \_\_\_\_\_

SECTION C: CONSENT   X  

SECTION D: ACTION \_\_\_\_\_

SECTION E: REPORTS/DISCUSSION \_\_\_\_\_

SECTION F: BOARD POLICIES

1<sup>st</sup> Reading \_\_\_\_\_ 2<sup>nd</sup> Reading \_\_\_\_\_

**Ratification of Amendment #1 to Agreement #15-123 - Ventura County Office of Education, Special Circumstances Paraeducator Services - SCP (Freeman/Gern)**

At the Board meeting of December 9, 2015, the Board of Trustees approved Agreement #15-123 with the Ventura County Office of Education (VCOE) to provide support from Special Circumstances Paraeducators (SCP's) to special education student AD091102 for the 2015-2016 school year, including Extended School Year for a total amount of \$28,224.84.

The actual cost for services has exceeded the previously approved amount and it is necessary to increase the amount of Agreement #15-123 by \$20,766.90 for a total cost of \$48,991.74. The increase is due to services being extended for this student for the 2015-2016 school year.

**FISCAL IMPACT:**

\$20,766.90 - Special Education Funds

**RECOMMENDATION:**

It is the recommendation of the Interim Director, Special Education Services, and the Assistant Superintendent, Educational Services, that the Board of Trustees ratify Amendment #1 to Agreement #15-123 with the Ventura County Office of Education for Special Circumstances Paraeducator Services (SCP's), in the amount of \$20,766.90.

**ADDITIONAL MATERIAL(S):**

**Attached:** Amendment #1 (1 Page)  
Agreement #15-123, Ventura County Office of Education (1 Page)



# AGREEMENT

## For Paraeducator Performing Special Circumstance Services

This Agreement, effective February 11, 2016 is made by and between the Ventura County Office of Education, hereinafter referred to as SUPERINTENDENT, and the Oxnard School District, hereinafter referred to as DISTRICT.  
AD091102

1. This agreement pertains to providing exceptional service(s) for, [REDACTED], a Special Education pupil who is a resident of DISTRICT and currently attends, Foster School a special education program operated by SUPERINTENDENT.
2. SUPERINTENDENT agrees to provide for the exceptional service(s) of such Special Education pupil as authorized by DISTRICT or its designee and agreed to by SUPERINTENDENT.
3. DISTRICT shall reimburse SUPERINTENDENT the actual cost of providing the exceptional service plus the state approved indirect cost rate of SUPERINTENDENT.

Authorized exceptional service(s) shall consist of Paraeducator performing Special Circumstances services throughout the school day and bus aide to and from school.

4. DISTRICT acknowledges that certain types of expenses will continue to accrue during periods of student's absence from school, including but not limited to salary and benefits of staff providing the exceptional service(s). DISTRICT further acknowledges that if the exceptional service(s) includes the service(s) of SUPERINTENDENT's employee(s), 30 days notice is required to layoff an employee for lack of work. Therefore, in the event the student unexpectedly leaves SUPERINTENDENT's program, SUPERINTENDENT will make every attempt to re-assign any staff involved in providing the exceptional service(s); however, if that is not possible, DISTRICT will reimburse SUPERINTENDENT for expense incurred throughout the layoff notice period.
5. DISTRICT does hereby agree to defend, indemnify and hold harmless the SUPERINTENDENT, the Ventura County Board of Education, and its officers, and employees from any and all claims, demands, liabilities, expenses (including attorneys' fees and costs of defense) arising as a result of SUPERINTENDENT's obligations under this agreement. However, this indemnification shall not apply if it is ultimately adjudicated that such claim, demand, liability or expense arose out of the sole negligence of the SUPERINTENDENT.
6. The term of this contract shall begin 2/11/2016 (IEP date), and continue thereafter on a continuing basis until the IEP of said student is modified or until student's district of residence changes.

FISCAL YEAR-based on IEP date:	CURRENT: <u>2015-2016</u> <u>(2/11/16-6/30/16)</u>	UPCOMING:
(including ESY, if applicable)	\$ <u>20,766.90</u>	+ \$ _____

It shall be the responsibility of DISTRICT to notify SUPERINTENDENT of any change in district of residence or change in the IEP that would affect this contract.

IN WITNESS WHEREOF, the parties hereto have executed this agreement:

OXNARD SCHOOL DISTRICT

VENTURA COUNTY OFFICE OF EDUCATION

Signature Lisa A. Franz

Accepted By: [Signature]  
Special Education Authorized Representative

Title: Director, Purchasing

Approved By: [Signature]  
Business Services Authorized Representative

Date: \_\_\_\_\_

Date: 2/23/16

Estimated Cost \$ \$20,766.90 for fiscal year 15-16

Please submit **two** original copies Oxnard School District-Purchasing Department



# AGREEMENT

## For Paraeducator Performing Special Circumstance Services

This Agreement, effective August 19, 2015 is made by and between the Ventura County Office of Education, hereinafter referred to as SUPERINTENDENT, and the Oxnard School District, hereinafter referred to as DISTRICT.  
AD091102

1. This agreement pertains to providing exceptional service(s) for, [REDACTED] a Special Education pupil who is a resident of DISTRICT and currently attends, Foster School a special education program operated by SUPERINTENDENT.
2. SUPERINTENDENT agrees to provide for the exceptional service(s) of such Special Education pupil as authorized by DISTRICT or its designee and agreed to by SUPERINTENDENT.
3. DISTRICT shall reimburse SUPERINTENDENT the actual cost of providing the exceptional service plus the state approved indirect cost rate of SUPERINTENDENT.

Authorized exceptional service(s) shall consist of Paraeducator performing Special Circumstances services; 400 minutes daily.

4. DISTRICT acknowledges that certain types of expenses will continue to accrue during periods of student's absence from school, including but not limited to salary and benefits of staff providing the exceptional service(s). DISTRICT further acknowledges that if the exceptional service(s) includes the service(s) of SUPERINTENDENT's employee(s), 30 days notice is required to layoff an employee for lack of work. Therefore, in the event the student unexpectedly leaves SUPERINTENDENT's program, SUPERINTENDENT will make every attempt to re-assign any staff involved in providing the exceptional service(s); however, if that is not possible, DISTRICT will reimburse SUPERINTENDENT for expense incurred throughout the layoff notice period.
5. DISTRICT does hereby agree to defend, indemnify and hold harmless the SUPERINTENDENT, the Ventura County Board of Education, and its officers, and employees from any and all claims, demands, liabilities, expenses (including attorneys' fees and costs of defense) arising as a result of SUPERINTENDENT's obligations under this agreement. However, this indemnification shall not apply if it is ultimately adjudicated that such claim, demand, liability or expense arose out of the sole negligence of the SUPERINTENDENT.
6. The term of this contract shall begin 8/19/2015 (IEP date), and continue thereafter on a continuing basis until the IEP of said student is modified or until student's district of residence changes.

FISCAL YEAR-based on IEP date:	CURRENT: <u>2015-2016</u>	UPCOMING: <u>2016-2017</u>
	(8/19/15-2/18/16)	( )
(including ESY, if applicable)	\$ <u>28,224.84</u>	+ \$ _____

It shall be the responsibility of DISTRICT to notify SUPERINTENDENT of any change in district of residence or change in the IEP that would affect this contract.

IN WITNESS WHEREOF, the parties hereto have executed this agreement:

OXNARD SCHOOL DISTRICT

VENTURA COUNTY OFFICE OF EDUCATION

Lisa A. Franz  
Signature Lisa A. Franz

Accepted By: [Signature]  
Special Education Authorized Representative

Title: Director, Purchasing

Approved By: [Signature]  
Business Services Authorized Representative

Date: 12-11-15

Date: 9/30/15

Estimated Cost \$ 28,224.84

Please submit **two** original copies Oxnard School District-Purchasing Department

**BOARD AGENDA ITEM**

Name of Contributor: Robin Freeman

Date of Meeting: 5/18/16

STUDY SESSION \_\_\_\_\_

CLOSED SESSION \_\_\_\_\_

SECTION B: HEARINGS \_\_\_\_\_

SECTION C: CONSENT   X  

SECTION D: ACTION \_\_\_\_\_

SECTION E: REPORTS/DISCUSSION \_\_\_\_\_

SECTION F: BOARD POLICIES

1<sup>st</sup> Reading \_\_\_\_\_ 2<sup>nd</sup> Reading \_\_\_\_\_

**Ratification of Amendment #1 to Agreement #15-128 - Ventura County Office of Education, Special Circumstances Paraeducator Services - SCP (Freeman/Gern)**

At the Board meeting of December 9, 2015, the Board of Trustees approved Agreement #15-128 with the Ventura County Office of Education (VCOE) to provide support from Special Circumstances Paraeducators (SCP's) to special education student MZ020305 for the 2015-2016 school year, including Extended School Year for a total amount of \$23,520.70.

The actual cost for services has exceeded the previously approved amount and it is necessary to increase the amount of Agreement #15-128 by \$29,893.08 for a total cost of \$53,413.78. The increase is due to services being extended for this student for the 2015-2016 school year.

**FISCAL IMPACT:**

\$29,893.08 - Special Education Funds

**RECOMMENDATION:**

It is the recommendation of the Interim Director, Special Education Services, and the Assistant Superintendent, Educational Services, that the Board of Trustees ratify Amendment #1 to Agreement #15-128 with the Ventura County Office of Education for Special Circumstances Paraeducator Services (SCP's), in the amount of \$29,893.08.

**ADDITIONAL MATERIAL(S):**

**Attached:** Amendment #1 (1 Page)  
Agreement #15-128, Ventura County Office of Education (1 Page)



# AGREEMENT

## For Paraeducator Performing Special Circumstance Services

This Agreement, effective December 4, 2015 is made by and between the Ventura County Office of Education, hereinafter referred to as SUPERINTENDENT, and the Oxnard School District, hereinafter referred to as DISTRICT.  
MZ020305

1. This agreement pertains to providing exceptional service(s) for, [REDACTED] a Special Education pupil who is a resident of DISTRICT and currently attends, Dwire School a special education program operated by SUPERINTENDENT.
2. SUPERINTENDENT agrees to provide for the exceptional service(s) of such Special Education pupil as authorized by DISTRICT or its designee and agreed to by SUPERINTENDENT.
3. DISTRICT shall reimburse SUPERINTENDENT the actual cost of providing the exceptional service plus the state approved indirect cost rate of SUPERINTENDENT.

Authorized exceptional service(s) shall consist of Paraeducator performing Special Circumstances services and bus aide, to and from school; 390 minutes per day.

4. DISTRICT acknowledges that certain types of expenses will continue to accrue during periods of student's absence from school, including but not limited to salary and benefits of staff providing the exceptional service(s). DISTRICT further acknowledges that if the exceptional service(s) includes the service(s) of SUPERINTENDENT's employee(s), 30 days notice is required to layoff an employee for lack of work. Therefore, in the event the student unexpectedly leaves SUPERINTENDENT's program, SUPERINTENDENT will make every attempt to re-assign any staff involved in providing the exceptional service(s); however, if that is not possible, DISTRICT will reimburse SUPERINTENDENT for expense incurred throughout the layoff notice period.
5. DISTRICT does hereby agree to defend, indemnify and hold harmless the SUPERINTENDENT, the Ventura County Board of Education, and its officers, and employees from any and all claims, demands, liabilities, expenses (including attorneys' fees and costs of defense) arising as a result of SUPERINTENDENT's obligations under this agreement. However, this indemnification shall not apply if it is ultimately adjudicated that such claim, demand, liability or expense arose out of the sole negligence of the SUPERINTENDENT.
6. The term of this contract shall begin 12/4/2015 (IEP date), and continue thereafter on a continuing basis until the IEP of said student is modified or until student's district of residence changes.

FISCAL YEAR-based on IEP date:	CURRENT: <u>2015-2016</u> (12/4/15-6/30/16)	UPCOMING:
(including ESY, if applicable)	\$ <u>29,893.08</u>	+
		\$ _____

It shall be the responsibility of DISTRICT to notify SUPERINTENDENT of any change in district of residence or change in the IEP that would affect this contract.

IN WITNESS WHEREOF, the parties hereto have executed this agreement:

OXNARD SCHOOL DISTRICT

VENTURA COUNTY OFFICE OF EDUCATION

Signature Lisa A. Franz

Accepted By: [Signature]  
Special Education Authorized Representative

Title: Director, Purchasing

Approved By: [Signature]  
Business Services Authorized Representative

Date: \_\_\_\_\_

Date: 2/23/16

Estimated Cost \$ \_\_\_\_\_  
\$29,893.08 for fiscal year 15-16





# AGREEMENT

## For Paraeducator Performing Special Circumstance Services

This Agreement, effective August 25, 2015 is made by and between the Ventura County Office of Education, hereinafter referred to as SUPERINTENDENT, and the Oxnard School District, hereinafter referred to as DISTRICT.  
MZ020305

1. This agreement pertains to providing exceptional service(s) for, [REDACTED], a Special Education pupil who is a resident of DISTRICT and currently attends, Dwire School a special education program operated by SUPERINTENDENT.
2. SUPERINTENDENT agrees to provide for the exceptional service(s) of such Special Education pupil as authorized by DISTRICT or its designee and agreed to by SUPERINTENDENT.
3. DISTRICT shall reimburse SUPERINTENDENT the actual cost of providing the exceptional service plus the state approved indirect cost rate of SUPERINTENDENT.

Authorized exceptional service(s) shall consist of Paraeducator performing Special Circumstances services, 5.5 hours daily and bus aide, 1 hour daily.

4. DISTRICT acknowledges that certain types of expenses will continue to accrue during periods of student's absence from school, including but not limited to salary and benefits of staff providing the exceptional service(s). DISTRICT further acknowledges that if the exceptional service(s) includes the service(s) of SUPERINTENDENT's employee(s), 30 days notice is required to layoff an employee for lack of work. Therefore, in the event the student unexpectedly leaves SUPERINTENDENT's program, SUPERINTENDENT will make every attempt to re-assign any staff involved in providing the exceptional service(s); however, if that is not possible, DISTRICT will reimburse SUPERINTENDENT for expense incurred throughout the layoff notice period.
5. DISTRICT does hereby agree to defend, indemnify and hold harmless the SUPERINTENDENT, the Ventura County Board of Education, and its officers, and employees from any and all claims, demands, liabilities, expenses (including attorneys' fees and costs of defense) arising as a result of SUPERINTENDENT's obligations under this agreement. However, this indemnification shall not apply if it is ultimately adjudicated that such claim, demand, liability or expense arose out of the sole negligence of the SUPERINTENDENT.
6. The term of this contract shall begin 8/25/2015 (IEP date-1/28/15), and continue thereafter on a continuing basis until the IEP of said student is modified or until student's district of residence changes.

FISCAL YEAR-based on IEP date:	CURRENT: <u>2015-2016</u> (8/25/15-1/28/16)	UPCOMING: <u>2016-2017</u> ( )
(including ESY, if applicable)	\$ <u>23,520.70</u>	+ \$ _____

It shall be the responsibility of DISTRICT to notify SUPERINTENDENT of any change in district of residence or change in the IEP that would affect this contract.

IN WITNESS WHEREOF, the parties hereto have executed this agreement:

OXNARD SCHOOL DISTRICT

VENTURA COUNTY OFFICE OF EDUCATION

Lisa A. Franz  
Signature Lisa A. Franz

Accepted By: [Signature]  
Special Education Authorized Representative

Title: Director, Purchasing

Approved By: [Signature]  
Business Services Authorized Representative

Date: 12-11-15

Date: 10/14/15

Estimated Cost \$ 23,520.70

Please submit **two** original copies Oxnard School District-Purchasing Department

**BOARD AGENDA ITEM**

Name of Contributor: Robin Freeman

Date of Meeting: 5/18/16

STUDY SESSION \_\_\_\_\_

CLOSED SESSION \_\_\_\_\_

SECTION B: HEARINGS \_\_\_\_\_

SECTION C: CONSENT     X    

SECTION D: ACTION \_\_\_\_\_

SECTION E: REPORTS/DISCUSSION \_\_\_\_\_

SECTION F: BOARD POLICIES      1<sup>st</sup> Reading \_\_\_\_\_      2<sup>nd</sup> Reading \_\_\_\_\_

**Ratification of Agreement #15-239 - Ventura County Office of Education, Special Circumstances Paraeducator Services – SCP (Freeman/Gern)**

---

Requesting ratification for exceptional services for special education students that consists of support from Special Circumstances Paraeducators (SCP's) for the 2015-2016 school year, including Extended School Year, if applicable.

Students 2015-2016:

ME011011	\$13,366.14	OL083008	\$22,276.90
JN122311	\$31,791.69	RP031903	\$5,560.12
KS120903	\$38,599.24	VV030307	\$5,120.00
KW062904	\$31,941.56		

**FISCAL IMPACT:**

\$148,655.65 - Special Education Funds

**RECOMMENDATION:**

It is the recommendation of the Interim Director, Special Education Services, and the Assistant Superintendent, Educational Services, that the Board of Trustees ratify Agreement #15-239 with the Ventura County Office of Education for Special Circumstances Paraeducator Services (SCP's), in the amount of \$148,655.65

**ADDITIONAL MATERIAL(S):**

**Attached:**      Agreement #15-239, Ventura County Office of Education (7 Pages)





# AGREEMENT

## For Paraeducator Performing Special Circumstance Services

This Agreement, effective December 2, 2015 is made by and between the Ventura County Office of Education, hereinafter referred to as SUPERINTENDENT, and the Oxnard School District, hereinafter referred to as DISTRICT.  
ME011011

1. This agreement pertains to providing exceptional service(s) for, [REDACTED] a Special Education pupil who is a resident of DISTRICT and currently attends, Williams Pre-school a special education program operated by SUPERINTENDENT.
2. SUPERINTENDENT agrees to provide for the exceptional service(s) of such Special Education pupil as authorized by DISTRICT or its designee and agreed to by SUPERINTENDENT.
3. DISTRICT shall reimburse SUPERINTENDENT the actual cost of providing the exceptional service plus the state approved indirect cost rate of SUPERINTENDENT.

Authorized exceptional service(s) shall consist of Paraeducator performing Special Circumstances services services throughout the school day.

4. DISTRICT acknowledges that certain types of expenses will continue to accrue during periods of student's absence from school, including but not limited to salary and benefits of staff providing the exceptional service(s). DISTRICT further acknowledges that if the exceptional service(s) includes the service(s) of SUPERINTENDENT's employee(s), 30 days notice is required to layoff an employee for lack of work. Therefore, in the event the student unexpectedly leaves SUPERINTENDENT's program, SUPERINTENDENT will make every attempt to re-assign any staff involved in providing the exceptional service(s); however, if that is not possible, DISTRICT will reimburse SUPERINTENDENT for expense incurred throughout the layoff notice period.
5. DISTRICT does hereby agree to defend, indemnify and hold harmless the SUPERINTENDENT, the Ventura County Board of Education, and its officers, and employees from any and all claims, demands, liabilities, expenses (including attorneys' fees and costs of defense) arising as a result of SUPERINTENDENT's obligations under this agreement. However, this indemnification shall not apply if it is ultimately adjudicated that such claim, demand, liability or expense arose out of the sole negligence of the SUPERINTENDENT.
6. The term of this contract shall begin 12/2/2015 (IEP date=1/12/15 and 1/12/16), and continue thereafter on a continuing basis until the IEP of said student is modified or until student's district of residence changes.

FISCAL YEAR-based on IEP date:	CURRENT: <u>2015-2016</u> ( <u>12/2/15-6/30/16</u> )	UPCOMING:
(including ESY, if applicable)	\$ <u>13,366.14</u>	+
		\$ _____

It shall be the responsibility of DISTRICT to notify SUPERINTENDENT of any change in district of residence or change in the IEP that would affect this contract.

IN WITNESS WHEREOF, the parties hereto have executed this agreement:

OXNARD SCHOOL DISTRICT

VENTURA COUNTY OFFICE OF EDUCATION

Signature Lisa A. Franz

Accepted By: [Signature]  
Special Education Authorized Representative

Title: Director, Purchasing

Approved By: [Signature]  
Business Services Authorized Representative

Date: \_\_\_\_\_

Date: 3/16/14

Estimated Cost \$ \$13,366.14 for fiscal year 15-16

Please submit **two** original copies Oxnard School District-Purchasing Department



# AGREEMENT

## For Paraeducator Performing Special Circumstance Services

This Agreement, effective January 15, 2016 is made by and between the Ventura County Office of Education, hereinafter referred to as SUPERINTENDENT, and the Oxnard School District, hereinafter referred to as DISTRICT.  
OL083008

1. This agreement pertains to providing exceptional service(s) for, [REDACTED], a Special Education pupil who is a resident of DISTRICT and currently attends, Penfield School a special education program operated by SUPERINTENDENT.
2. SUPERINTENDENT agrees to provide for the exceptional service(s) of such Special Education pupil as authorized by DISTRICT or its designee and agreed to by SUPERINTENDENT.
3. DISTRICT shall reimburse SUPERINTENDENT the actual cost of providing the exceptional service plus the state approved indirect cost rate of SUPERINTENDENT.

Authorized exceptional service(s) shall consist of Paraeducator performing Special Circumstances services services throughout the school day.

4. DISTRICT acknowledges that certain types of expenses will continue to accrue during periods of student's absence from school, including but not limited to salary and benefits of staff providing the exceptional service(s). DISTRICT further acknowledges that if the exceptional service(s) includes the service(s) of SUPERINTENDENT's employee(s), 30 days notice is required to layoff an employee for lack of work. Therefore, in the event the student unexpectedly leaves SUPERINTENDENT's program, SUPERINTENDENT will make every attempt to re-assign any staff involved in providing the exceptional service(s); however, if that is not possible, DISTRICT will reimburse SUPERINTENDENT for expense incurred throughout the layoff notice period.
5. DISTRICT does hereby agree to defend, indemnify and hold harmless the SUPERINTENDENT, the Ventura County Board of Education, and its officers, and employees from any and all claims, demands, liabilities, expenses (including attorneys' fees and costs of defense) arising as a result of SUPERINTENDENT's obligations under this agreement. However, this indemnification shall not apply if it is ultimately adjudicated that such claim, demand, liability or expense arose out of the sole negligence of the SUPERINTENDENT.
6. The term of this contract shall begin 1/15/2016 (IEP date= 3/19/15), and continue thereafter on a continuing basis until the IEP of said student is modified or until student's district of residence changes.

FISCAL YEAR-based on IEP date:	CURRENT: <u>2015-2016</u> (1/15/16-6/30/16)	UPCOMING:
(including ESY, if applicable)	\$ <u>22,276.90</u>	+
		\$ _____

It shall be the responsibility of DISTRICT to notify SUPERINTENDENT of any change in district of residence or change in the IEP that would affect this contract.

IN WITNESS WHEREOF, the parties hereto have executed this agreement:

OXNARD SCHOOL DISTRICT

VENTURA COUNTY OFFICE OF EDUCATION

Signature Lisa A. Franz

Accepted By: [Signature]  
Special Education Authorized Representative

Title: Director, Purchasing

Approved By: [Signature]  
Business Services Authorized Representative

Date: \_\_\_\_\_

Date: 3/16/16

Estimated Cost \$ \$22,276.90 for fiscal year 15-16

Please submit **two** original copies Oxnard School District-Purchasing Department



# AGREEMENT

## For Paraeducator Performing Special Circumstance Services

This Agreement, effective November 10, 2015 is made by and between the Ventura County Office of Education, hereinafter referred to as SUPERINTENDENT, and the Oxnard School District, hereinafter referred to as DISTRICT.

JN122311

1. This agreement pertains to providing exceptional service(s) for, [REDACTED], a Special Education pupil who is a resident of DISTRICT and currently attends, Dwire School a special education program operated by SUPERINTENDENT.
2. SUPERINTENDENT agrees to provide for the exceptional service(s) of such Special Education pupil as authorized by DISTRICT or its designee and agreed to by SUPERINTENDENT.
3. DISTRICT shall reimburse SUPERINTENDENT the actual cost of providing the exceptional service plus the state approved indirect cost rate of SUPERINTENDENT.

Authorized exceptional service(s) shall consist of Paraeducator performing Special Circumstances services; 300 minutes daily.

4. DISTRICT acknowledges that certain types of expenses will continue to accrue during periods of student's absence from school, including but not limited to salary and benefits of staff providing the exceptional service(s). DISTRICT further acknowledges that if the exceptional service(s) includes the service(s) of SUPERINTENDENT's employee(s), 30 days notice is required to layoff an employee for lack of work. Therefore, in the event the student unexpectedly leaves SUPERINTENDENT's program, SUPERINTENDENT will make every attempt to re-assign any staff involved in providing the exceptional service(s); however, if that is not possible, DISTRICT will reimburse SUPERINTENDENT for expense incurred throughout the layoff notice period.
5. DISTRICT does hereby agree to defend, indemnify and hold harmless the SUPERINTENDENT, the Ventura County Board of Education, and its officers, and employees from any and all claims, demands, liabilities, expenses (including attorneys' fees and costs of defense) arising as a result of SUPERINTENDENT's obligations under this agreement. However, this indemnification shall not apply if it is ultimately adjudicated that such claim, demand, liability or expense arose out of the sole negligence of the SUPERINTENDENT.
6. The term of this contract shall begin 11/10/2015 (IEP date- 10/16/15), and continue thereafter on a continuing basis until the IEP of said student is modified or until student's district of residence changes.

FISCAL YEAR-based on IEP date:	CURRENT: <u>2015-2016</u> (11/10/15-6/30/16)	UPCOMING:
(including ESY, if applicable)	\$ <u>31,791.69</u>	+ \$ _____

It shall be the responsibility of DISTRICT to notify SUPERINTENDENT of any change in district of residence or change in the IEP that would affect this contract.

IN WITNESS WHEREOF, the parties hereto have executed this agreement:

OXNARD SCHOOL DISTRICT

VENTURA COUNTY OFFICE OF EDUCATION

Signature Lisa A. Franz

Accepted By: [Signature]  
Special Education Authorized Representative

Title: Director, Purchasing

Approved By: [Signature]  
Business Services Authorized Representative

Date: \_\_\_\_\_

Date: 2/23/16

Estimated Cost \$ \_\_\_\_\_

\$31,791.69 for fiscal year 15-16

Please submit **two** original copies Oxnard School District-Purchasing Department





# AGREEMENT

## For Paraeducator Performing Special Circumstance Services

This Agreement, effective January 14, 2016 is made by and between the Ventura County Office of Education, hereinafter referred to as SUPERINTENDENT, and the Oxnard School District, hereinafter referred to as DISTRICT.  
RP031903

1. This agreement pertains to providing exceptional service(s) for, [REDACTED], a Special Education pupil who is a resident of DISTRICT and currently attends, Phoenix School a special education program operated by SUPERINTENDENT.
2. SUPERINTENDENT agrees to provide for the exceptional service(s) of such Special Education pupil as authorized by DISTRICT or its designee and agreed to by SUPERINTENDENT.
3. DISTRICT shall reimburse SUPERINTENDENT the actual cost of providing the exceptional service plus the state approved indirect cost rate of SUPERINTENDENT.

Authorized exceptional service(s) shall consist of Paraeducator performing Special Circumstances services throughout school day and bus aide to and from school.

4. DISTRICT acknowledges that certain types of expenses will continue to accrue during periods of student's absence from school, including but not limited to salary and benefits of staff providing the exceptional service(s). DISTRICT further acknowledges that if the exceptional service(s) includes the service(s) of SUPERINTENDENT's employee(s), 30 days notice is required to layoff an employee for lack of work. Therefore, in the event the student unexpectedly leaves SUPERINTENDENT's program, SUPERINTENDENT will make every attempt to re-assign any staff involved in providing the exceptional service(s); however, if that is not possible, DISTRICT will reimburse SUPERINTENDENT for expense incurred throughout the layoff notice period.
5. DISTRICT does hereby agree to defend, indemnify and hold harmless the SUPERINTENDENT, the Ventura County Board of Education, and its officers, and employees from any and all claims, demands, liabilities, expenses (including attorneys' fees and costs of defense) arising as a result of SUPERINTENDENT's obligations under this agreement. However, this indemnification shall not apply if it is ultimately adjudicated that such claim, demand, liability or expense arose out of the sole negligence of the SUPERINTENDENT.
6. The term of this contract shall begin 1/14/2016 (IEP date= 2/16/16), and continue thereafter on a continuing basis until the IEP of said student is modified or until student's district of residence changes.

