



BID ADDENDUM NO. 02

Date: February 08, 2022

Project: SKUSD- Tropico Middle School Expansion Project
(**Project Number:** SKUSD-TMS-EP)

Owner: SOUTHERN KERN UNIFIED SCHOOL DISTRICT
2601 Rosamond Blvd, Rosamond, CA 93560
661-256-5000

Architect: FLEWELLING & MOODY
815 Colorado Blvd, Los Angeles, CA 90041

Construction Management: HPLE, INC., 117 E Colorado Blvd, Pasadena, CA 91105

The clarifications, modifications, changes, additions and/or deletions contained herein shall be incorporated within the contract/construction documents for the project. Such information shall take precedence over that previously published.

NOTE TO ALL BIDDERS

Bidders are advised that all work to be carried out in this scope of work is per the associated drawings, specifications & addendums previously provided via link (<https://www.skusd.k12.ca.us/Page/852>) and those provided herein as new or superseding documents along with any changes and /or clarifications shall be included in the scope of Contracted Work.

Note: All changes and/or clarifications provided shall be included in the scope of contracted work. Pursuant to PR13-01 all work that requires approval by the DSA shall not begin until said approvals are obtained.

CHANGES TO ADDENDUM NO.2

1. See Attached Bid Clarification 01 documents (issued by Flewelling & Moody dated Feb 07, 2022)

CONTRACTOR RFI LIST

Response to Prebid RFI's (American Modular Systems, Inc.), Bid Addendum 02 dated February 08, 2022 attached hereto: (**see below**)

(**Note:** Responses to submitted RFI's shall apply to all bidders)

ATTACHMENTS

1. Bid Clarification 01 (by Flewelling & Moody dated Feb 07, 2022)
2. Architect/CM Responses to Pre Bid RFI's

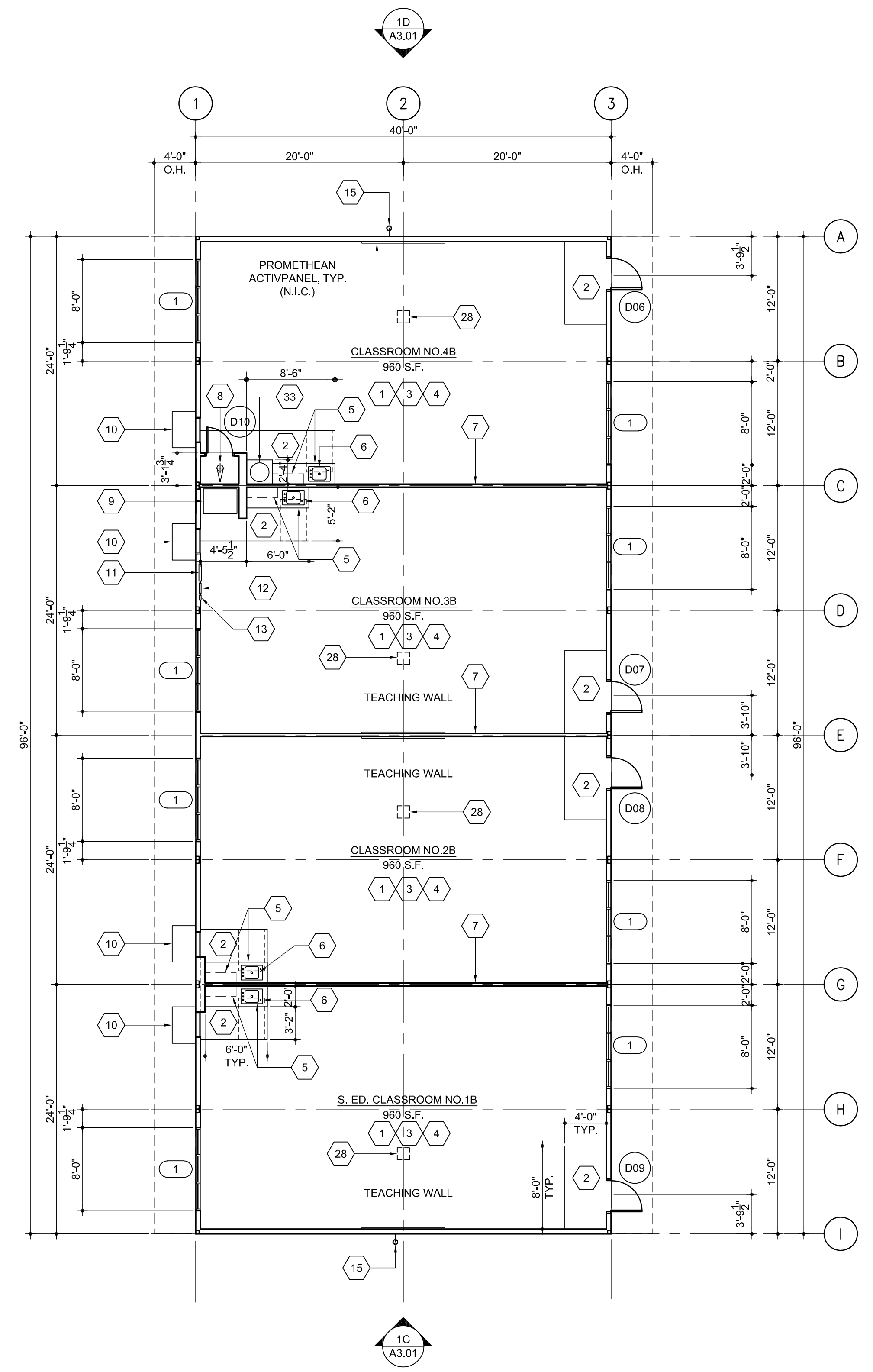
END OF ADDENDUM 02

SCOPE OF WORK KEYNOTES

GENERAL NOTES:

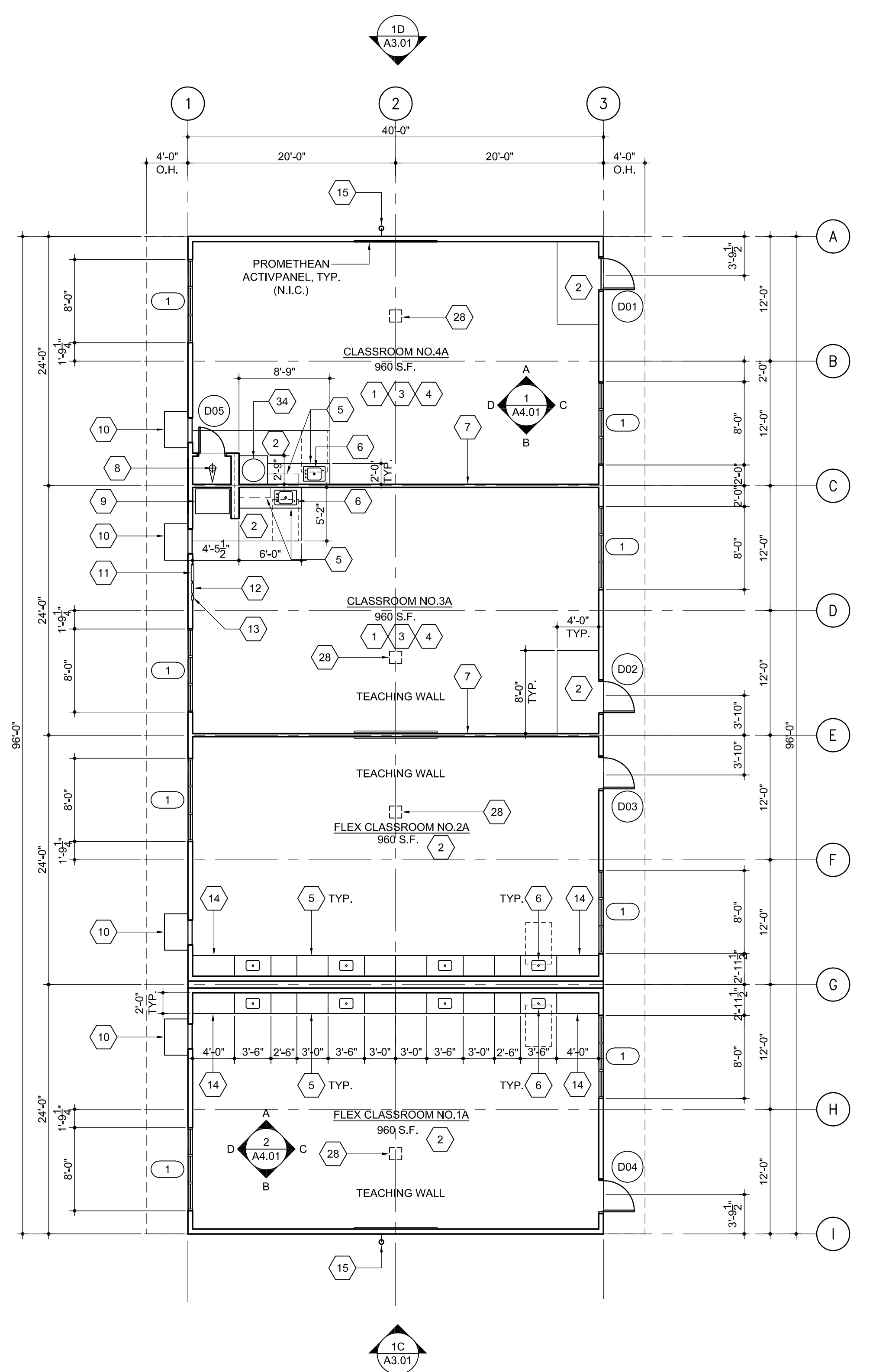
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- B. PROVIDE BACKING AS REQUIRED FOR ALL ACCESSORIES, EQUIPMENT AND CABINETS.
- C. ONE STORY MODULAR BUILDINGS TO HAVE CONCRETE FLOOR WITH METAL DECK AND A 5" MIN. LIGHT WEIGHT CONCRETE SUBFLOOR WITH BELOW GRADE CONCRETE FOUNDATION SYSTEM. FOUNDATION SYSTEM SHALL COMPLY WITH DSA IR 16-1.13 REQUIREMENTS. FOUNDATION SYSTEM SHALL BE PER MODULAR MANUFACTURER'S PC DESIGN PACKAGE BUT SHALL BE PROVIDED UNDER THE SITE WORK CONTRACT.
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- E. AT RESTROOM FLOORS PROVIDE CERAMIC TILES OVER SETTING BED. SIZE, COLOR AND STYLE TO BE SELECTED BY ARCHITECT FROM TILE MANUFACTURER'S FULL RANGE OF COLORS. SLOPE FLOORS TO DRAIN. PROVIDE CERAMIC TILE WAINSCOT FINISHES PER INTERIOR ELEVATIONS, SEE SHT. A4.02.
- F. STUB-OUT AND PLUG C.I. WASTE BELOW FLOOR WITH ALL UNDER FLOOR CONNECTIONS TO BE DONE BY SITE CONTRACTOR. COORDINATE P.O.C. WITH SITE CONTRACTOR.
- G. STUB-OUT AND CAP C.W. (TYPE "L" COPPER) BELOW FLOOR WITH ALL UNDER FLOOR CONNECTIONS TO BE DONE BY SITE CONTRACTOR. COORDINATE P.O.C. WITH SITE CONTRACTOR.
- H. SEE ALL ADA SIGNAGE AND BRILLE COMPLIANT SIGNAGE AT ALL DOOR AND ROOMS (ROOM NAMES AND NUMBERS). SEE SHT. A2.09 & A2.10 FOR REFERENCE ONLY. SITE CONTRACTOR SHALL PROVIDE AND INSTALL ALL REQUIRED SIGNAGE.
- I. PROVIDE COMMERCIAL GRADE ECOBEE THERMOSTATS.
- J. PROVIDE ALL CONDUIT AND J-BOX FOR ALL DATA DROPS AND POINTS OF CONNECTION. CONDUIT SHALL STUB UP IN WALL TO ABOVE CEILING INTO ACCESSIBLE ATTIC SPACE FOR PLENUM RATED CABLE TO BE INSTALLED BY OTHERS. MIN. CONDUIT SIZE IN WALL SHALL BE 1/2" DIAMETER, UNLESS NOTED OTHERWISE.
- K. PROVIDE 1" WINDOW BLINDS FOR ALL WINDOWS, COLOR TO BE SELECTED BY ARCHITECT.
- L. ALL HARDWARE SCHEDULE AND SPECIFICATIONS SHALL BE PER DISTRICT STANDARDS. REFER TO THE ATTACHED HARDWARE CUT SHEETS, HARDWARE SCHEDULE AND SPECIFICATIONS TO BE USED FOR REFERENCE.
- M. MODULAR MANUFACTURER SHALL APPLY FACTORY STUCCO FINISH FOR ALL BUILDINGS AND SHALL COMPLY WITH ALL REQUIREMENTS UNDER C.B.C. CHAPTER 25.

- 1. PROVIDE CARPET TILES PER DISTRICT STANDARD. PROVIDE ALL SUITABLE MOLDING STRIPS AT ALL INTERFACES WITH OTHER FLOORING INSTALLED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS. MANUFACTURER: INTERFACET. REFER TO INTERIOR FINISH MATRIX SCHEDULE.
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- 3. PROVIDE INSULATION- R-30 AT ROOF AND R-19 (MIN.) AT WALLS. FLAME SPREAD-0-25 SMOKE DEVELOPED, FUEL CONTRIBUTED-0-450. (SEC. 707 1994 CBC)
- 4. PROVIDE DISTRICT STANDARD WALL FINISHES: FRP WAINSCOT OVER 1/2" GYP. BOARD FILLER FROM FLOOR TO 38" ABOVE THEN VINYL COVERED 1/2" TACKABLE SUBSTRATE OVER 1/2" TYPE "X" GYP. BOARD FULL HEIGHT OF WALL UP TO 6" ABOVE CEILING. PROVIDE EXTRUDED ALUMINUM EDGE MOLDING AT BOTTOM AND AT ALL CUT OR EXPOSED EDGES. REFER TO SHT. A4.01 AND A4.02 FOR INTERIOR ELEVATIONS.
- 5. PROVIDE TYP. BASE AND UPPER CABINETS - PLASTIC LAMINATE SHALL BE MANUFACTURED BY WILSONART AND CABINETS SHALL BE MANUFACTURED AND INSTALLED IN ACCORDANCE WITH THE ARCHITECTURAL WOODWORK STANDARDS, CUSTOM GRADE, MOST RECENT EDITION. THE NUMBERS SHOWN FOR THE CASEWORK ARE W DESIGN STANDARD NUMBERS. HEIGHTS AND DEPTHS ARE AS SHOWN HEREIN OR IDENTIFIED IN THE ABOVE MANUAL. PROVIDE LOOKS FOR ALL CABINET DOORS AND DRAWERS. ALL FILE DRAWERS MUST ACCOMMODATE A STANDARD PENDAFLEX HANGING FILE SYSTEM. REFER TO INTERIOR FINISH MATRIX SCHEDULE.
- 6. PROVIDE CLASSROOM SINK w/ DRINKING FOUNTAIN BUBBLER COMPLETE WITH TRIM AND MAKE ALL FINAL CONNECTIONS WITH 2"WASTE, 1 1/2" VENT AND 3/4" CW WITH ANGLE STOPS. PROVIDE CLEANOUT PLUG BELOW SINK. CHLORINATION PER HEALTH CODE AND SPECIFICATIONS.
- 7. PROVIDE FULL HEIGHT PARTITION WITH DRYWALL ON BOTH SIDES AND R-11 BATT INSULATION FOR ACOUSTIC SEPARATION.
- 8. PROVIDE FIRE SPRINKLER RISER, PER PC APPROVED FIRE SPRINKLER DRAWINGS BY MODULAR MANUFACTURER.
- 9. PROVIDE IN-WALL BLOCKING FOR DISTRICT PROVIDED IDF CABINET, SEE ATTACHED IDF CUT SHEET FOR COMPLETE SPECIFICATIONS. IDF SHALL BE INSTALLED BY SITE CONTRACTOR.
- 10. PROVIDE WALL HUNG HVAC UNIT BY MODULAR BUILDING MANUFACTURER.
- 11. PROVIDE FLUSH MOUNTED ELECTRICAL PANEL.
- 12. PROVIDE 1 1/2" CONDUIT FOR FLUSH MOUNTED FIRE ALARM TERMINAL CABINET (BY OTHERS).
- 13. PROVIDE 1 1/2" CONDUIT FLUSH MOUNTED FIRE ALARM CABINET (BY OTHERS).
- 14. PROVIDE FULL HEIGHT CABINETS - PLASTIC LAMINATE SHALL BE MANUFACTURED BY WILSONART AND CABINETS SHALL BE MANUFACTURED AND INSTALLED IN ACCORDANCE WITH THE ARCHITECTURAL WOODWORK STANDARDS, CUSTOM GRADE, MOST RECENT EDITION. THE NUMBERS SHOWN FOR THE CASEWORK ARE W DESIGN STANDARD NUMBERS. HEIGHTS AND DEPTHS ARE AS SHOWN HEREIN OR IDENTIFIED IN THE ABOVE MANUAL. PROVIDE LOOKS FOR ALL CABINET DOORS.
- 15. PROVIDE F.R. HOSE BIBB (HB-1) RECESSED IN WALL & CONNECT 3/4" C.W.
- 16. FURNISH AND INSTALL FLOOR MOUNT WATER CLOSET WITH FLUSH VALVE AND ACCESSORIES. PROVIDE ALL UTILITY PIPES TO POINT OF CONNECTION OUTSIDE OF MODULAR BUILDING FOOTPRINT AND COORDINATE WITH SITE CONTRACTOR FOR ALL FINAL CONNECTIONS.
- 17. FURNISH AND INSTALL WALL MOUNT URINAL WITH FLUSH VALVE AND ACCESSORIES. PROVIDE ALL UTILITY PIPES TO POINT OF CONNECTION OUTSIDE OF MODULAR BUILDING FOOTPRINT AND COORDINATE WITH SITE CONTRACTOR FOR ALL FINAL CONNECTIONS.
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- 20. PROVIDE FLOOR DRAIN WITH TRAP PRIMER AND ADA COMPLIANT GRATE. ALL SUBFLOOR SUPPLY LINES SHALL BE INSULATED TO PROTECT AGAINST FREEZING.
- 21. PROVIDE HINY HIDERS TOILET PARTITIONS COMPLETE WITH ALL WALL AND FLOOR MOUNTED BACKING BY SCRANTON PRODUCTS OR EQUAL. COLOR TO BE SELECTED BY ARCHITECT. PROVIDE CONTINUOUS WALL BRACKETS RATED FOR SCHOOL INSTALLATIONS.
- 22. PROVIDE 24"x24"x10" TERRAZZO MOP SINK WITH POLISHED CHROME-PLATED UTILITY FAUCET WITH A MIN. OF 2 GPM FOR HOT AND COLD WATER. ALL SUBFLOOR SUPPLY LINES SHALL BE INSULATED TO PROTECT AGAINST FREEZING. COORDINATE WITH SITE CONTRACTOR FOR ALL FINAL UTILITY CONNECTIONS.
- 23. PROVIDE FINELITE RECESSED LIGHT FIXTURE, MODEL# HPR LEDA 2'x4' DCO-5835 120V SCCI.
- 24. PROVIDE 24"x48" SUSPENDED SLOPED T-BAR CEILING SYSTEM PER MANUFACTURER'S APPROVED PC SET AND DSA IR 25-2.13. CEILING PANELS SHALL BE A MIN. OF 1/2" THK. MINERAL FIBER OR FIBERGLASS CEILING TILES BY ARMSTRONG OR EQUAL.
- 25. PROVIDE LITHONIA LED LIGHT FIXTURE, MODEL# CPANL 2'x4' AL05NW7M4 WITH DCMK224 AND SENSOR SWITCH# CM99-PDT.
- 26. PROVIDE 1/2" GYP. BOARD CEILING (PAINTED) PER MANUFACTURER'S SPECIFICATION.
- 27. PROVIDE CONTINUOUS STRUCTURAL INTERLOCKING 3" STANDING SEAM METAL ROOF. MIN. 20 GAUGE WITH 0.025 THICKNESS GALV. STEEL. PROVIDE FACTORY FINISH, COLOR TO BE SELECTED BY ARCHITECT.
- 28. PROVIDE EL-500P FLOOR BOX WITH 1" SOLID IN ANODIZED ALUMINUM. INCLUDE A U-ACCESS COVER WITH INDUSTRIAL CARPET. COLOR TO BE SELECTED BY ARCHITECT. REFER TO ATTACHED CUT SHEET FOR COMPLETE SPECIFICATIONS.
- 29. PROVIDE HEAVY DUTY GALVANIZED IN-WALL MOUNTED STAINLESS STEEL AND ANTI-FREEZE HI-LO DRINKING FOUNTAIN WITH ANTIMICROBIAL COPPER PUSH BUTTON COMPLETE WITH ALL REQUIRED PLUMBING FOR A COMPLETE INSTALLATION. MANUFACTURER: OASIS OR APPROVED EQUAL.
- 30. FURNISH AND INSTALL LAVATORY COMPLETE WITH FAUCET BACK PLATE, TRAP, VENT AND ALL ACCESSORIES. INSULATE ALL EXPOSED HOT & COLD WATER AND WASTE PIPING BELOW LAVATORY. PROVIDE ALL FINAL WASTE, VENT AND MAKE WATER CONNECTION OUTSIDE OF MODULAR BUILDING FOOTPRINT. COORDINATE WITH SITE CONTRACTOR FOR ALL FINAL CONNECTIONS.
- 31. PROVIDE RECESSED CEILING HEATER (CDF SERIES) PER ATTACHED CUTSHEET. INSTALL PER MANUFACTURER'S SPECIFICATIONS.
- 32. PROVIDE PIPE INSULATION FOR ALL PLUMBING PIPES AND PROVIDE HEAT TAPE AT ALL WATER LINES INSIDE PLUMBING CHASE AREA.
- 33. PROVIDE 20 GALLON AO SMITH GAS WATER HEATER, MODEL NO DEL-20. PROVIDE ALL PIPING REQUIRED FOR A COMPLETE INSTALLATION. WATER HEATER SHALL BE INSIDE A FULL HEIGHT WIC CABINET, SEE INTERIOR ELEVATION DET. 1/A4.01
- 34. PROVIDE 50 GALLON AO SMITH GAS WATER HEATER, MODEL NO DEL-50. PROVIDE ALL PIPING REQUIRED FOR A COMPLETE INSTALLATION. WATER HEATER SHALL BE INSIDE A FULL HEIGHT WIC CABINET, SEE INTERIOR ELEVATION DET. 2/A4.01
- 35. PROVIDE 20 GALLON AO SMITH GAS WATER HEATER, MODEL NO DEL-20. PROVIDE ALL PIPING REQUIRED FOR A COMPLETE INSTALLATION. WATER HEATER SHALL BE WALL MOUNTED, BRACED AND ALLOW FOR ACCESS CLEARANCE TO PLUMBING FIXTURE.



**BUILDING 'B'
CLASSROOM FLOOR PLAN**
SCALE: 1/8" = 1'-0"

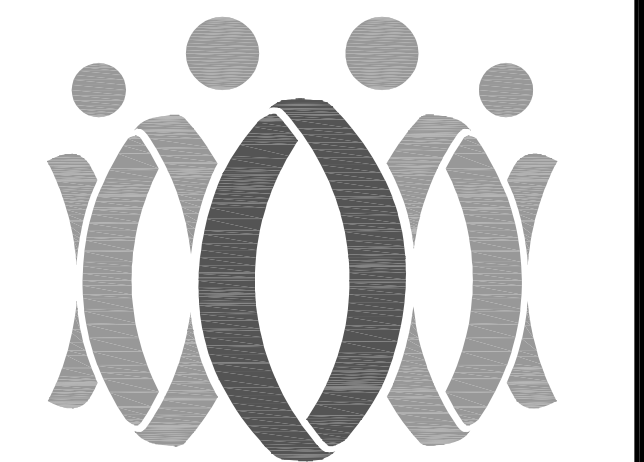
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A2.01



**BUILDING 'A'
CLASSROOM FLOOR PLAN**
SCALE: 1/8" = 1'-0"

1
A2.01

NOTE: THE INTENT OF THIS DRAWING IS TO REPLACE PREVIOUSLY ISSUED SHT. A2.01 DATED 01-14-2022 AND TO INCORPORATE THE WORK SHOWN HEREIN INTO THE CONTRACT. ALL WORK INDICATED SHALL HEREBY BE MADE A PART OF THE CONTRACT.

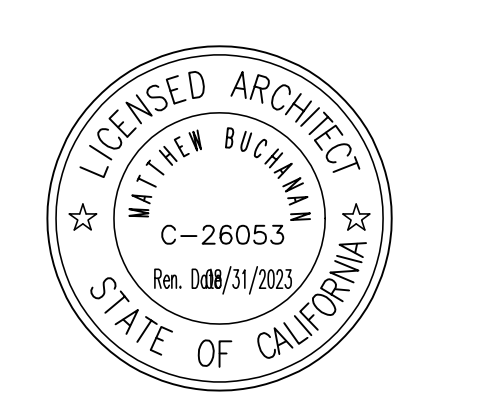


FLEWELLING & MOODY
architecture planning interiors

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1035 West Lancaster Boulevard
Lancaster, California 93534
P 865.946.0771
E-Mail: fm-lancaster@flewelling-moody.com

An Employee Owned Corporation



ARCHITECT
MATT BURMAN
C-26053
Exp. 08/31/2023
STATE OF CALIFORNIA

CONSULTANT

No.	Date	Description

SOUTHERN KERN UNIFIED SCHOOL DISTRICT
TROPICO MIDDLE SCHOOL EXPANSION PROJECT
3180 MOJAVE TROPICO ROAD
ROSAMOND, CA 93560

BLDG. A & B CLASSROOM FLOOR PLAN

Job No.	2940.000
Date	09-02-21

A2.01

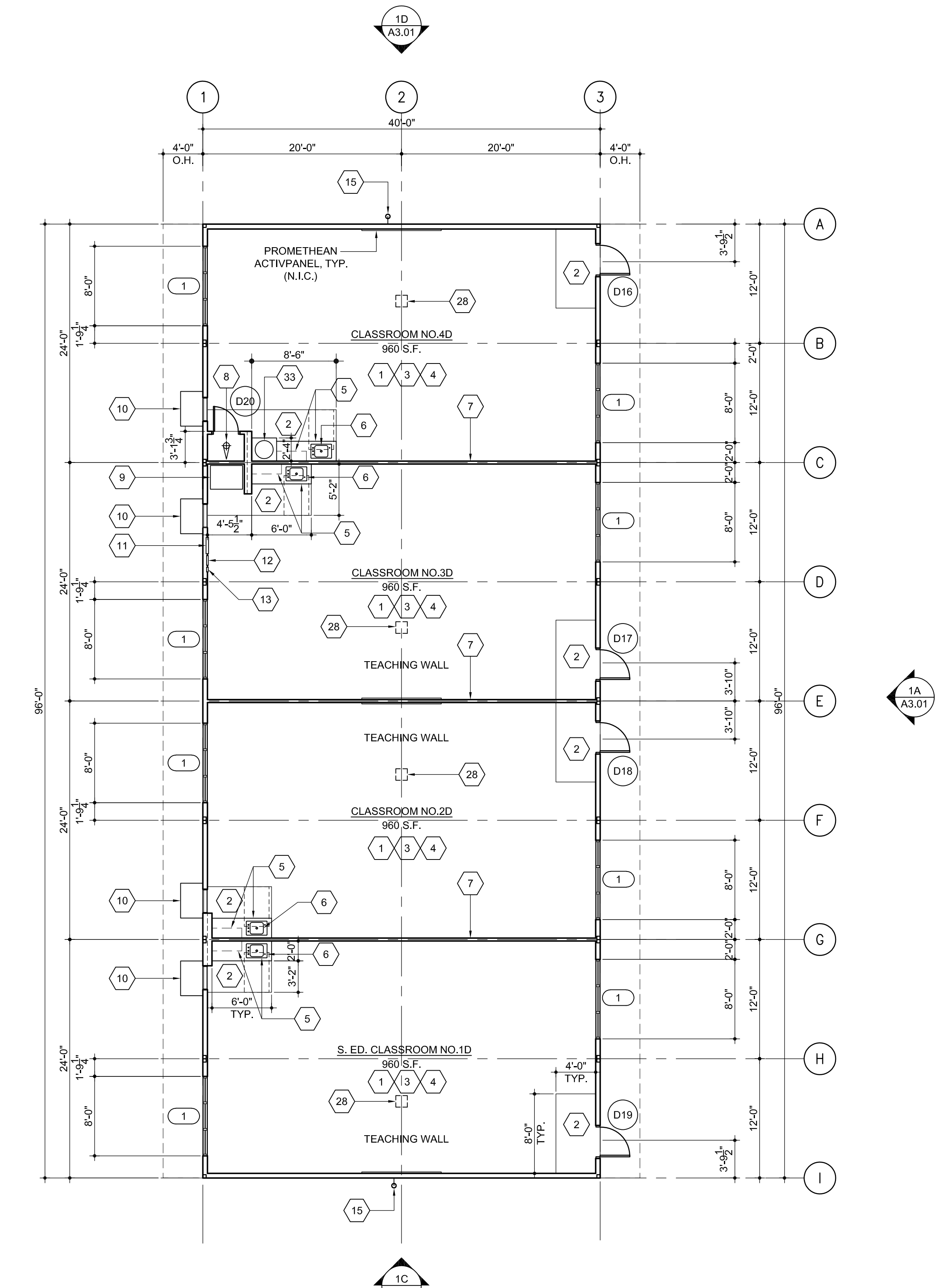
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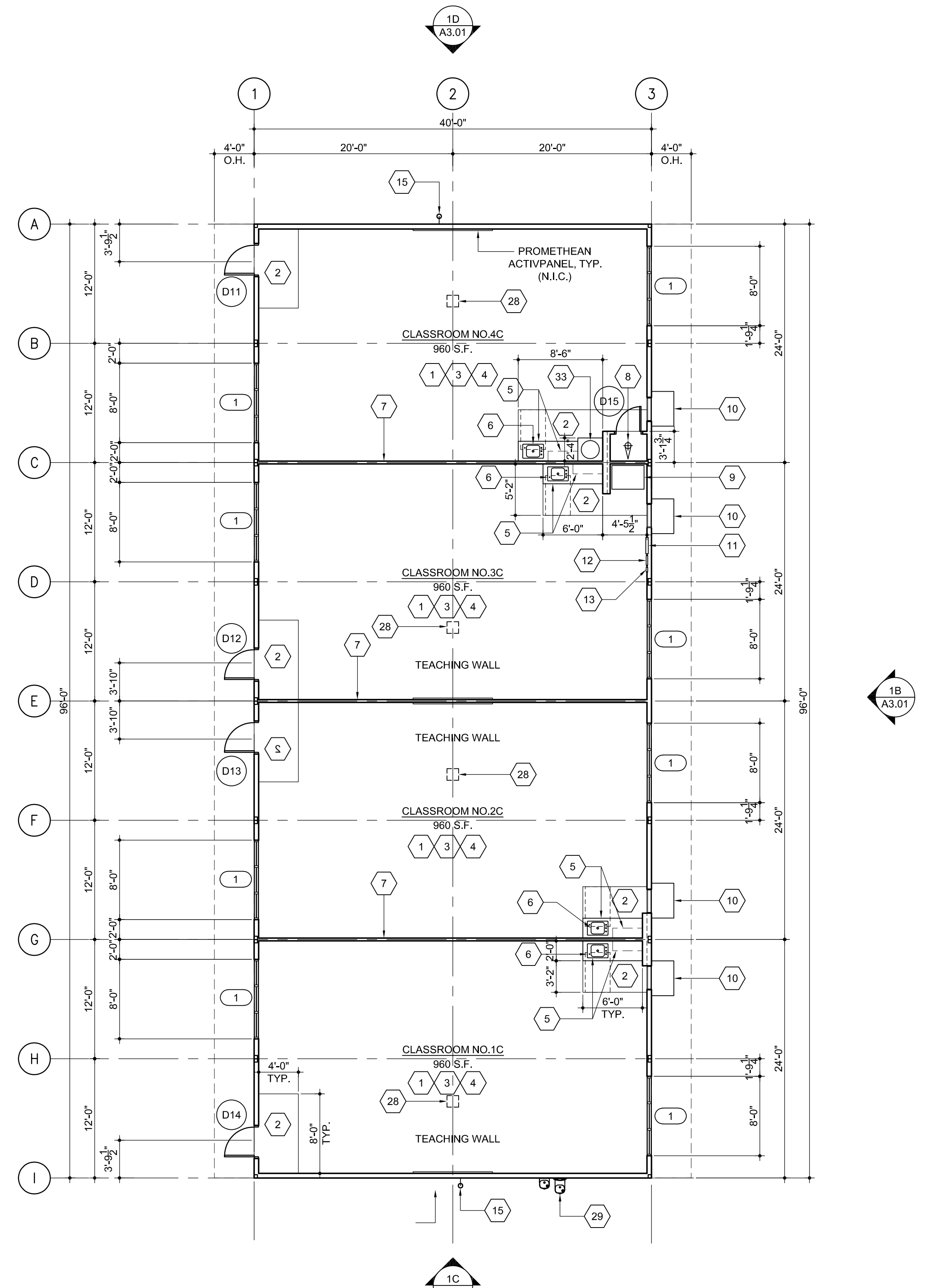
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- 33 PROVIDE 20 GALLON AQ SMITH GAS WATER HEATER, MODEL NO.DEL-20. PROVIDE ALL PIPING REQUIRED FOR A COMPLETE INSTALLATION. WATER HEATER SHALL BE INSIDE A FULL HEIGHT WC CABINET, SEE INTERIOR ELEVATION DET. 1/A4.01
- 34 PROVIDE 50 GALLON AQ SMITH GAS WATER HEATER, MODEL NO.DEL-50. PROVIDE ALL PIPING REQUIRED FOR A COMPLETE INSTALLATION. WATER HEATER SHALL BE INSIDE A FULL HEIGHT WC CABINET, SEE INTERIOR ELEVATION DET. 2/A4.01
- 35 PROVIDE 20 GALLON AQ SMITH GAS WATER HEATER, MODEL NO.DEL-20. PROVIDE ALL PIPING REQUIRED FOR A COMPLETE INSTALLATION. WATER HEATER SHALL BE WALL MOUNTED, BRACED AND ALLOW FOR ACCESS CLEARANCE TO PLUMBING FIXTURE.

NOTE: THE INTENT OF THIS DRAWING IS TO REPLACE PREVIOUSLY ISSUED SHT. A2.01 DATED 01-14-2022 AND TO INCORPORATE THE WORK SHOWN HEREIN INTO THE CONTRACT. ALL WORK INDICATED SHALL HEREBY BE MADE A PART OF THE CONTRACT.



BUILDING 'D' CLASSROOM FLOOR PLAN
SCALE: 1/8" = 1'-0"
DATE: 02/07/2022
DRAWN BY: JLC/JON
CHECKED BY: JLC/JON



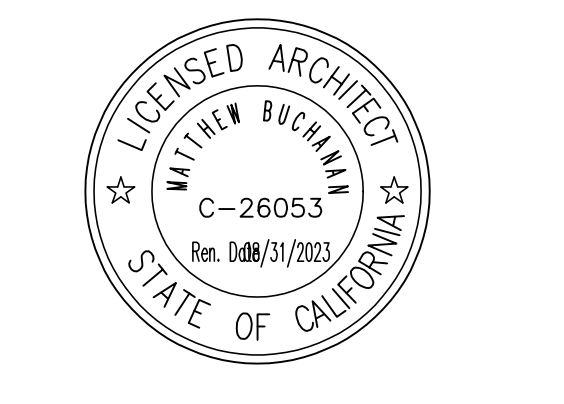
BUILDING 'C' CLASSROOM FLOOR PLAN
SCALE: 1/8" = 1'-0"
DATE: 02/07/2022
DRAWN BY: JLC/JON
CHECKED BY: JLC/JON

FLEWELLING & MOODY
architecture planning interiors

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An Employee Owned Corporation



CONSULTANT

No.	Date	Description

Drawn by: _____
Checked by: _____
Revised: _____

SOUTHERN KERN UNIFIED SCHOOL DISTRICT
TROPICO MIDDLE SCHOOL EXPANSION PROJECT
3180 MOJAVE TROPICO ROAD ROSAMOND, CA 93560

BLDG. C & D CLASSROOM FLOOR PLAN

Job No. 2940.000
Date 09-02-21

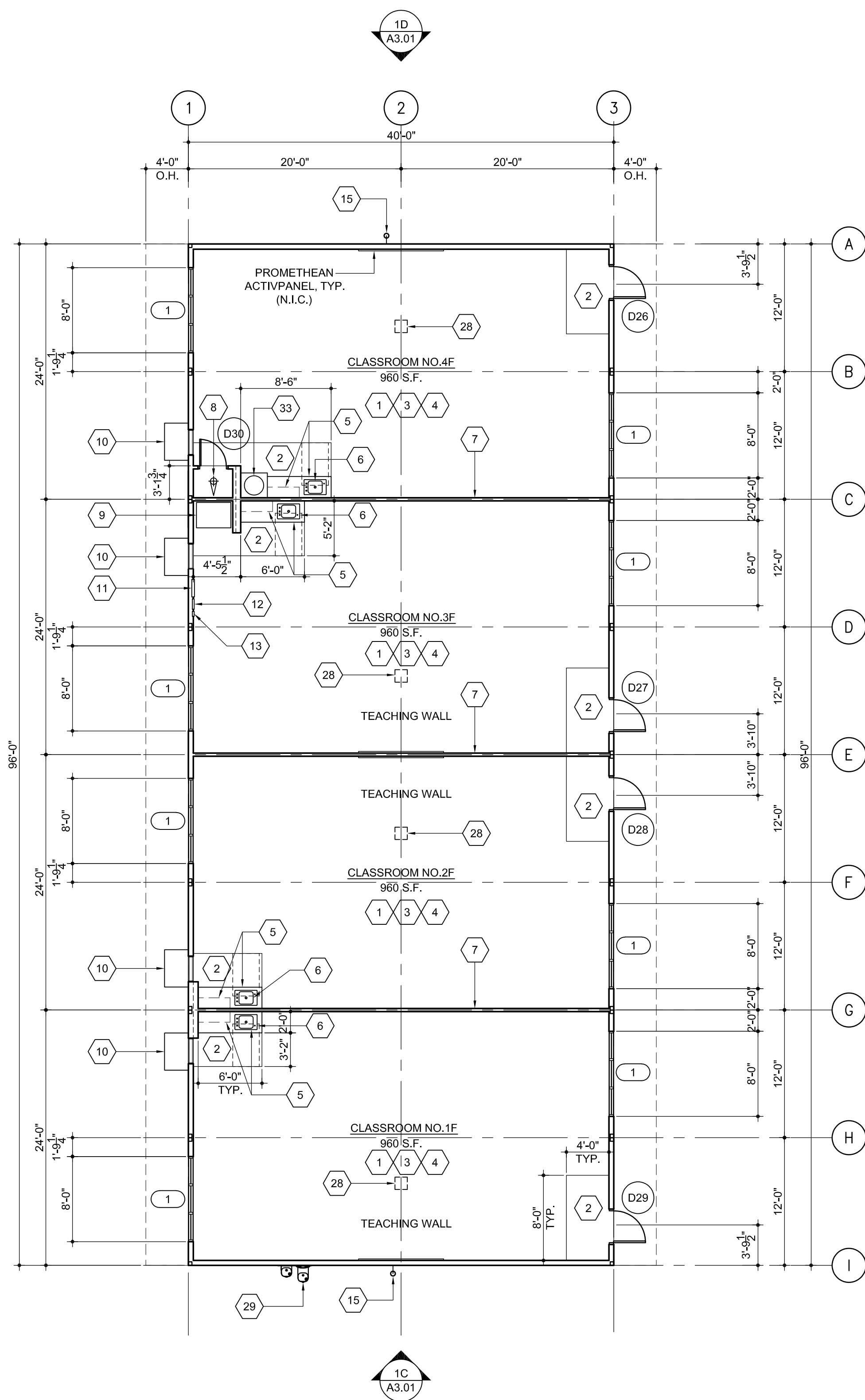
A2.02

SCOPE OF WORK KEYNOTES

GENERAL NOTES:

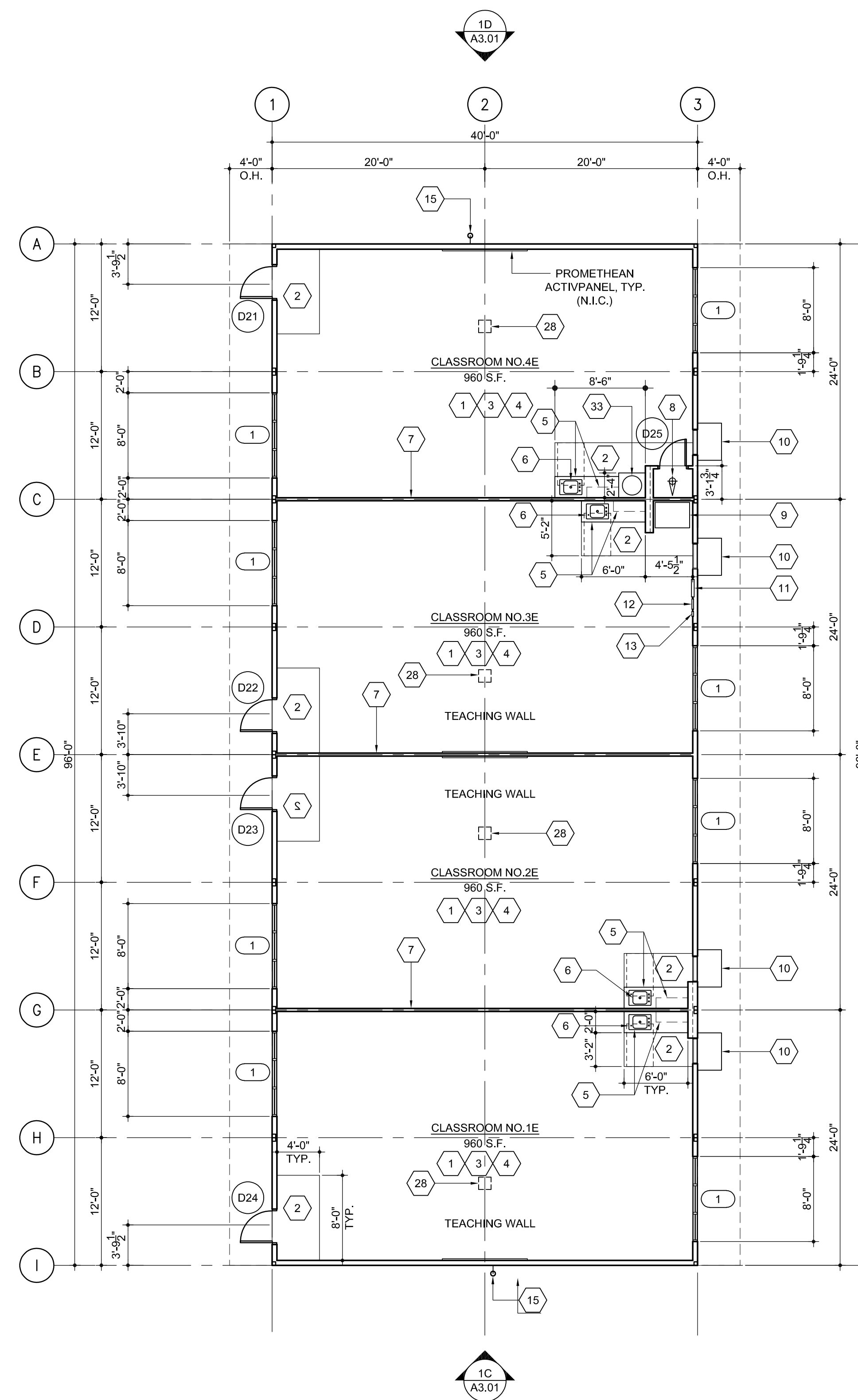
- A. ALL ITEMS INDICATED SHALL BE SUPPLIED BY MODULAR MANUFACTURER, UNLESS SPECIFICALLY NOTED OTHERWISE.
- B. PROVIDE BACKING AS REQUIRED FOR ALL ACCESSORIES, EQUIPMENT AND CABINETS.
- C. ONE STORY MODULAR BUILDINGS TO HAVE CONCRETE FLOOR WITH METAL DECK AND A 5" MIN. LIGHT WEIGHT CONCRETE SUBFLOOR WITH BELOW GRADE CONCRETE FOUNDATION SYSTEM. FOUNDATION SYSTEM SHALL COMPLY WITH DSA IR 16-1.13 REQUIREMENTS. FOUNDATION SYSTEM SHALL BE PER MODULAR MANUFACTURER'S PC DESIGN PACKAGE BUT SHALL BE PROVIDED UNDER THE SITE WORK CONTRACT.
- D. PROVIDE MIN. 2:12 PITCH ROOF WITH STANDING SEAM METAL ROOF AND 20 PSF SNOW LOAD CAPACITY PER MODULAR MANUFACTURER STANDARD. COLORS TO BE SELECTED BY ARCHITECT FROM FULL RANGE OF KYNAR COLORS.
- E. AT RESTROOM FLOORS PROVIDE CERAMIC TILES OVER SETTING BED, SIZE, COLOR AND STYLE TO BE SELECTED BY ARCHITECT FROM TILE MANUFACTURERS FULL RANGE OF COLORS. SLOPE FLOORS TO DRAIN. PROVIDE CERAMIC TILE MAINSCOT FINISHES PER INTERIOR ELEVATIONS, SEE SHT. A4.02.
- F. STUB-OUT AND PLUG C.I. WASTE BELOW FLOOR WITH ALL UNDER FLOOR CONNECTIONS TO BE DONE BY SITE CONTRACTOR. COORDINATE P.O.C. WITH SITE CONTRACTOR.
- G. STUB-OUT AND CAP C.W. (TYPE "L" COPPER) BELOW FLOOR WITH ALL UNDER FLOOR CONNECTIONS TO BE DONE BY SITE CONTRACTOR. COORDINATE P.O.C. WITH SITE CONTRACTOR.
- H. SEE ALL ADA SIGNAGE AND BRAILLE COMPLIANT SIGNAGE AT ALL DOOR AND ROOMS (ROOM NAMES AND NUMBERS), SEE SHT. A2.09 & A2.10 FOR REFERENCE ONLY. SITE CONTRACTOR SHALL PROVIDE AND INSTALL ALL REQUIRED SIGNAGE.
- I. PROVIDE COMMERCIAL GRADE ECOBEE THERMOSTATS.
- J. PROVIDE ALL CONDUIT AND J-BOX FOR ALL DATA DROPS AND POINTS OF CONNECTION. CONDUIT SHALL STUB UP IN WALL TO ABOVE CEILING INTO ACCESSIBLE ATTIC SPACE FOR PLENUM RATED CABLE TO BE INSTALLED BY OTHERS. MIN. CONDUIT SIZE IN WALL SHALL BE 1/2" DIAMETER, UNLESS NOTED OTHERWISE.
- K. PROVIDE 1" WINDOW BLINDS FOR ALL WINDOWS, COLOR TO BE SELECTED BY ARCHITECT.
- L. ALL HARDWARE SCHEDULE AND SPECIFICATIONS SHALL BE PER DISTRICT STANDARDS. REFER TO THE ATTACHED HARDWARE CUT SHEETS, HARDWARE SCHEDULE AND SPECIFICATIONS TO BE USED FOR REFERENCE.
- M. MODULAR MANUFACTURER SHALL APPLY FACTORY STUCCO FINISH FOR ALL BUILDINGS AND SHALL COMPLY WITH ALL REQUIREMENTS UNDER C.B.C. CHAPTER 25.