FISCAL YEAR-based on IEP date:	CURRENT: <u>2015-2016</u> ( <u>1/14/16-2/18/16</u> )	UPCOMING: <u>2016-2017</u>
(including ESY, if applicable)	\$ <u>5,560.12</u>	+
		\$ _____

It shall be the responsibility of DISTRICT to notify SUPERINTENDENT of any change in district of residence or change in the IEP that would affect this contract.

IN WITNESS WHEREOF, the parties hereto have executed this agreement:

OXNARD SCHOOL DISTRICT

VENTURA COUNTY OFFICE OF EDUCATION

Signature Lisa A. Franz

Accepted By: [Signature]  
Special Education Authorized Representative

Title: Director, Purchasing

Approved By: [Signature]  
Business Services Authorized Representative

Date: \_\_\_\_\_

Date: 4/11/16

Estimated Cost \$ 5,560.12 (Revised 4/4/16)

Please submit **two** original copies Oxnard School District-Purchasing Department



# AGREEMENT

## For Paraeducator Performing Special Circumstance Services

This Agreement, effective November 19, 2015 is made by and between the Ventura County Office of Education, hereinafter referred to as SUPERINTENDENT, and the Oxnard School District, hereinafter referred to as DISTRICT.  
KS120903

1. This agreement pertains to providing exceptional service(s) for, [REDACTED], a Special Education pupil who is a resident of DISTRICT and currently attends, Dwire School a special education program operated by SUPERINTENDENT.
2. SUPERINTENDENT agrees to provide for the exceptional service(s) of such Special Education pupil as authorized by DISTRICT or its designee and agreed to by SUPERINTENDENT.
3. DISTRICT shall reimburse SUPERINTENDENT the actual cost of providing the exceptional service plus the state approved indirect cost rate of SUPERINTENDENT.

Authorized exceptional service(s) shall consist of Paraeducator performing Special Circumstances services; 390 minutes daily and bus aide to and from school.

4. DISTRICT acknowledges that certain types of expenses will continue to accrue during periods of student's absence from school, including but not limited to salary and benefits of staff providing the exceptional service(s). DISTRICT further acknowledges that if the exceptional service(s) includes the service(s) of SUPERINTENDENT's employee(s), 30 days notice is required to layoff an employee for lack of work. Therefore, in the event the student unexpectedly leaves SUPERINTENDENT's program, SUPERINTENDENT will make every attempt to re-assign any staff involved in providing the exceptional service(s); however, if that is not possible, DISTRICT will reimburse SUPERINTENDENT for expense incurred throughout the layoff notice period.
5. DISTRICT does hereby agree to defend, indemnify and hold harmless the SUPERINTENDENT, the Ventura County Board of Education, and its officers, and employees from any and all claims, demands, liabilities, expenses (including attorneys' fees and costs of defense) arising as a result of SUPERINTENDENT's obligations under this agreement. However, this indemnification shall not apply if it is ultimately adjudicated that such claim, demand, liability or expense arose out of the sole negligence of the SUPERINTENDENT.
6. The term of this contract shall begin 11/19/2015 (IEP date), and continue thereafter on a continuing basis until the IEP of said student is modified or until student's district of residence changes.

FISCAL YEAR-based on IEP date:	CURRENT: <u>2015-2016</u> (11/19/15-6/30/16)	UPCOMING:
(including ESY, if applicable)	\$ <u>38,599.24</u>	+ \$ _____

It shall be the responsibility of DISTRICT to notify SUPERINTENDENT of any change in district of residence or change in the IEP that would affect this contract.

IN WITNESS WHEREOF, the parties hereto have executed this agreement:

OXNARD SCHOOL DISTRICT

VENTURA COUNTY OFFICE OF EDUCATION

Signature Lisa A. Franz

Accepted By: [Signature]  
Special Education Authorized Representative

Title: Director, Purchasing

Approved By: [Signature]  
Business Services Authorized Representative

Date: \_\_\_\_\_

Date: 2/23/16

Estimated Cost \$ \_\_\_\_\_  
\$38,599.24 for fiscal year 15-16



# AGREEMENT

## For Paraeducator Performing Special Circumstance Services

This Agreement, effective October 15, 2015 is made by and between the Ventura County Office of Education, hereinafter referred to as SUPERINTENDENT, and the Oxnard School District, hereinafter referred to as DISTRICT.

VV030307

1. This agreement pertains to providing exceptional service(s) for, [REDACTED] a Special Education pupil who is a resident of DISTRICT and currently attends, Dwire School a special education program operated by SUPERINTENDENT.
2. SUPERINTENDENT agrees to provide for the exceptional service(s) of such Special Education pupil as authorized by DISTRICT or its designee and agreed to by SUPERINTENDENT.
3. DISTRICT shall reimburse SUPERINTENDENT the actual cost of providing the exceptional service plus the state approved indirect cost rate of SUPERINTENDENT.

Authorized exceptional service(s) shall consist of Paraeducator performing Special Circumstances services; bus aide to and from school.

4. DISTRICT acknowledges that certain types of expenses will continue to accrue during periods of student's absence from school, including but not limited to salary and benefits of staff providing the exceptional service(s). DISTRICT further acknowledges that if the exceptional service(s) includes the service(s) of SUPERINTENDENT's employee(s), 30 days notice is required to layoff an employee for lack of work. Therefore, in the event the student unexpectedly leaves SUPERINTENDENT's program, SUPERINTENDENT will make every attempt to re-assign any staff involved in providing the exceptional service(s); however, if that is not possible, DISTRICT will reimburse SUPERINTENDENT for expense incurred throughout the layoff notice period.
5. DISTRICT does hereby agree to defend, indemnify and hold harmless the SUPERINTENDENT, the Ventura County Board of Education, and its officers, and employees from any and all claims, demands, liabilities, expenses (including attorneys' fees and costs of defense) arising as a result of SUPERINTENDENT's obligations under this agreement. However, this indemnification shall not apply if it is ultimately adjudicated that such claim, demand, liability or expense arose out of the sole negligence of the SUPERINTENDENT.
6. The term of this contract shall begin 10/15/2015 (IEP date), and continue thereafter on a continuing basis until the IEP of said student is modified or until student's district of residence changes.

FISCAL YEAR-based on IEP date:	CURRENT: <u>2015-2016</u>	UPCOMING:
(including ESY, if applicable)	<u>(10/15/15-6/30/16)</u>	
	\$ <u>5,120.00</u>	+ \$ _____

It shall be the responsibility of DISTRICT to notify SUPERINTENDENT of any change in district of residence or change in the IEP that would affect this contract.

IN WITNESS WHEREOF, the parties hereto have executed this agreement:

OXNARD SCHOOL DISTRICT

VENTURA COUNTY OFFICE OF EDUCATION

Signature Lisa A. Franz

Accepted By: [Signature]  
Special Education Authorized Representative

Title: Director, Purchasing

Approved By: [Signature]  
Business Services Authorized Representative

Date: \_\_\_\_\_

Date: 10/28/15

Estimated Cost \$ \_\_\_\_\_  
\$5,120.00 for fiscal year 15-16

Please submit **two** original copies Oxnard School District-Purchasing Department



## **BOARD AGENDA ITEM**

Name of Contributor: Lisa Cline

Date of Meeting: 5/18/16

CLOSED SESSION	_____
SECTION B: HEARINGS	_____
SECTION C: CONSENT	_____X_____
SECTION D: ACTION	_____
SECTION E: REPORTS/DISCUSSION	_____
SECTION F: BOARD POLICIES	_____

### **SETTING OF DATE FOR PUBLIC HEARING – OXNARD SCHOOL DISTRICT 2016-17 ADOPTED BUDGET (Cline/Penanhoat)**

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It is appropriate that the Board of Trustees set the date of Wednesday, June 1, 2016, in the Board Room of the Educational Service Center, for a public hearing on the Oxnard School District 2016-17 Adopted Budget.

#### **FISCAL IMPACT**

N/A

#### **RECOMMENDATION**

It is the recommendation of the Deputy Superintendent, Business & Fiscal Services, and the Director of Finance that the Board of Trustees set the date of Wednesday, June 1, 2016 for a public hearing on the Oxnard School District 2016-17 Adopted Budget.

#### **ADDITIONAL MATERIAL**

Attached: Notice of Public Hearing (1 page)





# OXNARD SCHOOL DISTRICT

1051 South A Street • Oxnard, CA 93030 • (805) 385-1501 • [www.oxnardsd.org](http://www.oxnardsd.org)

## **NOTICE OF PUBLIC HEARING**

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May 18, 2016

The Board of Trustees of the Oxnard School District will hold a Public Hearing on Wednesday, June 1, 2016, at 7:00 P.M. or as soon thereafter as this matter may be heard, in the Board Room of the Educational Service Center Building of the Oxnard School District, located at 1051 S. "A" Street, Oxnard, regarding the 2016-2017 Proposed Budget.

By: Lisa Cline  
Deputy Superintendent,  
Business & Fiscal Services  
(805) 385-1501, ext. 2401

## **BOARD AGENDA ITEM**

Name of Contributor: Lisa Cline

Date of Meeting: 5/18/16

STUDY SESSION	_____
CLOSED SESSION	_____
SECTION B: HEARINGS	_____
SECTION C: CONSENT	<u>  X  </u>
SECTION D: ACTION	_____
SECTION E: REPORTS/DISCUSSION	_____
SECTION F: BOARD POLICIES	_____

### **ENROLLMENT REPORT (Cline)**

---

District enrollment as of February 29, 2016 was 16,955. This is 68 less than the same time last year.

District enrollment as of March 24, 2016 was 16,963. This is 34 less than the same time last year.

District enrollment as of April 29, 2016 was 16,949. This is 44 less than the same time last year.

### **FISCAL IMPACT**

None.

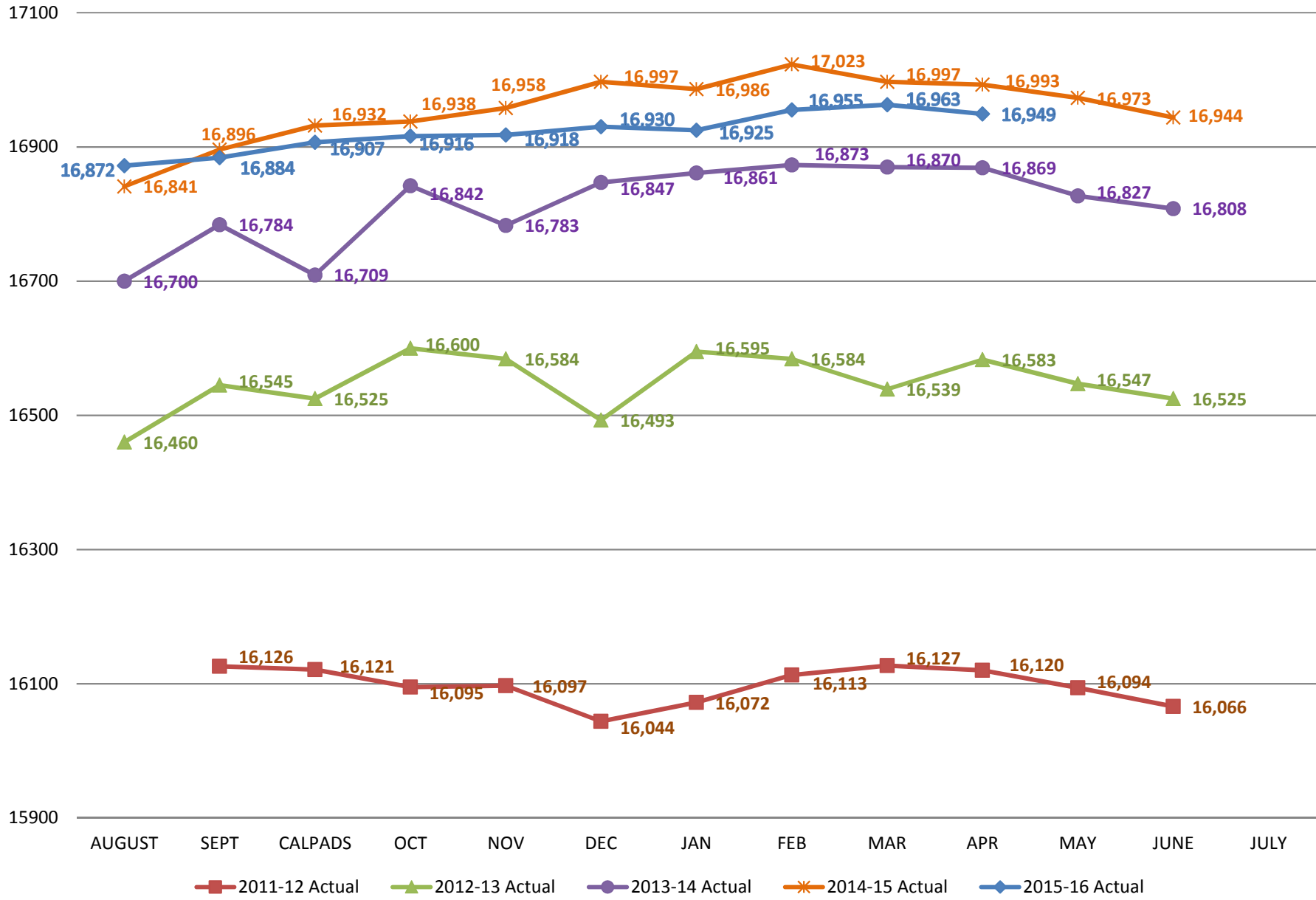
### **RECOMMENDATION**

Information only.

### **ADDITIONAL MATERIAL**

Attached:       Graph – Oxnard School District Enrollment History 2011-12 through  
                  2015-16 Actuals (1 page)

### Oxnard School District Enrollment History 2011-12 through 2015-16 Actuals



**BOARD AGENDA ITEM**

Name of Contributor(s): Lisa Cline

Date of Meeting: 5/18/16

**STUDY SESSION** \_\_\_\_\_  
**CLOSED SESSION** \_\_\_\_\_  
**SECTION B: HEARINGS** \_\_\_\_\_  
**SECTION C: CONSENT AGENDA**   X    
**SECTION D: ACTION** \_\_\_\_\_  
**SECTION E: REPORTS/DISCUSSION** \_\_\_\_\_  
**SECTION F: BOARD POLICIES** 1<sup>st</sup> Reading \_\_\_\_\_ 2<sup>nd</sup> Reading \_\_\_\_\_

**Ratification of WAL #005 with ATC Group Services LLC for Preparation of an Addendum to the Preliminary Environmental Assessment for the Lemonwood School Reconstruction Project (Cline/CFW)**

---

The Lemonwood School Reconstruction project commenced construction in early May 2016. The District conducted a groundbreaking ceremony on April 28, 2016 to celebrate this milestone.

Pursuant to the initial construction timeline, a Preliminary Environmental Assessment (PEA) was completed for the initial construction area associated with the new classroom building. At this time, the preparation of an addendum to the Preliminary Environmental Assessment is required to complete the process at the Lemonwood site pursuant to the California Department of Toxic Substances Control (DTSC) requirements.

The addendum to the PEA will conduct additional soils testing and complete the DTSC review and approval process for the entire site. Specifically, the scope of work includes: (1) attending the required DTSC scoping meeting; (2) preparing a PEA addendum work plan for DTSC review; (3) performing the proposed scope of work; (4) preparation of a PEA addendum report and; (5) participating in a public notification process prior to the DTSC adopting the PEA addendum.

In order to ensure DTSC review and confirm a “no further action” status without impact to the construction timeline, a Notice to Proceed was issued to ATC on April 18, 2016. At this time, the Board of Trustees is requested to ratify Work Authorization Letter #005 with ATC Group Services LLC:

Master Agreement: **#13-135**  
WAL: **#005**  
Consultant: **ATC Group Services LLC (formerly Cardno ATC)**  
Date Issued: **May 5, 2016**  
Amount: **\$44,950.00**

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**FISCAL IMPACT:**

The attached WAL #005 is for a not to exceed amount of \$44,950.00 - Measure "R"

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**RECOMMENDATION:**

It is the recommendation of the Deputy Superintendent, Business and Fiscal Services, in conjunction with Caldwell Flores Winters, that the Board of Trustees ratify WAL #005 with ATC Group Services LLC in the amount not to exceed \$44,950.00 for the preparation of an addendum to the Preliminary Environmental Assessment (PEA) for the Lemonwood School Reconstruction Project per Master Agreement #13-135 with ATC Group Services LLC.

---

**ADDITIONAL MATERIAL(S):**

- WAL#005, ATC Group Services LLC (formerly Cardno ATC) (2 Pages)
  - Proposal (6 Pages)
  - Master Agreement #13-135, Cardno ATC (32 Pages)
- 

**GOALS:**

- **District Goal Three:**  
***Adopt and Implement a Comprehensive Facilities Program that Improves Student Performance, Maximizes State Funding Opportunities and Reduces Overcrowding at Existing School Sites***



**WORK AUTHORIZATION LETTER**

**GENERAL INFORMATION**

<b>PROJECT #:</b> 3	<b>DATE:</b> 5/18/2016
<b>SITE NAME:</b> Lemonwood Elementary School	<b>DSA #</b> 03-116026
<b>MASTER AGREEMENT #:</b> 13-135	<b>OPSC #</b>
<b>WAL #:</b> 005	<b>VENDOR ID:</b>

**PURSUANT TO MASTER AGREEMENT BETWEEN:**

**DISTRICT**

**OXNARD SCHOOL DISTRICT**  
 1051 South A Street  
 Oxnard, CA 93030  
 (805) 385-1501

**CONSULTANT**

<b>Firm Name:</b>	ATC Group Services LLC (formerly Cardno ATC)
<b>Street:</b>	25 Cupania Circle
<b>City, State, Zip:</b>	Monterey Park, CA 91755
<b>Phone:</b>	323-517-9780

**SCOPE OF SERVICES TO BE PERFORMED UNDER THIS WAL**

Preparation of an addendum to the Preliminary Environmental Assessment (PEA) for the Lemonwood School Reconstruction Project as outlined in the attached proposal from ATC dated April 11, 2016. The scope of work will address all necessary steps associated with the preparation and ultimate approval of the PEA addendum by the Department of Toxic Substances Control (DTSC) for the entire remainder of the Lemonwood site. ATC agrees to abide by the attached schedule of activities and accelerate the timeline where feasible.

*(ATTACH ADDITIONAL PAGES AS NECESSARY)*

**SCHEDULE OF SERVICES TO BE PERFORMED UNDER THIS WAL**

<b>START DATE:</b> 4/18/2016	<b>COMPLETION DATE:</b> See attached schedule of activities
------------------------------	---

**FIXED FEE AMOUNT:** \$44,950

*This fee amount is based upon Consultant's proposal dated 4/11/2016 and subsequent negotiations mutually agreed to by all parties*

*This WAL is inherently a part of the Master Agreement referenced above. It is bound by the general terms and conditions of the Master Agreement. This WAL describes in detail the Consultants specific Scope of Services, agreed upon lump sum fixed fee, agreed upon schedule for completion of Services, and other provisions required to clearly indicate the required Services, and terms of this WAL.*

*This WAL and associated Master Agreement hereby supercede any and all terms, conditions, and other provisions of the Consultant's Proposal; and such terms, conditions, and other provisions are null and void, and are not incorporated to any extent as part of this WAL and associated Master Agreement whether or not they are directly superceded by this WAL and/or the associated Master Agreement.*

**IN WITNESS THEREOF, THE PARTIES HAVE AGREED TO AND EXECUTED THIS WAL AS SET FORTH BELOW:**

**DISTRICT**

OXNARD SCHOOL DISTRICT

(SIGNATURE)

(DATE)

**CONSULTANT**

CONSULTANT

(SIGNATURE)

(DATE)

**FOR DISTRICT USE ONLY**

<b>PROJECT MANAGER:</b> Patricia Raphael Garcia (CFW)	<b>PREPARED BY:</b> Patricia Raphael Garcia (CFW)
<b>P.O. #</b>	<b>P.O. AMOUNT:</b>
<b>SOURCE OF FUNDS:</b> <input checked="" type="checkbox"/> MEASURE "R" <input type="checkbox"/> DEF. MAINT. <input type="checkbox"/> DEV. FEES <input type="checkbox"/> OTHER _____	
<b>COST ID:</b> 6171 - Environmental Studies	

(PM APPROVAL SIGNATURE)

(DATE)

**SPECIAL INSTRUCTIONS:**

## Schedule of Activities

4/26/2016	ATC submits draft scope of work to DTSC
5/6/2016	ATC to prepare draft work plan to CFW
5/10/2016	CFW reviews work plan
5/10/2016	ATC submits work plan to DTSC
5/24/2016	DTSC approves work plan
6/7/2016	ATC completes field work
6/28/2016	ATC receives lab data/prepares PEA report
6/30/2016	CFW reviews PEA report
7/1/2016	ATC submits PEA report to DTSC
7/15/2016	DTSC reviews PEA report and issues letter of adequacy
8/24/2016	District completes public comment process
8/25/2016	District submits public comments to DTSC
9/8/2016	DTSC issues "no further action"

Note: The timeline is heavily dependent on actions undertaken by DTSC; ATC will endeavor to meet or exceed all scheduled milestones, but can not be held liable for actions or activities outside of ATC's direct control.

April 11, 2016

Patricia Raphael Garcia  
Oxnard School District  
c/o Caldwell Flores Winter, Inc.  
1901 S. Victoria Avenue, Suite 106  
Oxnard, California, 93035

Sent via email: praphael@cfwinc.com

**RE: Proposal for Preliminary Endangerment Assessment – Phase 2 Construction**  
Lemonwood Elementary School  
2200 Carnegie Court  
Oxnard, California 93035  
ATC Proposal Number 10116-2016-04-0121

Dear Ms. Garcia:

ATC Group Services LLC (ATC) is pleased to submit this Proposal to the Oxnard School District (OSD) for the Lemonwood Elementary Spchool (Lemonwood) site located at 2200 Carnegie Court in Oxnard, California. It is ATC's understanding that OSD intends to expand the "Phase 1" construction to include a new building whose footprint will be in the approximate vicinity of temporary buildings 913, 914, and 915. Because the proposed building will be constructed in an area in which soil conditions have not been assessed, the Department of Toxic Substances Control (DTSC) will require the preparation of an addendum to the Preliminary Endangerment Assessment (PEA) report, dated February 4, 2016, prior to the initiation of the proposed construction activities. It is ATC's understanding that the OSD prefers to perform all remaining site assessment activities required for both the expanded "Phase 1" construction, and all subsequent site construction activities in a single mobilization.

The scope of work included within this proposal is intended to address all necessary steps associated with the preparation of, and the ultimate adoption of, the second PEA by the DTSC. Specifically, the scope of work will include attending a scoping meeting with the DTSC, preparing a Phase II Environmental Site Assessment (ESA) work plan for DTSC review, performing the proposed scope of work, preparation of a PEA report, and participating in a public notification process prior to the DTSC adopting the PEA.

## **PROPOSED SCOPE OF WORK**

### **Scoping Meeting**

Prior to the preparation of a work plan, ATC will meet DTSC representatives at the site to discuss the construction activities being proposed for portions of the site not assessed in ATC's *Preliminary Environmental Assessment Report*, dated February 4, 2016. During the scoping meeting, ATC and the DTSC will come to an agreement





regarding the appropriate number of sampling points, sample depth intervals, and chemical analyses to be performed. ATC intends to make the case that neither soil vapor nor ground sampling activities are warranted, given the results of soil vapor and groundwater sampling activities previously performed at the site.

### **Work Plan Preparation**

ATC will prepare a work plan that will address the likely constituents-of-concern (expected to be petroleum hydrocarbons and organochlorine pesticides [OCPs]). It will include sampling strategy, proposed boring locations, and quality assurance/control procedures.

Given ATC's current understanding of site usage, ATC expects the scope of work agreed upon during the scoping meeting to consist of collecting a total of 30 soil borings, with samples collected at depths of 0.5, 2.0, and 5.0 feet below ground surface (bgs). Soil samples collected at all locations and depth intervals will be analyzed for total petroleum hydrocarbons (TPH) and OCPs. Additionally, ATC expects soil samples collected at a depth of 0.5 feet bgs from eight of the soil borings to be analyzed for CAM17 metals.

### **ESA Field Work**

Following acceptance of the work plan by the DTSC, ATC will execute the proposed scope of work. As stated above, ATC expects the scope of work to consist of collecting soil samples at 30 locations at depths of up to five feet bgs, with a total of 90 soil samples being analyzed for TPH (EPA Method 8015) and OCPs (EPA Method 8081). Additionally, eight samples would be analyzed for CAM 17 metals (EPA Method 6010B).

### **PEA Report Preparation**

A PEA Report documenting the procedures and findings of this investigation will be prepared and submitted to the DTSC. The report will expand upon the conclusions and recommendations made in ATC's *Revised Preliminary Environmental Assessment Report*, dated February 4, 2016. The report will contain the following:

- Title sheet, signature page, disclaimer, table of contents, executive summary, and introduction format and content will attempt to be consistent with DTSC guidance;
- Project Description - This section includes an overview of the proposed construction project, a statement of the objectives of the investigation, a short chronology of site activities, a summary of previous site work (if any), and items of work completed for the investigation. Identification of the recognized environmental concerns being addressed and the related source of information;
- A description of the sampling approach;
- The sampling locations, depths, designation, and rationale;
- A description of the sample collection methods:
  - Sampling methods: Identify the standard operation method and step-by-step procedures of how each sample was collected, including equipment field quality controls;
  - Sample containers and preservation: Identify the types of containers and preservatives used for the different analyses and provide the pre-cleaning method used for the containers.
  - Sample packaging and shipment: Describe the methods for packaging, labeling, marking and shipping the samples;
  - Sample documentation: Describe the label and provide an example. Describe the unique number system used to positively identify each sample without distinguishing the QA/QC samples from other samples. Discuss the field documentation used and include field logs, photographs, and QC checklist or logs, and chain-of-custody forms in an appendix;
- A description of the sample preparation methods used to homogenize, split, and composite samples;
- A description of the QA/QC samples collected;
- A list of the analyses performed on each sample or group of samples, associated quantitation limits and holding times;
- A description of the field activities conducted in sufficient detail to demonstrate compliance with applicable requirements and to permit reconstruction by another environmental assessor:
  - Decontamination: Describing equipment decontamination procedures;



- Field conditions: Report will include a qualitative summary of soil conditions with appropriate description of lithologic changes or evidence of fill material within a designated area;
- Health and Safety: Report will describe health and safety procedures followed in the field, including safety equipment, personal protective equipment, level of protection, health and safety meetings, hazards encountered, and any instrument readings recorded;
- Waste management: Describe the management and disposition of wastes generated during the investigation, including soil cuttings, personal protective equipment, decontamination water, etc.
- Discussion of the analytical results;
- An evaluation of the overall QA/QC used to ensure that sampling, field and laboratory chain-of custody, laboratory analyses, field and laboratory data measurements, and reporting activities provide data quality consistent with the intended use. As part of the project QA/QC evaluation, data validation will be performed for all submitted samples. Data quality will be defined by data quality indicators (accuracy, precision, method reporting limits, completeness, representativeness, and comparability). A summary of data validation will be included;
- Interpret the data and compare to the DTSC screening values;
- Conclusions and recommendations based on comparison of sampling results to the provided health screening criteria;
- Include references to identify published referenced sources relied upon during the evaluation. Each referenced source shall be adequately annotated to facilitate retrieval by another party;
- Appendices will include field logs, analytical laboratory data reports, chain-of-custody documentation;
- Figures:
  - Site Vicinity Map – This map will include a north arrow, be to scale, and show the general location of the site relative to its surrounding area, including major highways, surface water bodies, land use, sensitive populations, and critical habitats;
  - Site Plan – This scaled plan will include a north arrow, and will be of sufficient detail to show significant site features, including site boundaries, structures, and areas of known or suspected environmental conditions;
  - Sampling Locations with Analytical Results – This figure should show the samples collected and the associated positive analytical results overlaid onto the Site Plan. The figure will show the sampling locations relative to the areas of recognized environmental conditions. The map will show sampling locations, analytes, detected concentrations, quantitation limit for non-detect concentrations, and concentration units.
- Tables: A summary of analytical results, including analytical method, sampling locations, depths, matrix, detected concentrations, quantitation limit for non-detect concentrations, units, and comparison to screening values.