1. PROVIDE CARPET TILES PER DISTRICT STANDARD. PROVIDE ALL SUITABLE MOLDING STRIPS AT ALL INTERFACES WITH OTHER FLOORING INSTALLED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS. MANUFACTURER: INTERFACET. REFER TO INTERIOR FINISH MATRIX SCHEDULE.
2. PROVIDE VCT TILES PER DISTRICT STANDARD. PROVIDE ALL SUITABLE MOLDING STRIPS AT ALL INTERFACES WITH OTHER FLOORING INSTALLED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS. MANUFACTURER: ARMSTRONG. REFER TO INTERIOR FINISH MATRIX SCHEDULE.
3. PROVIDE INSULATION-R-30 AT ROOF AND R-19 (MIN.) AT WALLS. FLAME SPREAD-0-25 SMOKE DEVELOPED-0-450. (SEC. 707 1994 CBC)
4. PROVIDE DISTRICT STANDARD WALL FINISHES: FRP MAINSCOT OVER 1/2" GYP. BOARD FILLER FROM FLOOR TO 36" ABOVE THEN VINYL COVERED 1/2" TACKABLE SUBSTRATE OVER 1/2" TYPE "X" GYP. BOARD FULL HEIGHT OF WALL UP TO 6" ABOVE CEILING. PROVIDE EXTRUDED ALUMINUM EDGE MOLDING AT BOTTOM AND AT ALL CUT OR EXPOSED EDGES. REFER TO SHT. A4.01 AND A4.02 FOR INTERIOR ELEVATIONS.
5. PROVIDE TYP. BASE AND UPPER CABINETS - PLASTIC LAMINATE SHALL BE MANUFACTURED BY WILSONART AND CABINETS SHALL BE MANUFACTURED AND INSTALLED IN ACCORDANCE WITH THE ARCHITECTURAL WOODWORK STANDARDS, CUSTOM GRADE, MOST RECENT EDITION. THE NUMBERS SHOWN FOR THE CASEWORK ARE IN DESIGN STANDARD NUMBERS. HEIGHTS AND DEPTHS ARE AS SHOWN HEREIN OR IDENTIFIED IN THE ABOVE MANUAL. PROVIDE LOCKS FOR ALL CABINET DOORS AND DRAWERS. ALL FILE DRAWERS MUST ACCOMMODATE A STANDARD PENDAFLEX HANGING FILE SYSTEM. REFER TO INTERIOR FINISH MATRIX SCHEDULE.
6. PROVIDE CLASSROOM SINK w/ DRINKING FOUNTAIN BUBBLER COMPLETE WITH TRIM AND MAKE ALL FINAL CONNECTIONS WITH 2" WASTE, 1 1/2" VENT AND 3/4" CW WITH ANGLE STOPS. PROVIDE CLEANOUT PLUG BELOW SINK. CHLORINIZATION PER HEALTH CODE AND SPECIFICATIONS.
7. PROVIDE FULL HEIGHT PARTITION WITH DRYWALL ON BOTH SIDES AND R-11 BATT INSULATION FOR ACOUSTIC SEPARATION.
8. PROVIDE FIRE SPRINKLER RISER, PER PC APPROVED FIRE SPRINKLER DRAWINGS BY MODULAR MANUFACTURER.
9. PROVIDE IN-WALL BLOCKING FOR DISTRICT PROVIDED IDF CABINET. SEE ATTACHED IDF CUT SHEET FOR COMPLETE SPECIFICATIONS. IDF SHALL BE INSTALLED BY SITE CONTRACTOR.
10. PROVIDE WALL HUNG HVAC UNIT BY MODULAR BUILDING MANUFACTURER.
11. PROVIDE FLUSH MOUNTED ELECTRICAL PANEL.
12. PROVIDE 1 1/2" CONDUIT FOR FLUSH MOUNTED FIRE ALARM TERMINAL CABINET (BY OTHERS).
13. PROVIDE 1 1/2" CONDUIT FLUSH MOUNTED FIRE ALARM CABINET (BY OTHERS).
14. PROVIDE FULL HEIGHT CABINETS - PLASTIC LAMINATE SHALL BE MANUFACTURED BY WILSONART AND CABINETS SHALL BE MANUFACTURED AND INSTALLED IN ACCORDANCE WITH THE ARCHITECTURAL WOODWORK STANDARDS, CUSTOM GRADE, MOST RECENT EDITION. THE NUMBERS SHOWN FOR THE CASEWORK ARE IN DESIGN STANDARD NUMBERS. HEIGHTS AND DEPTHS ARE AS SHOWN HEREIN OR IDENTIFIED IN THE ABOVE MANUAL. PROVIDE LOCKS FOR ALL CABINET DOORS.
15. PROVIDE F.R. HOSE BIBB (HB-1) RECESSED IN WALL & CONNECT 3/4" C.W.
16. FURNISH AND INSTALL FLOOR MOUNT WATER CLOSET WITH FLUSH VALVE AND ACCESSORIES. PROVIDE ALL UTILITY PIPES TO POINT OF CONNECTION OUTSIDE OF MODULAR BUILDING FOOTPRINT AND COORDINATE WITH SITE CONTRACTOR FOR ALL FINAL CONNECTIONS.
17. FURNISH AND INSTALL WALL MOUNT URINAL WITH FLUSH VALVE AND ACCESSORIES. PROVIDE ALL UTILITY PIPES TO POINT OF CONNECTION OUTSIDE OF MODULAR BUILDING FOOTPRINT AND COORDINATE WITH SITE CONTRACTOR FOR ALL FINAL CONNECTIONS.
18. PROVIDE EXHAUST FAN PER MODULAR MANUFACTURER'S SPECIFICATION.
19. PROVIDE 2"x2" SEMI-GLOSS CERAMIC TILES. PROVIDE ALL SUITABLE MOLDING STRIPS AT ALL INTERFACES WITH OTHER FLOORING INSTALLED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS. COLOR OF TILE AND GROUT TO BE SELECTED BY ARCHITECT. MANUFACTURER: DAL-TILE OR APPROVED EQUAL.
20. PROVIDE FLOOR DRAIN WITH TRAP PRIMER AND ADA COMPLIANT GRATE. ALL SUBFLOOR SUPPLY LINES SHALL BE INSULATED TO PROTECT AGAINST FREEZING.
21. PROVIDE HINY HIDERS TOILET PARTITIONS COMPLETE WITH ALL WALL AND FLOOR MOUNTED BACKING BY SCRANTON PRODUCTS OR EQUAL. COLOR TO BE SELECTED BY ARCHITECT. PROVIDE CONTINUOUS WALL BRACKETS RATED FOR SCHOOL INSTALLATIONS.
22. PROVIDE 24"x24"x10" TERRAZZO MOP SINK WITH POLISHED CHROME-PLATED UTILITY FAUCET WITH A MIN. OF 2 GPM FOR HOT AND COLD WATER. ALL SUBFLOOR SUPPLY LINES SHALL BE INSULATED TO PROTECT AGAINST FREEZING. COORDINATE WITH SITE CONTRACTOR FOR ALL FINAL UTILITY CONNECTIONS.
23. PROVIDE FINELITE RECESSED LIGHT FIXTURE, MODEL# HPR LEDA 2'x4' DCO-S835 120V SCL.
24. PROVIDE 24"x48" SUSPENDED SLOPED T-BAR CEILING SYSTEM PER MANUFACTURER'S APPROVED PC SET AND DSA IR 25-2.13. CEILING PANELS SHALL BE A MIN. OF 1/2" THK. MINERAL FIBER OR FIBERGLASS CEILING TILES BY ARMSTRONG OR EQUAL.
25. PROVIDE LITHONIA LED LIGHT FIXTURE, MODEL# CPANL 2'x4' ALO65W744 WITH DCMK224 AND SENSOR SWITCH# CMR9-PDT.
26. PROVIDE 1/2" GYP. BOARD CEILING (PAINTED) PER MANUFACTURER'S SPECIFICATION.
27. PROVIDE CONTINUOUS STRUCTURAL INTERLOCKING 3" STANDING SEAM METAL ROOF, MIN. 20 GAUGE WITH 0.025 THICKNESS GALV. STEEL. PROVIDE FACTORY FINISH, COLOR TO BE SELECTED BY ARCHITECT.
28. PROVIDE FL-500P FLOOR BOX WITH 1/2" SOLID IN ANODIZED ALUMINUM. INCLUDE A U-ACCESS COVER WITH INDUSTRIAL CARPET, COLOR TO BE SELECTED BY ARCHITECT. REFER TO ATTACHED CUT SHEET FOR COMPLETE SPECIFICATIONS.
29. PROVIDE HEAVY DUTY GALVANIZED IN-WALL MOUNTED STAINLESS STEEL AND ANTI-FREEZE HI-LO DRINKING FOUNTAIN WITH ANTIMICROBIAL COPPER PUSH BUTTON COMPLETE WITH ALL REQUIRED PLUMBING FOR A COMPLETE INSTALLATION. MANUFACTURER: OASIS OR APPROVED EQUAL.
30. FURNISH AND INSTALL LAVATORY COMPLETE WITH FAUCET BACK PLATE, TRAP, VENT AND ALL ACCESSORIES. INSULATE ALL EXPOSED HOT & COLD WATER AND WASTE PIPING BELOW LAVATORY. PROVIDE ALL FINAL WASTE, VENT AND MAKE WATER CONNECTION OUTSIDE OF MODULAR BUILDING FOOTPRINT. COORDINATE WITH SITE CONTRACTOR FOR ALL FINAL CONNECTIONS.
31. PROVIDE RECESSED CEILING HEATER (COF SERIES) PER ATTACHED CUTSHEET. INSTALL PER MANUFACTURER'S SPECIFICATIONS.
32. PROVIDE PIPE INSULATION FOR ALL PLUMBING PIPES AND PROVIDE HEAT TAPE AT ALL WATER LINES INSIDE PLUMBING CHASE AREA.
33. PROVIDE 20 GALLON AO SMITH GAS WATER HEATER, MODEL NO.DEL-20. PROVIDE ALL PIPING REQUIRED FOR A COMPLETE INSTALLATION. WATER HEATER SHALL BE INSIDE A FULL HEIGHT WIC CABINET, SEE INTERIOR ELEVATION DET. 1/A4.01
34. PROVIDE 50 GALLON AO SMITH GAS WATER HEATER, MODEL NO.DEL-50. PROVIDE ALL PIPING REQUIRED FOR A COMPLETE INSTALLATION. WATER HEATER SHALL BE INSIDE A FULL HEIGHT WIC CABINET, SEE INTERIOR ELEVATION DET. 2/A4.01
35. PROVIDE 20 GALLON AO SMITH GAS WATER HEATER, MODEL NO.DEL-20. PROVIDE ALL PIPING REQUIRED FOR A COMPLETE INSTALLATION. WATER HEATER SHALL BE WALL MOUNTED, BRACED AND ALLOW FOR ACCESS CLEARANCE TO PLUMBING FIXTURE.



**BUILDING 'F'
CLASSROOM FLOOR PLAN**
SCALE: 1/8" = 1'-0"

2
A2.03



**BUILDING 'E'
CLASSROOM FLOOR PLAN**
SCALE: 1/8" = 1'-0"

1
A2.03

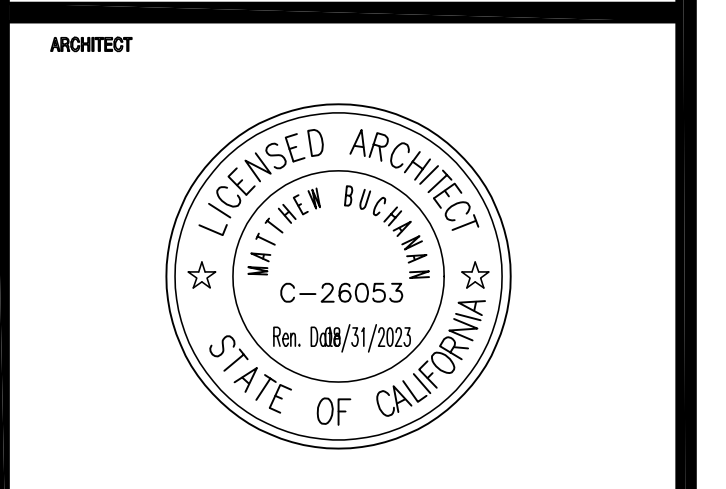
NOTE: THE INTENT OF THIS DRAWING IS TO REPLACE PREVIOUSLY ISSUED SHT. A2.01 DATED 01-14-2022 AND TO INCORPORATE THE WORK SHOWN HEREIN INTO THE CONTRACT. ALL WORK INDICATED SHALL HEREBY BE MADE A PART OF THE CONTRACT.

FLEWELLING & MOODY
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E-Mail: fm-lancaster@flewelling-moody.com

An Employee Owned Corporation



CONSULTANT

No.	Date	Description

SOUTHERN KERN UNIFIED
SCHOOL DISTRICT
TROPICO MIDDLE SCHOOL
EXPANSION PROJECT
3180 MOJAVE TROPICO ROAD
ROSAMOND, CA 93560

**BLDG. E & F CLASSROOM
FLOOR PLAN**

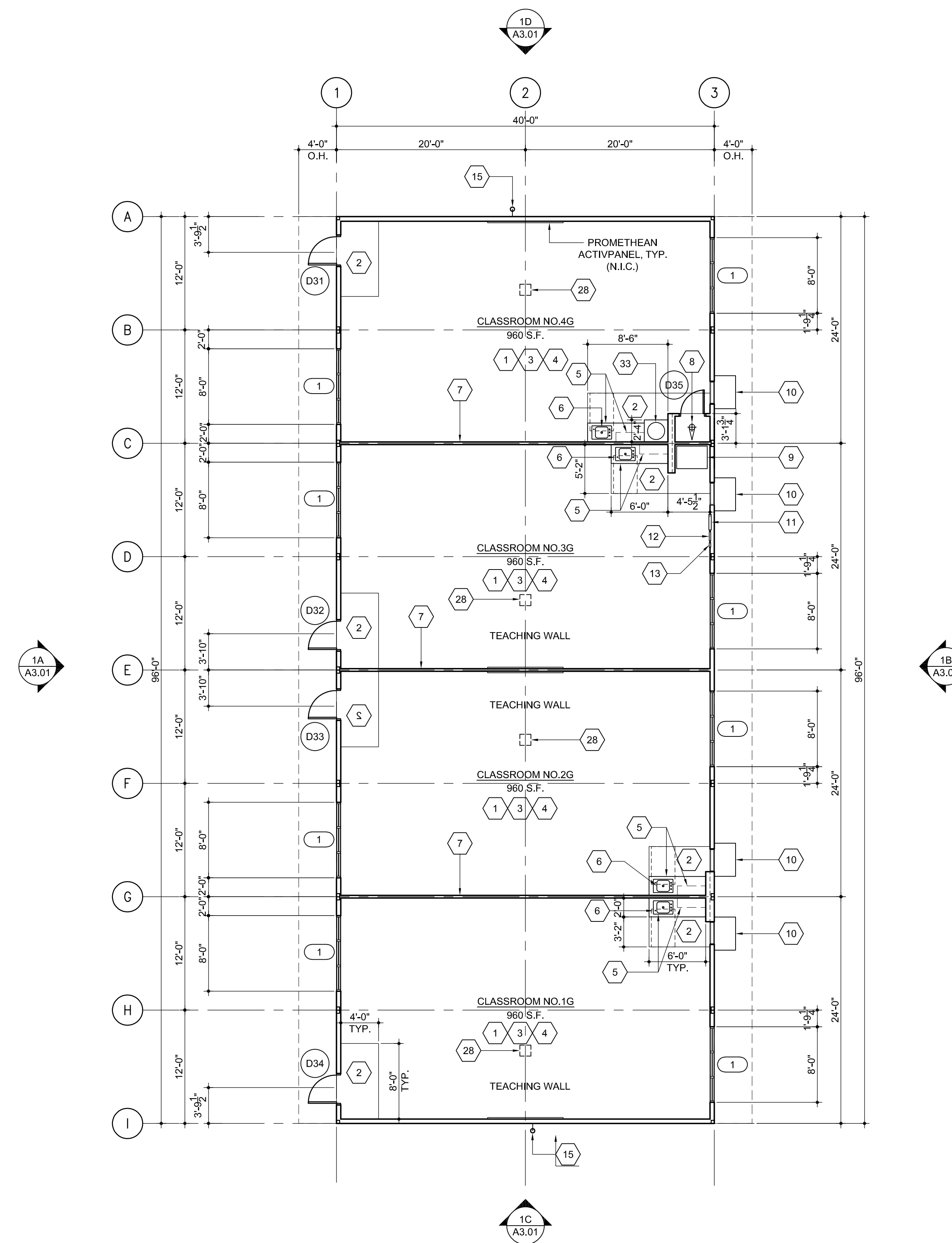
Job No.	2940.000
Date	09-02-21

A2.03

SCOPE OF WORK KEYNOTES

GENERAL NOTES:

- ALL ITEMS INDICATED SHALL BE SUPPLIED BY MODULAR MANUFACTURER, UNLESS SPECIFICALLY NOTED OTHERWISE.
- PROVIDE BACKING AS REQUIRED FOR ALL ACCESSORIES, EQUIPMENT AND CABINETS.
- ONE STORY MODULAR BUILDINGS TO HAVE CONCRETE FLOOR WITH METAL DECK AND A 5" MIN. LIGHT WEIGHT CONCRETE SUBFLOOR WITH BELOW GRADE CONCRETE FOUNDATION SYSTEM. FOUNDATION SYSTEM SHALL COMPLY WITH DSA IR 16-1.13 REQUIREMENTS. FOUNDATION SYSTEM SHALL BE PER MODULAR MANUFACTURER'S PC DESIGN PACKAGE BUT SHALL BE PROVIDED UNDER THE SITE WORK CONTRACT.
- PROVIDE MIN. 2:12 PITCH ROOF WITH STANDING SEAM METAL ROOF AND 20 PSF SNOW LOAD CAPACITY PER MODULAR MANUFACTURER STANDARD. COLORS TO BE SELECTED BY ARCHITECT FROM FULL RANGE OF KYNAR COLORS.
- AT RESTROOM FLOORS PROVIDE CERAMIC TILES OVER SETTING BED, SIZE, COLOR AND STYLE TO BE SELECTED BY ARCHITECT FROM TILE MANUFACTURERS FULL RANGE OF COLORS. SLOPE FLOORS TO DRAIN. PROVIDE CERAMIC TILE WAINSCOT FINISHES PER INTERIOR ELEVATIONS, SEE SHT. A4.02.
- STUB-OUT AND PLUG C.I. WASTE BELOW FLOOR WITH ALL UNDER FLOOR CONNECTIONS TO BE DONE BY SITE CONTRACTOR. COORDINATE P.O.C. WITH SITE CONTRACTOR.
- STUB-OUT AND CAP C.W. (TYPE "L" COPPER) BELOW FLOOR WITH ALL UNDER FLOOR CONNECTIONS TO BE DONE BY SITE CONTRACTOR. COORDINATE P.O.C. WITH SITE CONTRACTOR.
- SEE ALL ADA SIGNAGE AND BRAILLE COMPLIANT SIGNAGE AT ALL DOOR AND ROOMS (ROOM NAMES AND NUMBERS), SEE SHT. A2.09 & A2.10 FOR REFERENCE ONLY. SITE CONTRACTOR SHALL PROVIDE AND INSTALL ALL REQUIRED SIGNAGE.
- PROVIDE COMMERCIAL GRADE ECOBEE THERMOSTATS.
- PROVIDE ALL CONDUIT AND J-BOX FOR ALL DATA DROPS AND POINTS OF CONNECTION. CONDUIT SHALL STUB UP IN WALL TO ABOVE CEILING INTO ACCESSIBLE ATTIC SPACE FOR PLENUM RATED CABLE TO BE INSTALLED BY OTHERS. MIN. CONDUIT SIZE IN WALL SHALL BE 1/2" DIAMETER, UNLESS NOTED OTHERWISE.
- PROVIDE 1" WINDOW BLINDS FOR ALL WINDOWS, COLOR TO BE SELECTED BY ARCHITECT. REFER TO THE ATTACHED HARDWARE CUT SHEETS, HARDWARE SCHEDULE AND SPECIFICATIONS TO BE USED FOR REFERENCE.
- MODULAR MANUFACTURER SHALL APPLY FACTORY STUCCO FINISH FOR ALL BUILDINGS AND SHALL COMPLY WITH ALL REQUIREMENTS UNDER C.B.C. CHAPTER 25.