The report will be reviewed and signed by State of California Professional Geologist.

Following submittal of the PEA, and upon receipt of a Letter of Adequacy from the DTSC, ATC will attend and participate in the required public hearing regarding the PEA, prior to the PEA's final adoption by the DTSC.

**Please note that the actual PEA requirements are at the discretion of the DTSC, and significant modification to the scope of work may be required by the DTSC. Any additional out-of-scope items, including, but not limited to meetings, project management, field work, sampling, and reporting required by the DTSC will be charged on a time and materials basis, pending client approval.**



## **FEE ESTIMATE**

ATC proposes to complete the proposed scope of work on a mixed Unit Cost and Time and Materials basis for the estimated amount of **\$44,950.00**. A breakdown of costs is provided on the spreadsheet below.

ATC will not exceed the cost estimates for the scope of work without written authorization from the Client. Should the Client require additional work, such as consultation beyond the number of hours estimated to complete this project, extensive report revisions, additional copies of the reports, consultation with attorneys, etc., the same unit rates listed on ATC's standard fee schedule will be applicable.

The results, findings, conclusions and recommendations, which will be provided in the final report, will be based solely on the conditions which are observed by ATC. No warranties or representations, expressed or implied, will be made as to the condition of the site beyond that observed by ATC during its site activities.

## **PROJECT DELIVERABLES AND SCHEDULE**

The timeline for implementation of work will be primarily dictated by the DTSC. Within one week of acceptance of this proposal by OSD, ATC will setup an on-site scoping meeting with DTSC representatives. Within two weeks following the on-site scoping meeting, ATC will submit a draft copy of the proposed work plan to OSD for review. Upon receipt of work plan approval from the DTSC, ATC will schedule the field work to commence within two weeks; a draft copy of the PEA report will be made available to OSD approximately three weeks after all laboratory analytical data are received. ATC expects the field work to take one worker four days to complete (based on the expected scope of work outlined above). Upon submittal and review of the PEA by the DTSC, and the receipt of a "Letter of Adequacy", the OSD will need to implement a public comment period to last no less than 30 days prior to the DTSC granting final concurrence with the PEA report.

The estimated project schedule is designed to meet Client deadlines; however, it does not include allowances for delays due to inclement weather, site access problems or other factors beyond the control of ATC.

## **AUTHORIZATION**

ATC appreciates the opportunity to present this proposal and looks forward to working with Caldwell Flores Winters, Inc. and OSD on this project. If this proposal is acceptable to you and you would like ATC to schedule this project, please forward a Work Authorization Letter under the existing Agreement. If you have any questions regarding this proposal, please contact our office at (323) 517-9780.

Sincerely,  
**ATC Group Services**

A blue ink handwritten signature, appearing to read 'Benjamin Chevlen', written over a horizontal blue line.

Benjamin Chevlen, PG  
Program Manager  
Direct Line (805) 496-1217  
Email: ben.chevlen@atcassociates.com

Attachments:

List of Assumptions  
Estimated Cost Breakdown



#### LIST OF ASSUMPTIONS

1. DTSC oversight fees will be charged to the District and are not included in this proposal.
2. Please note that the actual PEA requirements are at the discretion of the DTSC, and significant modification to the scope of work, including additional sampling and reporting could be required by the DTSC. Any additional scope items, including but not limited to meetings, project management, field work, sampling, and reporting required by the DTSC will be charged on a time and materials basis, pending client approval.
3. Public outreach activities, beyond participation in the public meeting, are not included in this proposal. ATC can provide additional services on a time and materials basis in accordance with our current fee schedule.
4. This proposal contains the anticipated scope of work to complete the PEA. The proposal shall be modified based on DTSC requirements. Actual PEA cost may be higher than estimated in this proposal.
5. The Client will provide unencumbered access to the site and all of the requested locations to permit ATC and its subcontractors to complete the items outlined in this proposal, at the scheduled days and times.
6. There are no material changes in site conditions from those described.
7. Fieldwork will take place on weekdays, with the exception of holidays falling on weekdays. Work shall take place between the hours of 7:00 a.m. and 7:00 p.m. at the site.
8. The fieldwork will be performed in Level D personal protection.
9. The site is accessible to and the investigative work can be performed as proposed. If weather, access, or site conditions restrict field operations, other arrangements and modifications to our fee may be necessary.
10. ATC or its subcontractors will not be responsible for damage to any underground utilities. It is the responsibility of the owner to mark all surface traces of below grade utilities and structures and provide scaled maps that include existing surface features and traces of underground utilities and structures. If requested, ATC can provide a utility locating company for an additional fee of \$1,000.00.
11. The scope of services is restricted to that which is outlined in this proposal.
12. Client to supply water, power and sanitary services.
13. Additional costs associated with unforeseen site conditions; or additional requirements, including additional soil sampling and analysis that may be required by the DTSC, and DTSC negotiations; are not included in the cost estimates above.
14. Soil cuttings will be drummed and placed onsite, pending analytical results. Drum disposal is estimated at \$120.00 per drum, on a time and materials basis.
15. Subcontracted drilling charges will be billed at their actual cost, plus a 10% mark-up.





### Estimated Cost Breakdown

<b>Scoping Meeting, Work Plan Preparation, HASP Update, and Project Preparation</b>					
Principal	\$115.00	Hr.		10	\$1,150.00
Senior Project Manager	\$85.00	Hr.		25	\$2,125.00
CADD	\$45.00	Hr.		2	\$90.00
<b>subtotal</b>					<b>\$3,365.00</b>
<b>Field Investigation</b>					
Senior Project Manager	\$85.00	Hr.		6	\$510.00
Project Geologist	\$75.00	Hr.		52	\$3,900.00
Utility Truck / Field Supplies	\$150.00	Day		5	\$750.00
Driller - daily rate	\$3,000.00	Cost+		4	\$12,000.00
<b>subtotal</b>					<b>\$17,160.00</b>
<b>Fixed Laboratory Analysis</b>					
EPA 6010 - CAM17 Metals	\$100.00	Each		8	\$800.00
EPA 8015 - TPH	\$95.00	Each		90	\$8,550.00
EPA 8081 - OCPs	\$100.00	Each		90	\$9,000.00
<b>subtotal</b>					<b>\$18,350.00</b>
<b>PEA Addendum Reporting</b>					
PEA Addendum Preparation*	\$4,500.00	Each		1	\$4,500.00
<b>subtotal</b>					<b>\$4,500.00</b>
<b>PEA Support and Public Hearing Participation</b>					
Principal	\$115.00	Hr.		10	\$1,150.00
Senior Project Manager	\$85.00	Hr.		5	\$425.00
<b>subtotal</b>					<b>\$1,575.00</b>
<b>GRAND TOTAL</b>					<b>\$44,950.00</b>

\* Lump sum amount to include report preparation and review (i.e. report writing, senior review, CADD time, clerical support, etc.) as described above.

**OXNARD SCHOOL DISTRICT  
AGREEMENT FOR CONSULTANT SERVICES  
(MASTER AGREEMENT – HAZARDOUS MATERIALS SURVEY & TESTING)**

This Agreement for Consultant Services (“Agreement”) is entered into as of this 13<sup>th</sup> day of November, 2013 by and between the **Oxnard School District** (“District”), with offices located at 1051 South A Street, Oxnard, CA 93030, and **Cardno ATC** (“Consultant”) with a business address at 25 Cupania Circle, Monterey Park, CA 91755. District and Consultant are sometimes hereinafter individually referred to as “Party” and hereinafter collectively referred to as the “Parties.”

**RECITALS**

A. District is authorized by *California Government Code* Section 53060, and Board Policy 4368, to contract with independent contractors for the furnishing of services concerning financial, economic, accounting, engineering, legal, administrative and other matters. District has sought, by issuance of a Request for Qualifications, the performance of certain services, with the precise scope of work to be specified at the time of assignment of work.

B. Following submission of a Statement of Qualifications for the performance of services, Consultant was prequalified by District to perform services on behalf of District that may be assigned, or not assigned, at the District’s sole discretion.

C. The Parties desire to formalize the prequalification of Consultant for performance of services and desire that the terms of that performance be as particularly defined and described herein.

**OPERATIVE PROVISIONS**

NOW, THEREFORE, in consideration of the mutual promises and covenants made by the Parties and contained herein and other consideration, the value and adequacy of which are hereby acknowledged, the Parties agree as follows:

1. **Incorporation of Recitals and Exhibits.** The Recitals set forth above and all exhibits attached to this Agreement, as hereafter amended, are incorporated by this reference as if fully set forth herein.
2. **Master Agreement.** This Agreement sets forth the basic terms and conditions between District and Consultant. It may be supplemented from time to time with an individual Work Authorization Letter (“WAL”) which shall be considered an amendment to this Agreement, and which shall be subject to all the terms and conditions of this Agreement, and any further terms and conditions as set forth in the WAL.
3. **Scope of Services.** The scope of Services to be assigned to Consultant pursuant to a WAL is further defined in **Exhibit F – Scope of Services**, wherein the general responsibilities of Consultant are described pursuant to the discipline(s) for which the Consultant has been deemed prequalified by District as described in this Agreement.
4. **Agreement, Scope of Work, and Assignment of Projects.** District may, from time to time, and at the sole discretion of District, assign to Consultant specific services to be performed by Consultant (the “Services”) pursuant to a WAL. The WAL assignment procedure and associated forms are set forth in **Exhibit A**, which is attached hereto. This Agreement, together with the WAL, sets forth the terms and conditions pursuant to which Consultant will perform such Services on behalf of District. The WAL

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shall particularize and describe, among other things, such project(s) for which Consultant is to perform Services, such Services to be performed by Consultant at such project(s), the timeline for the performance of such Services, and the compensation to be paid to Consultant for the performance of such Services.

5. **Term of Agreement.** Subject to earlier termination as provided below, this Agreement shall remain in effect from November 13, 2013 through November 12, 2018 (the “Term”). This Agreement may be extended only by amendment, signed by the Parties, prior to the expiration of the Term. Such agreement for extension shall be based upon the showing of good and sufficient cause by Consultant that such extension(s) shall be granted. District shall not be obligated to compensate Consultant for any additional costs if such an extension has been granted to this Agreement. Any provision for additional compensation shall be accommodated via the WAL process as indicated in **Exhibit A**.
6. **Time for Performance.** The scope of the Services set forth in the WAL shall be completed during the Term pursuant to the schedule specified in the WAL. If Services indicated in the WAL cannot be completed within the schedule set forth in the WAL, or if the schedule exceeds the Term of this Agreement, it is the responsibility of Consultant to notify District at least ninety (90) days prior to the expiration of either, with a request for a time extension clearly identifying the cause(s) for the failure to complete the Services within the schedule and/or the Term. Should Consultant fail to provide such notice, and/or the Services not be completed pursuant to that schedule or within the Term, Consultant shall be deemed to be in Default as provided below. District, in its sole discretion, may choose not to enforce the Default provisions of this Agreement and may instead allow Consultant to continue performing the Services.
7. **Additional Services.** Additional Services are services in addition to the Services set forth in the WAL that are provided by Consultant pursuant to a written request by District. Additional Services will require a written request or pre-authorization in writing by District following specific approval of such services by the District Board of Trustees. It is understood and agreed that Consultant shall not perform any Additional Services unless and until Consultant receives specific written approval for such Additional Services from the District Board of Trustees. Any modification of the compensation to be paid to Consultant as a result of Additional Services must be specifically approved in writing by the District Board of Trustees. In the event that the District Board of Trustees approves in writing a modification of the compensation, then Consultant shall be paid for such Additional Services pursuant to Section 8, below. However, it is understood and agreed that if the cause of the Additional Services is the sole or partial responsibility of Consultant, its agents, or any subconsultants or other parties under the charge of Consultant, no additional compensation shall be paid to Consultant. If such conditions exist so as to justify Additional Services as indicated above, which require additional compensation or time in order to be performed, it is the sole responsibility of Consultant to submit a request for Additional Services within ten (10) days of Consultant’s discovery of such conditions which require Additional Services. It is understood and agreed that if Consultant performs any services that it claims are Additional Services without receiving prior written approval from the District Board of Trustees, Consultant shall not be paid for such claimed Additional Services.
8. **Compensation and Method of Payment.** This Agreement does not guarantee that District will issue a WAL to Consultant nor does this Agreement guarantee any compensation to Consultant. This Agreement does not create any obligation on the part of District to compensate Consultant absent a WAL indicating compensation due to Consultant once Services are performed. Specific compensation and payment amounts, including approved reimbursable expenses, shall be set forth in the WAL. However, it is understood and agreed that the compensation to be paid to Consultant shall not be in excess of or exceed the rates set forth in Exhibit **B** “Compensation”.

a. Each month Consultant shall furnish to District an original invoice for all work performed and expenses incurred during the preceding month for Services performed pursuant to a WAL. The invoice shall clearly indicate the assigned project, the approved WAL, and shall detail charges by the following categories: labor (by sub-category), travel, materials, equipment, supplies, and sub-consultant contracts. Sub-consultant charges, if any, shall be detailed by the following categories: labor, travel, materials, equipment and supplies. District shall independently review each invoice submitted by Consultant to determine whether the work performed and expenses incurred are in compliance with the provisions of this Agreement and the WAL. In the event that no charges or expenses are disputed, the invoice shall be approved and paid according to the terms set forth in subsection b. In the event any charges or expenses are disputed by District, the original invoice shall be returned by District to Consultant for correction and resubmission.

b. Except as to any charges for work performed or expenses incurred by Consultant which are disputed by District, District will use its best efforts to cause Consultant to be paid within forty-five (45) days of receipt of Consultant's correct and undisputed invoice.

c. Payment to Consultant for work performed pursuant to this Agreement and a WAL shall not be deemed to waive any defects in work performed by Consultant.

#### **9. Responsibilities of Consultant:**

a. Consultant shall perform all Services as indicated in this Agreement and the WAL to the satisfaction of District.

b. The specific Services of Consultant to be performed shall be indicated in the WAL.

c. Consultant hereby represents and warrants that (a) it is an experienced consultant in the discipline(s) identified in **Exhibit F**, having the skill and the legal and professional ability and the flexibility necessary to perform all of the Services required under this Agreement; (b) it has the capabilities and resources necessary to perform its obligations hereunder; (c) it is familiar with all current laws, rules, regulations and other restrictions which are and may become applicable to the scope of Services under this Agreement, including but not limited to all local ordinances, building codes, and requirements of all Authorities Having Jurisdiction (AHJ) including but not limited to the Division of State Architect (DSA), the Office of Public School Construction (OPSC), the State Facilities Planning Division (SFPD), California Department of Education (CDE), the California Department of General Services (DGS), the Department of Toxic Substances Control (DTSC), the California Environmental Quality Act (CEQA), Title 24 of the California Code of Regulations, the California Education Code, State and Local Fire Authorities, air quality districts, water quality and control boards, and any/all other AHJ; (d) that it will assume full responsibility for all Services performed and all work prepared and furnished to District by its employees, agents, and subconsultants; (e) that it has sufficient financial strength and resources to undertake and complete the Services provided for under this Agreement within the schedule set forth in the WAL; and (f) that it certifies and covenants that all reports, certifications, studies, analyses, and other documents prepared by Consultant shall be prepared in accordance with all applicable laws, rules, regulations, and other requirements in effect at the time of their preparation, or required at their time of submittal to District and or agencies.

d. Consultant shall follow accepted industry standards and practices and comply with all federal, state, and local laws and ordinances applicable to the Services required by this Agreement and the WAL.

#### **10. Responsibilities of District.**



- a. District will prepare and furnish to Consultant upon Consultant's request, such information as is reasonably necessary to the performance of the Services required under this Agreement and the WAL. Consultant understands that all information provided to Consultant remains the property of District and shall only be removed from District's possession/premises and/or be photocopied, reproduced, distributed, or otherwise made available to others if such activities are expressly approved in writing by District and/or the Program Manager. Failure to comply with the above requirements shall be reasonable cause for termination of this Agreement, and may subject Consultant to liability for damages to District.
  - b. If needed by Consultant, District shall provide information as to the requirements and educational program for each project assigned by a WAL, including approved budget and schedule limitations.
  - c. District shall facilitate and coordinate cooperation amongst and between District consultants, including but not limited to architects, construction managers, surveyors, geotechnical engineers, inspectors, testing laboratories, hazardous materials specialists, CEQA/DTSC compliance specialists, technology experts, and any other professional consultants District deems necessary to execute the Facilities Implementation Program. Such coordination shall include the distribution of documentation prepared by individual consultants which may be of service to Consultant in the course of completing the Services.
  - d. District shall facilitate and coordinate cooperation amongst and between District staff and Consultant, as required to complete the Services.
  - e. District shall provide for the timely approval and execution of the WALs, Additional Services requests, invoices, and any other documentation that requires District action in order for Consultant to complete the Services.
11. **Suspension.** District may, for any reason or no reason, in District's sole discretion, suspend all or a portion of this Agreement, the WAL, or the Services by giving ten (10) calendar days written notice of suspension to Consultant. In the event such notice is given, Consultant shall cease immediately all work in progress. If District suspends the Services for a period of ninety (90) consecutive calendar days or more and, in addition, if such suspension is not caused by Consultant or the acts or omissions of Consultant, then if the Services are resumed, Consultant's compensation shall be subject to adjustment to provide for actual direct costs and expenses incurred by Consultant as a direct result of the suspension and resumption by District of the Services.
12. **Termination.** This Agreement, the WAL, or the Services may be terminated at any time by mutual agreement of the Parties or by either Party as follows:
- a. District may terminate all or a portion of this Agreement, the WAL, or the Services without cause at any time by giving ten (10) calendar days written notice of termination to Consultant. In the event such notice is given, Consultant shall cease immediately all work in progress; or
  - b. District may terminate all or a portion of this Agreement, the WAL, or the Services for cause in the event of a Default by giving written notice pursuant to Section 15, below; or
  - c. Consultant may terminate this Agreement or the WAL at any time upon thirty (30) calendar days written notice if District fails to make any undisputed payment to Consultant when due and such failure remains uncured for forty-five (45) calendar days after written notice to District.

13. **Similar or Identical Services.** In the event that this Agreement, the WAL, or any of the Services are terminated in whole or in part as provided herein, District may procure, upon such terms and in such manner as District may determine appropriate, services similar or identical to those terminated to complete any unfinished Services or new services as needed by District.
14. **Inspection and Final Acceptance.** District acceptance of any of work or Services, whether specifically in writing or by virtue of payment, shall not constitute a waiver of any of the provisions of this Agreement or the WAL including, but not limited to, indemnification and insurance provisions.
15. **Default.** Failure of Consultant to perform any Services or comply with any provisions of this Agreement or the WAL constitutes a Default. District may terminate all or any portion of this Agreement, the WAL, or the Services for cause in the event of a Default. The termination shall be effective if Consultant fails to cure such Default within thirty (30) calendar days following issuance of written notice thereof by District, or if the cure by its nature takes longer, fails to commence such cure within thirty (30) calendar days from the date of issuance of the notice and diligently prosecutes such cure to the satisfaction of District. If Consultant has not cured the Default, District may hold all invoices and may choose to proceed with payment on said invoices only after the Default is cured to District's satisfaction. In the alternative, District may, in its sole discretion, during the period before Consultant has cured the Default, elect to pay any portion of outstanding invoices that corresponds to Services satisfactorily rendered. Any failure on the part of District to give notice of Consultant's default shall not be deemed to result in a waiver of District's legal rights or any rights arising out of any provision of this Agreement or the WAL.
  - a. In addition to District's termination rights set forth above, District shall have (i) the right to cure Consultant's Default at Consultant's cost, in which case all amounts expended by District in connection with such cure shall accrue interest from the date incurred until repaid to District by Consultant at the rate of ten percent (10%) per annum; and (ii) all other rights and remedies available to District at law and in equity, including, without limitation, an action for damages. District shall have the right to retain unpaid earned balances to offset damages, and/or charge Consultant for all damages above and beyond unpaid balance of WAL.
16. **Ownership of Documents.** All maps, models, designs, drawings, photographs, studies, surveys, reports, data, notes, computer files, files and other documents prepared, developed or discovered by Consultant in the course of providing any Services pursuant to this Agreement or the WAL (collectively and individually, the "Documents") shall become the sole property of District and may be used, reused or otherwise disposed of by District without the permission of Consultant. Upon completion, expiration or termination of this Agreement or the WAL, Consultant shall turn over to District all such Documents.
17. **Use of Documents by District.** If and to the extent that District utilizes for any purpose not related to this Agreement or the WAL any Documents, Consultant's guarantees and warranties related to Standard of Performance under this Agreement or the WAL shall not extend to such use of the Documents.
18. **Consultant's Books and Records.** Consultant shall maintain any and all documents and records demonstrating or relating to Consultant's performance of Services pursuant to this Agreement or the WAL for a minimum of four years after termination or expiration of this Agreement and the WAL, or longer if required by law. Such records shall include at minimum a detailed record of daily performance, staff time records, subconsultants time records, documentation of all costs incurred by Consultant that were billed to District, and detailed records of all Consultant fees, overhead, and profit on earned amounts.

a. Consultant shall maintain any and all ledgers, books of account, invoices, vouchers, canceled checks, or other documents or records evidencing or relating to work, services, expenditures and disbursements charged to District pursuant to this Agreement or the WAL for a minimum of four years, or longer if required by law, all in accordance with generally accepted accounting principles and with sufficient detail so as to permit an accurate evaluation of the Services provided by Consultant pursuant to this Agreement or the WAL.

b. Any and all such records or documents shall be made available for inspection, audit and copying, at any time during regular business hours, upon request by District or its designated representative. Copies of such documents or records shall be provided directly to District for inspection, audit and copying when it is practical to do so; otherwise, unless an alternative is mutually agreed upon, such documents and records shall be made available at Consultant's address indicated for receipt of notices in this Agreement.

c. District has the right to acquire custody of such records by written request if Consultant decides to dissolve or terminate its business. Consultant shall deliver or cause to be delivered all such records and documents to District within sixty (60) days of receipt of the request.

19. **Independent Contractor.** Consultant is retained as an independent contractor and is not employed by District. No employee or agent of Consultant shall become, or be considered to be, an employee of District for any purpose. It is agreed that District is interested only in the results obtained from the Services under this Agreement and the WAL and that Consultant shall perform as an independent contractor with sole control of the manner and means of performing the Services required under this Agreement and the WAL. Consultant shall complete this Agreement and the WAL according to its own methods of work which shall be in the exclusive charge and control of Consultant and which shall not be subject to control or supervision by District except as to results of the Services. Consultant shall provide all of its own supplies, equipment, facilities, materials, manpower, and any/all other resources that may become necessary in the course of completing the Services. It is expressly understood and agreed that Consultant and its employees shall in no event be entitled to any benefits to which District employees are entitled, including, but not limited to, overtime, retirement benefits, insurance, vacation, worker's compensation benefits, sick or injury leave or other benefits. Consultant will be responsible for payment of all of Consultant's employees' wages, payroll taxes, employee benefits and any amounts due for federal and state income taxes and Social Security taxes since these taxes will not be withheld from payments under this Agreement or the WAL.

a. The personnel performing the Services under this Agreement and the WAL on behalf of Consultant shall at all times be under Consultant's exclusive direction and control. Consultant, its agents or employees shall not at any time or in any manner represent that Consultant or any of Consultant's officers, employees, or agents are in any manner officials, officers, employees or agents of District.

b. Consultant shall have no authority to bind District in any manner, or to incur any obligation, debt or liability of any kind on behalf of or against District, whether by contract or otherwise, unless such authority is expressly conferred in writing by District, or under this Agreement.

20. **Standard of Performance.** Consultant represents and warrants that it has the skill, qualifications, experience and facilities necessary to properly perform the Services required under this Agreement and the WAL in a thorough, competent and professional manner. Consultant represents and warrants that its employees and subcontractors have all legally required licenses, permits, qualifications and approvals necessary to perform the Services and that all such licenses and approvals shall be maintained throughout the term of this Agreement and the WAL. Consultant shall at all times faithfully, competently and to the best of its ability, experience and talent, perform all Services

described herein and the WAL. In meeting its obligations under this Agreement and the WAL, Consultant shall employ, at a minimum, the standard of care utilized by persons engaged in providing services similar to those required of Consultant under this Agreement and the WAL for California school districts in or around the same geographic area of District (the “Standard of Performance”).


21. **Confidential Information.** All information gained during performance of the Services and all Documents or other work product produced by Consultant in performance of this Agreement and the WAL shall be considered confidential (“confidential information”). Consultant shall not release or disclose any such confidential information, Documents or work product to persons or entities other than District without prior written authorization from the Superintendent of District and/or Program Manager, except as may be required by law. Confidential information does not include information that: (i) Consultant had in its possession prior to considering entering into this Agreement; (ii) becomes public knowledge through no fault of Consultant; (iii) Consultant lawfully acquires from a third party not under an obligation of confidentiality to the disclosing party; or (iv) is independently developed by Consultant without benefit of the information provided by District. In connection with confidential information:

a. Consultant shall promptly notify District if it is served with any summons, complaint, subpoena or other discovery request, court order or other request from any party regarding this Agreement or the WAL or the Services performed hereunder or the WAL.

b. District retains the right, but has no obligation, to represent Consultant or be present at any deposition, hearing or similar proceeding. Consultant agrees to cooperate fully with District and to provide District with the opportunity to review any response to discovery requests provided by Consultant; provided that this does not imply or mean the right by District to control, direct, or rewrite said response.

22. **Conflict of Interest; Disclosure of Interest.** Consultant covenants that neither it, nor any officer or principal of its firm, has or shall acquire any interest, directly or indirectly, which would conflict in any manner with the interests of District or which would in any way hinder Consultant’s performance of the Services under this Agreement or the WAL. Consultant further covenants that in the performance of this Agreement and the WAL, no person having any such interest shall be employed by it as an officer, employee, agent or subcontractor without the express written consent of District. Consultant agrees to at all times avoid conflicts of interest or the appearance of any conflicts of interest with the interests of District in the performance of this Agreement and the WAL.


a. Bylaws of the Board 2030(A) E, 2030(B) E and 2030(C) E, as hereinafter amended or renumbered, require that a consultant that qualifies as a “designated employee” must disclose certain financial interests by filing financial interest disclosures. By its initials below, Consultant (i) represents that it has received and reviewed a copy of the Bylaws of the Board 2030(A) E, 2030(B) E and 2030(C) E and that it  does  does not qualify as a “designated employee”; and (ii) agrees to notify District, in writing, if Consultant believes that it is a “designate employee” and should be filing financial interest disclosures, but has not been previously required to do so by District.

 (Initials)

23. **Compliance with Applicable Laws.** In connection with the Services and its operations, Consultant shall keep itself informed of and comply with all applicable federal, state and local laws, statutes, codes, ordinances, regulations and rules including, but not limited to, minimum wages and/or prohibitions against discrimination, in effect during the Term. Consultant shall obtain any and all licenses, permits and authorizations necessary to perform the Services. Neither District, nor any

elected or appointed boards, officers, officials, employees or agents of District shall be liable, at law or in equity, as a result of any failure of Consultant to comply with this section.

a. Without limiting the generality of the foregoing, Consultant, unless exempted, shall comply with the requirements of Education Code Section 45125.1 with respect to fingerprinting of employees who may have contact with District's pupils. Consultant must complete District's certification form, attached herein as Exhibit E, prior to any of Consultant's employees coming into contact with any of District's pupils. Consultant also agrees to comply with all other operational requirements of District, as may be revised from time to time, including but not limited to any obligations relating to vaccination or testing for infectious diseases.

 (Initials)

24. **Unauthorized Aliens.** Consultant hereby promises and agrees to comply with all of the provisions of the Federal Immigration and Nationality Act, 8 U.S.C.A. §§ 1101, et seq., as amended, and in connection therewith, shall not employ "unauthorized aliens" as that term is defined in 8 U.S.C.A. §1324a(h)(3). Should Consultant so employ such individuals for the performance of work and/or Services covered by this Agreement or the WAL, and should any liability or sanctions be imposed against District for such employment, Consultant hereby agrees to and shall reimburse District for the cost of all such liabilities or sanctions imposed, together with any and all costs, including attorneys' fees, incurred by District.
25. **Non-Discrimination.** Consultant shall abide by the applicable provisions of the United States Civil Rights Act of 1964 and other provisions of law prohibiting discrimination and shall not discriminate, in any way, against any person on the basis of race, color, religious creed, national origin, ancestry, sex, sexual orientation, age, physical handicap, medical condition or marital status in connection with or related to the performance of this Agreement or the WAL.
26. **Disabled Veteran Business Enterprise Participation.** Pursuant to Education Code section 17076.11, District has a participation goal for disabled veteran business enterprises (DVBES) of at least three (3) percent, per year, of funds expended each year by District on projects that use funds allocated by the State Allocation Board pursuant to the Leroy F. Greene School Facilities Act. Unless waived in writing by District, Consultant shall provide proof of DVBE compliance, in accordance with any applicable policies of District or the State Allocation Board, within thirty (30) days of its execution of this Agreement
27. **Assignment.** The expertise and experience of Consultant are material considerations for this Agreement and the WAL. District has an interest in the qualifications of and capability of the persons and entities that will fulfill the duties and obligations imposed upon Consultant under this Agreement and the WAL. In recognition of that interest, Consultant shall not assign or transfer this Agreement or any portion of this Agreement or any portion of the WAL or the performance of any of Consultant's duties, Services or obligations under this Agreement or the WAL without the prior written consent of District and approved by District's Board of Trustees. Any attempted assignment shall be ineffective, null and void, and shall constitute a material breach of this Agreement and the WAL entitling District to any and all remedies at law or in equity, including summary termination of this Agreement and the WAL.
28. **Subcontracting.** Notwithstanding the above, Consultant may utilize subcontractors in the performance of its duties pursuant to this Agreement and the WAL, but only with the prior written consent of District. Consultant shall be as fully responsible to District for the acts and omissions of its subcontractors, and of persons either directly or indirectly employed by Consultant's subcontractors, as if the acts and omissions were performed by Consultant directly.


29. **District Administrator.** Lisa Franz shall be in charge of administering this Agreement on behalf of District, (the “Administrator”) provided that any written notice or any consent, waiver or approval of District must be signed by the Superintendent or a designated employee of District to be valid. The Administrator has completed **Exhibit D** “Conflict of Interest Check” attached hereto.

30. **Continuity of Personnel.** Consultant shall make every reasonable effort to maintain the stability and continuity of Consultant’s staff and subcontractors consistent with the staff proposed as part of the Statement of Qualifications, if any, assigned to perform Services under this Agreement and the WAL.

a. Consultant shall provide District and the Administrator a list of all personnel and subcontractors providing Services and shall maintain said list current and up to date at all times during the Term. The list shall include the following information: (1) all full or part-time staff positions by title, including volunteer positions whose direct services are required to provide the Services; (2) a brief description of the functions of each such position and the hours each position works each week or, for part-time positions, each day or month, as appropriate; (3) the professional degree, if applicable, and experience required for each position; and (4) the name of the person responsible for fulfilling the terms of this Agreement and the WAL.

31. **Indemnification.** To the fullest extent permitted by law, Consultant shall defend and indemnify District and its officials, elected board members, employees and agents (“Indemnified Parties”) from and against all claims that arise out of, pertain to, or relate to the negligence, recklessness, or willful misconduct of the Consultant, its officers, employees, consultants, subcontractors, or agents, pursuant to this Agreement and/or the WAL, but not for any loss, injury, death or damage caused by the active negligence or willful misconduct of any of the Indemnified Parties.

a. Consultant agrees to obtain executed indemnity agreements with provisions identical to the above from each and every subcontractor retained or employed by Consultant in the performance of this Agreement and the WAL. Failure of District to monitor compliance with these requirements imposes no additional obligations on District and will in no way act as a waiver of any rights hereunder. Consultant’s obligation to indemnify and defend District as set forth above is binding on the successors, assigns or heirs of Consultant and shall survive the termination of this Agreement and the WAL.

 (Initials)

32. **Insurance.** Consultant agrees to obtain and maintain in full force and effect during the term of this Agreement the insurance policies set forth in **Exhibit C** “Insurance” and made a part of this Agreement. All insurance policies shall be subject to approval by District as to form and content. These requirements are subject to amendment or waiver if so approved in writing by the District Superintendent.

33. **Notices.** All notices required or permitted to be given under this Agreement or the WAL shall be in writing and shall be personally delivered, or sent by telecopier or certified mail, postage prepaid and return receipt requested, addressed as follows:

**To District:** Oxnard School District  
1051 South A Street  
Oxnard, California, 93030  
Attention: Lisa Cline  
*Assistant Superintendent, Business & Fiscal Services*  
Re: [Insert Project Name]

**With electronic copy to:** Caldwell Flores Winters, Inc.  
Oxnard School District Program Manager  
6425 Christie Ave., Suite 270  
Emeryville, California 94608  
Attention: Yuri Calderon  
T: 510-596-8170  
Email: ycalderon@cfwinc.com

To Consultant: Cardno ATC  
25 Cupania Circle  
Monterey Park, CA 91755  
ATTN: Carlos A. Galdamez  
T: (323) 517-9780  
Email: carlos.galdamez@cardno.com

All notices, demands, or requests to be given under this Agreement or the WAL shall be given in writing and conclusively shall be deemed received when delivered in any of the following ways: (i) on the date delivered if delivered personally; (ii) on the date sent if sent by facsimile transmission and confirmation of transmission is received; (iii) on the date it is accepted or rejected if sent by certified mail; and (iv) the date it is received if sent by regular United States mail.

34. **Excusable Delays.** Neither Party will be liable to the other for unanticipated delays or failures in performance resulting from causes beyond the reasonable control of that Party, including, but not limited to, acts of God, labor disputes or disturbances, material shortages or rationing, riots, acts of war, governmental regulations, communications or utility failures, or casualties; provided that the delayed Party: (i) gives the other Party prompt written notice of such cause; and (ii) uses its reasonable efforts to correct such failure or delay in its performance. The delayed Party's time for performance or cure under this section will be extended for a period equal to the duration of the cause or sixty (60) days, whichever is less.
35. **Entire Agreement; Binding Effect.** This Agreement including Exhibits hereto, contains the entire understanding of the Parties, and supersedes all other written or oral agreements. Consultant shall be entitled to no other benefits other than those specified herein. No changes, amendments or alternations shall be effective unless in writing and signed by both Parties and approved by District's Board of Trustees. Consultant specifically acknowledges that in entering into this Agreement, Consultant relied solely upon the provisions contained in this Agreement and no others. This Agreement shall be binding upon the heirs, executors, administrators, successors and assigns of the Parties.
36. **Amendment.** No changes, amendments to or modifications of this Agreement or the WAL shall be valid, effective or binding unless made in writing and signed by both Parties and approved by the District's Board of Trustees. The Parties agree that this requirement for written modifications cannot be waived and that any attempted waiver shall be void.
37. **Waiver.** Waiver by any Party of any term, condition, or covenant of this Agreement or the WAL shall not constitute a waiver of any other term, condition, or covenant. Waiver by any Party of any breach of the provisions of this Agreement or the WAL shall not constitute a waiver of any other provision or a waiver of any subsequent breach or violation of any provision of this Agreement or the WAL. None of the provisions of this Agreement or the WAL shall be considered waived by either Party unless such waiver is specifically specified in writing. Neither District's review, approval of, nor payment for, any of the Services required under this Agreement or the WAL shall be construed to operate as a waiver of

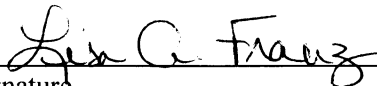
any rights under this Agreement or the WAL, and Consultant shall remain liable to District in accordance with this Agreement and the WAL for all damages to District caused by Consultant's failure to perform any of the Services to the Standard of Performance. This provision shall survive the termination of this Agreement and the WAL.

- 38. **Governing Law.** This Agreement and the WAL shall be interpreted, construed and governed according to the laws of the State of California. With respect to litigation involving this Agreement, the WAL or the Services, venue in state trial courts shall lie exclusively in the County of Ventura, California.
- 39. **Severability.** If any term, condition or covenant of this Agreement or the WAL is declared or determined by any court of competent jurisdiction to be invalid, void or unenforceable, the remaining provisions of this Agreement and the WAL shall not be affected thereby and the Agreement and WAL shall be read and construed without the invalid, void or unenforceable provision(s).
- 40. **Authority to Execute.** The person or persons executing this Agreement on behalf of Consultant represents and warrants that he/she/they has/have the authority to so execute this Agreement and to bind Consultant to the performance of its obligations hereunder.

IN WITNESS WHEREOF, District and Consultant have executed and delivered this Agreement for consultant services as of the date first written above.

**OXNARD SCHOOL DISTRICT:**

**CARDNO ATC:**

  
\_\_\_\_\_  
Signature

  
\_\_\_\_\_  
Signature

Lisa A. Franz, Director, Purchasing  
Typed Name/Title

Stephen Drengson/Program Manager  
Typed Name/Title

11-20-13  
Date

10/30/13  
Date

Tax Identification Number: 95-6002318

Tax Identification Number: 46-0399408



Not Project Related

Project #13-135

**EXHIBIT A**  
**TO AGREEMENT FOR CONSULTANT SERVICES #13-135**


**WORK AUTHORIZATION PROCEDURES**

**1. Assignment of Work Authorization**

- 1.1. Request For Proposal (RFP): At the sole discretion of District, one or more prequalified professional services consultants shall be solicited with a Request For Proposal (“RFP”) for a specific lump sum fixed fee proposal for defined Services to be complete within a defined timeline. For a proposal to be valid it must clearly acknowledge the complete Services requested by District and must include a lump sum fixed fee amount to complete all defined Services, a clearly defined schedule for completion of Services which meets the required timeline defined by District and shows final completion to occur within the Term of this Agreement.
- 1.2. Evaluation of Proposal: District’s Program Manager, in consultation with District, shall review each proposal for validity, accuracy, competitiveness, and overall quality of the Services proposed to be performed. In the case where more than one firm is solicited for a scope of defined Services, the Program Manager shall evaluate each proposal thoroughly based on predetermined, objective criteria to ensure a just and fair review of all proposals.
- 1.3. Selection of Consultant: Following evaluation of proposals, the consultant whose proposal exhibits the best value for the benefit of District shall be recommended to the Superintendent for approval.
- 1.4. Work Authorization Letter (WAL): With the approval of the District Superintendent, the Program Manager shall issue a Work Authorization Letter (“WAL”) to the selected consultant to perform the defined Services as indicated in the RFP, for the lump sum fixed fee amount reflected in the proposal, with all Services to complete within the timeline indicated in the RFP, and the Term set forth in this Agreement. District retains the right to negotiate all terms of the WAL subsequent to the receipt of proposal(s) in order to clarify the scope of Services, and/or make any adjustments to the fee amount and required schedule prior to issuance of the WAL. The WAL shall be considered a binding agreement, and amendment to this Agreement, once executed by Consultant, approved by the District Board of Trustees, and executed by the Superintendent.
- 1.5. Performance of Services Set Forth in the WAL: Performance of Services set forth in the WAL shall not commence until final approval by the District Superintendent and Board of Trustees, unless expressly authorized by the District Superintendent and Program Manager. During the course of completing the Services, Consultant shall comply will all provisions of this Agreement and the WAL. All Services set forth in the WAL shall be completed within the schedule set forth in the WAL.
- 1.6. Close Out of WAL Services: Upon completion of all Services required by the WAL, Consultant shall submit all required close-out documentation, certifications, records, reports, warranties, and any other information required or requested by District prior to submitting Consultant’s invoice for final payment.
- 1.7. WAL Form: See next page for sample Work Authorization Letter.

Not Project Related

Project #13-135

		<b>WORK AUTHORIZATION LETTER (WAL)</b>	
GENERAL INFORMATION			
PROJECT #:		DATE:	
SITE NAME:		DSA #:	
MASTER AGREEMENT #:		OPSC #:	
WAL #:		VENDOR ID:	
PURSUANT TO MASTER AGREEMENT BETWEEN:			
DISTRICT		CONSULTANT	
OXNARD SCHOOL DISTRICT 1051 South A. St. Oxnard , CA 93030 (805) 385-1501		Firm Name: Street: City, State, Zip: Phone:	
SCOPE OF SERVICES TO BE PERFORMED UNDER THIS WAL			
(ATTACH ADD'L PAGES AS NECESSARY)			
SCHEDULE OF SERVICES TO BE PERFORMED UNDER THIS WAL			
START DATE:		COMPLETION DATE:	
FIXED FEE AMOUNT: _____			
<i>This fee amount is based upon Consultant's proposal dated _____, and subsequent negotiations mutually agreed to by all parties.</i>			
<i>This WAL is inherently a part of the Master Agreement indicated above. It is bound by the general terms and conditions of the Master Agreement. This WAL describes in detail the Consultants specific scope of Services, agreed upon lump sum fixed fee, agreed upon schedule for completion of Services, and other provisions required to clearly indicate the required Services, and terms of this WAL.</i>			
<i>This WAL and associated Master Agreement hereby supersede any and all terms, conditions, and other provisions of the Consultant's proposal, and such terms, conditions, and other provisions are null and void and are not incorporated to any extent as part of this WAL and associated Master Agreement whether or not they are directly superseded by this WAL and/or the associated Master Agreement.</i>			
<b>IN WITNESS THEREOF, THE PARTIES HAVE AGREED TO AND EXECUTED THIS WAL AS SET FORTH BELOW:</b>			
DISTRICT		CONSULTANT	
OXNARD SCHOOL DISTRICT		CONSULTANT:	
(SIGNATURE)	(DATE)	(SIGNATURE)	(DATE)
FOR DISTRICT USE ONLY			
PROJECT MANAGER:		PREPARED BY:	
PO #:		PO AMOUNT:	
SOURCE OF FUNDS:	<input type="checkbox"/> MEASURE "R" <input type="checkbox"/> DEF. MAINT. <input type="checkbox"/> DEV. FEES <input type="checkbox"/> OTHER: _____		
COST ID:			
(PM APPROVAL SIGNATURE)		(DATE)	
SPECIAL INSTRUCTIONS:			

Not Project Related

Project #13-135

**EXHIBIT B**  
**TO AGREEMENT FOR CONSULTANT SERVICES #13-135**

**COMPENSATION & RATE/FEE SCHEDULE**

I. The following rates of pay shall apply in the performance of the Services under this Agreement and the WAL:

**STANDARD PERSONNEL RATES**

<b>Category</b>	<b>Base Hourly Rates</b>
Principal	\$115.00
Certified Safety Professional (CSP)	\$115.00
Certified Industrial Hygienist (CIH)	\$125.00
Geologist (CA Registered)	\$95.00
Engineer (CA Registered)	\$95.00
Program Manager	\$95.00
Senior Project Manager	\$85.00
Senior Engineer	\$85.00
Senior Geologist	\$85.00
Senior Industrial Hygienist	\$90.00
Project Industrial Hygienist	\$75.00
Project Engineer	\$75.00
Project Geologist	\$75.00
Project Scientist	\$75.00
Certified Asbestos Consultant (CA DOSH)	\$75.00
Project Manager	\$75.00
Trainer	\$75.00
Staff Industrial Hygienist	\$65.00
Staff Engineer	\$65.00
Staff Geologist	\$65.00
Certified Lead Project Designer (CA Registered)	\$55.00
Certified Lead Inspector/Assessor (CA Registered)	\$55.00
Certified Lead Project Monitor (CA Registered)	\$55.00
Certified Site Surveillance Technician (CA DOSH)	\$55.00
Technician III	\$65.00
Technician II	\$55.00
Technician I	\$45.00
Draftsperson / CADD	\$45.00
Clerical Staff	\$35.00

Not Project Related

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**ASBESTOS**

PLM Analysis (NVLAP QA/QC) 600/R-93/116		PCM Analysis NIOSH 7400, Revision 3 A Rules		TEM Air Analysis AHERA/EPA Level II	
Immediate	\$20.00	Immediate	\$20.00	Immediate	\$140.00
8 hours	\$15.00	8 hours	\$15.00	8 hours	\$125.00
24 hours	\$12.00	24 hours	\$12.00	24 hours	\$100.00
48 hours	\$9.00	48 hours	\$9.00	48 hours	\$75.00
3-5 days	\$9.00	3-5 days	\$9.00	3-5 days	\$75.00

1000 Point Count Analysis (0.1% Limit of Detection)		Wipes/Microvac by TEM Chatfield Method Semi- Quantitative		Wipes/Microvac by TEM ASTM D- 5755 Quantitative	
Immediate	N/A	Immediate	\$200.00	Immediate	N/A
8 hours	N/A	8 hours	\$175.00	8 hours	N/A
24 hours	N/A	24 hours	\$175.00	24 hours	N/A
48 hours	N/A	48 hours	\$125.00	48 hours	N/A
3-5 days	\$100.00	3-5 days	\$125.00	5 days	\$200

**LEAD**

Paint, Dust, Soil, Wipe, Bulk Sample Analysis EPA 3050/7420 Air, Wipes NIOSH 7082		Drinking Water Analysis EPA 200.9		Waste Analysis Extraction Only			
				STLC Wet-Title 22		TCLP EPA 1311	
Immediate	\$32.00	Immediate	\$40.00	24 hours	N/A	24-hours	\$125.00
8 hours	\$28.00	8 hours	\$35.00	2 days	\$100.00	2 days	\$100.00
24 hours	\$17.00	24 hours	\$30.00	3-5 days	\$84.00	3-5 days	\$84.00
48 hours	\$14.00	48 hours	\$25.00				
3-5 Days	\$10.00	3-5 Days	\$20.00				

Not Project Related

Project #13-135

**II. Consultant may utilize subcontractors as permitted in the Agreement and the WAL. The hourly rate for any subcontractor shall be consistent with the rate and fee schedule indicated in Section I above, unless other direction is provided with written authorization from District Superintendent or his/her designee.**

**III. Claims for reimbursable expenses shall be documented by appropriate invoices and supporting receipts. Consultant may be reimbursed for those reasonable out-of-pocket expenses set forth below that are incurred and paid for by Consultant beyond the typical obligations under this Agreement and the WAL, but only to the extent that such expenses are directly related to Services satisfactorily completed, are approved by District in writing and do not cause the amounts paid to Consultant to exceed the amounts allowed under this Agreement and the WAL. No mark-up of any expense is permitted. The following is the EXCLUSIVE list of reimbursable expenses:**

**A. Travel and Mileage. Consultant must request the travel in writing and justify why the travel should be reimbursed. Travel expenses must be approved in writing by District, in its sole discretion. Trips from any Consultant's office to District's office or to the subject project site will not be approved for reimbursement.**

**B. Reimbursable Reprographic Services. Print sets or copies requested in writing by District beyond the quantities required under the WAL.**

**C. Fees for Subcontractors. Fees for subcontractors hired and paid by Consultant at the written request of District and are permitted in the Agreement and the WAL.**

**D. Fees advanced for securing approval of public agencies having jurisdiction over any project hereunder.**

**IV. Consultant shall provide to District a complete Schedule of Values (SOV), identifying major work activities required to complete the authorized scope of work. All invoices must reflect the appropriate progress percentage for each SOV item billed, to be verified by District. District will compensate Consultant for the Services performed upon approval by District of a valid and complete invoice, in form and substance acceptable to District. See Exhibit G for required Invoice Approval Form and Billing Cover Sheet. The Billing Cover Sheet shall reflect the approved SOV. In connection with Services that are only partially completed at the time an invoice is paid, notwithstanding any provision of the Agreement, the WAL, or any other document, payment of the invoice does not constitute acceptance of the partially completed work or Service. Each invoice is to include:**

**A. Billing Cover Sheet/SOV with all appropriate progress percentages identified toward completion of the Services.**

**B. Acceptable back-up for billings shall include, but not be limited to:**

- a. Records for all personnel describing the work performed, the number of hours worked, and the hourly rate, for all time charged to the Services.**
- b. Records for all supplies, materials and equipment properly charged to the Services.**
- c. Records for all travel pre-approved by District and properly charged to the Services.**
- d. Records for all subcontractor labor, supplies, equipment, materials, and travel properly charged to the Services.**

Unless otherwise directed by District, in writing, completed invoices are to be submitted to the attention of the Director of Purchasing and the Assistant Superintendent, Business and Fiscal Services. To be considered complete,

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the invoice packet shall include all back-up documentation required by District and sign-off from District staff, Program Manager or project manager assigned by District to supervise the Services.

**V. The total compensation for the Services shall be provided for in the WAL(s) issued subsequent to this Agreement.**

**VI. Compensation Upon Termination.** In the event that District suspends or terminates this Agreement, the WAL or any of the Services pursuant to Section 11 or Section 12a of the Agreement, District will pay Consultant as provided herein and the WAL for all Services and authorized Additional Work actually performed, and all authorized reimbursable expenses actually incurred and paid, under and in accordance with this Agreement and the WAL, up to and including the date of suspension or termination; provided that such payments shall not exceed the amounts specified in the Agreement and the WAL as compensation for the Services completed, plus any authorized Additional Work and authorized reimbursable expenses completed prior to suspension or termination. No payment for demobilization shall be paid unless District at its sole discretion determines that demobilization or other compensation is appropriate. After a notice of termination is given, Consultant shall submit to District a final claim for payment, in the form and with certifications prescribed by District. Such claim shall be submitted promptly, but in no event later than forty (40) calendar days after the Termination Date specified on the notice of termination. Such payment shall be Consultant's sole and exclusive compensation and District shall have no liability to Consultant for any other compensation or damages, including without limitation, anticipated profit, prospective losses, legal fees or costs associated with legal representation or consequential damages, of any kind.

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**EXHIBIT C**  
**TO AGREEMENT FOR CONSULTANT SERVICES #13-135**

**INSURANCE**

I. **Insurance Requirements.** Consultant shall provide and maintain insurance, acceptable to District Superintendent or District Counsel, in full force and effect throughout the Term of this Agreement and the WAL, against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by Consultant, its agents, subcontractors, representatives and/or employees. Insurance is to be placed with insurers authorized to conduct business in the State of California and with a current A.M. Best's rating of no less than A, as rated by the current edition of Best's Key Rating Guide, published by A.M. Best Company, Oldwick, New Jersey 08858. Consultant shall provide the following scope and limits of insurance:

A. **Minimum Scope of Insurance.** Coverage shall be at least as broad as:

- (1) Commercial General Liability coverage of not less than two million dollars (\$2,000,000) aggregate and one million dollars (\$1,000,000) per occurrence.
- (2) Auto liability insurance with limits of not less than one million dollars (\$1,000,000).
- (3) Insurance coverage should include:
  - 1. owned, non-owned and hired vehicles;
  - 2. blanket contractual;
  - 3. broad form property damage;
  - 4. products/completed operations; and
  - 5. personal injury.
- (4) Workers' Compensation insurance as required by the laws of the State of California.
- (5) Abuse and Molestation coverage of not less than two million dollars (\$2,000,000) per occurrence and five million dollars (\$5,000,000) aggregate.
- (6) Professional liability (Errors and Omissions) insurance, including contractual liability, as appropriate to the Consultant's profession, in an amount of not less than the following:

Accountants, Attorneys, Education Consultants, Nurses, Therapists	\$1,000,000
Architects	\$1,000,000 or \$2,000,000
Physicians and Medical Corporations	\$5,000,000

**Failure to maintain professional liability insurance is a material breach of this Agreement and the WAL and grounds for immediate termination**

II. **Other Provisions.** Insurance policies required by this Agreement shall contain the following provisions:

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A. All Policies. Each insurance policy required by this Agreement shall be endorsed and state the coverage shall not be suspended, voided, cancelled by the insurer or either Party to this Agreement, reduced in coverage or in limits except after 30 days' prior written notice by Certified mail, return receipt requested, has been given to District

B. General Liability, Automobile Liability, and Abuse/Molestation Coverages.

(1) District, and its respective elected and appointed officers, officials, employees and volunteers are to be covered as additional insureds (collectively, "additional insureds") as respects the following: liability arising out of activities and/or Services Consultant performs; products and completed operations of Consultant; premises owned, occupied or used by Consultant; automobiles owned, leased, hired or borrowed by Consultant, and Abuse/Molestation. The coverage shall contain no special limitations on the scope of protection afforded to additional insureds.

(2) Each policy shall state that the coverage provided is primary and any insurance carried by any additional insured is in excess to and non-contributory with Consultant's insurance.

(3) Consultant's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

(4) Any failure to comply with the reporting or other provisions of the policies including breaches of warranties shall not affect coverage provided to any additional insured.

III. Other Requirements. Consultant agrees to deposit with District, at or before the effective date of this Agreement and the WAL, certificates of insurance necessary to satisfy District that the insurance provisions of this Agreement have been complied with. District may require that Consultant furnish District with copies of original endorsements effecting coverage required by this section. The certificates and endorsements are to be signed by a person authorized by that insurer to bind coverage on its behalf. District reserves the right to inspect complete, certified copies of all required insurance policies, at any time.

A. If any Services are performed by a subcontractor, Consultant shall furnish certificates and endorsements from each subcontractor identical to those Consultant provides.

B. Any deductibles or self-insured retentions must be declared to and approved by District. At the option of District, either the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects District or its respective elected or appointed officers, officials, employees and volunteers or the Consultant shall procure a bond guaranteeing payment of losses and related investigations, claim administration, defense expenses and claims.

C. The procuring of any required policy or policies of insurance shall not be construed to limit Consultant's liability hereunder nor to fulfill the indemnification provisions and requirements of this Agreement.



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**EXHIBIT D**  
**TO AGREEMENT FOR CONSULTANT SERVICES #13-135**

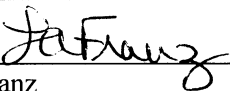
**CONFLICT OF INTEREST CHECK**

Bylaws of the Board 2030(C)E requires that the Superintendent or a designee make a determination, on a case by case basis, concerning whether disclosure will be required from a consultant to comply with District's Conflict of Interest Code (commencing with Bylaws of the Board 2030 BB).

Consultants are required to file disclosures when, pursuant to a contract with District, Consultant will make certain specified government decisions or will perform the same or substantially the same duties for District as a staff person would.

The services to be performed by Consultant under the Agreement to which this Exhibit D is attached  constitute  do not constitute governmental decisions or staff services within the meaning of the Conflict of Interest Code. Therefore, Consultant,  is  is not subject to disclosure obligations.

Date: 11-20-13

By:   
Lisa A. Franz  
Director, Purchasing

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**EXHIBIT "E"**  
**TO AGREEMENT FOR CONSULTANT SERVICES #13-135**

**BACKGROUND CHECK AND FINGERPRINTING PROCEDURES  
FOR CONTRACTORS**

The successful Bidder will be required to assure that its employees, subcontractors of any tier, material suppliers, and consultants do not have direct contact with the District's students during the performance of the Contract in compliance with Education Code §§ 45125.1 and 45125.2. To assure these provisions, the successful Bidder's supervisor shall be fingerprinted, and proof of same shall be provided to the District prior to start of on-site work. The supervisor will monitor the workers' conduct while on school grounds. In addition, the successful Bidder shall barricade the Work area to separate its workers from the students. Costs associated with this process are the responsibility of the successful Bidder.

The Contractors' construction supervisors or their unsupervised employees who will be working outside of fenced areas during the school hours **must** have submitted a fingerprint identification card to the Department of Justice (DOJ) and have a proof of clearance in the form of an affidavit filed in the Oxnard School District's Purchasing Office **prior to** the start of the Work.

California Education Code §§45125.1 and 45125.2 require that criminal checks be completed for contractors (Contracting Firm) who provide architectural, construction, janitorial, administrative, landscape, transportation, food-related, or other similar services to school districts.

The undersigned does hereby certify to the Board of Trustees of the Oxnard School District as follows:

That I am a representative of the Contractor currently under contract ("Contract") with the District; that I am familiar with the facts herein certified, and am authorized and qualified to execute this certificate on behalf of Contractor.