**BUILDING 'G'
CLASSROOM FLOOR PLAN**

SCALE: 1/8" = 1'-0"

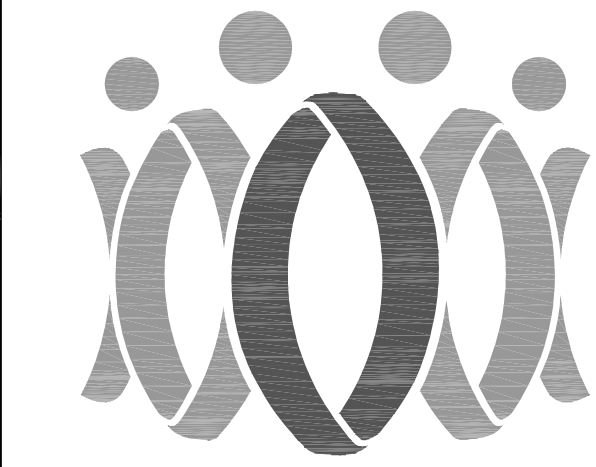
DATE: 01-14-2022

1
A2.04

- PROVIDE CARPET TILES PER DISTRICT STANDARD. PROVIDE ALL SUITABLE MOLDING STRIPS AT ALL INTERFACES WITH OTHER FLOORING INSTALLED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS. MANUFACTURER: INTERFACE CARPET. REFER TO INTERIOR FINISH MATRIX SCHEDULE.
- PROVIDE VCT TILES PER DISTRICT STANDARD. PROVIDE ALL SUITABLE MOLDING STRIPS AT ALL INTERFACES WITH OTHER FLOORING INSTALLED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS. MANUFACTURER: ARMSTRONG. REFER TO INTERIOR FINISH MATRIX SCHEDULE.
- PROVIDE INSULATION - R-30 AT ROOF AND R-19 (MIN.) AT WALLS. FLAME SPREAD-0-25 SMOKE DEVELOPED, FUEL CONTRIBUTED-0-450. (SEC. 707 1994 CBC)
- PROVIDE DISTRICT STANDARD WALL FINISHES: FRP WAINSCOT OVER 1/2" GYP. BOARD FILLER FROM FLOOR TO 38" ABOVE THEN VINYL COVERED 1/2" TACKABLE SUBSTRATE OVER 1/2" TYPE "X" GYP. BOARD FULL HEIGHT OF WALL UP TO 6" ABOVE CEILING. PROVIDE EXTRUDED ALUMINUM EDGE MOLDING AT BOTTOM AND AT ALL CUT OR EXPOSED EDGES. REFER TO SHT. A4.01 AND A4.02 FOR INTERIOR ELEVATIONS.
- PROVIDE TYP. BASE AND UPPER CABINETS - PLASTIC LAMINATE SHALL BE MANUFACTURED BY WILSONART AND CABINETS SHALL BE MANUFACTURED AND INSTALLED IN ACCORDANCE WITH THE ARCHITECTURAL WOODWORK STANDARDS, CUSTOM GRADE, MOST RECENT EDITION. THE NUMBERS SHOWN FOR THE CASEWORK ARE IN DESIGN STANDARD NUMBERS. HEIGHTS AND DEPTHS ARE AS SHOWN HEREIN OR IDENTIFIED IN THE ABOVE MANUAL. PROVIDE LOCKS FOR ALL CABINET DOORS AND DRAWERS. ALL FILE DRAWERS MUST ACCOMMODATE A STANDARD PENDAFLEX HANGING FILE SYSTEM. REFER TO INTERIOR FINISH MATRIX SCHEDULE.
- PROVIDE CLASSROOM SINK w/ DRINKING FOUNTAIN BUBBLER COMPLETE WITH TRIM AND MAKE ALL FINAL CONNECTIONS WITH 2"WASTE, 1 1/2" VENT AND 3/4" CW WITH ANGLE STOPS. PROVIDE CLEANOUT PLUG BELOW SINK. CHLORINATION PER HEALTH CODE AND SPECIFICATIONS.
- PROVIDE FULL HEIGHT PARTITION WITH DRYWALL ON BOTH SIDES AND R-11 BATT INSULATION FOR ACOUSTIC SEPARATION.
- PROVIDE FIRE SPRINKLER RISER, PER PC APPROVED FIRE SPRINKLER DRAWINGS BY MODULAR MANUFACTURER.
- PROVIDE IN-WALL BLOCKING FOR DISTRICT PROVIDED IDF CABINET, SEE ATTACHED IDF CUT SHEET FOR COMPLETE SPECIFICATIONS. IDF SHALL BE INSTALLED BY SITE CONTRACTOR.
- PROVIDE WALL HUNG HVAC UNIT BY MODULAR BUILDING MANUFACTURER.
- PROVIDE FLUSH MOUNTED ELECTRICAL PANEL.
- PROVIDE 1 1/2" CONDUIT FOR FLUSH MOUNTED FIRE ALARM TERMINAL CABINET (BY OTHERS).
- PROVIDE 1 1/2" CONDUIT FLUSH MOUNTED FIRE ALARM CABINET (BY OTHERS).
- PROVIDE FULL HEIGHT CABINETS - PLASTIC LAMINATE SHALL BE MANUFACTURED BY WILSONART AND CABINETS SHALL BE MANUFACTURED AND INSTALLED IN ACCORDANCE WITH THE ARCHITECTURAL WOODWORK STANDARDS, CUSTOM GRADE, MOST RECENT EDITION. THE NUMBERS SHOWN FOR THE CASEWORK ARE IN DESIGN STANDARD NUMBERS. HEIGHTS AND DEPTHS ARE AS SHOWN HEREIN OR IDENTIFIED IN THE ABOVE MANUAL. PROVIDE LOCKS FOR ALL CABINET DOORS.
- PROVIDE F.R. HOSE BIBB (HB-1) RECESSED IN WALL & CONNECT 3/4" C.W.
- FURNISH AND INSTALL FLOOR MOUNT WATER CLOSET WITH FLUSH VALVE AND ACCESSORIES. PROVIDE ALL UTILITY PIPES TO POINT OF CONNECTION OUTSIDE OF MODULAR BUILDING FOOTPRINT AND COORDINATE WITH SITE CONTRACTOR FOR ALL FINAL CONNECTIONS.
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- PROVIDE EXHAUST FAN PER MODULAR MANUFACTURER'S SPECIFICATION.
- PROVIDE 2"x2" SEMI-GLOSS CERAMIC TILES. PROVIDE ALL SUITABLE MOLDING STRIPS AT ALL INTERFACES WITH OTHER FLOORING INSTALLED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS. COLOR OF TILE AND GROUT TO BE SELECTED BY ARCHITECT. MANUFACTURER: DAL-TILE OR APPROVED EQUAL.
- PROVIDE FLOOR DRAIN WITH TRAP PRIMER AND ADA COMPLIANT GRATE. ALL SUBFLOOR SUPPLY LINES SHALL BE INSULATED TO PROTECT AGAINST FREEZING.
- PROVIDE HINY HIDERS TOILET PARTITIONS COMPLETE WITH ALL WALL AND FLOOR MOUNTED BACKING BY SCRANTON PRODUCTS OR EQUAL. COLOR TO BE SELECTED BY ARCHITECT. PROVIDE CONTINUOUS WALL BRACKETS RATED FOR SCHOOL INSTALLATIONS.
- PROVIDE 24"x24"x10" TERRAZZO MOP SINK WITH POLISHED CHROME-PLATED UTILITY FAUCET WITH A MIN. OF 2 GPM FOR HOT AND COLD WATER. ALL SUBFLOOR SUPPLY LINES SHALL BE INSULATED TO PROTECT AGAINST FREEZING. COORDINATE WITH SITE CONTRACTOR FOR ALL FINAL UTILITY CONNECTIONS.
- PROVIDE FINELITE RECESSED LIGHT FIXTURE, MODEL# HPR LEDA 2'x4' DCO-S835 120V SCL.
- PROVIDE 24"x48" SUSPENDED SLOPED T-BAR CEILING SYSTEM PER MANUFACTURER'S APPROVED PC SET AND DSA IR 25-2.13. CEILING PANELS SHALL BE A MIN. OF 8" THK. MINERAL FIBER OR FIBERGLASS CEILING TILES BY ARMSTRONG OR EQUAL.
- PROVIDE LITHONIA LED LIGHT FIXTURE, MODEL# CPANEL 2'x4' ALO65W7M4 WITH DCMK224 AND SENSOR SWITCH# CM99-PDT.
- PROVIDE 1/2" GYP. BOARD CEILING (PAINTED) PER MANUFACTURER'S SPECIFICATION.
- PROVIDE CONTINUOUS STRUCTURAL INTERLOCKING 3" STANDING SEAM METAL ROOF, MIN. 20 GAUGE WITH 0.025 THICKNESS GALV. STEEL. PROVIDE FACTORY FINISH, COLOR TO BE SELECTED BY ARCHITECT.
- PROVIDE FL-500P FLOOR BOX WITH 1/2" SOLID IN ANODIZED ALUMINUM. INCLUDE A U-ACCESS COVER WITH INDUSTRIAL CARPET, COLOR TO BE SELECTED BY ARCHITECT. REFER TO ATTACHED CUT SHEET FOR COMPLETE SPECIFICATIONS.
- PROVIDE HEAVY DUTY GALVANIZED IN-WALL MOUNTED STAINLESS STEEL AND ANTI-FREEZE HI-LO DRINKING FOUNTAIN WITH ANTIMICROBIAL COPPER PUSH BUTTON COMPLETE WITH ALL REQUIRED PLUMBING FOR A COMPLETE INSTALLATION. MANUFACTURER: OASIS OR APPROVED EQUAL.
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- PROVIDE RECESSED CEILING HEATER (CDF SERIES) PER ATTACHED CUTSHEET. INSTALL PER MANUFACTURER'S SPECIFICATIONS.
- PROVIDE PIPE INSULATION FOR ALL PLUMBING PIPES AND PROVIDE HEAT TAPE AT ALL WATER LINES INSIDE PLUMBING CHASE AREA.
- PROVIDE 20 GALLON AO SMITH GAS WATER HEATER, MODEL NO.DEL-20. PROVIDE ALL PIPING REQUIRED FOR A COMPLETE INSTALLATION. WATER HEATER SHALL BE INSIDE A FULL HEIGHT WIC CABINET, SEE INTERIOR ELEVATION DET. 1/A4.01
- PROVIDE 50 GALLON AO SMITH GAS WATER HEATER, MODEL NO.DEL-50. PROVIDE ALL PIPING REQUIRED FOR A COMPLETE INSTALLATION. WATER HEATER SHALL BE INSIDE A FULL HEIGHT WIC CABINET, SEE INTERIOR ELEVATION DET. 2/A4.01
- PROVIDE 20 GALLON AO SMITH GAS WATER HEATER, MODEL NO.DEL-20. PROVIDE ALL PIPING REQUIRED FOR A COMPLETE INSTALLATION. WATER HEATER SHALL BE WALL MOUNTED, BRACED AND ALLOW FOR ACCESS CLEARANCE TO PLUMBING FIXTURE.

NOTE: THE INTENT OF THIS DRAWING IS TO REPLACE PREVIOUSLY ISSUED SHT. A2.01 DATED 01-14-2022 AND TO INCORPORATE THE WORK SHOWN HEREIN INTO THE CONTRACT. ALL WORK INDICATED SHALL HEREBY BE MADE A PART OF THE CONTRACT.

AGENCY



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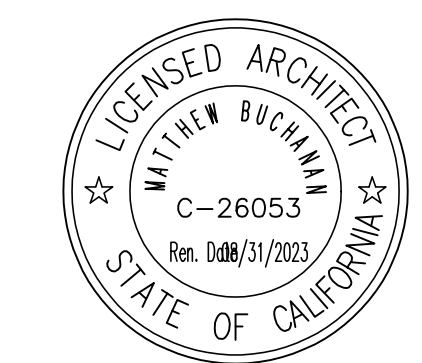
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ARCHITECT



CONSULTANT

Drawn by

Checked by

Revisions

No.	Date	Description

All dimensions shall be checked at the job by the contractor who accepts full responsibility for their accuracy under the contract. These plans are the intellectual property of the architect and no part of them shall be reproduced or transmitted in any form or by any means electronic or mechanical, including photocopying, recording, or by any information storage and retrieval system, without the prior written permission of the architect.

SOUTHERN KERN UNIFIED
SCHOOL DISTRICT

TROPICO MIDDLE SCHOOL
EXPANSION PROJECT

3180 MOJAVE TROPICO ROAD
ROSAMOND, CA 93560

**BLDG. G CLASSROOM
FLOOR PLAN**

Job No.

2940.000

Date

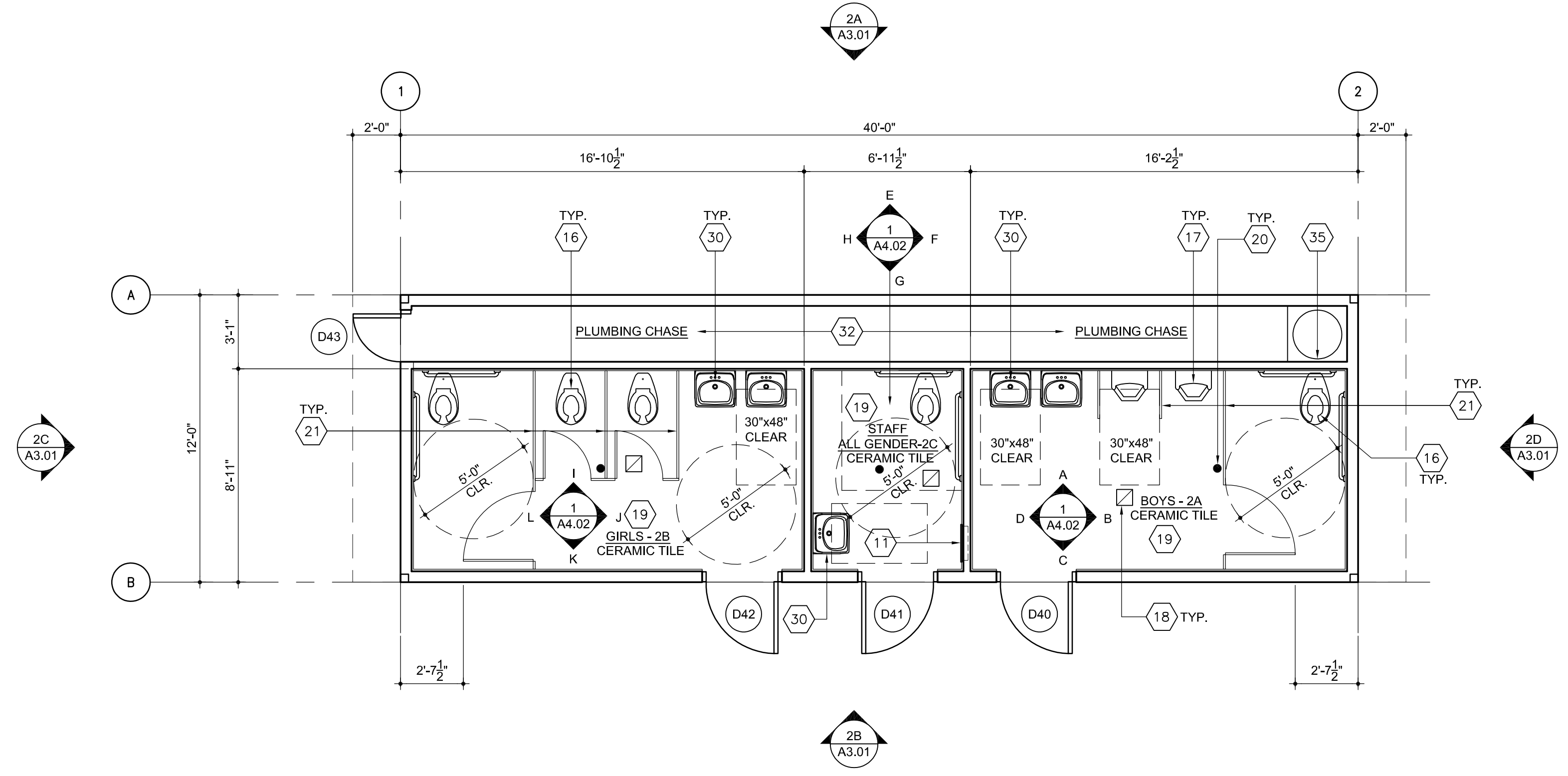
09-02-21

A2.04

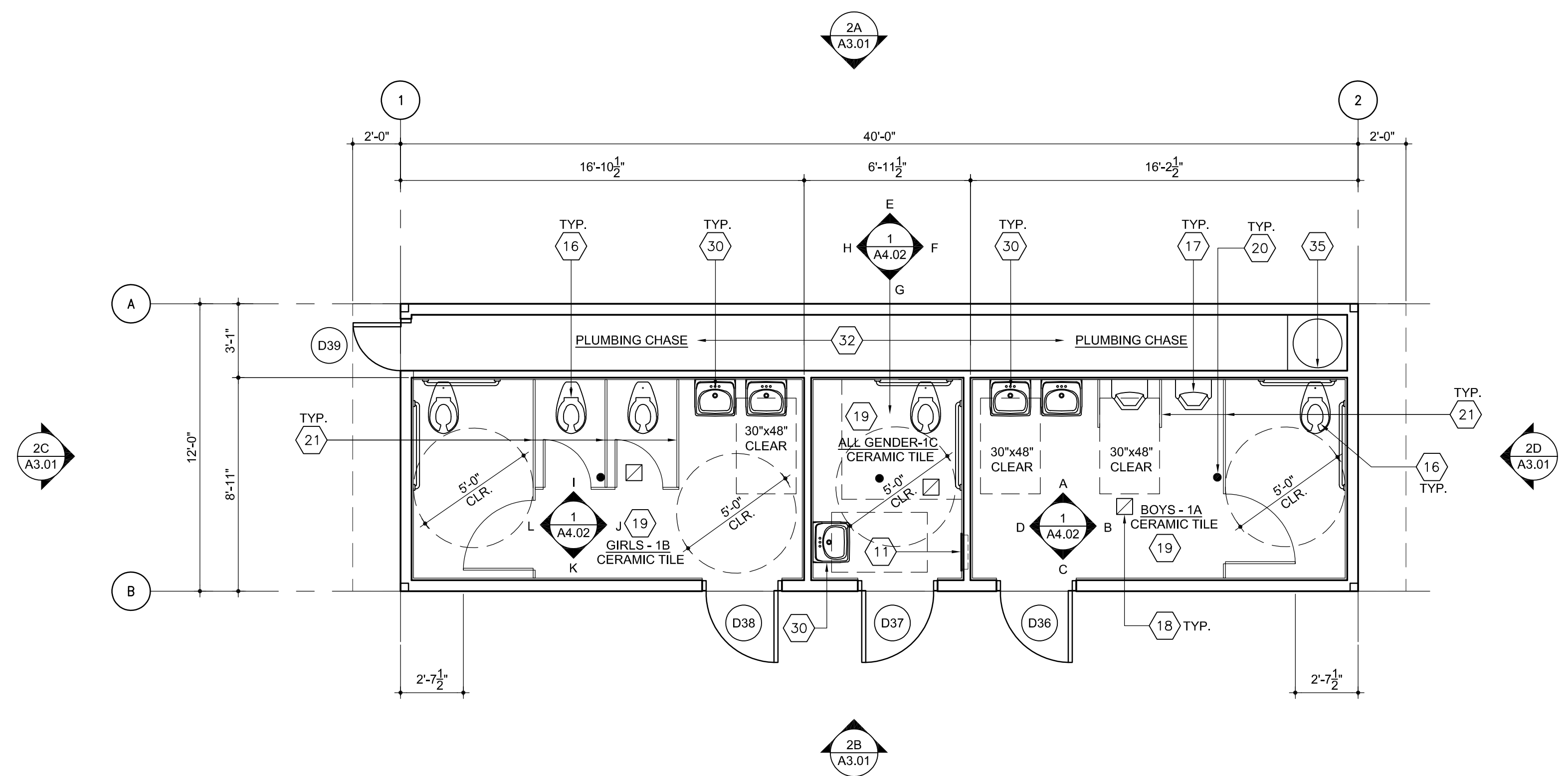
SCOPE OF WORK KEYNOTES

- GENERAL NOTES:**
- ALL ITEMS INDICATED SHALL BE SUPPLIED BY MODULAR MANUFACTURER, UNLESS SPECIFICALLY NOTED OTHERWISE.
 - PROVIDE BACKING AS REQUIRED FOR ALL ACCESSORIES, EQUIPMENT AND CABINETS.
 - ONE STORY MODULAR BUILDINGS TO HAVE CONCRETE FLOOR WITH METAL DECK AND A 5" MIN. LIGHT WEIGHT CONCRETE SUBFLOOR WITH BELOW GRADE CONCRETE FOUNDATION SYSTEM. FOUNDATION SYSTEM SHALL COMPLY WITH DSA IR 16-1.13 REQUIREMENTS. FOUNDATION SYSTEM SHALL BE PER MODULAR MANUFACTURER'S PC DESIGN PACKAGE BUT SHALL BE PROVIDED UNDER THE SITE WORK CONTRACT.
 - PROVIDE MIN. 2:12 PITCH ROOF WITH STANDING SEAM METAL ROOF AND 20 PSF SNOW LOAD CAPACITY PER MODULAR MANUFACTURER STANDARD. COLORS TO BE SELECTED BY ARCHITECT FROM FULL RANGE OF KYNAR COLORS.
 - AT RESTROOM FLOORS PROVIDE CERAMIC TILES OVER SETTING BED, SIZE, COLOR AND STYLE TO BE SELECTED BY ARCHITECT FROM TILE MANUFACTURER'S FULL RANGE OF COLORS. SLOPE FLOORS TO DRAIN. PROVIDE CERAMIC TILE MAINSCOT FINISHES PER INTERIOR ELEVATIONS, SEE SHT. A4.02.
 - STUB-OUT AND PLUG C.I. WASTE BELOW FLOOR WITH ALL UNDER FLOOR CONNECTIONS TO BE DONE BY SITE CONTRACTOR. COORDINATE P.O.C. WITH SITE CONTRACTOR.
 - STUB-OUT AND CAP C.W. (TYPE "L" COPPER) BELOW FLOOR WITH ALL UNDER FLOOR CONNECTIONS TO BE DONE BY SITE CONTRACTOR. COORDINATE P.O.C. WITH SITE CONTRACTOR.
 - SEE ALL ADA SIGNAGE AND BRAILLE COMPLIANT SIGNAGE AT ALL DOOR AND ROOMS (ROOM NAMES AND NUMBERS). SEE SHT. A2.09 & A2.10 FOR REFERENCE ONLY. SITE CONTRACTOR SHALL PROVIDE AND INSTALL ALL REQUIRED SIGNAGE.
 - PROVIDE COMMERCIAL GRADE ECOBEE THERMOSTATS.
 - PROVIDE ALL CONDUIT AND J-BOX FOR ALL DATA DROPS AND POINTS OF CONNECTION. CONDUIT SHALL STUB UP IN WALL TO ABOVE CEILING INTO ACCESSIBLE ATTIC SPACE FOR PLENUM RATED CABLE TO BE INSTALLED BY OTHERS. MIN. CONDUIT SIZE IN WALL SHALL BE 1/2" DIAMETER, UNLESS NOTED OTHERWISE.
 - PROVIDE 1" WINDOW BLINDS FOR ALL WINDOWS, COLOR TO BE SELECTED BY ARCHITECT.
 - ALL HARDWARE SCHEDULE AND SPECIFICATIONS SHALL BE PER DISTRICT STANDARDS. REFER TO THE ATTACHED HARDWARE CUT SHEETS, HARDWARE SCHEDULE AND SPECIFICATIONS TO BE USED FOR REFERENCE.
 - MODULAR MANUFACTURER SHALL APPLY FACTORY STUCCO FINISH FOR ALL BUILDINGS AND SHALL COMPLY WITH ALL REQUIREMENTS UNDER C.B.C. CHAPTER 25.

- PROVIDE CARPET TILES PER DISTRICT STANDARD. PROVIDE ALL SUITABLE MOLDING STRIPS AT ALL INTERFACES WITH OTHER FLOORING INSTALLED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS. MANUFACTURER: INTERFACE CARPET. REFER TO INTERIOR FINISH MATRIX SCHEDULE.
- PROVIDE VCT TILES PER DISTRICT STANDARD. PROVIDE ALL SUITABLE MOLDING STRIPS AT ALL INTERFACES WITH OTHER FLOORING INSTALLED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS. MANUFACTURER: ARMSTRONG. REFER TO INTERIOR FINISH MATRIX SCHEDULE.
- PROVIDE INSULATION- R-30 AT ROOF AND R-19 (MIN.) AT WALLS. FLAME SPREAD-0-25 SMOKE DEVELOPED, FUEL CONTRIBUTED-0-450. (SEC. 707 1994 CBC)
- PROVIDE DISTRICT STANDARD WALL FINISHES: FRP MAINSCOT OVER 1/2" GYP. BOARD FILLER FROM FLOOR TO 38" ABOVE THEN VINYL COVERED 1/2" TAGGABLE SUBSTRATE OVER 1/2" TYPE "X" GYP. BOARD FULL HEIGHT OF WALL UP TO 6" ABOVE CEILING. PROVIDE EXTRUDED ALUMINUM EDGE MOLDING AT BOTTOM AND AT ALL CUT OR EXPOSED EDGES. REFER TO SHT. A4.01 AND A4.02 FOR INTERIOR ELEVATIONS.
- PROVIDE TYP. BASE AND UPPER CABINETS - PLASTIC LAMINATE SHALL BE MANUFACTURED BY WILSONART AND CABINETS SHALL BE MANUFACTURED AND INSTALLED IN ACCORDANCE WITH THE ARCHITECTURAL WOODWORK STANDARDS, CUSTOM GRADE, MOST RECENT EDITION, THE NUMBERS SHOWN FOR THE CASEWORK ARE WJ DESIGN STANDARD NUMBERS, HEIGHTS AND DEPTHS ARE AS SHOWN HEREIN OR IDENTIFIED IN THE ABOVE MANUAL. PROVIDE LOOKS FOR ALL CABINET DOORS AND DRAWERS. ALL FILE DRAWERS MUST ACCOMMODATE A STANDARD PENDAFLEX HANGING FILE SYSTEM. REFER TO INTERIOR FINISH MATRIX SCHEDULE.
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- PROVIDE 24"x24"x10" TERRAZZO MOP SINK WITH POLISHED CHROME-PLATED UTILITY FAUCET WITH A MIN. OF 2 GPM FOR HOT AND COLD WATER. ALL SUBFLOOR SUPPLY LINES SHALL BE INSULATED TO PROTECT AGAINST FREEZING. COORDINATE WITH SITE CONTRACTOR FOR ALL FINAL UTILITY CONNECTIONS.
- PROVIDE FINELITE RECESSED LIGHT FIXTURE, MODEL# HPR LEDA 2'x4' DCC-SB35 120V SCCI.
- PROVIDE 24"x48" SUSPENDED SLOPED T-BAR CEILING SYSTEM PER MANUFACTURER'S APPROVED PC SET AND DSA IR 25-2.13. CEILING PANELS SHALL BE A MIN. OF 1/2" THK. MINERAL FIBER OR FIBERGLASS CEILING TILES BY ARMSTRONG OR EQUAL.
- PROVIDE LITHONIA LED LIGHT FIXTURE, MODEL# CPANL 2'x4' AL065W7M4 WITH DCMK224 AND SENSOR SWITCH# CMR9-PDT.
- PROVIDE 1/2" GYP. BOARD CEILING (PAINTED) PER MANUFACTURER'S SPECIFICATION.
- PROVIDE CONTINUOUS STRUCTURAL INTERLOCKING 3" STANDING SEAM METAL ROOF. MIN. 20 GAUGE WITH 0.025 THICKNESS GALV. STEEL. PROVIDE FACTORY FINISH, COLOR TO BE SELECTED BY ARCHITECT.
- PROVIDE EL-SOOP FLOOR BOX WITH 1" SOLID IN ANODIZED ALUMINUM. INCLUDE A U-ACCESS COVER WITH INDUSTRIAL CARPET, COLOR TO BE SELECTED BY ARCHITECT. REFER TO ATTACHED CUT SHEET FOR COMPLETE SPECIFICATIONS.
- PROVIDE HEAVY DUTY GALVANIZED IN-WALL MOUNTED STAINLESS STEEL AND ANTI-FREEZE HI-LO DRINKING FOUNTAIN WITH ANTIMICROBIAL COPPER PUSH BUTTON COMPLETE WITH ALL REQUIRED PLUMBING FOR A COMPLETE INSTALLATION. MANUFACTURER: OASIS OR APPROVED EQUAL.
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RESTROOM BUILDING NO.2 FLOOR PLAN
SCALE: 1/4" = 1'-0"
PROJECT NUMBER: 2940-000-A2.05
DATE: 02/07/2022



RESTROOM BUILDING NO.1 FLOOR PLAN
SCALE: 1/4" = 1'-0"
PROJECT NUMBER: 2940-000-A2.05
DATE: 02/07/2022

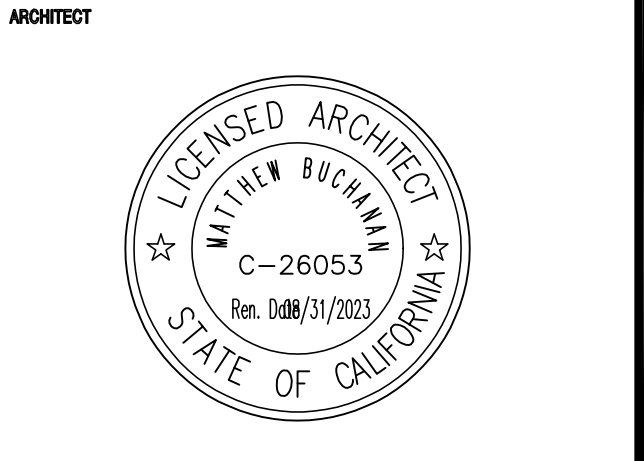
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No.	Date	Description

SOUTHERN KERN UNIFIED SCHOOL DISTRICT
TROPICO MIDDLE SCHOOL EXPANSION PROJECT
3180 MOJAVE TROPICO ROAD ROSAMOND, CA 93560

RESTROOM BLDG. 1 & 2 FLOOR PLAN

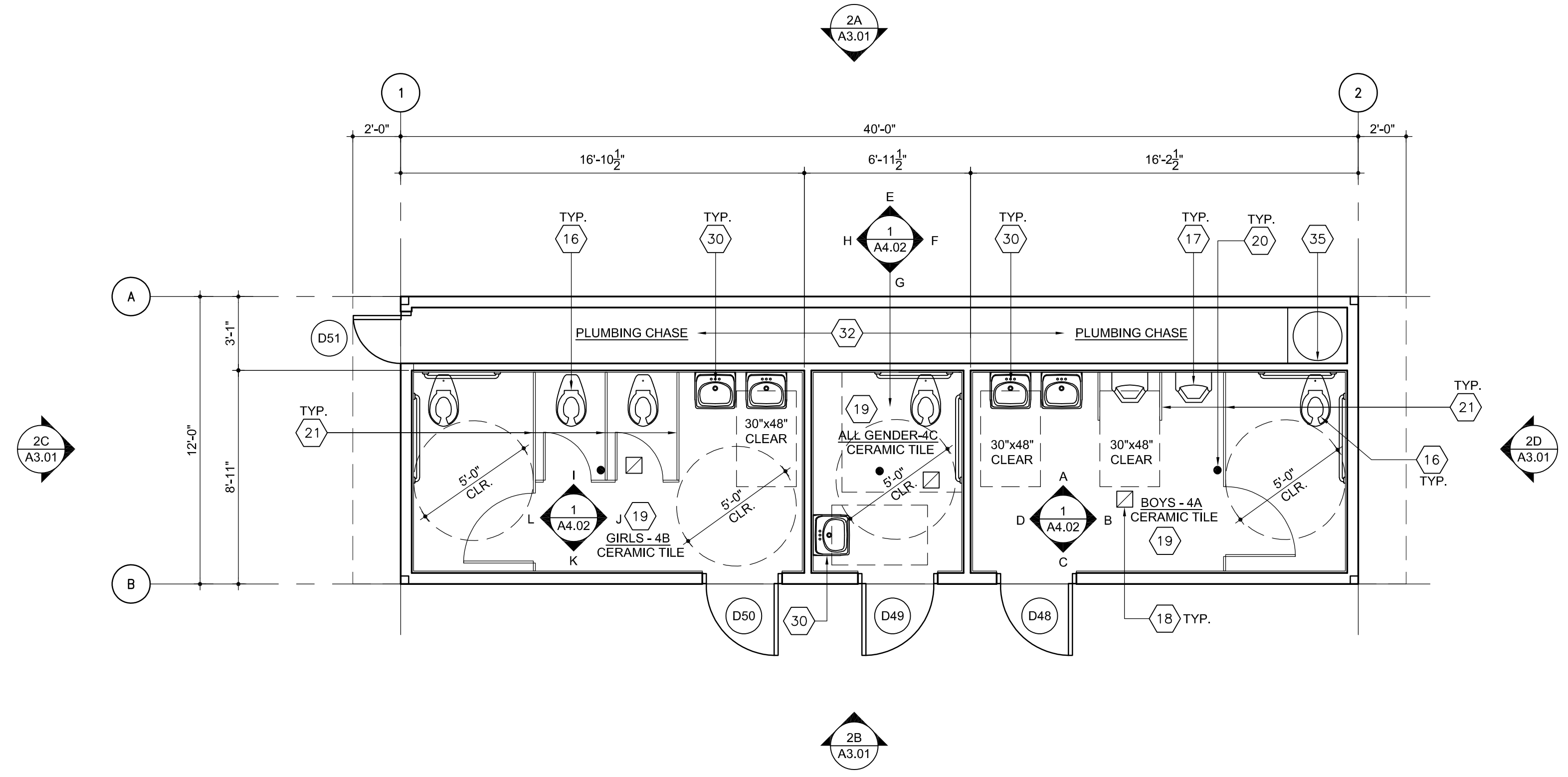
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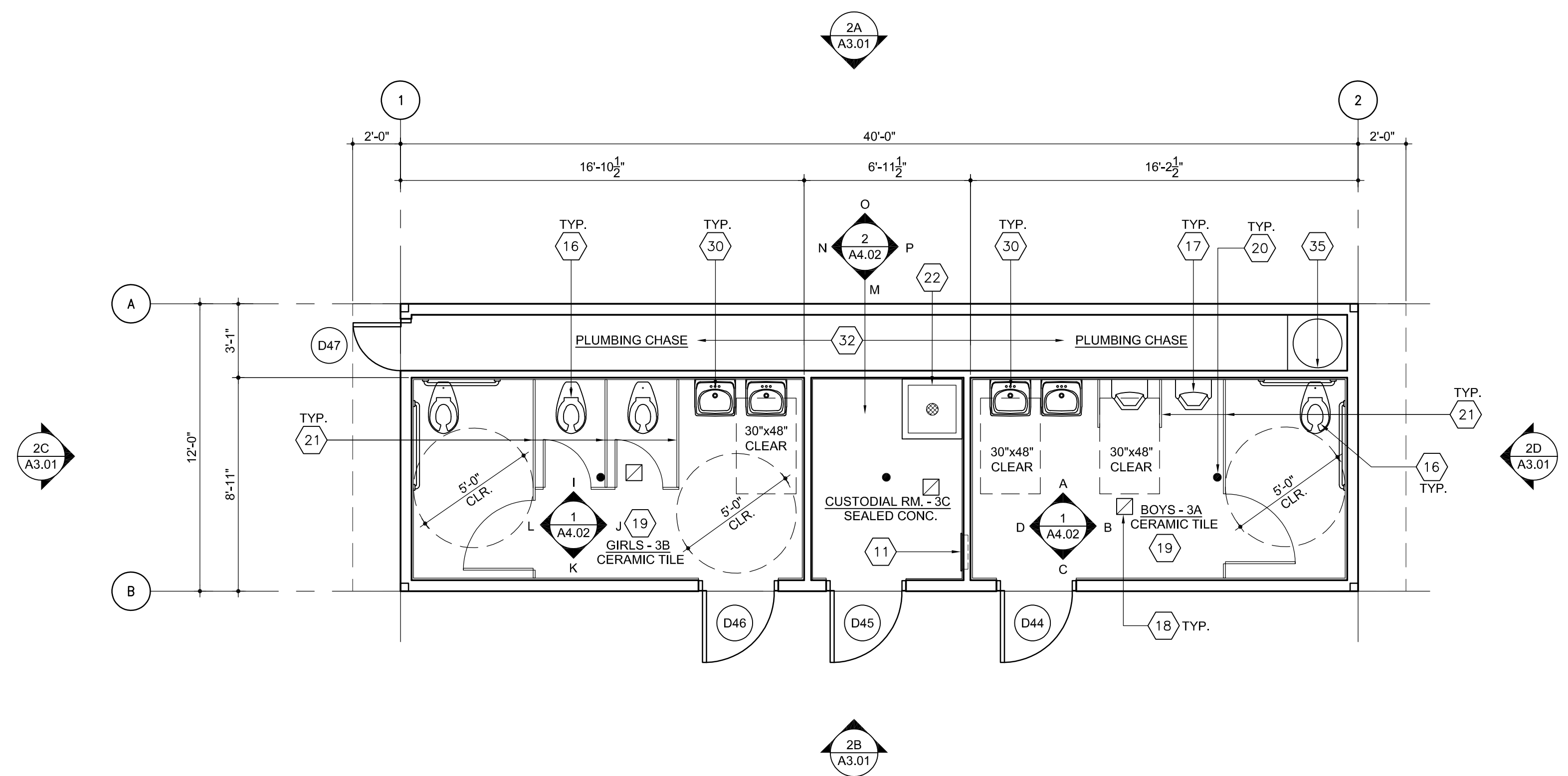
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11. PROVIDE FLUSH MOUNTED ELECTRICAL PANEL.
12. PROVIDE 1" CONDUIT FOR FLUSH MOUNTED FIRE ALARM TERMINAL CABINET (BY OTHERS).
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22. PROVIDE 24"x24"x10" TERRAZZO MOP SINK WITH POLISHED CHROME-PLATED UTILITY FAUCET WITH A MIN. OF 2 GPM FOR HOT AND COLD WATER. ALL SUBFLOOR SUPPLY LINES SHALL BE INSULATED TO PROTECT AGAINST FREEZING. COORDINATE WITH SITE CONTRACTOR FOR ALL FINAL UTILITY CONNECTIONS.
23. PROVIDE FINELITE RECESSED LIGHT FIXTURE, MODEL# HPR LEDA 2"x4" DCO-S835 120V SCDL.
24. PROVIDE 24"x48" SUSPENDED SLOPED T-BAR CEILING SYSTEM PER MANUFACTURER'S APPROVED PC SET AND DSA IR 25-2.13. CEILING PANELS SHALL BE A MIN. OF 3/8" THK. MINERAL FIBER OR FIBERGLASS CEILING TILES BY ARMSTRONG OR EQUAL.
25. PROVIDE LITHONIA LED LIGHT FIXTURE, MODEL# CPANL 2"x4" ALO65W7M4 WITH DCMK224 AND SENSOR SWITCH# CMR9-PDT.
26. PROVIDE 3/8" GYP. BOARD CEILING (PAINTED) PER MANUFACTURER'S SPECIFICATION.
27. PROVIDE CONTINUOUS STRUCTURAL INTERLOCKING 3" STANDING SEAM METAL ROOF. MIN. 20 GAUGE WITH 0.025 THICKNESS GALV. STEEL. PROVIDE FACTORY FINISH, COLOR TO BE SELECTED BY ARCHITECT.
28. PROVIDE FL-500P FLOOR BOX WITH 1" SOLID IN ANODIZED ALUMINUM. INCLUDE A U-ACCESS COVER WITH INDUSTRIAL CARPET, COLOR TO BE SELECTED BY ARCHITECT. REFER TO ATTACHED CUT SHEET FOR COMPLETE SPECIFICATIONS.
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32. PROVIDE PIPE INSULATION FOR ALL PLUMBING PIPES AND PROVIDE HEAT TAPE AT ALL WATER LINES INSIDE PLUMBING CHASE AREA.
33. PROVIDE 20 GALLON AO SMITH GAS WATER HEATER, MODEL NO.DEL-20. PROVIDE ALL PIPING REQUIRED FOR A COMPLETE INSTALLATION. WATER HEATER SHALL BE INSIDE A FULL HEIGHT WC CABINET, SEE INTERIOR ELEVATION DET. 1/A4.01.
34. PROVIDE 50 GALLON AO SMITH GAS WATER HEATER, MODEL NO.DEL-50. PROVIDE ALL PIPING REQUIRED FOR A COMPLETE INSTALLATION. WATER HEATER SHALL BE INSIDE A FULL HEIGHT WC CABINET, SEE INTERIOR ELEVATION DET. 2/A4.01.
35. PROVIDE 20 GALLON AO SMITH GAS WATER HEATER, MODEL NO.DEL-20. PROVIDE ALL PIPING REQUIRED FOR A COMPLETE INSTALLATION. WATER HEATER SHALL BE WALL MOUNTED, BRACED AND ALLOW FOR ACCESS CLEARANCE TO PLUMBING FIXTURE.



RESTROOM BUILDING NO.4 FLOOR PLAN
SCALE: 1/4" = 1'-0"
PROJECT NUMBER: 2940-000-A2.06
DATE: 02/07/2022



RESTROOM BUILDING NO.3 FLOOR PLAN
SCALE: 1/4" = 1'-0"
PROJECT NUMBER: 2940-000-A2.06
DATE: 02/07/2022

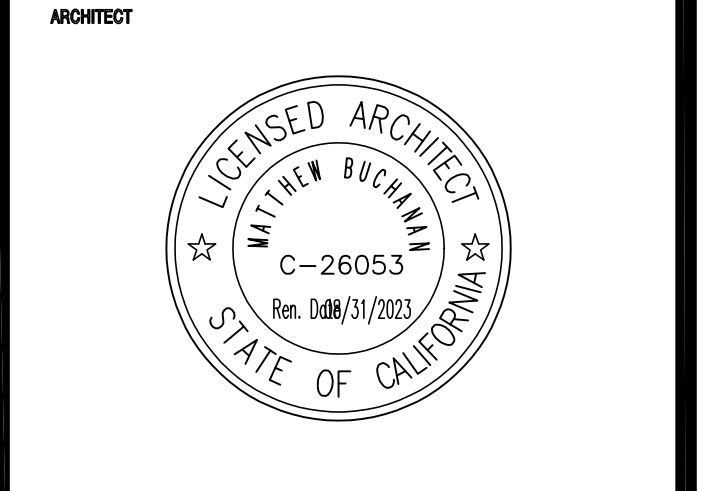
NOTE: THE INTENT OF THIS DRAWING IS TO REPLACE PREVIOUSLY ISSUED SHT. A2.01 DATED 01-14-2022 AND TO INCORPORATE THE WORK SHOWN HEREIN INTO THE CONTRACT. ALL WORK INDICATED SHALL HEREBY BE MADE A PART OF THE CONTRACT.