Contractor certifies that it has taken the following actions with respect to the construction Project that is the subject of the Contract:

1. Pursuant to Education Code §45125.2, Contractor has installed or will install, prior to commencement of Work, a physical barrier at the Work Site, which will limit contact between Contractor's employees and District pupils at all times (mandatory for all Projects); AND
2. The Contractor has complied with the fingerprinting requirements of Education Code §45125.1 with respect to all Contractor's employees and all of its subcontractors' employees who may have contact with District pupils in the course of providing services pursuant to the Contract, and the California Department of Justice has determined that none of those employees has been convicted of a felony, as that term is defined in Education Code §45122.1. A complete and accurate list of Contractor's employees and of all its subcontractors' employees who may come in contact with District pupils during the course and scope of the Contract is attached hereto; AND/OR

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3. Pursuant to Education Code §45125.2, Contractor certifies that all employees will be under the continual supervision of, and monitored by, an employee of the Contractor who the California Department of Justice has ascertained has not been convicted of a violent or serious felony. The name and title of each employee who will be supervising Contractor's employees and its subcontractors' employees is:

Name: SEE LIST BELOW - ALL CLEARED

Title: \_\_\_\_\_

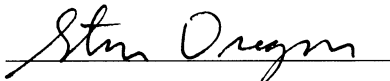
AND/OR

4. The Work on the Contract is at an unoccupied school site and no employee and/or subcontractor or supplier of any tier of Contract shall come in contact with District pupils.

Contractor's responsibility for background clearance extends to all of its employees, Subcontractors, and employees of Subcontractors coming into contact with District pupils regardless of whether they are designated as employees or acting as independent contractors of the Contractor.

Date: 10/30/13

Proper Name of Contractor: ATC GROUP SERVICES INC dba CARONO ATC

Signature: 

By: STEPHEN DRENSON

Its: PROGRAM MANAGER

PRINTS ON FILE & CLEARED:

STEPHEN DRENSON SR PM  
CARLOS GALDAMEZ SA PM  
BARRY HIETT SA PM  
ROBERT de la TORRE TECH  
DAMON CARRIER TECH  
RICHARD GARCIA TECH

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**EXHIBIT “F”  
TO AGREEMENT FOR CONSULTANT SERVICES #13-135**

**SCOPE OF SERVICES – Lead, Asbestos, & Hazardous Materials Survey & Testing**

**The Lead, Asbestos, & Hazardous Materials Survey & Testing Lab’s Scope of Work includes, but is not limited to, the following:**

Consultant shall ensure that the project sites and existing improvements are free from hazardous materials, and/or to verify the presence of hazardous materials and develop a work plan to remove, contain, or otherwise mitigate the effects of hazardous materials to the school site. All work by this consultant must be performed in accordance with Division of State Architect (DSA), California Department of Education (CDE), California Department of Toxic Substances Control (DTSC), California Environmental Quality Act (CEQA), California Occupational Safety and Health Administration (Cal-OSHA), and all other agencies having jurisdiction.

**1. Pre-Construction Services:**

**a. Asbestos-Related Consulting Services**

- i. Provide State of California, Division of Occupational Safety and Health Association (OSHA), Certified Asbestos Consultant(s) (CAC) or Certified Site Surveillance Technician(s) (CSST), for asbestos-related services.
- ii. Review sites and scope of work and/or specification and plans for proposed construction activities to determine the type of work that will occur on the project. Also, CONSULTANT shall review building records, including architectural and structural plans as provided by the DISTRICT to obtain information regarding building elements and for reference to asbestos used in construction, renovation and/or repair.
- iii. Meet with District Project Manager and where applicable, other consultants, to perform on-site inspections of the locations involved in the project to determine where asbestos containing materials may be present, or are in close proximity to the work and could be impacted, as a result of the project.
- iv. Review of previous asbestos documents provided by the DISTRICT to determine sampling strategy. Sampling to be conducted in accordance with EPA/AHERA established sampling protocols and asbestos analysis shall be performed by an NVLAP Accredited Laboratory.
- v. Inspections shall include accessing and possibly creating destructive entry into walls and enclosed spaces. CONSULTANT shall collect representative bulk samples of suspect materials not identified as positive or negative for asbestos content. Materials assumed to contain asbestos, such as transite pipes and flues, gaskets, etc. will not be sampled or analyzed.
- vi. Take digital photographs of special site conditions, anomalies, and for describing conditions more clearly.
- vii. Review existing Asbestos Management Plan, Survey Reports and supplemental bulk sample and analysis reports and reports prepared by consultants on prior projects.

**b. Lead Based Paint (LBP) and other Lead-Related Consulting Services**

- i. Provide staff with State of California, Department of Health Services Lead Certification to perform lead-related services.

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- ii. Review sites and scope of work and/or specification and plans for proposed construction activities to determine the type of work that will occur on the project.
- iii. Meet with District Project Manager and where applicable, other consultants, to perform on-site inspections of the locations involved in the project to determine where lead-based paint may be present, or are in close proximity to the work and could be impacted, as a result of the project.
- iv. Areas of deteriorated paint or other lead-containing materials may need to be identified so that loose and flaky paint, or other potential lead-containing materials, can be removed or otherwise properly handled prior to and/or during demolition and construction.
- v. Lead-based paint testing will be performed using a portable X-ray fluorescence (XRF) analyzer.

**c. Hazardous Materials Consulting Services**

- i. Prior to demolition or abatement, a survey of potential hazardous materials (in addition to asbestos and lead based paint (LBP) must be inventoried. CONSULTANT shall perform a visual evaluation of potential hazardous chemicals and/or ballasts to determine the need for additional mitigation efforts required for safe demolition. CONSULTANT is to visit the project site and determine what materials require sampling. CONSULTANT is to take bulk samples of all materials that are suspected to be hazardous including all unmarked containers containing unknown substances. Samples are analyzed for PCBs according to EPA Method 8082 by an accredited laboratory using proper chain-of custody procedures to collect and transport samples.
- ii. The following items require sampling:
  - Polychlorinated Biphenyl (PCB) Ballasts including capacitors
  - Mercury thermostats and light switches and fluorescent light tubes
  - Cooling units, Freon heating, refrigerators, air conditioners and drinking water fountains
  - Hydrocarbon-containing equipment (door closers)
  - Lead (lead-acid batteries)
  - Other suspect items including but not limited to paint, coatings, window film, ceramic tile, ceiling tile, resilient flooring tile, adhesives/mastics, and any other potentially hazardous or suspect materials or items.

**d. Evaluation of Soil Conditions**

- i. Assessing site structures for the potential presence of hazardous materials will occur concurrently with evaluating soils for the same. This requirement may be due to the Site's history and the analytes that may occur in the soils of such properties. The analytes include lead leached from LBP, organochlorine pesticides (OCP) used for termite control, PCBs from pole-mounted transformers, pesticides, fertilizers, heavy metals, hydrocarbons, and all other hazardous materials identified by DTSC as a potential threat to the health and well being of students.
- ii. To assess the potential presence of these analytes at the Site and to characterize them, if present, the CONSULTANT may be required to prepare a workplan. The proposed work for evaluation of the presence of residual lead in soil from LBP or other lead affected materials shall be conducted in a manner consistent with the California Environmental Protection Agency (Cal EPA) and Department of Toxic Substances Control (DTSC) regulations.
- iii. Soils samples may be collected within the buildings' drip lines and exterior areas with known, or the potential for, LBP. CONSULTANT shall collect samples from ground surface to approximately 0.5 feet below ground surface (bgs). Based on analytical results, additional soil samples may be collected from other lateral "step-out" positions to define the extent of soils with

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lead exceeding current allowable regulatory limits. The exact number of samples collected at each building will be determined by accessibility.

- iv. After sample collection, the CONSULTANT will close each borehole and decontaminate drilling and sampling equipment. To close the borehole, the CONSULTANT shall backfill it with unused sample material and/or hydrated bentonite chips to grade and finish the borehole with material that is compatible with the surrounding surface.

## 2. Construction Phase:

- a. During the course of construction, monitor abatement work to ensure compliance with the contract requirements and completion of the work by the abatement contractor. During construction, perform the following tasks:
  - i. Attend all necessary construction meetings during the course of abatement work
  - ii. Review abatement contractor submittals
  - iii. Provide on-site inspections with daily reports and photos of abatement work. Maintain on-site records and perform monitoring during all abatement work. Perimeter monitoring for fugitive lead and asbestos at or near the entrances and or openings to the containment zone are an essential part of assuring that the containment is operating properly. This perimeter monitoring shall be performed by the CONSULTANT.
  - iv. Monitor abatement contractor's compliance with the plans, specifications and any regulations including but not limited to certification of abatement workers, ensuring proper containments, and confirmation of the removal of all asbestos, lead and hazardous materials.
  - v. Assist the District with problem resolutions associated with abatement work and keep District informed of abatement contractor's performance.
  - vi. Surveys of existing buildings and sample collection, and utilization and compliance with OSHA, AHERA and ASHARA and EPA approved methods.
  - vii. Complete written reports on all activities performed.
  - viii. Consultation on remedial action and contractor selection.
  - ix. Develop, implement and monitor a network of real-time ambient air monitoring stations to screen for potential particulate matter released from construction activities on the Project Site.
  - x. Collect and analyze a subset of daily air monitoring samples for contaminants of potential concern via Transmission electron Microscopy (TEM), Scanning Electron Microscopy (SEM), or other appropriate methodology.
  - xi. An on-site technical staff position may be required to interpret, consult and advise on air monitoring results.
  - xii. Upon completion of the contracted abatement, the CONSULTANT shall inspect the entire surface from which asbestos-containing materials have been abated as well as the entire containment setup, plastic, and/or polyethylene used in the containment setup, the decontamination setup and any other item, equipment or material within the isolated/regulated area.

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xiii. The CONSULTANT shall verify that all surfaces are free of visible debris before approving the area.

### 3. Close-out Phase:

- a. Verify the Uniform Hazardous Waste Manifest, when required, has been submitted and reviewed by Office of Environmental Health and Safety (OEHS) for completeness a minimum of 48-hours prior to the date the waste is to be removed from the site. Consultant shall provide waste specific information for inclusion on the manifest. No hazardous waste may be transported away from a District site without a manifest. Submit all original paper work required to be maintained by the contract documents, this agreement, and by law to the District.
- b. Upon completion of the abatement work, prepare a Closeout Abatement Report that documents all the activities performed, including copies of all sampling forms with results, daily reports, progress photos, correspondence and any regulatory compliance forms.

### 4. Reports

As part of the Services, Consultant will prepare and deliver the following tangible work products to District:

- a. Assessment Reports, Abatement Plan, & Final Close-Out Report
  - i. Prepare an Assessment Report for each project and in the case of projects involving site acquisition, subsections by each property parcel including a description of the site conditions, details of the site inspection/investigations, site drawings indicated sampling locations, site photographs and laboratory results with a summary of all identified asbestos, lead or hazardous materials and soil conditions.
  - ii. Prepare recommendations and an abatement plan with an estimate of costs for abatement of the materials that will impact the project/parcels. The abatement plan shall include an Abatement Scope of Work and Abatement Technical Specifications to be included in the Project Bid Documents. The specifications will stipulate industry standard methods for abatement activities; ACBM, LBP, and HMA abatement methods; removal and disposal methods, regulations, and standards to be followed. Drawings will be included to depict the location and design of containment systems, access to abatement areas, routes for waste removal, locations of waste containers, and other details important to abatement activities. Under otherwise desired by DISTRICT, the specifications will allow for one 8-hour work shift per day of abatement. The Bid Documents will require that bids include a schedule consistent with the DISTRICT'S needs; a work plan based on specifications; a list of recently completed projects; records of any EPA or OSHA citations; and documentation of insurance, licensing, training, medical surveillance and respirator fit-testing.
  - iii. Preparation of a final report describing and quantifying identified friable and non-friable ACMs associated with the property.
  - iv. Upon completion of the abatement work, prepare a Closeout Abatement Report that documents all the activities performed, including copies of all sampling forms with results, daily reports, progress photos, correspondence and any regulatory compliance forms.

### 5. Time

Phase 1 initial survey & sampling report shall be provided to the District within 30 days of receipt of Notice to Proceed (NTP). Phase 2 work detailing all required remediation, abatement, and containment activities to be performed shall be provided within 45 days of receipt of NTP. Phase 3 monitoring &

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observation reports shall be provided on a weekly basis while work is underway to summarize activities completed that week, and look ahead for upcoming activities over next two weeks. Final Close-out Abatement Report shall be provided within 30 days of completion of all remediation, abatement, and containment activities.

#### **6. Accuracy Standards**

Precision of all required reports and recommendations shall be in accordance with the professional standard of care to be expected of professional hazardous materials consultants licensed to practice in the State of California.



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**EXHIBIT "G"**  
**TO AGREEMENT FOR CONSULTANT SERVICES #13-135**

**INVOICE APPROVAL LETTER & BILLING COVER SHEET**

DATE:

**Project No. \_\_\_:** [INSERT PROJECT NAME]

**Consultant:** Cardno ATC ("ATC")

---

ATC has submitted Invoice No. \_\_\_\_\_ for review by the District's Program Manager, Caldwell Flores Winters, Inc. ("CFW"), and Assistant Superintendent of Business Services, Lisa Cline.

By signing below, a representative of ATC, hereby certifies that the invoice submitted is a true and accurate reflection of the work performed to date, is an accurate representation of the percent work completed for the phase identified in the invoice, and that the invoice submitted does not include any charges for services that have been previously paid, or rejected by the District and/or CFW.

---

Cardno ATC

Date

The invoice has been reviewed by the following and is recommended for payment:

---

Caldwell Flores Winters, Inc.

Date

---

Oxnard School District

Date

Lisa Cline, Assistant Superintendent,  
Business and Fiscal Services



- Not Project Related  
 Project #13-135

## Consultant/Vendor Billing Instructions

### Invoice Cover Sheet Set-Up.

- 1 See "billing tab" below for spreadsheet, these are the instructions
- 2 Enter Project Site name, DSA project number, Project Type, Invoice #, Date, Your Company Name, fax, phone, etc....
- 3 Enter PO # (Purchase Order #) provided to you when contract issued.
- 4 Feel free to include your company logo if you wish
- 5 Enter approved contract agreements, amendments, re-imbursables, allowances, etc. for which you are billing. Include summary scope of work. Enter "Cost Code" provided to you by Program Manager.
- 6 If you wish to break the contract work items down into portions that you would typically separate for progressive payments, please do that now. If your contract allows re-imbursables in addition to contract fee, please separate these values. If you require more line items to complete this step, please highlight the entire last row by clicking on the grey row # at left, press CTRL+C to copy row, right click grey row # immediately below, select "Insert Copied Cells". This can be repeated as many times as necessary. Multiple rows can be copied/inserted in a single step by highlighting multiple rows prior to copying.

### First Billing.

- 5 **IMPORTANT!** When you are entering costs for your first billing, enter values (dollar amounts) **ONLY** into the green column. The percentages will change automatically. **NOTE: Select the (% Complete) billing tab if you prefer to track your billings based on total project % complete. Once % complete is entered, billable amount will populate automatically. Select the (lump sum) billing tab if you prefer to track your billings as a lump sum billable amount to date. Once lump sum amount is entered, % complete will populate automatically.**
- 6 Send invoice based on the Dollar value at the PRE-RETENTION value, if applicable.

### Subsequent Billings

- 7 Manually input the dollar values from the "cost completed to date" column into the blue "total previous billings" column
- 8 Enter the corresponding dollar values/% complete values into the green column for total work complete to date.
- 9 Submit a conditional release waiver with the billing. Submit signed pay request certification form.
- 10 Email (tmiddlestadt@cfwinc.com), or mail to the CFW Oxnard office at 1901 Victoria Ave, Suite 106 Oxnard, CA 93035. Please allow 4-6 weeks for invoice processing prior to payment.
- 11 Please note that invoice amounts which exceed remaining contract balance will not be processed, and will be returned to Vendor pending additional contract agreement(s). Incorrect contract amounts, cost codes, or other errors & miscalculations can delay/prevent processing of payment.

**NOTE: All Consultant/Vendor invoices must be accompanied by this worksheet to ensure proper payment. Invoices without this worksheet may be rejected and may delay payment until the next billing cycle or until the spreadsheet becomes accurate. Invoices not received by the 25<sup>th</sup> may be delayed until the next billing cycle. Contact the Program Manager with any questions regarding billing values, or any other information required, prior to submitting a billing.**



# CERTIFICATE OF LIABILITY INSURANCE

DATE(MM/DD/YYYY)  
10/31/2013

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

**IMPORTANT:** If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

<b>PRODUCER</b> Aon Risk Services Southwest, Inc. Houston TX Office 5555 San Felipe Suite 1500 Houston TX 77056 USA	<b>CONTACT NAME:</b> <b>PHONE (A/C. No. Ext):</b> (866) 283-7122 <b>FAX (A/C. No.):</b> (800) 363-0105		
	<b>E-MAIL ADDRESS:</b>		
<b>INSURED</b> ATC Group Services, Inc. Cardno ATC ATC Associates, Inc. 221 Rue De Jean Suite 200 Lafayette LA 70508 USA	<b>INSURER(S) AFFORDING COVERAGE</b>		<b>NAIC #</b>
	<b>INSURER A:</b> Insurance Co of the State of PA		19429
	<b>INSURER B:</b> National Union Fire Ins Co of Pittsburgh		19445
	<b>INSURER C:</b> New Hampshire Ins Co		23841
	<b>INSURER D:</b> Chartis Specialty Insurance Company		26883
	<b>INSURER E:</b> <b>INSURER F:</b>		

**COVERAGES**      **CERTIFICATE NUMBER:** 570051838093      **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS. **Limits shown are as requested**

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
D	GENERAL LIABILITY <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> Contractual Liability is included <input checked="" type="checkbox"/> General Agg. apply per Project GEN'L AGGREGATE LIMIT APPLIES PER: POLICY <input checked="" type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC			PROP11781522	09/30/2013	09/30/2014	EACH OCCURRENCE	\$1,000,000
							DAMAGE TO RENTED PREMISES (Ea occurrence)	\$300,000
							MED EXP (Any one person)	\$10,000
							PERSONAL & ADV INJURY	\$1,000,000
							GENERAL AGGREGATE	\$2,000,000
							PRODUCTS - COMP/OP AGG	\$2,000,000
A	AUTOMOBILE LIABILITY			CA 3582949 Auto (AOS)	09/30/2013	09/30/2014	COMBINED SINGLE LIMIT (Ea accident)	\$1,000,000
B	<input checked="" type="checkbox"/> ANY AUTO ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS <input checked="" type="checkbox"/> NON-OWNED AUTOS			CA 2714604 Auto (MA)	09/30/2013	09/30/2014	BODILY INJURY (Per person)	
							BODILY INJURY (Per accident)	
							PROPERTY DAMAGE (Per accident)	
D	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED <input checked="" type="checkbox"/> RETENTION \$10,000			PROU11781566	09/30/2013	09/30/2014	EACH OCCURRENCE	\$5,000,000
							AGGREGATE	\$5,000,000
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR / PARTNER / EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N N	N/A	WC039901297 WC - AOS SIR applies per policy terms & conditions	09/30/2013	09/30/2014	<input checked="" type="checkbox"/> WC STATUTORY LIMITS <input type="checkbox"/> OTHER	
							E.L. EACH ACCIDENT	\$1,000,000
							E.L. DISEASE-EA EMPLOYEE	\$1,000,000
							E.L. DISEASE-POLICY LIMIT	\$1,000,000
D	Contractor Prof			PROP11781522 Professional Liability	09/30/2013	09/30/2014	Aggregate Per Incident	\$2,000,000 \$1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)  
RE: Meeting of the Board of Trustees of the Oxnard School District on November 13, 2013.

<b>CERTIFICATE HOLDER</b>  Oxnard School District Program Manager 6425 Christie Ave., Suite 270 Emeryville CA 94608 USA	<b>CANCELLATION</b> SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.  AUTHORIZED REPRESENTATIVE  
--	--

Holder Identifier :

Certificate No : 570051838093

RECEIVED NOV 01 2013 CFW



# ADDITIONAL REMARKS SCHEDULE

AGENCY Aon Risk Services Southwest, Inc.		NAMED INSURED ATC Group Services, Inc.	
POLICY NUMBER See Certificate Number: 570051838093			
CARRIER See Certificate Number: 570051838093	NAIC CODE	EFFECTIVE DATE:	

**ADDITIONAL REMARKS**

**THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,  
FORM NUMBER: ACORD 25 FORM TITLE: Certificate of Liability Insurance**

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER	
INSURER	
INSURER	
INSURER	

**ADDITIONAL POLICIES** If a policy below does not include limit information, refer to the corresponding policy on the ACORD certificate form for policy limits.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YYYY)	POLICY EXPIRATION DATE (MM/DD/YYYY)	LIMITS	
	WORKERS COMPENSATION							
C		N/A		WC039901296 WC - (NJ,PA) SIR applies per policy terms & conditions	09/30/2013	09/30/2014		
C		N/A		WC039901295 WC - (IL,KY,NC,NH,UT,VT) SIR applies per policy terms & conditions	09/30/2013	09/30/2014		
C		N/A		WC039901294 WC - (AK,AZ,GA,VA) SIR applies per policy terms & conditions	09/30/2013	09/30/2014		
C		N/A		WC025842892 WC - FL SIR applies per policy terms & conditions	09/30/2013	09/30/2014		
C		N/A		WC012055045 WC - (MA,ND,OH,WA,WI,WY) SIR applies per policy terms & conditions	09/30/2013	09/30/2014		
A		N/A		WC025842891 WC - CA SIR applies per policy terms & conditions	09/30/2013	09/30/2014		
	OTHER							
D	Contractor Poll			PROP11781522 Pollution Coverage	09/30/2013	09/30/2014	Aggregate	\$2,000,000
							Per Incident	\$1,000,000
							Deductible	\$25,000
							SIR/Deduct	\$25,000

BOARD AGENDA ITEM

Name of Contributor(s): **Robin I. Freeman**

Date of Meeting: **5/18/16**

- Study Session: \_\_\_\_\_  
Closed Session: \_\_\_\_\_  
A. Preliminary \_\_\_\_\_  
B. Hearing: \_\_\_\_\_  
C. Consent Agenda   X    
D. Action Items \_\_\_\_\_  
E. Reports/Discussion Items (no action) \_\_\_\_\_  
F. Board Policies   1<sup>st</sup> Reading \_\_\_\_\_ 2<sup>nd</sup> Reading \_\_\_\_\_

**SETTING OF DATE FOR PUBLIC HEARING – OXNARD SCHOOL DISTRICT  
2016-17 LOCAL CONTROL ACCOUNTABILITY PLAN (Freeman/Cline)**

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It is appropriate that the Board of Trustees set the date of Wednesday, June 1, 2016 in the Board Room of the Educational Service Center, for a public hearing on the Oxnard School District 2016-17 Local Control Accountability Plan (LCAP).

**FISCAL IMPACT:**

N/A

**RECOMMENDATION:**

It is the recommendation of the Assistant Superintendent Educational Services, and the Deputy Superintendent, Business and Fiscal Services that the Board of Trustees set the date of Wednesday, June 1, 2016 for a public hearing on the Oxnard School District 2016-17 Local Control Accountability Plan (LCAP).

**ADDITIONAL MATERIAL(S):**

Attached: Notice of Public Hearing (1 page)



# OXNARD SCHOOL DISTRICT

1051 South "A" Street • Oxnard, CA 93030 • 805/385-1501 • Fax 805/487-9648

## NOTICE OF PUBLIC HEARING

May 18, 2016

The Board of Trustees of the Oxnard School District will hold a Public Hearing on Wednesday, June 1, 2016, at 7:00 p.m. or as soon thereafter as this matter may be heard, in the Board Room of the Educational Service Center Building of the Oxnard School District, located at 1051 South A Street, Oxnard, regarding the 2016-17 Local Control Accountability Plan (LCAP).

By: Robin I. Freeman  
Assistant Superintendent,  
Educational Services Department  
(805) 385-1501, ext. 2301

## BOARD AGENDA ITEM

Name of Contributor: **Robin I. Freeman**

Date of Meeting: **5/18/16**

Study Session \_\_\_\_\_

A. Preliminary \_\_\_\_\_

B. Hearing: \_\_\_\_\_

C. Consent Agenda   X  

D. Action Items \_\_\_\_\_

E. Report/Discussion Items (no action)

F. Board Policies      1<sup>st</sup> Reading \_\_\_\_\_ 2<sup>nd</sup> Reading \_\_\_\_\_

### **Request for Approval to Attend Out of State Training- Nevada (Freeman/West/Bond)**

The Board's approval is requested for Haydock's Middle School music teacher, Susan Ekwall to attend a five day Mariachi Workshop training sponsored by VanderCook College of Music. The workshop would take place at the Golden Nugget Hotel and Casino in Las Vegas from June 20-24, 2016. Susan Ekwall would implement what she has learned from the conference to start a mariachi band at Haydock Academy of Arts and Sciences.

Haydock is transitioning to a STEAM academy with a focus on the arts and environmental sciences. Specifically at Haydock, we will be expanding our arts program to include a mariachi band, which will be taught by Susan Ekwall. Susan Ekwall is very interested in attending the VanderCook College of Music Mariachi Workshop from June 20-24<sup>th</sup> 2016 in Las Vegas. The following table shows the application statements and Haydock deliverables that we are expected to deliver as specified in the MSAP grant that relate to a mariachi program at Haydock.

<b>Grant Application Statements</b>	<b>Haydock Deliverables</b>
Develop the Haydock magnet theme of arts and environmental sciences.	Haydock will expand academy programs to add mariachi, jazz band, theater arts and production
Create a culture of STEAM and academy focus.	School-wide STEAM related events and activities (Winter and Spring showcase, MESA competition, NAVSEA event)
Implement STEAM Curricula, as per academy focus	Expand visual and performing art elective choices
Implement CCSS across disciplines and in all classrooms to develop college and career readiness.	Coordinate collaboration among teachers
Create a culture of STEAM and academy focus.	Promote and market the school brand internally and externally
Provide collaboration time for staff to implement STEAM programs.	Site-based and collaborative Professional Development with support.
Supplement curricula to enrich student learning experiences.	Connect students to experts in their fields.



Build and maintain strong partnerships.	Develop partnerships (for guest speakers, resources, field trips, branding, etc .) : Educational institutions, such as CSUCI, UCSB. <ul style="list-style-type: none"> <li>• Community (RESTOR).</li> <li>• Businesses. Performing Arts venues; (PACC, museums, art galleries, etc.)</li> <li>• Government agencies (NOAA and NPS).</li> </ul>
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The conference would support these deliverables in many ways. The workshop will “focus on the development of pedagogical strategies to assist educators in teaching mariachi at a variety of levels.” Specifically, in the Beginning Song Styles of the workshop, which Ms. Ekwall would be attending, she will learn how to play various instruments found in mariachi bands. The workshop will also provide Ms. Ekwall with “curriculum documents, beginning level music arrangements for the various mariachi song forms, recordings, historical materials, and information on procuring instruments, uniforms and clinicians.” “Participants will acquire new skills and a full year’s worth of materials so that a mariachi program can be successfully introduced into a school’s comprehensive music program. Teachers will also extend their network to include professional mariachi resource consultants who will be available to assist as the subsequent school year progresses” (taken from <http://www.vandercook.edu/su16-mecamariachworkshop2016/>)

**FISCAL IMPACT:** Not to exceed \$1000.00 from MSAP funds. Cost includes: registration fee, hotel accommodations, meals and transportation fees.

**RECOMMENDATION:** It is recommended by the Assistant Superintendent Educational Services, the MSAP Director, and the Principal of Haydock Middle School that the Board of Trustees approve the proposed out of state conference attendance as outlined above.

**ADDITIONAL MATERIAL:**

- **Workshop Information and Registration**

# VANDERCOOK 2016 MARIACHI WORKSHOP: A RETROSPECTIVE COURSE REGISTRATION FORM

LEGAL NAME (FIRST, MIDDLE INITIAL, LAST)		SOC.SEC. #	
HOME ADDRESS	CITY	STATE	ZIP
HOME PHONE	WORK PHONE	BIRTHDATE	
SCHOOL NAME		SCHOOL ADDRESS	
MAJOR INSTRUMENT OR VOICE	FIRST NAME AS YOU WOULD LIKE IT TO APPEAR ON YOUR NAME TAG		

PREFERRED EMAIL ADDRESS (COURSE CORRESPONDENCE WILL BE SENT TO THIS ADDRESS)

Have you earned credit through VanderCook before?     Yes     No

If **YES**, are you currently enrolled in the VanderCook M.M.Ed. program?     Yes     No

If **NO**, complete the following:

Degrees earned:     B.M.Ed. or equivalent     M.M.Ed. or equivalent     Doctoral degree

NAME(S) OF GRADUATING COLLEGE(S)	DEGREE(S) EARNED
----------------------------------	------------------

A degree in music or music education is required in order to earn graduate credit at VanderCook College of Music. Any exceptions must be approved by VanderCook's Director of Professional and Online Education. Please call 312.788.1133 for further information. A degree in music or music education is not required for non-credit participation.