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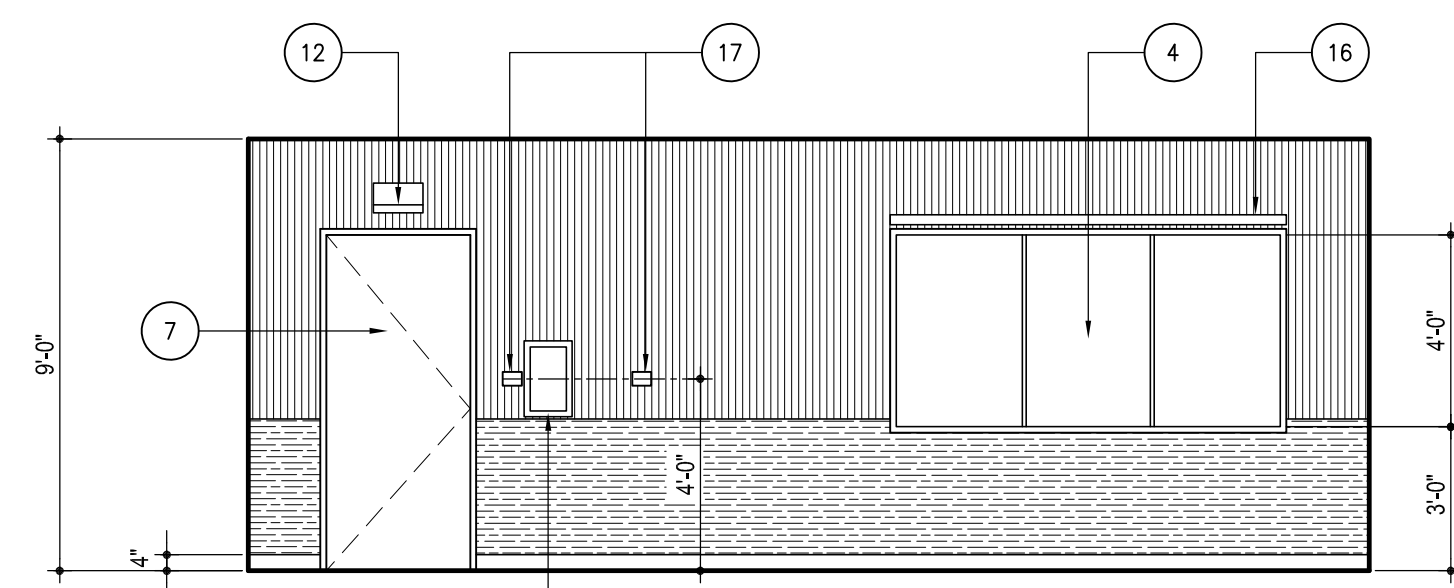
CONSULTANT

No.	Date	Description

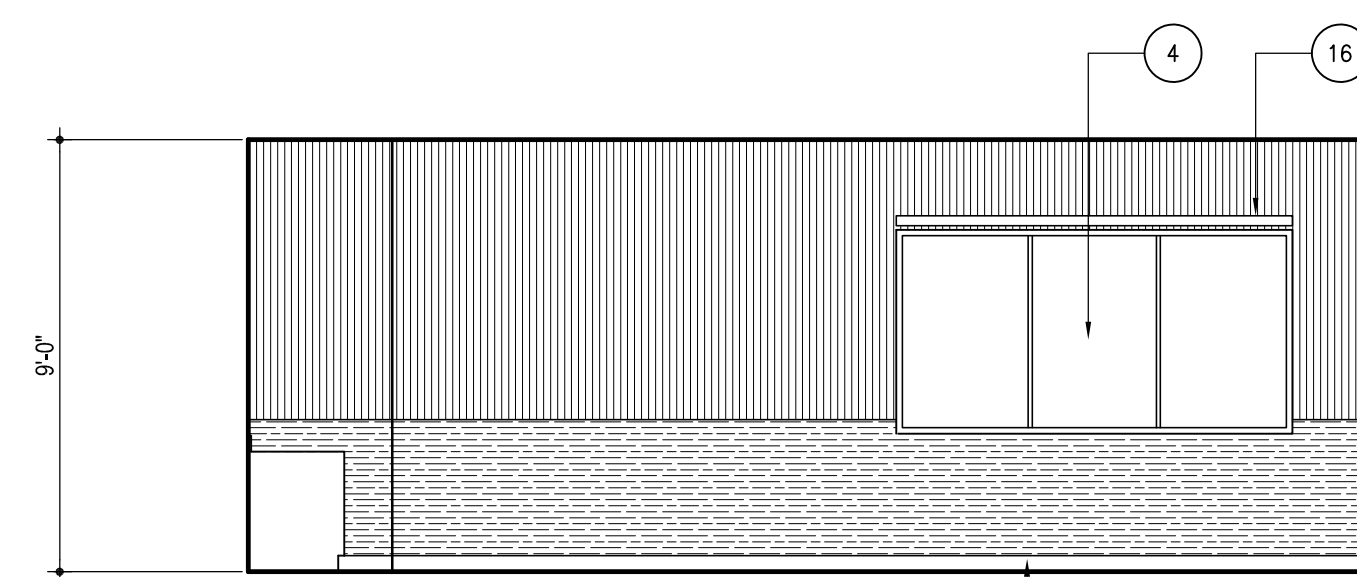
SOUTHERN KERN UNIFIED SCHOOL DISTRICT
TROPICO MIDDLE SCHOOL EXPANSION PROJECT
3180 MOLAVE TROPICO ROAD ROSAMOND, CA 93560

RESTROOM BLDG. 3 & 4 FLOOR PLAN

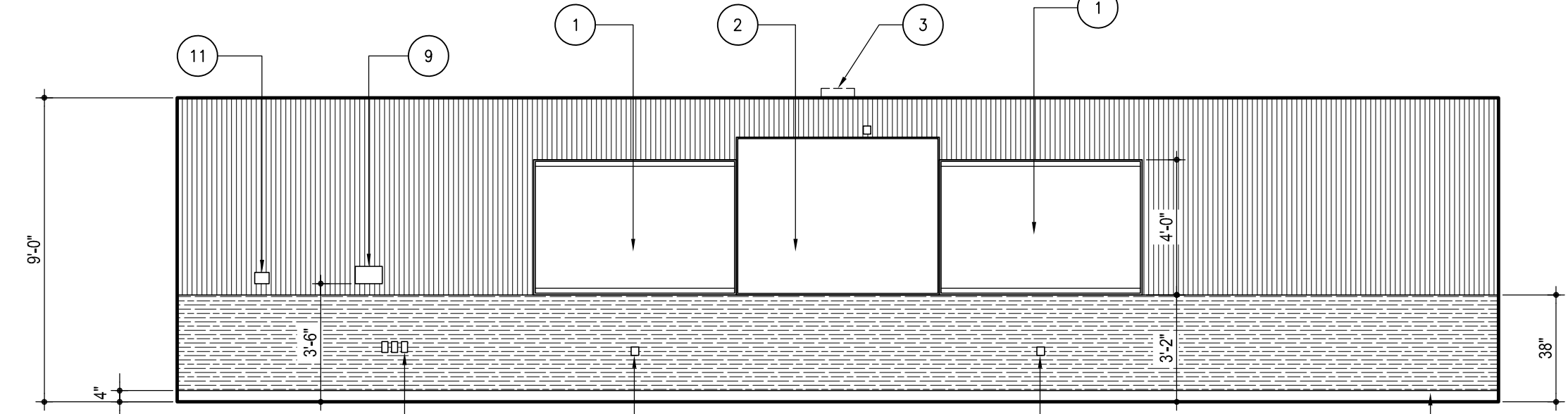
Job No. 2940.000
Date 09-02-21
A2.06



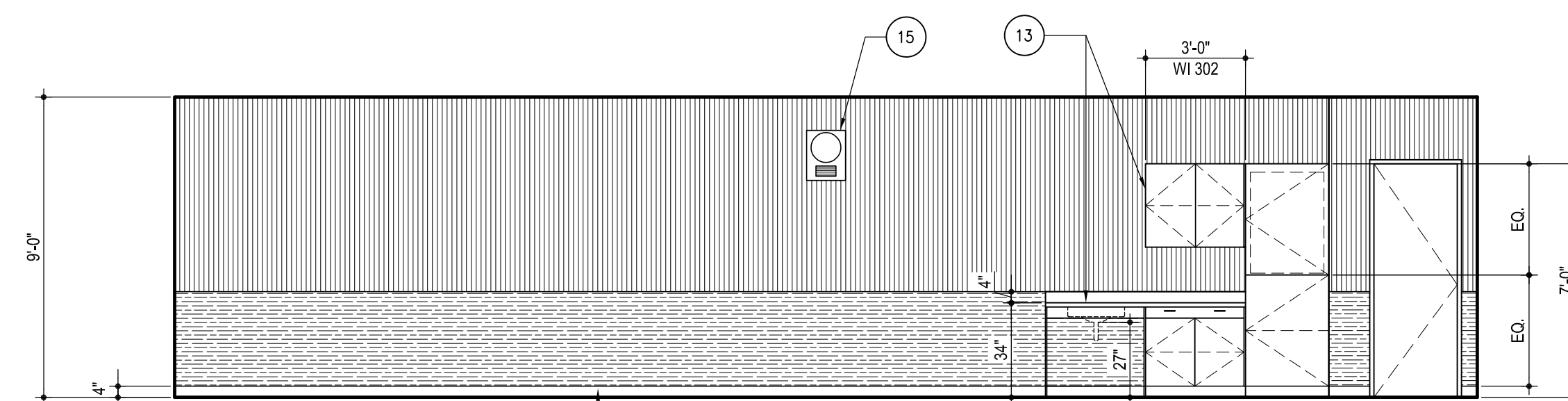
ELEVATION - C



ELEVATION - D



ELEVATION - A

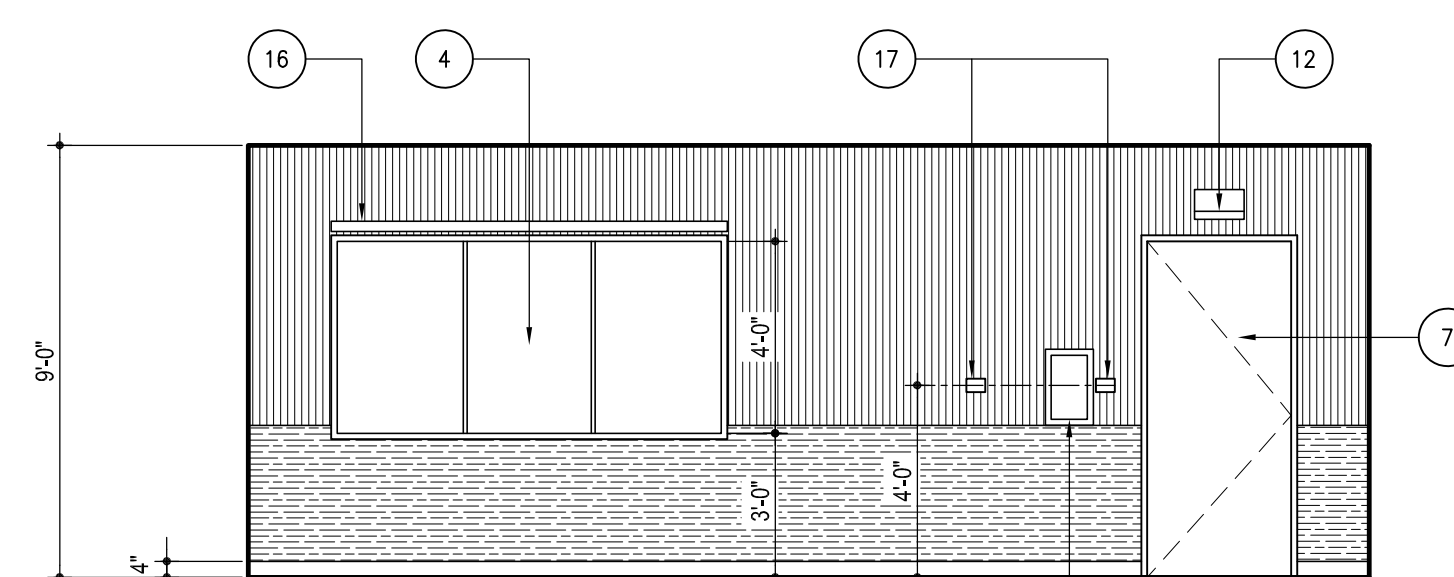


ELEVATION - B

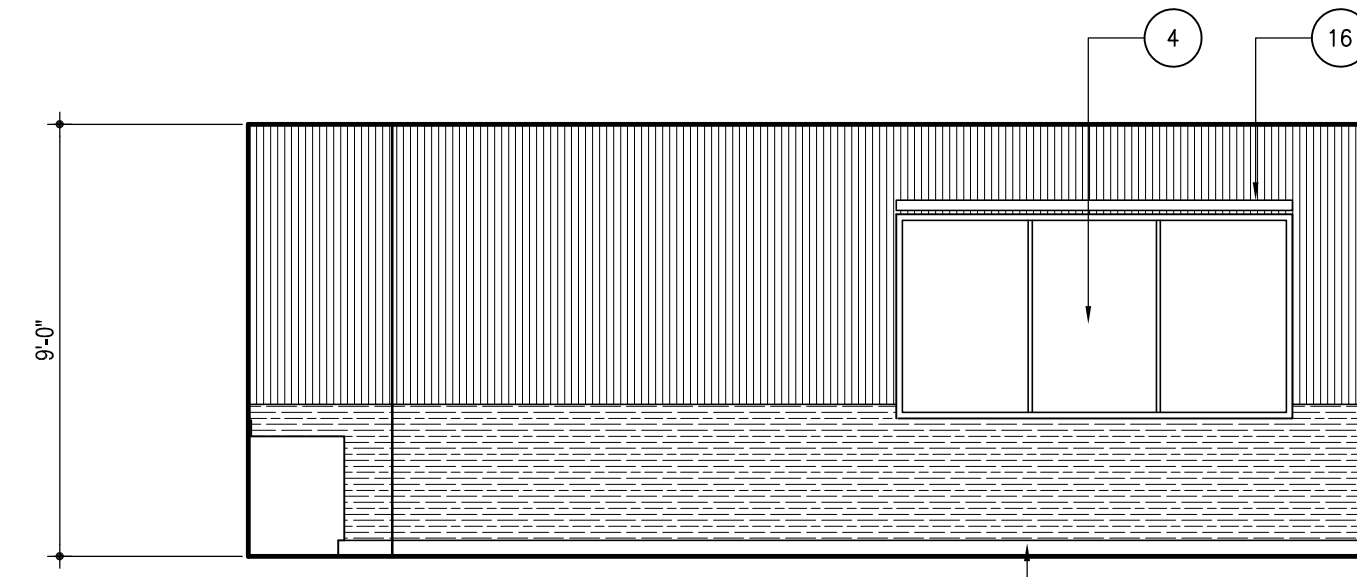
TYP. CLASSROOM INTERIOR ELEVATIONS

SCALE: 1/4" = 1'-0"

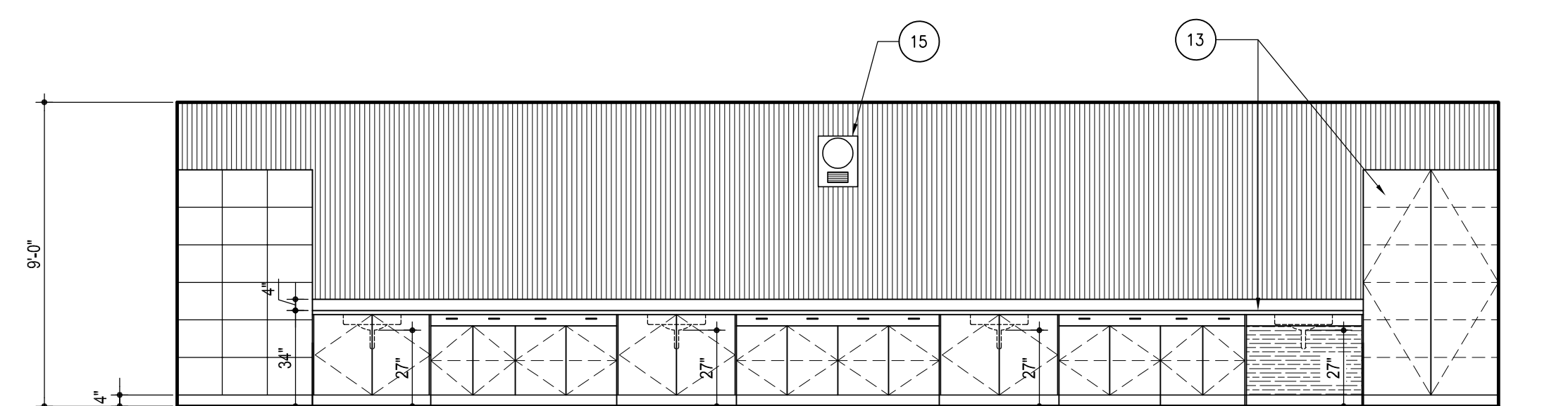
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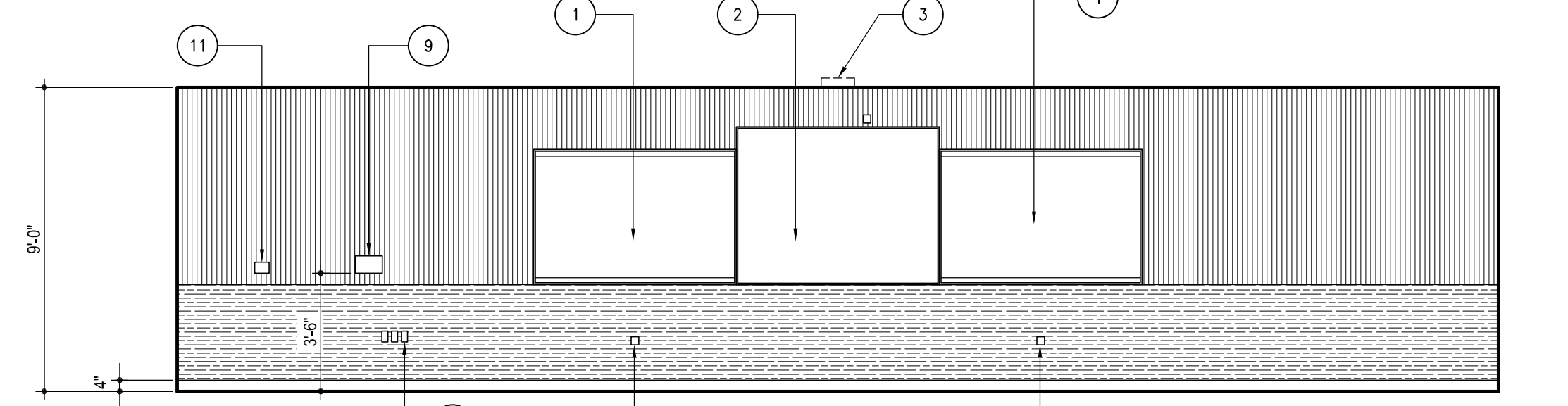
ELEVATION - C



ELEVATION - D



ELEVATION - A



ELEVATION - B

TYP. FLEX CLASSROOM INTERIOR ELEVATIONS

SCALE: 1/4" = 1'-0"

2
A4.01

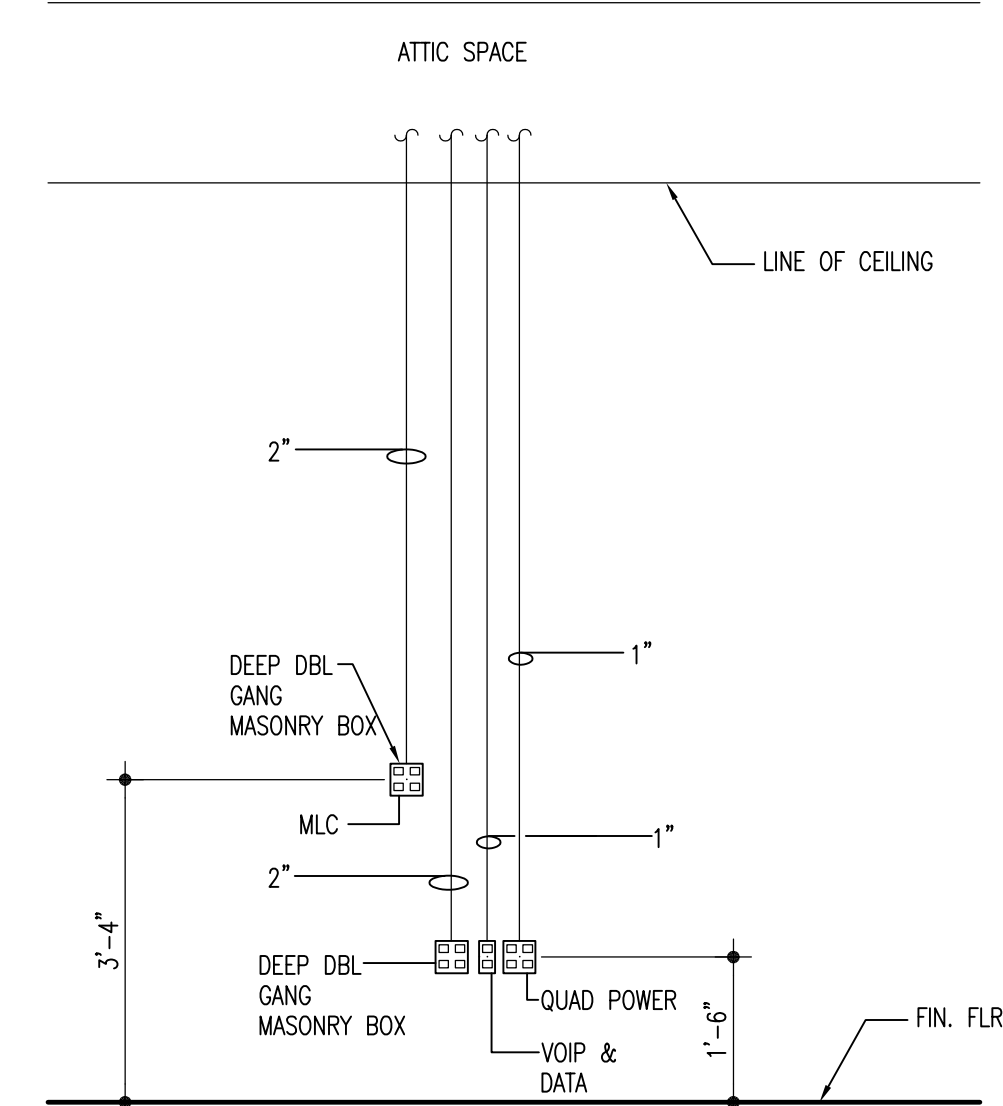
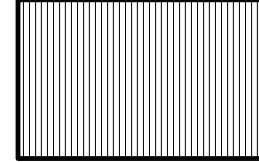
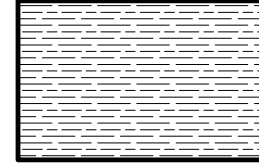
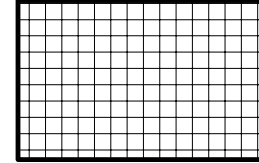


DIAGRAM FOR 9 AND 10

SCALE: 1/2" = 1'-0"

3
A4.01

INT. ELEVATION LEGEND

-  TACKBOARD WALL PANEL AND TRIM BY KOROSEAL. COLOR TO BE SELECTED BY ARCHITECT
-  SEQUENTIA FRP PANELS BY CRANE COMPOSITES. COLOR TO BE SELECTED BY ARCHITECT
-  4.25"x4.25" DALTILE SEMI-GLOSS CERAMIC WALL AND BASE WITH MAPEI GROUT. COLOR TO BE SELECTED BY ARCHITECT

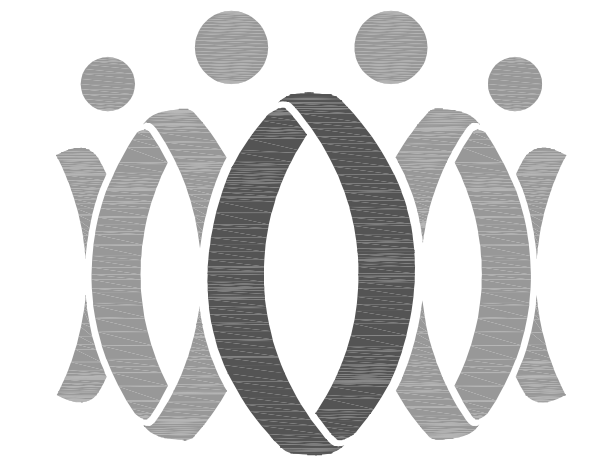
INT. ELEVATION KEYNOTES

GENERAL NOTES:

- A. MODULAR CONTRACTOR SHALL INCLUDE ALL BATHROOM ACCESSORIES REQUIRED FOR DSA APPROVAL. ALL ACCESSORIES SHALL BE VANDAL PROOF. SUBMIT CUT SHEETS TO ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO SUBMITTING BIDS.
- B. MODULAR CONTRACTOR SHALL PROVIDE RECESSED CAST IRON WHITE PUSH BUTTON HAND DRYER. SUBMIT CUT SHEET TO ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO SUBMITTING BIDS.
1. PROVIDE 4'x6' LCS DELUXE DRY ERASE MARKERBOARD WITH MAP RAIL AND 2 MAP HOOKS, CHALK TRY AND FLAG HOLDER BY CLARIDGE PRODUCTS. COLOR - WHITE WITH 8" FACE MITERED CORNERS.
2. 75" PROMETHEAN ACTIVAPANEL SCREEN TO BE PROVIDED BY DISTRICT AND SITE CONTRACTOR TO INSTALL. MODULAR CONTRACTOR SHALL PROVIDE ALL REQUIRED POWER AND LOW VOLTAGE CONDUITS PER SHT. AV1.01
3. TECHLOGIC MAXIM RECEIVER AMPLIFIER TO BE PROVIDED BY DISTRICT AND SITE CONTRACTOR TO INSTALL. MODULAR CONTRACTOR SHALL PROVIDE J-BOX ABOVE CEILING w/ DUPLEX OUTLET ON 3" WHIP TO BE SET BY AUDIO/VISUAL CONTRACTOR IN FIELD.
4. 4'x8' FIXED ALUMINUM FRAME WINDOW PER MODULAR BUILDING MANUFACTURER.
5. 4" RUBBER BASE BY BURKE MERCER, COLOR TO BE SELECTED BY ARCHITECT.
6. (1) DBL. DATA + (1) DUPLEX POWER (+18")
7. 16 GA. WELDED SEAMLESS STEEL DOOR w/ 14 GA. WELDED STEEL FRAME BY STILES. PAINT DOOR AND FRAME, COLOR TO BE SELECTED BY ARCHITECT.
8. TERRAZO MOP SINK, REFER TO SCOPE OF WORK KEYNOTE NO.22, SHT. A2.06.
9. EXTRON CONTROLS. PROVIDE ALL CONDUIT AND BOXES AS SHOWN ON DET. 3/A4.01
10. EXTRON VOIP, DATA AND POWER OUTLETS. REFER TO DET. 3/A4.01
11. EMS-SI THERMOSTAT BY ECOBEE.
12. EMERGENCY LIGHT FIXTURE VALUE+LED - VLLU BY PHILLIPS CHLORIDE. HOUSING COLOR - WHITE.
13. LAMINATED CABINET, COUNTERTOP AND BACKSPLASH BY WILSONART. COUNTERTOP AND BACKSPLASH COLOR TO BE SELECTED BY ARCHITECT.
14. 2A-10BC FIRE EXTINGUISHER IN SEMI-RECESSED CABINET WITH VALID CERTIFICATION TAG.
15. VOLCOM SPEAKER/CLOCK ASSEMBLY BOX TO BE PROVIDED BY DISTRICT AND INSTALLED BY MODULAR CONTRACTOR. MODULAR CONTRACTOR SHALL PROVIDE CONDUIT PER SHT. AV1.01
16. 1" WINDOW BLINDS, COLOR TO BE SELECTED BY ARCHITECT.
17. TYPICAL ROOM SIGNAGE FOR REFERENCE ONLY AND SHALL BE PROVIDED AND INSTALLED BY SITE CONTRACTOR, COLOR TO BE SELECTED BY ARCHITECT.
18. PROVIDE 18"x30" STAINLESS STEEL GLASS FREE VANDAL RESISTANT MIRROR.
19. PROVIDE STAINLESS STEEL VANDAL RESISTANT SOAP DISPENSER.

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AGENCY



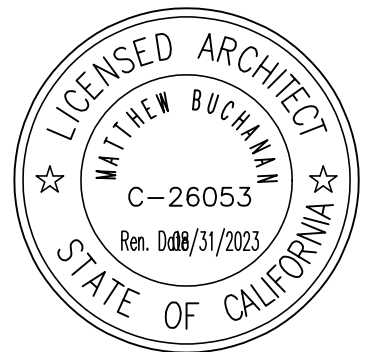
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CONSULTANT

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Checked by

Revisions

No.	Date	Description

All drawings must be checked at the job by the contractor who accepts full responsibility for full accuracy under the contract. There shall be no specification in contract documents has been prepared for a specific site. Any and all responsibility for that use to which it is put or any other use is hereby disclaimed by Flewelling & Moody.

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TYP. CLASSROOM BLDG.
INTERIOR ELEVATIONS

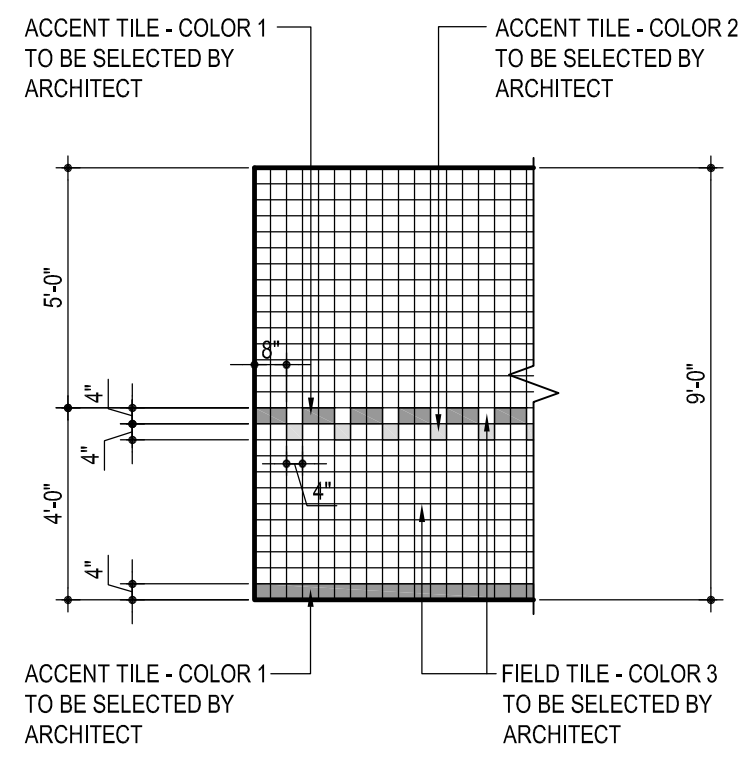
Job No.

2940.000

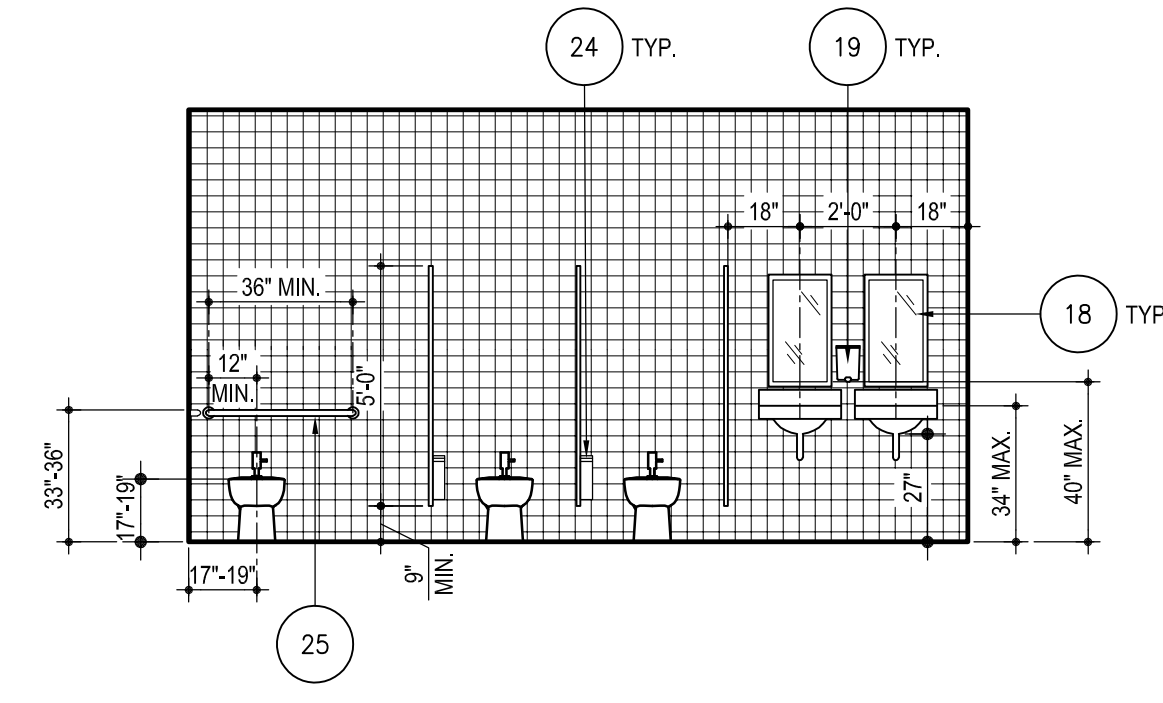
Date

09-02-21

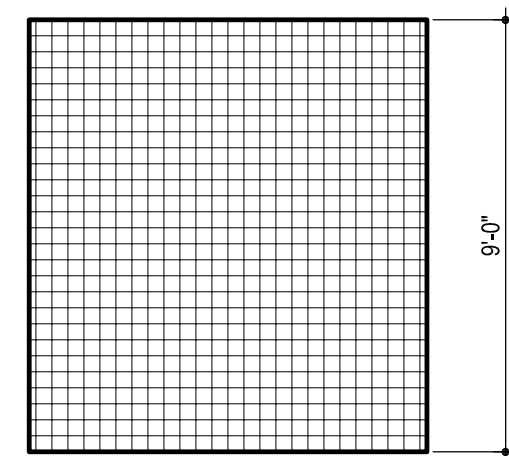
A4.01



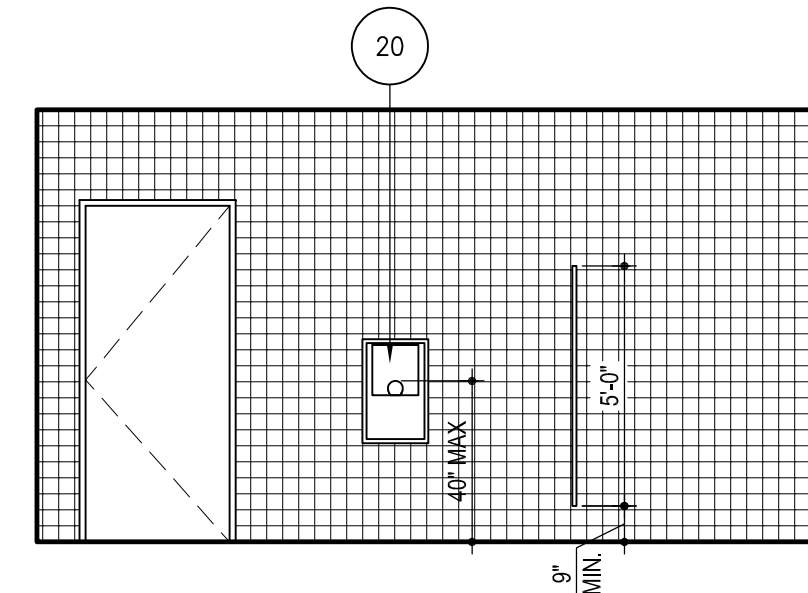
TYP. TILE WAINSCOT PATTERN FOR ALL BOYS, GIRLS & ALL GENDER RESTROOMS



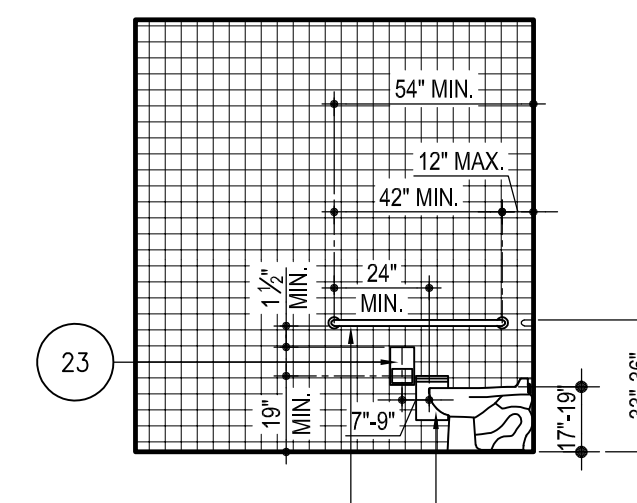
INTERIOR ELEVATION - I



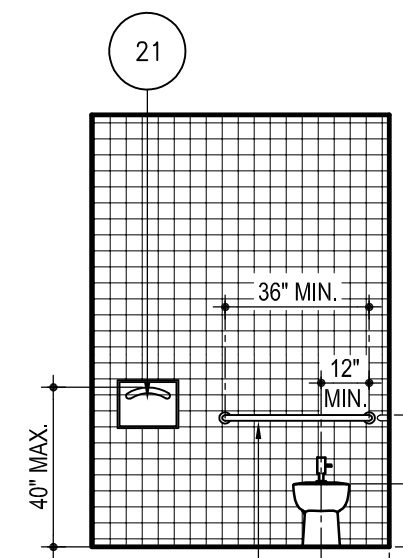
INTERIOR ELEVATION - J



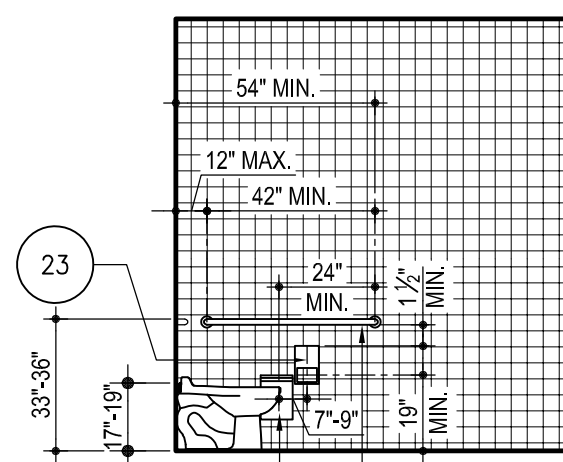
INTERIOR ELEVATION - K



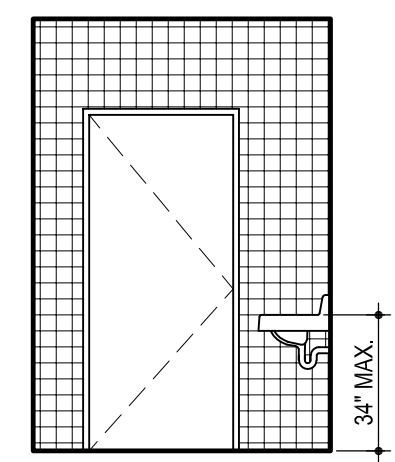
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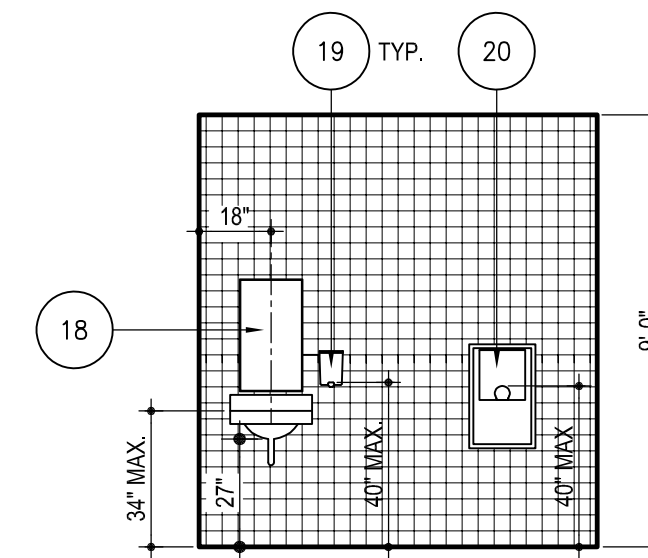
INTERIOR ELEVATION - E



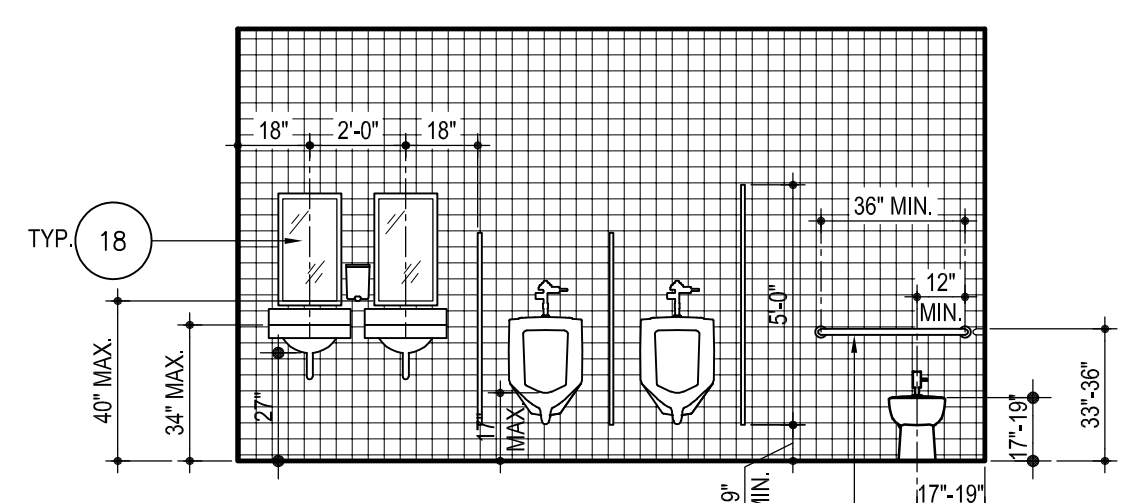
INTERIOR ELEVATION - F



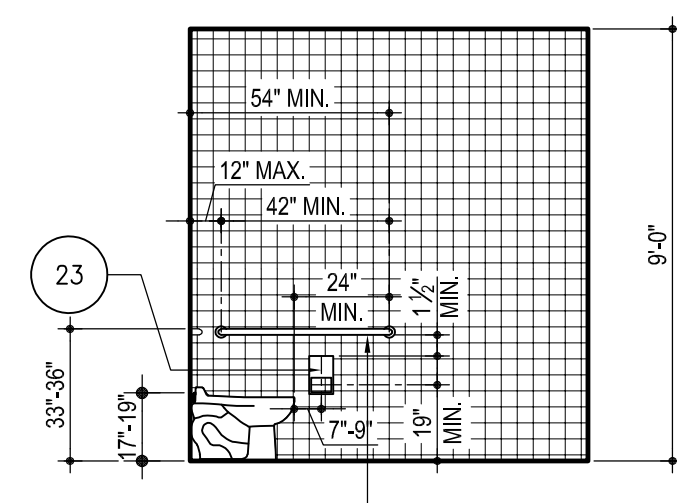
INTERIOR ELEVATION - G



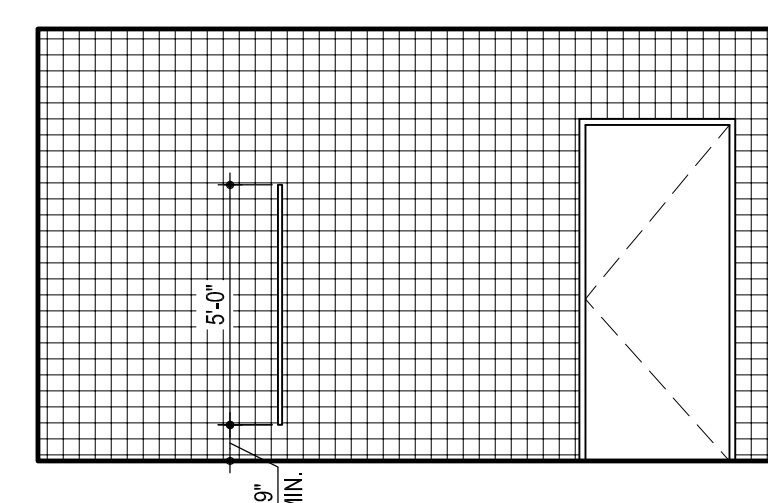
INTERIOR ELEVATION - H



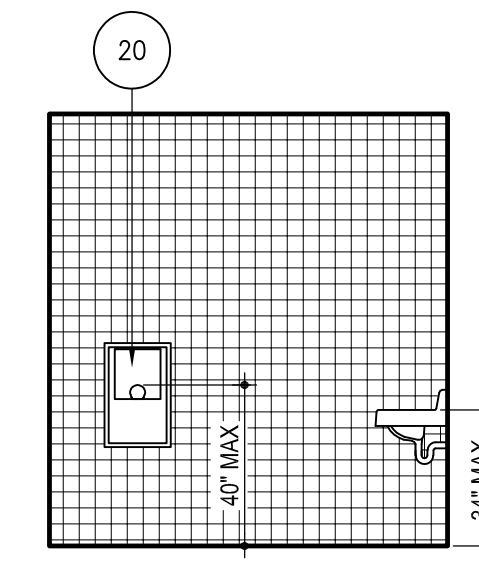
INTERIOR ELEVATION - A



INTERIOR ELEVATION - B



INTERIOR ELEVATION - C

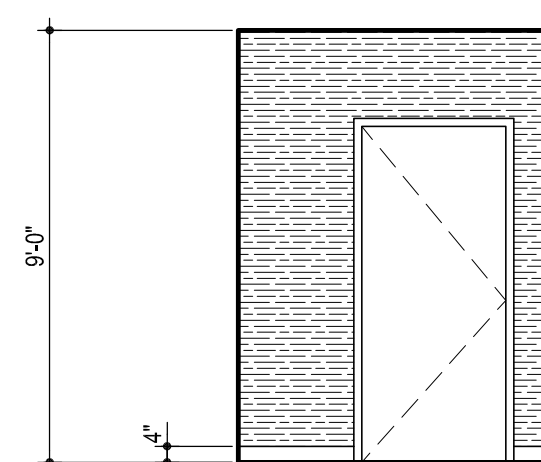


INTERIOR ELEVATION - D

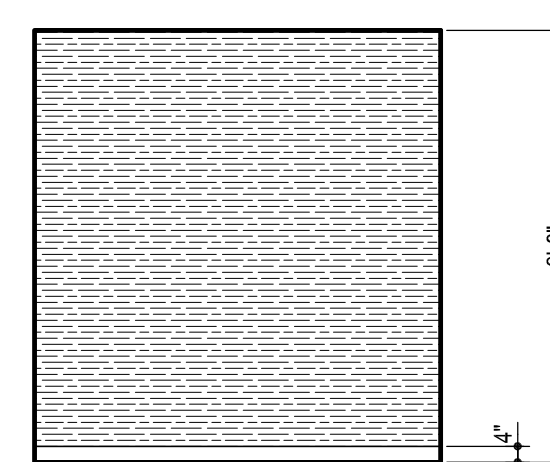
TYP. BOYS, GIRLS, ALL GENDER & STAFF RESTROOM INTERIOR ELEVATIONS

SCALE: 1/4" = 1'-0"