I wish to enroll in the following course (check one):

<p><b>Beginning Mariachi</b>    <input type="checkbox"/> <b>7156 A</b> – graduate credit tuition: \$960  <input type="checkbox"/> <b>7156 B</b> – non-credit fee: \$350</p> <p><b>Intermediate Mariachi</b>    <input type="checkbox"/> <b>7166 A</b> – graduate credit tuition: \$960  <input type="checkbox"/> <b>7166 B</b> – non-credit fee: \$350</p> <p><b>Advanced Mariachi</b>    <input type="checkbox"/> <b>7176 A</b> – graduate credit tuition: \$960  <input type="checkbox"/> <b>7176 B</b> – non-credit fee: \$350</p>	<p><b>OPTIONAL MASTER CLASSES - LIMITED ENROLLMENT! *</b></p> <p>I wish to register for the following master class(es):</p> <p><input type="checkbox"/> <b>Vocal Interpretation Master Class</b> with Maestro José Hernández</p> <p><input type="checkbox"/> <b>Guitar/Vihuela Master Class</b> with Jesus "Chuy" Hernández</p> <p>* Enrollment is \$50 for each master class, payable on site.</p>
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**Mariachi Sol de Mexico Concert:** One VIP ticket is included for each registered participant. Additional tickets are available. Please visit [www.musicedconsultants.net/2016-mariachi-workshops](http://www.musicedconsultants.net/2016-mariachi-workshops) for details.

For hotel reservations and additional information, please visit [www.musicedconsultants.net/2016-mariachi-workshops](http://www.musicedconsultants.net/2016-mariachi-workshops).

COURSE TUITION: \_\_\_\_\_

CONFERENCE FACILITIES FEE (INCLUDES DAILY LUNCH) REQUIRED OF ALL ATTENDEES:     \$235.00    

TOTAL: \_\_\_\_\_

**PAYMENT**

Check or Money Order payable to VanderCook College of Music

CHECK # \_\_\_\_\_

PLEASE REFERENCE "MECA SUMMER MARIACHI REGISTRATION" ON YOUR CHECK

Visa, Discover or MasterCard (circle one) \_\_\_\_\_

CARD NUMBER                      EXP. DATE                      CCV

**NOTE: Full course tuition and conference facilities fee will be charged at the time of registration.**

PARTICIPANT SIGNATURE \_\_\_\_\_

DATE \_\_\_\_\_

**CANCELLATIONS:** Refunds of tuition, less a non-refundable \$75 processing fee, may be requested up to 12:00 p.m. CST on Friday, June 17. The \$235 conference facilities fee is non-refundable after 12:00 p.m. CST on Friday, June 10.

VanderCook reserves the right to cancel any course due to insufficient enrollment, in which case all deposits will be refunded.

**ACCREDITATION:** VanderCook College of Music is an independent, not-for-profit, degree-granting institution, fully accredited by the Higher Learning Commission of the North Central Association of Colleges and Schools and the National Association of Schools of Music. VanderCook's teacher certification programs are approved by the Illinois State Board of Education. Graduate credit earned in the MECA program can be applied toward a master's degree at VanderCook College of Music.

**FOR OFFICE USE ONLY**

Tuition/Fee \_\_\_\_\_

Wenger Scholarship \_\_\_\_\_

**Total** \_\_\_\_\_



# MARIACHI WORKSHOP: A RETROSPECTIVE

Featuring special guests Mariachi Sol de México de José Hernández

June 20-24, 2016

Golden Nugget Hotel and Casino,  
Las Vegas, NV

Special workshop room rates start at  
\$45/night (plus 12% tax and \$5 daily  
resort fee) \*

## Graduate credit option:

3 graduate credits

\$960, due in full with registration.

## Non-credit option:

\$350, due in full with registration.

A \$235 conference facilities fee (includes materials and daily lunch) is due with full tuition at the time of registration for both options. \*

INSTRUCTORS: **MARCIA NEEL, JOSÉ HERNÁNDEZ, JESUS "CHUY" HERNÁNDEZ, RAMIRO BENAVIDES, ROBERT LOPEZ, ERIK RAMIREZ, YVETTE SITAL** and special guests **MARIACHI SOL DE MÉXICO!**

\* Reservations must be made through [www.musicedconsultants.net/2016-mariachi-workshops](http://www.musicedconsultants.net/2016-mariachi-workshops) prior to May 27, 2016. Special workshop room rates expire May 27.

Wenger Corporation is providing scholarships in the amount of \$100 for the first 20 participants who register for *Mariachi Pedagogy: Beginning Song Styles* with VanderCook College of Music.

## REGISTRATION CLOSES JUNE 10, 2016

at 12:00 p.m. CST

By phone: 312.788.1133

By fax: 312.225.5211

Online: [www.vandercook.edu](http://www.vandercook.edu)

By mail: Completed registration form to:

VanderCook College of Music  
MECA Summer Registration  
3140 S. Federal Street  
Chicago, IL 60616

Students must have a degree in music or music education to earn credit. Exceptions must be approved by VanderCook's Director of Professional and Online Education.

## Earn graduate credit through VanderCook College of Music by attending the 2016 Mariachi Workshop.

Each of the three mariachi courses will focus on the development of pedagogical strategies to assist educators in teaching mariachi at a variety of levels. Each course will concentrate on the development of playing skills on secondary and tertiary instruments. More specific information is below. Attendees will also be treated to a performance by a local school mariachi ensemble.

### MARIACHI PEDAGOGY: BEGINNING SONG STYLES

Expand enrollment and provide additional opportunities for music-making by offering mariachi at your school. Participants will learn to play the guitarrón, vihuela and guitar in authentic style through study and playing of the ranchera valseada, ranchera lenta, bolero and polka song styles. In addition, sample materials will be provided that can be used in presentations to district administrators, principals, parents and fellow educators. Resources include curriculum documents, beginning level musical arrangements for the various mariachi song forms, recordings, historical material and information on procuring instruments, uniforms, and clinicians. Emphasis will be placed on ensemble playing and singing. Participants will acquire new skills and a full year's worth of materials so that a mariachi program can be successfully introduced into a school's comprehensive music program. Teachers will also extend their network to include professional mariachi resource consultants who will be available to assist as the subsequent school year progresses.

### MARIACHI PEDAGOGY: INTERMEDIATE SONG STYLES

Participants will enhance their playing skills on guitarrón, vihuela and guitar in authentic style through study of intermediate-level playing techniques and song styles including, but not limited to, bolero moruno, a variety of sones, basic joropo, jarabe and cumbia. Participants should have already completed Mariachi I or have previous experience teaching or playing mariachi. The musical and curricular material presented will be appropriate for use with students who are advancing into their second year of mariachi study. Emphasis will be placed on ensemble playing and singing with

opportunities to study each of the secondary instruments to assist with the development of individual playing and teaching skills.

### MARIACHI PEDAGOGY: ADVANCED SONG STYLES

Participants will advance their playing skills on guitarrón, vihuela, and guitar in authentic style through study and playing of the more complex playing techniques and song styles including, but not limited to, advanced joropo, son jarocho and huapango. Participants will be provided with an array of musical material representative of the more advanced song styles as well as advanced curricular materials that are appropriate for students/ensembles moving into their third year of study. Emphasis will be placed on ensemble singing and playing with opportunities for attendees to study each of the secondary instruments to assist with the development of individual playing skills.

### OPTIONAL MASTER CLASSES: \$50 each

A two-hour Vocal Interpretation Master Class with Maestro José Hernández, and a two-hour Guitar/Vihuela Master Class with Jesus "Chuy" Hernández will be made available. Participation is limited so sign up early!

### WHAT'S INCLUDED:

- One full year of teaching materials for your Beginning, Intermediate or Advanced Mariachi Ensembles
- Hands-on instruction on all mariachi instruments
- One VIP ticket to the Mariachi Sol de México concert
- Daily plated lunch

Westmusic  
Mariachi

YAMAHA

Wenger



HAL LEONARD

MUSIC  
EDUCATION  
CONSULTANTS  
INCORPORATED  
A Consortium of Music Education Professionals



CenturyLink prism

Conn  
Selmer

VanderCook  
COLLEGE OF MUSIC  
[www.vandercook.edu](http://www.vandercook.edu)



[facebook.com/VanderCookCollege](https://facebook.com/VanderCookCollege)



@VanderCookMECA  
#SummerMECA16

**BOARD AGENDA ITEM**

Name of Contributor(s): **DR. JESUS VACA**

Date of Meeting: **MAY 18, 2016**

- Study Session \_\_\_\_\_
- Closed Session \_\_\_\_\_
- A. Preliminary \_\_\_\_\_
- B. Hearing \_\_\_\_\_
- C. Consent Agenda   X
- D. Action Items \_\_\_\_\_
- E. Reports/Discussion Items (no action) \_\_\_\_\_
- F. Board Policies 1<sup>st</sup> Reading \_\_\_\_\_ 2<sup>nd</sup> Reading \_\_\_\_\_

**Consideration of Approval of New Job Description: Director of Dual Language Programs (Vaca)**

**EXECUTIVE SUMMARY:**

Presented, for your consideration, is the new job description for the Director of Dual Language Programs. If approved, this position will allow the Educational Services Department to better serve the students, parents, teachers, principals, other support personnel and community.

A job description for the position of Director of Dual Language Programs is needed to assist the Assistant Superintendent, Educational Services substantially and effectively in the task of providing leadership in developing, achieving, and maintaining the best possible educational practices and services for all Dual Language Programs. The pay range will be \$109,275 to \$129,827. The job description is presented for your review and consideration.

**FISCAL IMPACT:**

<b>Title</b>	<b>Salary Range</b>
Director of Dual Language Programs	\$109,275 to \$129,827

**RECOMMENDATION:**

It is the recommendation of the Assistant Superintendent, Human Resources that the Board of Trustees approve the new job description, as presented.

**ADDITIONAL MATERIAL(S): (Attached)**

Job Description for Director of Dual Language Programs (three pages)

# HUMAN RESOURCES & SUPPORT SERVICES

## **Title: DIRECTOR OF DUAL LANGUAGE PROGRAMS**

### **Qualifications:**

1. A Master's degree.
2. A valid and appropriate Clear Administrative Credential in compliance with the provisions of Title 5, California Administrative Code, Sections 80125-80127 and California Education Code, Section 44270.
3. Three years of successful, full-time administrative or supervisory experience.
4. A minimum of five years of successful, full-time classroom teaching experience, including Structured English Immersion, Transitional Bilingual Education, or Dual Language Immersion programs. The candidate should also have direct experience in K-8 grade ranges.
5. Demonstrated ability to work effectively and harmoniously with administrators, teachers, and other staff.
6. Demonstrated ability to compile and write clear, concise district policies and procedures consistent with current law and the needs of the District.
7. Ability to meet district standards for physical and mental health.
8. Evidence of mature judgment and sensitivity to the personnel needs of the District based upon the racial/ethnic composition of the community, including state and federal laws.
9. Demonstrated ability to communicate effectively in written form and orally in both Spanish and English.
10. Satisfactory recommendations from a training supervisor or other professional who has observed the candidate's personal characteristic, scholastic achievement, and job-related performance.
11. Bilingualism and bi-literacy in English and Spanish desired.
12. BCLAD or equivalent certification desired.

**Reports to:** Assistant Superintendent, Educational Services

**Supervises:** 1) Secretarial and clerical staff as assigned.  
2) Designated administrators.

**Job Goals:** To assist the Assistant Superintendent, Educational Services substantially and effectively in the task of providing leadership in developing, achieving, and maintaining the best possible educational programs and services for all Dual Language Programs. Administers the particular division and/or departments of which he/she has charge with a maximum of efficiency.

## HUMAN RESOURCES & SUPPORT SERVICES

### **Performance Responsibilities:**

1. Assist teachers and administrators in employing appropriate research-based strategies to ensure students achieve linguistically and academically in English and Spanish, including assistance in developing and using Dual Language instructional strategies, curriculum products, implementation plans and assessment tools.
2. Assist the Assistant Superintendent, Educational Services with the evaluation and supervision of the performance of teachers to secure the continual improvement of the District's programs and services.
3. Attend board meetings, conduct and participate in a variety of meetings as assigned; provide formal and informal in-service personnel trainings; serve as a member of management's negotiation teams and attend related meetings and conferences.
4. Research, teach, and model best practices used to address the needs of students participating in a Dual Language Program.
5. Assist with the preparation of administrative rules, personnel actions, and status reports for the Assistant Superintendent, Educational Services.
6. Provide instructional coaching and modeling to administrators and teachers to support the development of high quality instructional pedagogy.
7. Provide feedback on unit plans, lesson plans, and formative assessments that align with the CCSS.
8. Devise comprehensive and efficient systems of record-keeping in accordance with the particular needs of his/her department and the policies, regulations, and laws affecting his/her department.
9. Remain abreast of developments and innovations in the field by reading current and cogent literature, attending professional society and association meetings and conferences, and discussing development and problems of mutual interest with others in the field.
10. Ability to work both collaboratively and independently; establish and maintain project deadlines.
11. Assist in monitoring the district's effectiveness and compliance with local, state, federal and court ordered requirements related to Dual Language programs.
12. Assist in implementing a balanced approach of direct teaching using authentic, literature based reading and writing opportunities throughout the content areas in both English and Spanish.
13. Analyze student achievement data to inform decision-making.
14. Works with administrators to determine needs and professional development plan for Dual Language programs.
15. Attend DELAC meetings.
16. Assist with district and school-wide initiatives.

## HUMAN RESOURCES & SUPPORT SERVICES

17. Perform other duties as assigned by the Assistant Superintendent, Educational Services.

### **Term of Employment:**

This shall be a twelve month position with salary and benefits established annually by the Board of Trustees. The currently adopted work year, salary and benefit schedule will be found in the most current Certificated Management Compensation and Benefit Program.

### **Evaluation:**

The evaluation and assessment of performance of the Director of Dual Language Programs will be conducted by the Assistant Superintendent, Educational Services, in accordance with the provisions of California Education Code, Sections 44660-44665 and Oxnard School District Board Policy.

### **Equal Opportunity:**

The Oxnard School District's Governing Board is committed to equal opportunity for all individuals in education and encourages applications for employment for all persons regardless of race, religious creed, age, medical condition, marital status, color, ancestry/citizenship, sexual orientation, national origin, political affiliation, physical or mental disability, pregnancy, child birth or related medical condition, or sex (gender identity). The Board shall promote programs that ensure that discriminatory practices are eliminated in all district activities. The Oxnard School District encourages applications for employment from all persons regardless of race, religion, national origin, political affiliation, disability or sex.

Board Approved: May 18, 2016

## Board Agenda Item

**NAME OF CONTRIBUTOR:** Jonathan Koch **DATE OF MEETING:** May 18, 2016

**STUDY SESSION** \_\_\_\_\_

**CLOSED SESSION** \_\_\_\_\_

**SECTION A: PRELIMINARY** \_\_\_\_\_

**SECTION B: HEARINGS** \_\_\_\_\_

**SECTION C: CONSENT** \_\_\_\_\_ **X** \_\_\_\_\_

**SECTION D: ACTION** \_\_\_\_\_

**SECTION E: REPORTS/DISCUSSION** \_\_\_\_\_

**SECTION F: BOARD POLICIES** 1<sup>st</sup> Reading \_\_\_\_\_ 2<sup>nd</sup> Reading \_\_\_\_\_

**TITLE: Establish/Abolish/Increase/Reduce Hours of Position**

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### DESCRIPTION OF AGENDA ITEM:

#### Establish

an eight hour, 246 day Grounds Maintenance Specialist, position number 7592, to be established in the Facilities department. The position will be established to provide additional support.

an eight hour, 246 day Facilities Materials Specialist, position number 7659, to be established in the Facilities department. The position will be established to provide additional support.

#### Increase

a six hour, 203 day Office Assistant, position number 2156, to be increased to seven hours at Harrington School. The position will be increased due to student enrollment.

The following Site Technology Technician positions will be increased from 192 to 246 days effective June 24, 2016. The positions will be increased to provide additional support.

eight hour, position number 2502 at Brekke School

eight hour, position number 2503 at Chavez School

eight hour, position number 2504 at Curren School

eight hour, position number 2505 at Driffill School

eight hour, position number 2506 at Elm School

eight hour, position number 2836 at Frank School

five hour, position number 2946 at Frank School

eight hour, position number 2507 at Fremont School

five hour, position number 2950 at Fremont School

eight hour, position number 2508 at Harrington School

eight hour, position number 2509 at Haydock School

five hour, position number 2947 at Haydock School

eight hour, position number 2207 at Kamala School

eight hour, position number 656 at Lemonwood School

eight hour, position number 2001 at Marina West School

eight hour, position number 1839 at Marshall School

eight hour, position number 653 at McAuliffe School

eight hour, position number 2510 at McKinna School



eight hour, position number 2511 at Ramona School  
eight hour, position number 2512 at Ritchen School  
eight hour, position number 2513 at Rose Ave. School  
eight hour, position number 2198 at Sierra Linda School  
eight hour, position number 2514 at Soria School

**FISCAL IMPACT:**

Cost for Grounds Maintenance Specialist - \$69,473.00 Maintenance  
Cost for Facilities Materials Specialist - \$69,473.00 Maintenance  
Cost for Office Assistant II - \$5,327.00 General  
Cost for Site Technology Tech - \$233,317.00 General

**RECOMMENDATION:**

Approve the establishment and increase of position, as presented

**ADDITIONAL MATERIAL(S):** None

**Board Agenda Item**

**NAME OF CONTRIBUTOR:** Jesus Vaca/Jonathan Koch **DATE OF MEETING:** May 18, 2016

- STUDY SESSION \_\_\_\_\_
- CLOSED SESSION \_\_\_\_\_
- SECTION A: PRELIMINARY \_\_\_\_\_
- SECTION B: HEARINGS \_\_\_\_\_
- SECTION C: CONSENT           X
- SECTION D: ACTION \_\_\_\_\_
- SECTION E: REPORTS/DISCUSSION \_\_\_\_\_
- SECTION F: BOARD POLICIES 1<sup>st</sup> Reading \_\_\_\_\_ 2<sup>nd</sup> Reading \_\_\_\_\_

**TITLE: Personnel Actions (Vaca/Koch)**

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**DESCRIPTION OF AGENDA ITEM:**

The attached are recommended personnel actions presented to the Board of Trustees for consideration. The salary placement for the individuals employed will be in accordance with salary regulations of the district. Personnel actions include: New Hires, transfers, pay changes, layoffs, recall from layoffs, resignations, retirements, and leave of absence.

**RECOMMENDATION:**

Approve the Personnel Actions, as presented.

**ADDITIONAL MATERIAL(S):**

- Classified Personnel Actions
- Certificated Personnel Actions

May 18, 2016

**CERTIFICATED PERSONNEL**

Listed below are recommended certificated personnel actions presented for consideration by the Board of Trustees. The salaries for the individuals employed will be determined in accordance with salary regulations of the District.

**NEW HIRES**

Catherine Broger	Substitute Teacher	2015/2016 School Year
Carolyn Eder	Substitute Teacher	2015/2016 School Year

**RETIREMENT**

Charles Bensley	Teacher, Social Science, Soria	June 18, 2016
Susan Dixon	Teacher, 3 SEI, Curren	June 18, 2016
Jim Hendrickson	Teacher, 2 SEI, Kamala	June 18, 2016
Mary Ann Marx	Teacher, Kindergarten SEI, Sierra Linda	June 18, 2016

**RESIGNATION**

Jessica Blois	Speech/Language Specialist, Curren	June 17, 2016
Sandy Gonzalez	Resource Specialist, Haydock	June 17, 2016
James Kerr	School Psychologist, Marina West/McKinna	June 24, 2016
Amy C. Mc Vicker	Teacher, ELA, Haydock	June 17, 2016
George Naugles	Teacher, Science, Chavez	June 17, 2016
Sandra Synnes	Teacher, 4 SEI, Kamala	June 17, 2016

## CLASSIFIED PERSONNEL ACTIONS

May 18, 2016

**New Hire**

Aguilera, Martha A.	Paraeducator I (B), Position #7223 Fremont 5.0 hrs./183 days	05/02/2016
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**Limited Term**

Cisneros Sanchez, Agueda	Paraeducator	05/03/2016
Ferrer, Harold	Paraeducator	05/02/2016
Frenes Jr., Daniel	Paraeducator	05/03/2016
Monahan, Lona T.	Paraeducator	04/26/2016

**Transfer**

Mendoza, Pedro	Warehouse Worker/Delivery Driver, Position #841 Warehouse 8.0 hrs./246 days Warehouse Worker/Delivery Driver, Position #5384 Warehouse 8.0 hrs./210 days	07/01/2016
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**Return from Leave of Absence**

Rodarte, Maribel	Child Nutrition Worker, Position #7277 Fremont 5.0 hrs./185 days	05/02/2016
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**Return from FMLA**

Rosalez, Jeanette	Child Nutrition Cafeteria Coordinator, Position #1075 Brekke 8.0 hrs./189 days	05/02/2016
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**Resignation**

Ng, Michelle	Intermediate School Secretary (B), Position #6241 Chavez 8.0 hrs./192 days	06/23/2016
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**BOARD AGENDA ITEM**

Name of Contributor: Dr. Morales/Lisa Cline

Date of Meeting: May 18, 2016

STUDY SESSION \_\_\_\_\_  
CLOSED SESSION \_\_\_\_\_  
SECTION A: PRELIMINARY \_\_\_\_\_  
SECTION B: HEARINGS \_\_\_\_\_  
SECTION C: CONSENT \_\_\_\_\_  
SECTION D: ACTION   X    
SECTION E: REPORTS/DISCUSSION \_\_\_\_\_  
SECTION F: BOARD POLICIES 1<sup>ST</sup> Reading \_\_\_\_\_ 2<sup>nd</sup> Reading \_\_\_\_\_

**Approval of Agreement #16-08 – Latino Film Institute Youth Cinema Project (Morales/Cline)**

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The goal of the Latino Film Institute Youth Cinema Project is to enhance a student’s education and to turn students into more engaged learners. The Youth Cinema Project uses filmmaking as a vehicle to inspire students to write and tell their own stories, think creatively and critically in the classroom, and develop the discipline to make a film product out of their writing. The Youth Cinema Project enables students to learn classroom content, while honing their communication, collaboration and problem-solving skills.

**FISCAL IMPACT**

\$75,666.00 to be paid out of the Unrestricted General Fund.

**RECOMMENDATION**

It is the recommendation of the Superintendent and the Deputy Superintendent, Business & Fiscal Services, that the Board of Trustees approve Agreement #16-08 with the Latino Film Institute Youth Cinema Project.

**ADDITIONAL MATERIAL**

Attached: Agreement #16-08, Latino Film Institute Youth Cinema Project (5 Pages)



May 4, 2016

Dr. Cesar Morales  
Superintendent  
Oxnard School District  
1051 South A Street  
Oxnard, CA 93030

Re: Agreement Between Oxnard School District and the Latino Film Institute Youth Cinema Project

Dear Dr. Morales:

Please allow me to express our appreciation to the Board of Trustees and the Oxnard School District (the “District”) for the opportunity for the Latino Film Institute Youth Cinema Project (“Youth Cinema Project”) to partner with the District. We look forward to working with you and your team. This letter sets forth the terms and conditions of the agreement between the Youth Cinema Project and the District.

The goal of the Youth Cinema Project is to enhance a student’s education and to turn students into more engaged learners. The Youth Cinema Project uses filmmaking as a vehicle to inspire students to write and tell their own stories, think creatively and critically in the classroom, and develop the discipline to make a film product out of their writing. The Youth Cinema Project enables students to learn classroom content, while honing their communication, collaboration and problem-solving skills.

To that end, California Government Code Section 53060 authorizes the District to contract with and employ any persons for the furnishing of special services if such persons are specially trained and experienced and competent to perform the special services required.

**Scope of Services**

In accordance with the contents of this Agreement, the District is hiring the Youth Cinema Project as an Independent Contractor to provide instructional services in cinematic film making including: screenwriting, filming, editing, directing, sound recording/engineering, production and postproduction. The services will be offered at one (1) elementary school, specifically one fourth-grade class at the elementary school site. The Youth Cinema Project will provide the curriculum for each class and course. Each class will be taught by a District employed certificated teacher. Before the start of the school year, the Youth Cinema Project will provide twelve (12) hours of orientation and teacher training for each of the District teachers and any administrators the District designates in the program. Once the program has begun, the

Youth Cinema Project will also provide twelve (12) hours of year-round staff development for each of the District teachers and any administrators the District designates in the program. The Youth Cinema Project will supply instructors to supplement and assist in instruction and provide training to each classroom teacher. From time to time, the Youth Cinema Project will also supply expert speakers on particular topics to supplement instruction. The Youth Cinema Project will also support the District's efforts to market the program to parents and others, and Mr. Edward James Olmos will personally assist in that effort. For its part the District shall be responsible for providing the equipment (e.g. cameras, lights and computers) required for each class. Attached is a list of recommended equipment and estimated costs for each class.

### **Fees and Costs**

The District will pay the Youth Cinema Project (1) for the instructional and staff development services it provides to the District at an hourly rate of \$110.00 per hour; and (2) a one-time fee of \$8,826.00 to cover costs of program management, coordination and support including but not limited to the recruiting, scheduling and placement of Youth Cinema Project instructors and mentors, coordinating, scheduling and managing student film production logistics, coordinating logistics in student participation or guesting in actual productions and assisting the District in the management and maintenance of production equipment. Attached to this letter is an estimated budget for the Youth Cinema Project for the 2016-17 school year.

The District will also reimburse the Youth Cinema Project for all its out of pocket expenses incurred on the District's behalf including but not limited to any mileage (which will be paid at the IRS rate), filming licenses, permits, fees, transportation or insurance. The Youth Cinema Project will, of course, itemize all costs incurred and provide back-up documentation upon request.

### **Billings**

The Youth Cinema Project will bill the District on a monthly basis. All amounts due will be payable to the "Latino Film Institute Youth Cinema Project." The District agrees to pay the full amount set forth in our statements within thirty (30) days of receipt of our invoices.

### **Term and Termination**

This agreement shall be effective as of July 1<sup>st</sup>, 2016 and shall remain in effect through June 30, 2017.

The District may, at any time, with or without reason, terminate this Agreement and shall compensate the Youth Cinema Project for services rendered and expenses incurred to the date of termination. Written notice by the District shall be sufficient to stop further performance by the Youth Cinema Project. Notice shall be deemed given when mailed and received by the Youth Cinema Project at the address specified below:

ATTN: Latino Film Institute Youth Cinema Project  
18034 Ventura Blvd., Suite 288  
Encino, CA 91316

If the foregoing terms and conditions are satisfactory, please execute this letter in the space provided below and return a signed copy to me in the enclosed self-addressed, stamped envelope. Again, we appreciate the opportunity to provide services to the District and look forward to working with you. As always, should you have any questions, comments or concerns, please do not hesitate to give me a call.

Sincerely,

Edward James Olmos  
*Chairman,*  
*Latino Film Institute*  
*Youth Cinema Project*

**I have read and am authorized to agree to the foregoing:**

**OXNARD SCHOOL DISTRICT**

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**By:           Dr. Cesar Morales**  
**Superintendent**



**2016-17 ESTIMATED BUDGET FOR  
YOUTH CINEMA PROJECT AT  
OXNARD SCHOOL DISTRICT**

Set forth below are the estimated costs and expenses for the Latino Film Institute Youth Cinema Project (“Youth Cinema Project”) for Oxnard School District (the “District”). The estimates are based on the assumption of 180 instructional days, 34 weeks of actual instruction, and class sizes of 30 students in elementary school.

**1. Teacher Orientation and Staff Development:**

Prior to the start of the program, District teachers and administrators assigned to the program will receive approximately twelve hours (12) hours of orientation and training.

The Youth Cinema Project’s teacher orientation and training program is conducted by our Chief Academic & Development Officers. These same Officers will also conduct approximately twelve hours (12) of year-round staff development with the District teachers and administrators.

Orientation, Training, and Staff Development Costs: 46 x \$110 = **\$5,280.00**

The Youth Cinema Project instructors assigned to the individual classes at the District will continue training District personnel over the course of the instructional year.

**2. Elementary School Classroom:**

Film program instruction ideally requires one and a half (1.5) hours of instruction two times a week. Students should be divided into groups of six and each class will require two Youth Cinema Project instructors to assist in classroom instruction and to further train the classroom teacher. In addition, each session will require one (1) hour of prep time and one (1) hour of travel time per instructor. The estimated cost for each elementary class is:

Instructor #1: 7 hours per week x 34 weeks = 238 hours x \$110 = \$26,180

Instructor #2: 7 hours per week x 34 weeks = 238 hours x \$110 = \$26,180

Accordingly, the costs would be: **\$52,360**.

Additionally, LFI will invite guest lecturers to present on specialized topics (2 times a semester). LFI is assuming a cost of \$200 per expert. PLEASE NOTE: LFI instructors are part of the industry professionals in the classroom LFI promises. But, LFI instructors are teaching during their hiatus period, so LFI Guests provide a direct pathway to the industry that is active. They enhance lessons with fresh insight from a current project (they are in the middle of) and they provide a direct link for the students and the school to the professional workplace.

Thus the annual cost of the elementary class in the first year would thus be:

6 x \$200 dollars, i.e. \$1,200 plus \$52,360 = **\$53,560**

**3. Program Management, Coordination and Support:**

The program will require program management, coordination and support including recruitment, scheduling and placement of Youth Cinema Project instructors and mentors, coordinating, scheduling and managing student film production logistics, coordinating logistics in student participation or guesting in actual productions and assisting the District in the management and maintenance of production equipment. Additionally, management will be responsible for coordinating school field trips to major Hollywood studios, networks and/or agencies, as well coordinating the end-of-year screenings and premieres of the student short films in the presence of the Hollywood industry. These services will cost approximately \$8,826.00.

**4. Equipment Requirements**

The Youth Cinema Project will provide a list of the equipment required for the program. The District will be responsible for the purchase of the equipment.

**5. Recap**

Training & Year-round Development	<b>\$5,280</b>
Elementary School Classroom	<b>\$53,560</b>
 Program Administration, Manager-Coordinator	 <b>\$8,826</b>
 Instructional and Production Expenses:	
Printing (Scripts, Dossiers, Lesson Plans), Photocopying, Permits, Mileage, Misc.	 <b><u>\$8,000</u></b>
 <b>Total</b>	 <b>\$75,666</b>

BOARD AGENDA ITEM

**Name of Contributor(s): Robin I. Freeman**

**Date of Meeting: 5/18/16**

- Study Session: \_\_\_\_\_
- Closed Session: \_\_\_\_\_
- A. Preliminary \_\_\_\_\_
- B. Hearing: \_\_\_\_\_
- C. Consent Agenda \_\_\_\_\_
- D. Action Items   X
- E. Reports/Discussion Items (no action) \_\_\_\_\_
- F. Board Policies   1<sup>st</sup> Reading \_\_\_\_\_ 2<sup>nd</sup> Reading \_\_\_\_\_

**Approval on the Findings of the K-5 ELA/ELD Pilot Committee (Freeman/Thomas)**

**EXECUTIVE SUMMARY:**

The Board of Trustees will take action on the selection and purchase of ELA/ELD materials for K-5<sup>th</sup> grades—McGraw-Hill: Wonders (English) and Maravillas (Spanish).

**FISCAL IMPACT:**

Estimated cost of materials Total: \$3,154,681.00  
Paid out of: Unrestricted General Funds

**RECOMMENDATION:**

It is the recommendation of the Assistant Superintendent Educational Services and the Director of Curriculum, Instruction and Accountability that the Board of Trustees approve the selection and purchase of ELA/ELD materials with McGraw-Hill.

**ADDITIONAL MATERIAL(S):** None

**BOARD AGENDA ITEM**

Name of Contributor(s): **DR. JESUS VACA**

Date of Meeting: **MAY 18, 2016**

- Study Session \_\_\_\_\_
- Closed Session \_\_\_\_\_
- A. Preliminary \_\_\_\_\_
- B. Hearing \_\_\_\_\_
- C. Consent Agenda \_\_\_\_\_
- D. Action Items   X
- E. Reports/Discussion Items (no action) \_\_\_\_\_
- F. Board Policies 1<sup>st</sup> Reading \_\_\_\_\_ 2<sup>nd</sup> Reading \_\_\_\_\_

**Declaration of Need for Fully Qualified Educators for the 2016-17 School Year (Vaca)**

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**DESCRIPTION:**

Form CL- 500 is issued by the State of California Commission on Teacher Credentialing. This form is a Declaration of Need for Fully Qualified Educators. By submitting this annual declaration, the District is certifying a diligent search to recruit fully prepared teachers for any assignments made, or if a suitable fully prepared teacher is not available, the District will make a reasonable effort to recruit, based on the priority stated on the form submitted.

This authorizes the District to hire a teacher under an intern program or a limited assignment permit. The District does not anticipate the need for any non-fully qualified teachers. This application is required by the State of California Commission on Teacher Credentialing and is only for precaution.

**FISCAL IMPACT:**

None.

**RECOMMENDATION:**

It is the recommendation of the Assistant Superintendent, Human Resources that the Board of Trustees approve the Declaration of Need for Fully Qualified Educators for the 2016-2017 school year and authorize its submission to the State of California Commission on Teacher Credentialing.

**ADDITIONAL MATERIAL(S): (Attached)**

Forms CL-500 and CL-505a

**DISTRICT GOAL(S):**

Goal One - All students will achieve high academic standards in a nurturing, creative and technology rich learning environment that prepares students for college and career opportunities.



## DECLARATION OF NEED FOR FULLY QUALIFIED EDUCATORS

- Original Declaration of Need for year: 2016/2017  
 Revised Declaration of Need for year: \_\_\_\_\_

### FOR SERVICE IN A SCHOOL DISTRICT

Name of District: Oxnard School District District CDS Code: 72538

Name of County: Ventura County CDS Code: 56

By submitting this annual declaration, the district is certifying the following:

- A diligent search, as defined below, to recruit a fully prepared teacher for the assignment(s) was made
- If a suitable fully prepared teacher is not available to the school district, the district will make a reasonable effort to recruit based on the priority stated below

The governing board of the school district specified above adopted a declaration at a regularly scheduled public meeting held on 05 / 18 / 16 certifying that there is an insufficient number of certificated persons who meet the district's specified employment criteria for the position(s) listed on the attached form. The attached form was part of the agenda, and the declaration did NOT appear as part of a consent calendar.

► **Enclose a copy of the board agenda item**

With my signature below, I verify that the item was acted upon favorably by the board. The declaration shall remain in force until June 30, 2017.

Submitted by (Superintendent, Board Secretary, or Designee):

<u>Dr. Cesar Morales</u>		<u>Superintendent</u>
<small>Name</small>	<small>Signature</small>	<small>Title</small>
<u>805-483-7426</u>	<u>805-385-1501</u>	
<small>Fax Number</small>	<small>Telephone Number</small>	<small>Date</small>
<u>1051 South A Street, Oxnard, CA 93030</u>		
<small>Mailing Address</small>		
<u>drcmorales@oxnardsd.org</u>		
<small>EMail Address</small>		

### FOR SERVICE IN A COUNTY OFFICE OF EDUCATION, STATE AGENCY OR NONPUBLIC SCHOOL OR AGENCY

Name of County \_\_\_\_\_ County CDS Code \_\_\_\_\_

Name of State Agency \_\_\_\_\_

Name of NPS/NPA \_\_\_\_\_ County of Location \_\_\_\_\_

The Superintendent of the County Office of Education or the Director of the State Agency or the Director of the NPS/NPA specified above adopted a declaration on \_\_\_\_ / \_\_\_\_ / \_\_\_\_, at least 72 hours following his or her public announcement that such a declaration would be made, certifying that there is an insufficient number of certificated persons who meet the county's, agency's or school's specified employment criteria for the position(s) listed on the attached form.

The declaration shall remain in force until June 30, \_\_\_\_\_.

► **Enclose a copy of the public announcement**

Submitted by Superintendent, Director, or Designee:

Name	Signature	Title
Fax Number	Telephone Number	Date
Mailing Address		
E-Mail Address		

► This declaration must be on file with the Commission on Teacher Credentialing before any emergency permits will be issued for service with the employing agency

**AREAS OF ANTICIPATED NEED FOR FULLY QUALIFIED EDUCATORS**

Based on the previous year's actual needs and projections of enrollment, please indicate the number of emergency permits the employing agency estimates it will need in each of the identified areas during the valid period of this Declaration of Need for Fully Qualified Educators. This declaration shall be valid only for the type(s) and subjects(s) identified below.

This declaration must be revised by the employing agency when the total number of emergency permits applied for exceeds the estimate by ten percent. Board approval is required for a revision.

Type of Emergency Permit	Estimated Number Needed
<input checked="" type="checkbox"/> CLAD/English Learner Authorization (applicant already holds teaching credential)	5
<input checked="" type="checkbox"/> Bilingual Authorization (applicant already holds teaching credential)	5
List target language(s) for bilingual authorization: <u>Spanish</u>	
<input checked="" type="checkbox"/> Resource Specialist	5
<input checked="" type="checkbox"/> Teacher Librarian Services	1
<input checked="" type="checkbox"/> Visiting Faculty Permit	3

**LIMITED ASSIGNMENT PERMITS**

Limited Assignment Permits may only be issued to applicants holding a valid California teaching credential based on a baccalaureate degree and a professional preparation program including student teaching.

Based on the previous year's actual needs and projections of enrollment, please indicate the number of Limited Assignment Permits the employing agency estimates it will need in the following areas:

TYPE OF LIMITED ASSIGNMENT PERMIT	ESTIMATED NUMBER NEEDED
Multiple Subject	5
Single Subject	5
Special Education	5
TOTAL	15

**EFFORTS TO RECRUIT CERTIFIED PERSONNEL**

The employing agency declares that it has implemented in policy and practices a process for conducting a diligent search that includes, but is not limited to, distributing job announcements, contacting college and university placement centers, advertising in local newspapers, exploring incentives included in the Teaching as a Priority Block Grant (refer to [www.cde.ca.gov](http://www.cde.ca.gov) for details), participating in state and regional recruitment centers and participating in job fairs in California.

If a suitable fully prepared teacher is not available to the school district, the district made reasonable efforts to recruit an individual for the assignment, in the following order:

- A candidate who qualifies and agrees to participate in an approved intern program in the region of the school district
- An individual who is scheduled to complete initial preparation requirements within six months

**EFFORTS TO CERTIFY, ASSIGN, AND DEVELOP FULLY QUALIFIED PERSONNEL**

Has your agency established a District Intern program?  Yes  No

If no, explain. The district participates in a university internship program.

Does your agency participate in a Commission-approved college or university intern program?  Yes  No

If yes, how many interns do you expect to have this year? 5

If yes, list each college or university with which you participate in an intern program.

California State Universities (Channel Islands, Dominguez Hills, Northridge)

California Lutheran University, University of La Verne, University of California Santa

Barbara, Azusa Pacific University, National University

If no, explain why you do not participate in an intern program.

\_\_\_\_\_  
\_\_\_\_\_



## **ANNUAL STATEMENT OF NEED 30-DAY SUBSTITUTE and DESIGNATED SUBJECTS CAREER TECHNICAL EDUCATION 30-DAY SUBSTITUTE TEACHING PERMITS**

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### **INSTRUCTIONS TO THE EMPLOYER**

This statement of need must be filed at the school district office each school year when employing holders of Emergency 30-Day Substitute Permits. The employing agency will complete a single statement of need form (below) and retain the form at the school district office.

The form must be completed annually, indicating that either no credentialed person is available or that those available are not deemed qualified for substitute teaching and details of the circumstances that necessitate the use of emergency permit holders rather than fully credentialed teachers.

This statement of need form does not require listing specific employees or their positions. The form must be signed by the superintendent of the employing school district. It does not need to be co-signed by the county superintendent of schools.

A copy of the form does not need to be submitted to the county or the Commission with each Emergency 30-Day Substitute Teaching Permit application; however, the county superintendent of schools, whose responsibilities include areas such as district payroll or district substitute placement, may request a copy of the district's statement of need form to accurately fulfill these duties.

County superintendent of schools offices employing holders of the Emergency 30-Day Substitute Teaching Permit are also required to annually file, at their office, this completed statement of need form. The county superintendent of schools will sign the form.

The Commission does not require that the school board approve the statement of need. The individual school district may establish its own policy regarding this matter.

*References: California Education Code, Sections 44225 and 44300 and California Code of Regulations, Title 5, Sections 80023, 80025 and 80026*



**This form must be signed by either:**

The district superintendent of schools and filed at the school district office if the holder of any Emergency 30-Day Substitute Teaching Permit will be employed as a substitute in a public school operated by a school district.

**OR**

The county superintendent of schools and filed at the county superintendent of schools' office if the holder of any Emergency 30-Day Substitute Teaching Permit will be employed as a substitute in a county-operated school.

**Certification and Authorized Signature**

The district superintendent of schools or the county superintendent of schools has reviewed the information contained in this statement of need and certifies one the following:

Either a credentialed person is not available or one or more credentialed persons are available, but are not deemed qualified by the district or county, as applicable, to serve as a day-to-day substitute teacher.

**OR**

The situation or circumstances that necessitate the use of an emergency permit holder are as follows:  
(Attach additional sheets, if necessary.)

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I hereby certify that all of the information contained in this statement of need is true and correct.

**Oxnard School District**

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*Signature of the District Superintendent* *District* *Date*

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*Signature of the County Superintendent of Schools* *County* *Date*

*It is not necessary to submit this form to the Commission on Teacher Credentialing.*

**BOARD AGENDA ITEM**

**Name of Contributor:** Robin Freeman

**Date of Meeting:** 5/18/16

**STUDY SESSION** \_\_\_\_\_

**CLOSED SESSION** \_\_\_\_\_

**SECTION B: HEARINGS** \_\_\_\_\_

**SECTION C: CONSENT** \_\_\_\_\_

**SECTION D: ACTION**   X  

**SECTION E: REPORTS/DISCUSSION** \_\_\_\_\_

**SECTION F: BOARD POLICIES**   1<sup>st</sup> Reading \_\_\_\_\_   2<sup>nd</sup> Reading \_\_\_\_\_

**Approval of Agreement #15-222 – Gloria Centurion Arce (Freeman/West)**

The artist will design and paint a 200 foot mural which will be externally mounted on the wall at Haydock Middle School in order to enhance the school’s physical environment as well as to further promote the STEAM goals and academy focus. Services for the proposed contract will be provided by local artist Gloria Centurion Arce and will include the design and production of a prominent mural that will support the identity and development of Haydock Middle School - an art-based academy. Ms. Centurion Arce has provided a preliminary sketch of the mural and once it is approved by the Oxnard School Board, the artist will purchase the necessary supplies to complete the proposed artwork. The total cost of the mural will be in the amount not to exceed \$10,000.00 and services provided will include: labor, supplies and materials (including paint, wood paneling, and graffiti protection), and transportation of the mural to the school site on a date and time as mutually agreed upon between Ms. Centurion Arce and the District. Once the mural has been delivered to Haydock Middle School it will be installed above the school cafeteria by the Oxnard School District Facilities Department.

**FISCAL IMPACT:**

Total cost not to exceed \$10,000.00 – MSAP

**RECOMMENDATION:**

It is the recommendation of the Director, MSAP, and the Assistant Superintendent, Educational Services, that the Board of Trustees approve Agreement #15-222 with Gloria Centurion Arce in the amount not to exceed \$10,000.00.

**ADDITIONAL MATERIAL(S):**

**Attached:**     Agreement/MOU #15-222, Gloria Centurion Arce (1 Page)  
                  Picture – Haydock Mural (1 Page)

**AGREEMENT/MOU #15-222 BETWEEN  
GLORIA CENTURION ARCE AND OXNARD SCHOOL DISTRICT  
FOR A MURAL FOR HAYDOCK MIDDLE SCHOOL**

The scope of this document is to define the roles and responsibilities of **Gloria Centurion Arce** and the **Oxnard School District (OSD)**. The purpose of this agreement is to provide Haydock Middle School with a mural that represents the academy focuses of arts and sciences as part of the school's rebranding efforts.

This serves as a Memorandum of Understanding and Responsibility Agreement that the Oxnard School District and Gloria Centurion Arce will collaborate on the design and production of a mural for Haydock Middle School to be delivered by Gloria Centurion Arce. Both the district and the consultant agree to participate in coordinating, providing and financing the following services for the purpose of this agreement. All copyrights to the artwork, sketches, concepts and final artwork remain in the ownership of artist, however, the school and school district may utilize the artwork as they see fit.

**1. Gloria Centurion Arce agrees to:**

- a. Provide an initial design sketch for the client allowing up to two changes to the sketch until an agreed upon sketch is accepted by the client.
- b. Purchase mural materials in an amount not to exceed \$5,000.00 which will include: paint, scaffolding, wood paneling, paint brushes and refining tools, graffiti protection, and if necessary, the services of an assistant to help with painting.
- c. The completion of a 200 square foot painted and graffiti protected mural using the agreed upon artist's sketch. The pricing is based on a rate of \$25 per square foot for a total amount not to exceed \$5,000.00.
- d. Transport and deliver the completed mural to Haydock Middle School no later than September 15, 2016.
- e. Provide direction and supervision to the OSD Facilities Department regarding installation of the mural above the main entrance of the school cafeteria.
- f. The total costs are not to exceed \$10,000.00, including initial sketch, all materials, all labor costs, delivery of the mural to Haydock Middle School and supervision of the mural installation.

**2. Oxnard School District and its Magnet Schools Assistance Program (MSAP) agree to:**

- a. Pay a total amount not to exceed \$10,000.00 for the cost of the completed mural, including the initial sketch, all materials, all labor costs, delivery of the mural to Haydock Middle School and the artist's supervision of its installation.
- b. Pay a deposit of 50% of the total fee or \$5,000.00 ten (10) days in advance of commencing the scheduled work. The total remaining balance of \$5,000.00 will be due upon completion of the installation process.
- c. If the District cancels the mural for any reason, it will be responsible for payment of any non-refundable expenses that have already been incurred up to and including the date of cancellation.

Oxnard School District will monitor this agreement to oversee completion and installation of the mural at Haydock Middle School. This Memorandum of Understanding and Responsibility Agreement shall be effective upon signature and implemented from May 19, 2016 to September 15, 2016.

**Oxnard School District:**

**Gloria Centurion Arce:**

\_\_\_\_\_  
*Signature*

\_\_\_\_\_  
*Signature*

Lisa A. Franz, Director, Purchasing  
*Typed Name/Title*

Gloria Centurion Arce  
*Typed Name/Title*

\_\_\_\_\_  
*Date*

\_\_\_\_\_  
*Date*







BOARD AGENDA ITEM

Name of Contributor: Dr. Morales

Date of Meeting: 05-19-16

- Study Session \_\_\_\_\_
- A. Preliminary \_\_\_\_\_
- B. Hearing: \_\_\_\_\_
- C. Consent Agenda \_\_\_\_\_
- D. Action Items \_\_\_\_\_
- E. Report/Discussion Items (no action)     X
- F. Board Policies   1<sup>st</sup> Reading \_\_\_\_\_ 2<sup>nd</sup> Reading \_\_\_\_\_

REVIEW OF SIMULTANEOUS TRANSLATION SERVICES FOR BOARD MEETINGS

**DESCRIPTION:**

The District is in its fourth year of outsourcing the work of providing simultaneous translation services for the board meetings in Spanish. All Languages Interpreting and Translating will have provided simultaneous translating services for the regular board meetings of September 5, 2012 through June 22, 2016. This year the cost was \$12,160.00 which was paid with General Funds.

It is now time for the Board of Trustees to discuss and consider if they wish to continue with these services or provide direction to administration of other avenues they would like to explore. Should Board direction be to continue with the above mentioned services, an agreement will be brought to the Board for approval at a June 2016 board meeting.

**FISCAL IMPACT:**

The cost for services will remain the same as the previous agreement with each meeting rate being \$640.00 (for three hours); any meeting going over the three hours will be charged at an additional \$213.33 per hour. Total amount to be paid would not exceed \$13,000.00, to be paid with General Funds.

**RECOMMENDATION:**

The Board of Trustees will review the simultaneous translation services and consider if they would like to continue to provide the services to the public for the 2016-2017 fiscal year, beginning with August 2016.

## QUOTE FOR SERVICES

May 3, 2016

Presented to:

MS. PATRICIA LOMELI  
OXNARD SCHOOL DISTRICT  
OFFICE OF THE SUPERINTENDENT  
ADMINISTRATIVE ASSISTANT  
1051 SOUTH A STREET  
OXNARD, CALIFORNIA, 93030

As requested, we will provide the following services for the Board Meetings.

1. Two Professional Conference Interpreters – The interpretation will be simultaneous.
2. Fees:
  - Fee for two interpreters: First interpreter: \$400.00  
Second interpreter \$240.00  
Total with two interpreters \$ 640.00

This fee covers the first three hours; additional time will be prorated hourly - \$213.33 per additional hour or portion thereof.

Our fee for the services we provide will not change.

I take this opportunity to let you know that we also provide interpreting services in other languages. We have interpreters that have been providing services in various school sites in Ventura County. During the last few weeks we have provided interpreters in Arabic, Thai, Vietnamese, Russian, Korean, Mixteco, Farsi, Armenian, Tagalog, Sign Language, other languages are also available. Our services are mostly used during IEP meetings with parents and students. We have also translated documents for the Special Education Departments of various High Schools in the area.

Thank you very much for continuing to use our services. It has been a pleasure to interpret for your District.

Cordially,

Lourdes G. Campbell

**BOARD AGENDA ITEM**

Name of Contributor(s): **Robin I. Freeman**

Date of Meeting: **5/18/16**

- Study Session \_\_\_\_\_
- Closed Session \_\_\_\_\_
- A. Preliminary \_\_\_\_\_
- B. Hearing \_\_\_\_\_
- C. Consent Agenda \_\_\_\_\_
- D. Action Items \_\_\_\_\_
- E. Reports/Discussion Items (no action)   X
- F. Board Policies 1<sup>st</sup> Reading \_\_\_\_\_ 2<sup>nd</sup> Reading \_\_\_\_\_

**After School Education and Safety (ASES) Grant (Freeman/Thomas)**

---

The Director of Curriculum, Instruction and Accountability, along with the Manager of Special Programs, will present an update on the After School Education and Safety Grant in Oxnard School District. The presentation will highlight the Oxnard Scholars Program and our five-year partnership with the City of Oxnard, highlighting events, activities and the academic component of the after school program.

**FISCAL IMPACT:**

None

**RECOMMENDATION:**

It is the recommendations of the Assistant Superintendent Educational Services and the Director of Curriculum, Instruction and Accountability that the Board of Trustees receive this report as presented.

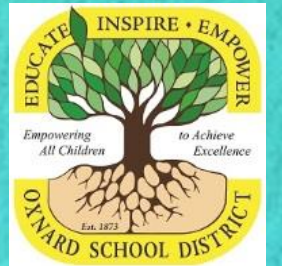
**ADDITIONAL MATERIAL(S):**

Power Point Presentation

# ASES: After School Education and Safety Grant

ASES Report May 18, 2016

Anna Thomas, Director Curriculum and Instruction  
Ginger Shea, Manager Special Programs





# Grant Awards



## Core Grant

- Program serves over 2,000 students district wide
- \$2,595,675
  - Elementary Enrollment
    - 80-100 students per school
  - Intermediate Enrollment
    - 110-120 students per school
  - K-8
    - 110-120 students per school

## Supplemental Grant

- \$56,600
  - Allows for events for after school program student non-school days at select sites
    - 3 hours of operation





## Vision:

Empower all children to achieve excellence

## Mission:

Help students in Oxnard School District develop 21<sup>st</sup> Century Skills through activities which promote communication, collaboration, critical thinking and creativity, supporting the development specific strand of each site







## • Goals

- Alignment with the regular day
- Academic focus on Common Core State Standards, Hands on experience, application of knowledge, writing applications, reading comprehension, algebra functions and geometry
- Enrichment and Physical activities to support Academic Language and Content Vocabulary to support English Language development
- Connect and build community relationships and partnerships to build capacity and career paths



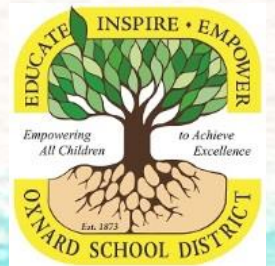
# Grant Assurances

## Program

- Include Educational and Literacy element
- Include Enrichment element
- Provide a safe physical and emotional environment
- Collaborate with the regular day
- Provide Nutritious Snack
- Provide 30 minutes of physical activity every day

## Attendance/Participation

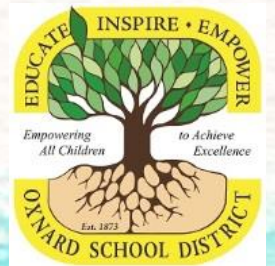
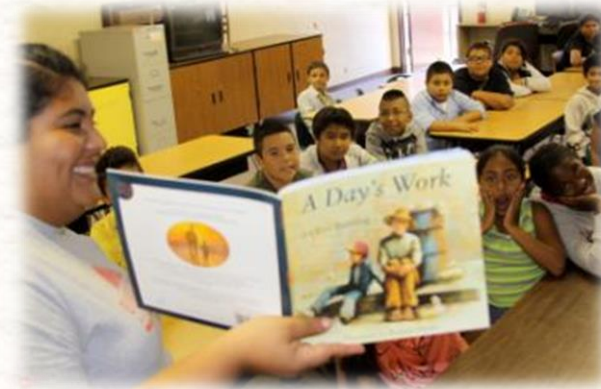
- Students in Elementary programs attend 5 days per week
- 20:1 student to staff ratio
- Program open until 6:00 PM
- Early release policy limits absences





# Program Components & Professional Development

- Literacy Curriculum
  - Designed by VCOE to address Reading Fluency and Writing
- Math Curriculum
  - Designed by VCOE to address number sense, algebraic reasoning, and geometry
- Art Curriculum
  - Designed by Dr. Staci Block to include exposure to art and academic vocabulary





# Program Components & Professional Development (cont.)

- Recreation
  - Provided by the City of Oxnard and includes physical and nutritional activities
  - Focus on Fun for All-students don't have to be great at a sport to be physical
- Technology
  - Designed to integrate iPads and other technology based activities into the after school program
  - Students get experience with coding, green screen, stop motion animation, robotics, and green technology
- Enrichment
  - Activities like folklórico, class of rock, hip hop, Math Chi, Great Thinkers Club, sign language, Zumba, yoga and drumming





# School Site Support

## Monthly Principal Meetings

- Principal
- Liaison
- Site Coordinator
- Oxnard Scholars Director
- Manager Special Programs

## Teacher Support

- One teacher from each school supports the program
- Helps build connection to regular day
- May provide mentoring to scholars staff or academic support

## Academic Results

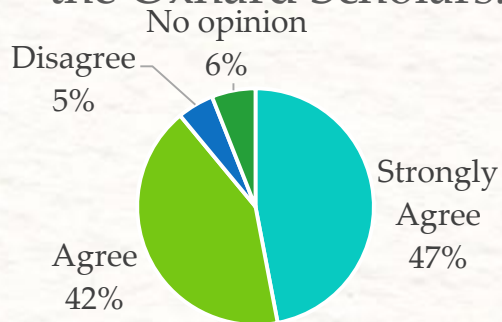
- A review of the STAR 360 data reflects that after school program students scored an average of 30 points more than students who don't participate



# Aligning with the regular day

93% of responders agree or strongly agree that the ASP staff works with their child's regular day teacher to help their child learn.

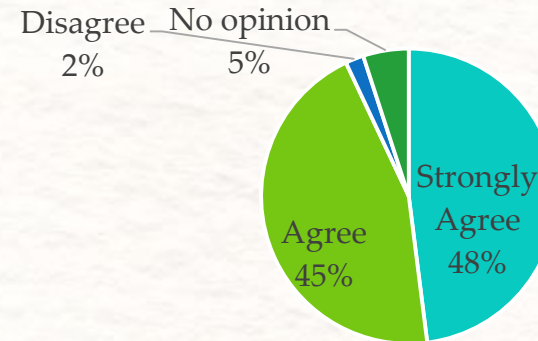
My communication with the regular school day has improved because of my involvement with the Oxnard Scholars.



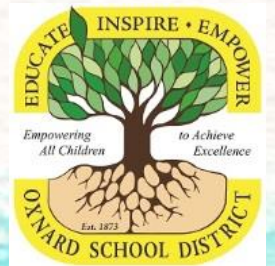
■ Strongly Agree ■ Agree ■ Disagree ■ No opinion

89% of responders agree or strongly agree that their communication with the regular school day has improved because of their involvement with the Oxnard Scholars.

OXNARD SCHOLARS staff work with my child's regular school day teacher to help my child learn.



■ Strongly Agree ■ Agree ■ Disagree ■ No opinion







# OXNARD SCHOLARS

After School Program

CITY OF OXNARD RECREATION AND COMMUNITY SERVICES

## Five Year Partnership

Terrel Harrison  
Community Service Manager

Jessy Tapia  
After School Program Director





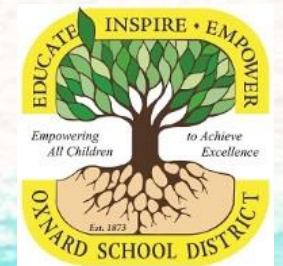
# Elementary Program

Each program offers:

- Homework assistance
- Literacy
- Math
- Arts enrichment
- Recreation
- Special enrichment activities

## Sample Schedule

Time	Monday
2:45-3:00	Snack
3:05-3:40	Homework
3:45-4:20	Math/Literacy
4:25-5:00	Recreation
5:05-5:40	Enrichment
5:45-6:00	Wrap Up

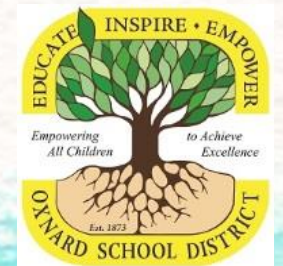


# Intermediate Program

- Homework assistance
- Clubs
  - Class of Rock
  - Drumming
  - DJ Classes
  - Drama
  - Cheer
  - Dance
  - MESA
  - Yearbook
  - Art
  - Technology Club

## Sample Schedule

Time	Activity
2:45-3:00	Snack
3:05-4:05	Homework
4:10-4:5:30	Choice of Activity: Club or Sport
5:30-6:00	Wrap Up





# Highlighted events

Newsletter  
Neon Fun Run  
Strawberry Festival Art  
Rock' N 2 Sports  
Fun Fest  
Holiday Parade  
Santa to the Sea  
Lights on After School  
Field Trips  
Intramurals





# Highlighted events

Cesar Chavez Art  
Competition  
AKA African American  
Speech Competition  
Strawberry Festival Art  
Competition  
Class of Rock  
performances  
Art Gala  
Parent nights





# Oxnard Scholars Staff and Collaborative Partnerships



- **Program employs 210 part-time workers**

80% of workers are between the ages of 18-26

20% of workers are older working adults

All are Interviewed, Background checked & Fingerprinted

- **Partnerships include:**

- Ventura County Public Health

- Ventura County Office of Education

- California State University Channel Islands

- Oxnard Police Activities League

- City Corps

- Pacifica High School

- (TECA :Teaching and Educational Career Academy)





# Parent involvement

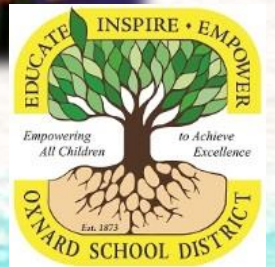
**Informational Meetings**

**Parent Nights**

**Cultivating Scholars**

**Nutrition Education**

**End of Year celebration**

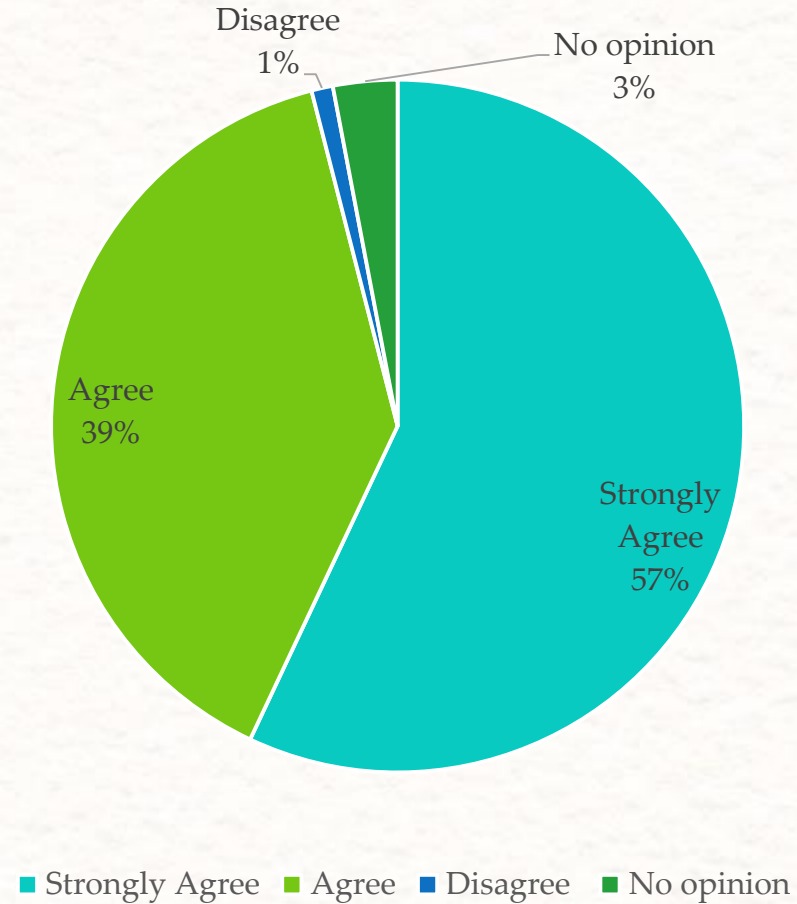




# Parent Survey Results

96% of responders agree or strongly agree that the Oxnard Scholars provides the extra academic help their child needs.

In the OXNARD SCHOLARS, my child is getting the extra academic help s/he needs.

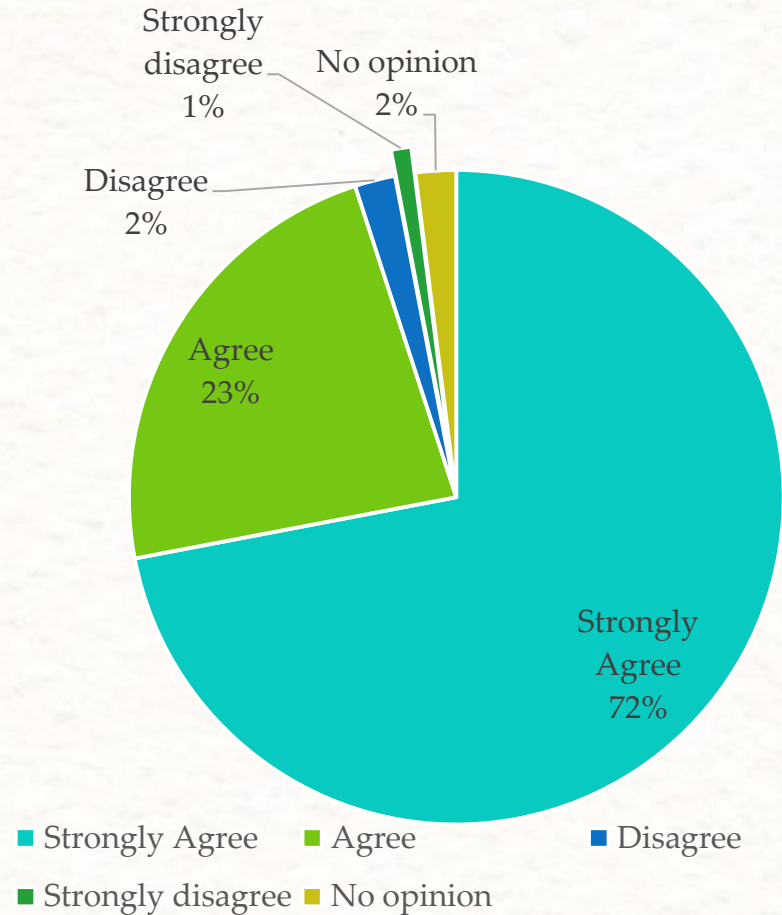




# Parent Survey Results

95% of responders agree or strongly agree that their child's homework completion has improved since being part of the Oxnard Scholars.

Since my child has been in the OXNARD SCHOLARS, s/he has done a better job of completing his/her homework.





## In Conclusion...

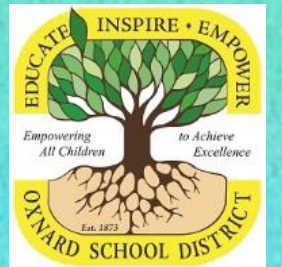
- Great academic extension
- Social opportunities
- Enrichment events
- Extra physical activity
- 91 extra school days





Questions?

Thank you!



BOARD AGENDA ITEM

Name of Contributor: Robin I. Freeman

Date of Meeting: 5/18/16

- Study Session \_\_\_\_\_
- A. Preliminary \_\_\_\_\_
- B. Hearing: \_\_\_\_\_
- C. Consent Agenda \_\_\_\_\_
- D. Action Items \_\_\_\_\_
- E. Report/Discussion Items (no action) \_\_\_\_\_
- F. Board Policies      1<sup>st</sup> Reading \_\_\_\_      2<sup>nd</sup> Reading X

**Local Control and Accountability Plan – AR 0460 and BP 0460 (Freeman)**

This new policy on the Local Control and Accountability Plan is needed to clarify the goals, actions and processes for adopting and updating the plan. The deleted language is indicated by *strikethrough* on the attached.

**FISCAL IMPACT:**

None

**RECOMMENDATION:**

It is the recommendation of the Assistant Superintendent, Educational Services that the Board of Trustees approve the AR 0460 and BP 0460 as outlined above.

**ADDITIONAL MATERIAL:**

AR 0460 (5 pages)  
BP 0460 (5 pages)

**LOCAL CONTROL AND ACCOUNTABILITY PLAN**

**Goals and Actions Addressing State and Local Priorities**

The district's local control and accountability plan (LCAP) shall include, for the district and each district school: (Education Code 52060)

1. A description of the annual goals established for all students and for each numerically significant subgroup as defined in Education Code 52052, including ethnic subgroups, socioeconomically disadvantaged students, English learners, students with disabilities, and foster youth. The LCAP shall identify goals for each of the following state priorities:

a. The degree to which district teachers are appropriately assigned in accordance with Education Code 44258.9 and fully credentialed in the subject areas and for the students they are teaching; every district student has sufficient access to standards-aligned instructional materials as determined pursuant to Education Code 60119; and school facilities are maintained in good repair as specified in Education Code 17002

*(cf. 1312.4 - Williams Uniform Complaint Procedures)*

*(cf. 3517 - Facilities Inspection)*

*(cf. 4112.2 - Certification)*

*(cf. 4113 - Assignment)*

*(cf. 6161.1 - Selection and Evaluation of Instructional Materials)*

b. Implementation of the academic content and performance standards adopted by the State Board of Education (SBE), including how the programs and services will enable English learners to access the Common Core State Standards and the English language development standards for purposes of gaining academic content knowledge and English language proficiency

*(cf. 6011 - Academic Standards)*

*(cf. 6174 - Education for English Language Learners)*

c. Parent/guardian involvement, including efforts the district makes to seek parent/guardian input in district and school site decision making and how the district will promote parent/guardian participation in programs for unduplicated students, as defined in Education Code 42238.02 and Board policy

*(cf. 3553 - Free and Reduced Price Meals)*

*(cf. 6020 - Parent Involvement)*

*(cf. 6173.1 - Education for Foster Youth)*

d. Student achievement, as measured by all of the following as applicable:

**LOCAL CONTROL AND ACCOUNTABILITY PLAN** (continued)

- (1) Statewide assessments of student achievement
- (2) Academic Performance Index
- (3) ~~The percentage of students who have successfully completed courses that satisfy the requirements for entrance to the University of California and the California State University, or career technical education sequences or programs of study that satisfy specified requirements and align with SBE-approved career technical education standards and frameworks, including, but not limited to, those described in Education Code 52302, 52372.5, or 54692~~
- (4) The percentage of English learners who make progress toward English proficiency as measured by the SBE-certified assessment of English proficiency
- (5) The English learner reclassification rate
- (6) ~~The percentage of students who have passed an Advanced Placement examination with a score of 3 or higher~~
- (7) ~~The percentage of students who participate in and demonstrate college preparedness in the Early Assessment Program pursuant to Education Code 99300-99301~~

*(cf. 0500 - Accountability)*

*(cf. 6141.5 - Advanced Placement)*

*(cf. 6162.5 - Student Assessment)*

*(cf. 6162.51 - State Academic Achievement Tests)*

*(cf. 6178 - Career Technical Education)*

- e. Student engagement, as measured by school attendance rates, chronic absenteeism rates, middle school dropout rates, high school dropout rates, and high school graduation rates, as applicable

*(cf. 6146.1 - High School Graduation Requirements)*

*(cf. 5113.1 - Chronic Absence and Truancy)*

*(cf. 5147 - Dropout Prevention)*

- f. School climate, as measured by student suspension and expulsion rates and other local measures, including surveys of students, parents/guardians, and teachers on the sense of safety and school connectedness, as applicable

**LOCAL CONTROL AND ACCOUNTABILITY PLAN (continued)**

*(cf. 5137 - Positive School Climate)*

*(cf. 5144 - Discipline)*

*(cf. 5144.1 - Suspension and Expulsion/Due Process)*

*(cf. 5144.2 - Suspension and Expulsion/Due Process (Students with Disabilities))*

- g. The extent to which students have access to and are enrolled in a broad course of study that includes all of the subject areas described in Education Code 51210 and 51220, as applicable, including the programs and services developed and provided to unduplicated students and students with disabilities, and the programs and services that are provided to benefit these students as a result of supplemental and concentration funding pursuant to Education Code 42238.02 and 42238.03

*(cf. 6143 - Courses of Study)*

*(cf. 6159 - Individualized Education Program)*

- h. Student outcomes, if available, in the subject areas described in Education Code 51210 and 51220, as applicable
2. Any goals identified for any local priorities established by the Board.

*(cf. 0200 - Goals for the School District)*

3. A description of the specific actions the district will take during each year of the LCAP to achieve the identified goals, including the enumeration of any specific actions necessary for that year to correct any deficiencies in regard to the state and local priorities specified in items #1-2 above. Such actions shall not supersede provisions of existing collective bargaining agreements within the district.

For purposes of the descriptions required by items #1-3 above, the Board may consider qualitative information, including, but not limited to, findings that result from any school quality reviews conducted pursuant to Education Code 52052 or any other reviews. (Education Code 52060)

For any local priorities addressed in the LCAP, the Board and Superintendent or designee shall identify and include in the LCAP the method for measuring the district's progress toward achieving those goals. (Education Code 52060)

To the extent practicable, data reported in the LCAP shall be reported in a manner consistent with how information is reported on a school accountability report card. (Education Code 52060)

*(cf. 0510 - School Accountability Report Card)*

## **LOCAL CONTROL AND ACCOUNTABILITY PLAN (continued)**

### **Increase or Improvement in Services for Unduplicated Students**

The LCAP shall demonstrate how the district will increase or improve services for unduplicated students at least in proportion to the increase in funds apportioned on the basis of the number and concentration of unduplicated students. (5 CCR 15494-15496)

When the district expends supplemental and/or concentration funds on a districtwide or schoolwide basis during the year for which the LCAP is adopted, the district's LCAP shall: (5 CCR 15496)

1. Identify those services that are being funded and provided on a districtwide or schoolwide basis
2. Describe how services are principally directed towards, and are effective in, meeting the district's goals for unduplicated students in the state priority areas and any local priority areas
3. If the enrollment of unduplicated students is less than 55 percent of district enrollment or less than 40 percent of school enrollment, describe how these services are the most effective use of the funds to meet the district's goals for its unduplicated students in the state priority areas and any local priority areas. The description shall provide the basis for this determination, including, but not limited to, any alternatives considered and any supporting research, experiences, or educational theory. (5 CCR 15496)

### **Annual Updates**

On or before July 1 of each year, the LCAP shall be updated using the template in 5 CCR 15497.5 and shall include all of the following: (Education Code 52061)

1. A review of any changes in the applicability of the goals described in the existing LCAP pursuant to the section "Goals and Actions Addressing State and Local Priorities" above
2. A review of the progress toward the goals included in the existing LCAP, an assessment of the effectiveness of the specific actions described in the existing LCAP toward achieving the goals, and a description of changes to the specific actions the district will make as a result of the review and assessment
3. A listing and description of the expenditures for the fiscal year implementing the specific actions included in the LCAP and the changes to the specific actions made as a result of the reviews and assessment required by items #1-2 above



**LOCAL CONTROL AND ACCOUNTABILITY PLAN** (continued)

4. A listing and description of expenditures for the fiscal year that will serve unduplicated students and students redesignated as fluent English proficient

**Availability of the Plan**

The Superintendent or designee shall post the LCAP and any updates or revisions to the LCAP on the district's web site. (Education Code 52065)

*(cf. 1113 - District and School Web Sites)*

Regulation  
approved:

**OXNARD SCHOOL DISTRICT**  
Oxnard, California

**LOCAL CONTROL AND ACCOUNTABILITY PLAN**

The Governing Board desires to ensure the most effective use of available funding to improve outcomes for all students. A community-based, comprehensive, data-driven planning process shall be used to identify annual goals and specific actions and to facilitate continuous improvement of district practices.

*(cf. 0000 - Vision)*

*(cf. 0200 - Goals for the School District)*

The Board shall adopt a districtwide local control and accountability plan (LCAP), following the template provided in 5 CCR 15497.5, that addresses the state priorities in Education Code 52060 and any local priorities adopted by the Board. The LCAP shall be updated on or before July 1 of each year and, like the district budget, shall cover the next fiscal year and subsequent two fiscal years. (Education Code 52060; 5 CCR 15497.5)

*(cf. 3100 - Budget)*

The LCAP shall focus on improving outcomes for all students, particularly those who are "unduplicated students" and other underperforming students.

*Unduplicated students* include students who are eligible for free or reduced-price meals, English learners, and foster youth and are counted only once for purposes of the local control funding formula. (Education Code 42238.02)

*(cf. 3553 - Free and Reduced Price Meals)*

*(cf. 6173.1 - Education for Foster Youth)*

*(cf. 6174 - Education for English Language Learners)*

The Superintendent or designee shall review the single plan for student achievement (SPSA) submitted by each district school pursuant to Education Code 64001 to ensure that the specific actions included in the LCAP are consistent with strategies included in the SPSA. (Education Code 52062)

*(cf. 0420 - School Plans/Site Councils)*

The LCAP shall also be aligned with other district and school plans to the extent possible in order to minimize duplication of effort and provide clear direction for program implementation.

*(cf. 0400 - Comprehensive Plans)*

*(cf. 0440 - District Technology Plan)*

*(cf. 0450 - Comprehensive Safety Plan)*

*(cf. 5030 - Student Wellness)*

*(cf. 6171 - Title I Programs)*

*(cf. 7110 - Facilities Master Plan)*

## **LOCAL CONTROL AND ACCOUNTABILITY PLAN (continued)**

Any complaint that the district has not complied with legal requirements pertaining to the LCAP may be filed pursuant to AR 1312.3 - Uniform Complaint Procedures. (Education Code 52075)

*(cf. 1312.3 - Uniform Complaint Procedures)*

### **Plan Development**

The Superintendent or designee shall gather data and information needed for effective and meaningful plan development and present it to the Board and community. Such data and information shall include, but not be limited to, data regarding the numbers of students in various student subgroups, disaggregated data on student achievement levels, and information about current programs and expenditures.

The Board shall consult with teachers, principals, administrators, other school personnel, employee bargaining units, parents/guardians, and students in developing the LCAP. Consultation with students shall enable unduplicated students and other numerically significant student subgroups to review and comment on LCAP development and may include surveys of students, student forums, student advisory committees, and/or meetings with student government bodies or other groups representing students. (Education Code 52060; 5 CCR 15495)

*(cf. 1220 - Citizen Advisory Committees)*

*(cf. 4140/4240/4340 - Bargaining Units)*

*(cf. 6020 - Parent Involvement)*

### **Public Review and Input**

The Board shall establish a parent advisory committee to review and comment on the LCAP. The committee shall be composed of a majority of parents/guardians and shall include at least one parent/guardian of an unduplicated student as defined above. (Education Code 52063; 5 CCR 15495)

Whenever district enrollment includes at least 15 percent English learners, with at least 50 students who are English learners, the Board shall establish an English learner parent advisory committee composed of a majority of parents/guardians of English learners. (Education Code 52063; 5 CCR 15495)

The Superintendent or designee shall present the LCAP to the committee(s) before it is submitted to the Board for adoption, and shall respond in writing to comments received from the committee(s). (Education Code 52062)

## **LOCAL CONTROL AND ACCOUNTABILITY PLAN (continued)**

The Superintendent or designee shall notify members of the public of the opportunity to submit written comments regarding the specific actions and expenditures proposed to be included in the LCAP. The notification shall be provided using the most efficient method of notification possible, which may not necessarily include producing printed notices or sending notices by mail. All written notifications related to the LCAP shall be provided in the primary language of parents/guardians when required by Education Code 48985. (Education Code 52062)

*(cf. 5145.6 - Parental Notifications)*

The Board shall hold at least one public hearing to solicit the recommendations and comments of members of the public regarding the specific actions and expenditures proposed to be included in the LCAP. The public hearing shall be held at the same meeting as the budget hearing required pursuant to Education Code 42127 and AR 3100 - Budget. (Education Code 42127, 52062)

*(cf. 9320 - Meetings and Notices)*

### **Adoption of the Plan**

The Board shall adopt the LCAP prior to adopting the district budget, but at the same public meeting. This meeting shall be held after the public hearing described above, but not on the same day as the hearing.

The Board may adopt revisions to the LCAP at any time during the period in which the plan is in effect, provided the Board follows the process to adopt the LCAP pursuant to Education Code 52062 and the revisions are adopted in a public meeting. (Education Code 52062)

### **Submission of Plan to County Superintendent of Schools**

Not later than five days after adoption of the LCAP, the Board shall file the LCAP with the County Superintendent of Schools. (Education Code 52070)

If the County Superintendent sends, by August 15, a written request for clarification of the contents of the LCAP, the Board shall respond in writing within 15 days of the request. If the County Superintendent then submits recommendations for amendments to the LCAP within 15 days of receiving the Board's response, the Board shall consider those recommendations in a public meeting within 15 days of receiving the recommendations. (Education Code 52070)

## **LOCAL CONTROL AND ACCOUNTABILITY PLAN (continued)**

### **Monitoring Progress**

The Superintendent or designee shall report to the Board, at least annually in accordance with the timeline and indicators established by him/her and the Board, regarding the district's progress toward attaining each goal identified in the LCAP. Evaluation data shall be used to recommend any necessary revisions to the LCAP.

*(cf. 0500 - Accountability)*

### **Technical Assistance/Intervention**

When it is in the best interest of the district, the Board may submit a request to the County Superintendent for technical assistance, including, but not limited to: (Education Code 52071)

1. Assistance in the identification of district strengths and weaknesses in regard to state priorities and review of effective, evidence-based programs that apply to the district's goals
2. Assistance from an academic expert, team of academic experts, or another district in the county in identifying and implementing effective programs to improve the outcomes for student subgroups
3. Advice and assistance from the California Collaborative for Educational Excellence established pursuant to Education Code 52074

In the event that the County Superintendent requires the district to receive technical assistance pursuant to Education Code 52071, the Board shall review all recommendations received from the County Superintendent or other advisor and shall consider revisions to the LCAP as appropriate in accordance with the process specified in Education Code 52062.

If the Superintendent of Public Instruction (SPI) identifies the district as needing intervention pursuant to Education Code 52072, the district shall cooperate with any action taken by the SPI or any academic advisor appointed by the SPI, which may include one or more of the following:

1. Revision of the district's LCAP
2. Revision of the district's budget in accordance with changes in the LCAP

**LOCAL CONTROL AND ACCOUNTABILITY PLAN (continued)**

3. A determination to stay or rescind any district action that would prevent the district from improving outcomes for all student subgroups, provided that action is not required by a collective bargaining agreement

*Legal Reference:*

EDUCATION CODE

305-306 *English language education*  
17002 *State School Building Lease-Purchase Law, including definition of good repair*  
41020 *Audits*  
42127 *Public hearing on budget adoption*  
42238.01-42238.07 *Local control funding formula*  
44258.9 *County superintendent review of teacher assignment*  
48985 *Parental notices in languages other than English*  
51210 *Course of study for grades 1-6*  
51220 *Course of study for grades 7-12*  
52052 *Academic Performance Index; numerically significant student subgroups*  
52060-52077 *Local control and accountability plan*  
52302 *Regional occupational centers and programs*  
52372.5 *Linked learning pilot program*  
54692 *Partnership academies*  
60119 *Sufficiency of textbooks and instructional materials; hearing and resolution*  
60605.8 *California Assessment of Academic Achievement; Academic Content Standards Commission*  
60811.3 *Assessment of language development*  
64001 *Single plan for student achievement*  
99300-99301 *Early Assessment Program*  
CODE OF REGULATIONS, TITLE 5  
15494-15497.5 *Local control and accountability plan and spending requirements*  
UNITED STATES CODE, TITLE 20  
6312 *Local educational agency plan*  
6826 *Title III funds, local plans*

*Management Resources:*

CSBA PUBLICATIONS

*Impact of Local Control Funding Formula on Board Policies, November 2013*  
*Local Control Funding Formula 2013, Governance Brief, August 2013*  
*State Priorities for Funding: The Need for Local Control and Accountability Plans, Fact Sheet, August 2013*

CALIFORNIA DEPARTMENT OF EDUCATION PUBLICATIONS

*California School Accounting Manual*

WEB SITES

CSBA: <http://www.csba.org>  
California Department of Education: <http://www.cde.ca.gov>



# OXNARD SCHOOL DISTRICT

1051 South “A” Street • Oxnard, California 93030 • 805/385-1501

## SCHEDULE OF BOARD MEETINGS JANUARY – DECEMBER 2016

(UNLESS OTHERWISE INDICATED, ALL MEETINGS ARE HELD ON THE FIRST AND THIRD **WEDNESDAY** OF EACH MONTH IN THE BOARD ROOM AT THE DISTRICT OFFICE, 1051 SOUTH ‘A’ STREET, STARTING AT 7:00 PM)

January	20	Regular Board Meeting (Note: only ONE meeting in January)
February	3	Regular Board Meeting
	17	Regular Board Meeting
March	2	Regular Board Meeting
	16	Regular Board Meeting
April	20	Regular Board Meeting (Note: only ONE meeting in April)
May	4	Regular Board Meeting
	18	Regular Board Meeting
June	1	Regular Board Meeting
	22	Regular Board Meeting
July		District Dark – No meeting in July
August	3	Regular Board Meeting
	24	Regular Board Meeting
September	7	Regular Board Meeting
	21	Regular Board Meeting
October	5	Regular Board Meeting
	19	Regular Board Meeting
November	2	Regular Board Meeting (Note: only ONE meeting in November)
December	7	Regular Board Meeting – Organizational Meeting of the Board (Note: only ONE meeting in December)

*The meeting schedule shown above is subject to change at any time.*

*NOTE: Changes are indicated in italics/bold.*

Board Approved: 12-09-15

*Mission: “Ensure a culturally diverse education for each student in a safe, healthy and supportive environment that prepares students for college and career opportunities.”*