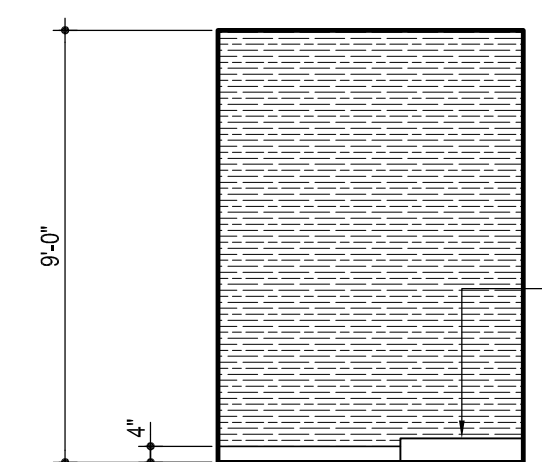
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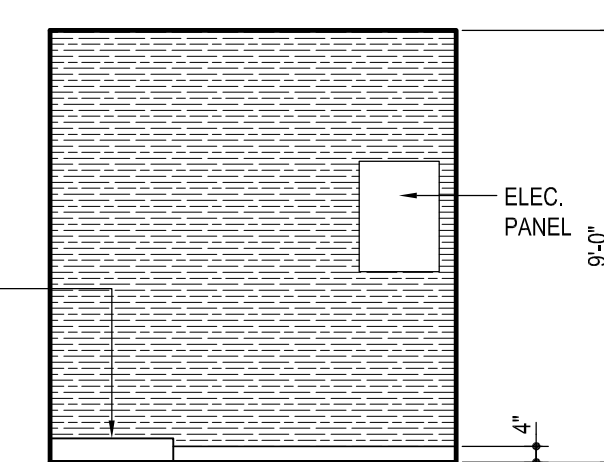
INTERIOR ELEVATION - M



INTERIOR ELEVATION - N



INTERIOR ELEVATION - O



INTERIOR ELEVATION - P

CUSTODIAL RM.3C - RESTROOM BLDG. NO.3 INTERIOR ELEVATIONS

SCALE: 1/4" = 1'-0"

2
A4.02

INT. ELEVATION LEGEND

- TACKBOARD WALL PANEL AND TRIM BY KORSEAL, COLOR TO BE SELECTED BY ARCHITECT
- SEQUENTIA FRP PANELS BY CRANE COMPOSITES. COLOR TO BE SELECTED BY ARCHITECT
- 4.25"x4.25" DALTILE SEMI-GLOSS CERAMIC WALL AND BASE WITH MAPEI GROUT. COLOR TO BE SELECTED BY ARCHITECT

INT. ELEVATION KEYNOTES

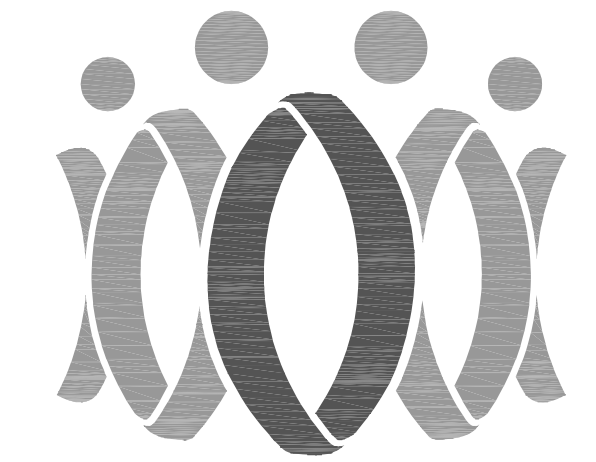
GENERAL NOTES:

- A. MODULAR CONTRACTOR SHALL INCLUDE ALL BATHROOM ACCESSORIES. REQUIRED FOR DSA APPROVAL. ALL ACCESSORIES SHALL BE VANDAL PROOF. SUBMIT CUT SHEETS TO ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO SUBMITTING BIDS.
- B. MODULAR CONTRACTOR SHALL PROVIDE RECESSED CAST IRON WHITE PUSH BUTTON HAND DRYER. SUBMIT CUT SHEET TO ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO SUBMITTING BIDS.

1. PROVIDE 4'x6' LCS DELUXE DRY ERASE MARKERBOARD WITH MAP RAIL AND 2 MAP HOOKS, CHALK TRY AND FLAG HOLDER BY CLARIDGE PRODUCTS. COLOR - WHITE WITH 8" FACE MITERED CORNERS.
2. 75" PROMETHAN ACTIPANEL SCREEN TO BE PROVIDED BY DISTRICT AND SITE CONTRACTOR TO INSTALL. MODULAR CONTRACTOR SHALL PROVIDE ALL REQUIRED POWER AND LOW VOLTAGE CONDUITS PER SHT. AV1.01
3. TECHLOGIC MAXIM RECEIVER AMPLIFIER TO BE PROVIDED BY DISTRICT AND SITE CONTRACTOR TO INSTALL. MODULAR CONTRACTOR SHALL PROVIDE J-BOX ABOVE CEILING w/ DUPLEX OUTLET ON 3' WHIP TO BE SET BY AUDIO/VISUAL CONTRACTOR IN FIELD.
4. 4'x8' FIXED ALUMINUM FRAME WINDOW PER MODULAR BUILDING MANUFACTURER.
5. 4" RUBBER BASE BY BURKE MERCER, COLOR TO BE SELECTED BY ARCHITECT.
6. (1) DBL. DATA + (1) DUPLEX POWER (+18")
7. 16 GA. WELDED SEAMLESS STEEL DOOR w/ 14 GA. WELDED STEEL FRAME BY STILES. PAINT DOOR AND FRAME, COLOR TO BE SELECTED BY ARCHITECT.
8. TERRAZO MOP SINK, REFER TO SCOPE OF WORK KEYNOTE NO.22, SHT. A2.06.
9. EXTRON CONTROLS. PROVIDE ALL CONDUIT AND BOXES AS SHOWN ON DET. 3/A4.01
10. EXTRON VOIP, DATA AND POWER OUTLETS. REFER TO DET. 3/A4.01
11. EMS-SI THERMOSTAT BY ECOBEE.
12. EMERGENCY LIGHT FIXTURE VALUE+LED - VLLU BY PHILLIPS CHLORIDE. HOUSING COLOR - WHITE.
13. LAMINATED CABINET, COUNTERTOP AND BACKSPLASH BY WILSONART. COUNTERTOP AND BACKSPLASH COLOR TO BE SELECTED BY ARCHITECT.
14. 2A-10BC FIRE EXTINGUISHER IN SEMI-RECESSED CABINET WITH VALID CERTIFICATION TAG.
15. VOLCOM SPEAKER/CLOCK ASSEMBLY BOX TO BE PROVIDED BY DISTRICT AND INSTALLED BY MODULAR CONTRACTOR. MODULAR CONTRACTOR SHALL PROVIDE CONDUIT PER SHT. AV1.01
16. 1" WINDOW BLINDS, COLOR TO BE SELECTED BY ARCHITECT.
17. TYPICAL ROOM SIGNAGE FOR REFERENCE ONLY AND SHALL BE PROVIDED AND INSTALLED BY SITE CONTRACTOR, COLOR TO BE SELECTED BY ARCHITECT.
18. PROVIDE 18"x30" STAINLESS STEEL GLASS FREE VANDAL RESISTANT MIRROR.
19. PROVIDE STAINLESS STEEL VANDAL RESISTANT SOAP DISPENSER.
20. PROVIDE MANUAL, ACCESSIBLE RECESSED HAND DRYER. COLOR TO BE SELECTED BY ARCHITECT.
21. PROVIDE TOILET SEAT COVER DISPENSER ONLY IN RESTROOM BUILDING 2.
22. PROVIDE SANITARY NAPKIN DISPOSAL.
23. PROVIDE RECESSED TOILET PAPER DISPENSER.
24. PROVIDE SURFACE-MOUNTED TOILET PAPER DISPENSER.
25. PROVIDE 36" GRAB BAR.
26. PROVIDE 42" GRAB BAR.

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AGENCY



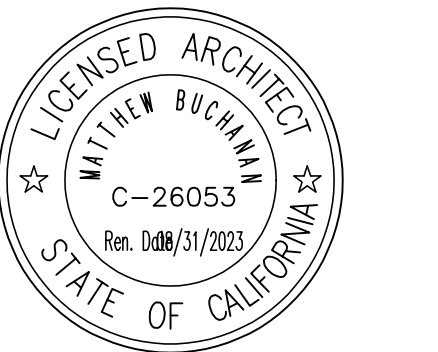
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ARCHITECT



CONSULTANT

Drawn by

Checked by

Revisions

No.	Date	Description

All drawings must be checked at the job by the contractor who accepts full responsibility for full accuracy under the contract. There shall be no specification in contract documents has been prepared for a specific site. Any and all responsibility for that use to which or in part or any other site is hereby disclaimed by Flewelling & Moody.

SOUTHERN KERN UNIFIED
SCHOOL DISTRICT
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EXPANSION PROJECT
3180 MOJAVE TROPICO ROAD
ROSAMOND, CA 93560

TYP. RESTROOM BLDG.
INTERIOR ELEVATIONS

Job No.

2940.000

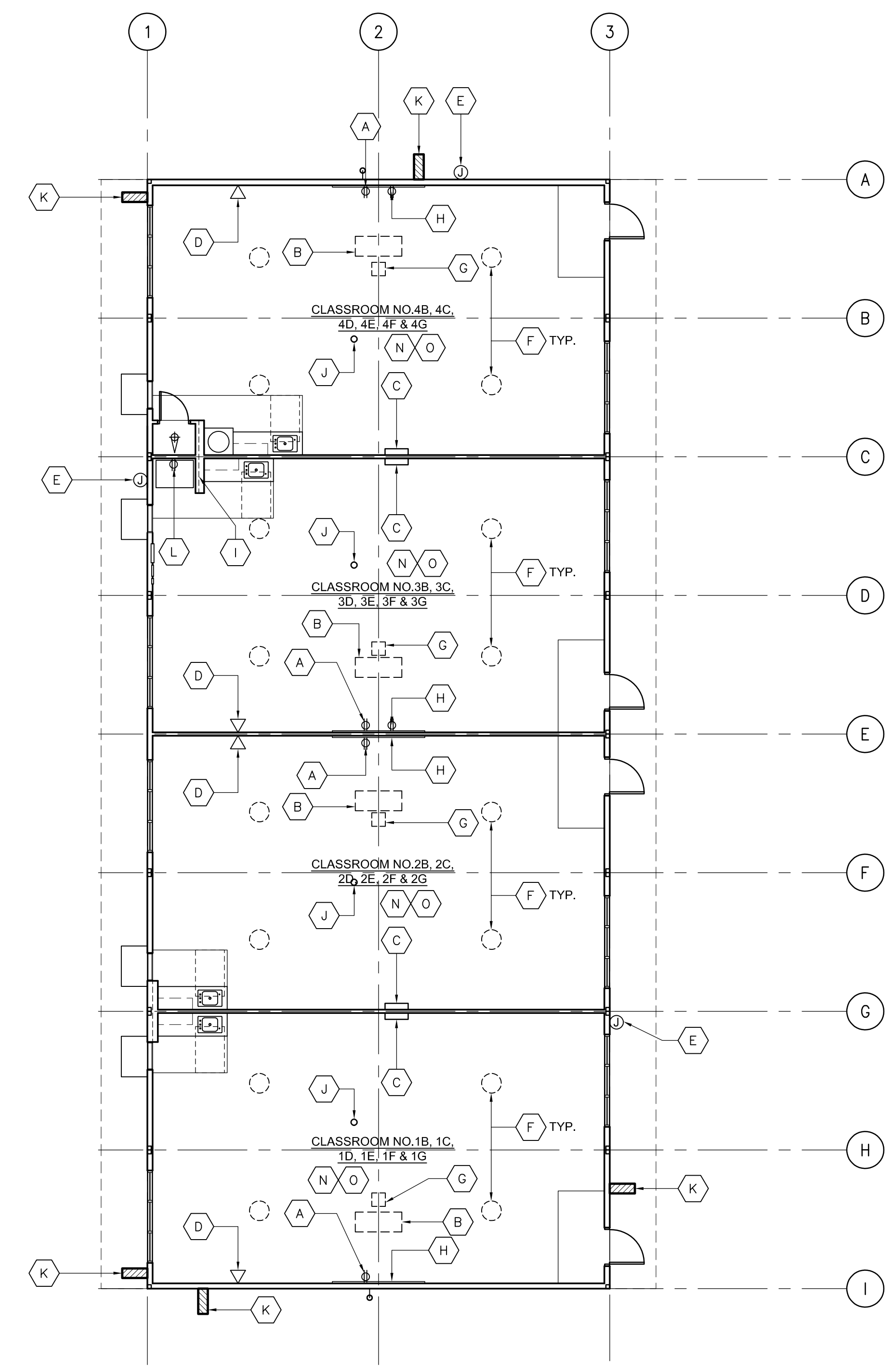
Date

09-02-21

A4.02

LOW VOLTAGE SCOPE OF WORK KEYNOTES

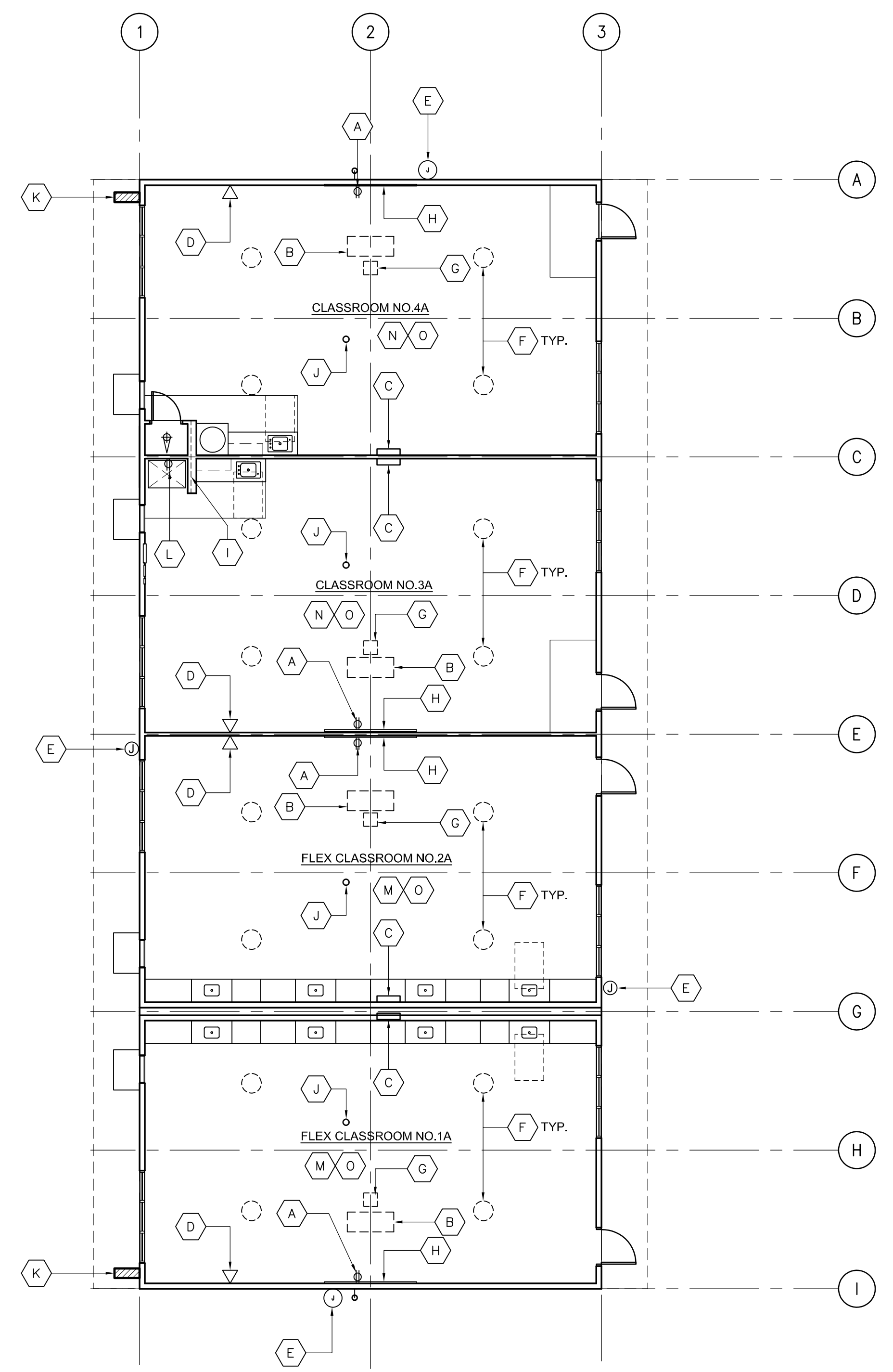
- (A) PROVIDE WALL PLATE WITH HDMI, USB AND POWER OUTLET FOR DISTRICT PROVIDED AND SITE CONTRACTOR INSTALLED ACTVPANEL SCREEN. COORDINATE LOCATION WITH ARCHITECT PRIOR TO BUILDING FABRICATION.
- (B) PROVIDE POWER OUTLET ABOVE T-BAR CEILING FOR DISTRICT PROVIDED AND SITE CONTRACTOR INSTALLED RECEIVER AMPLIFIER.
- (C) PROVIDE 3" EMT STUB OUT TO ABOVE CEILING FOR DISTRICT PROVIDED VOLCOM SPEAKER/CLOCK ASSEMBLY BOX. MODULAR CONTRACTOR SHALL INSTALLED RECESSED CLOCK/SPEAKER BOX.
- (D) CONTROL PANEL PER DET. 3/A4.01. PROVIDE VOIP, DATA, POWER OUTLETS AND ALL CONDUITS AS SHOWN ON DET. 3/A4.01.
- (E) PROVIDE WP 4S J-BOX FOR DISTRICT PROVIDED AND SITE CONTRACTOR INSTALLED P.A. SPEAKER. COORDINATE LOCATION WITH ARCHITECT PRIOR TO BUILDING FABRICATION.
- (F) DISTRICT PROVIDED LAY-IN CEILING SPEAKERS (TYP. OF 4 PER CLASSROOM). REFER TO TEACHLOGIC CUT SHEET. MODULAR CONTRACTOR SHALL INSTALL SPEAKERS AND POWER REQUIREMENTS. COORDINATE LOCATION WITH ARCHITECT PRIOR TO BUILDING FABRICATION.
- (G) PROVIDE METAL FLOOR BOX, REFER TO FSR CUT SHEET. MODULAR CONTRACTOR SHALL INSTALL FLOOR BOX AND PROVIDE SAME NUMBER AND SIZE OF CONDUITS AS SHOWN ON ELEVATION DIAGRAM. DET. 3/A4.01. PROVIDE 2" CONDUIT BELOW FLOOR TO WALL WHERE ACTVPANEL SCREEN IS LOCATED, UP THE WALL AND STUB OUT ABOVE CEILING.
- (H) DISTRICT PROVIDED AND SITE CONTRACTOR PROMETHEAN ACTVPANEL 75" SCREEN SHALL BE MOUNTED ON CENTER OF TEACHING WALL.
- (I) PROVIDE QUAD POWER OUTLET AT 96" A.F.F. WITH (2) 2" CONDUIT FOR FIBER AND (1) 3/4" CONDUIT FOR POWER.
- (J) DISTRICT PROVIDED AND SITE CONTRACTOR INFRARED DOME SENSOR.
- (K) PROVIDE J-BOX WITH W.P. PLATE AND (1) 1" CONDUIT TO ABOVE CEILING. SECURITY CAMERA SHALL BE PROVIDED BY DISTRICT AND INSTALLED BY SITE CONTRACTOR. COORDINATE LOCATION WITH ARCHITECT PRIOR TO BUILDING FABRICATION.
- (L) PROVIDE POWER OUTLET FOR IDF CABINET. COORDINATE LOCATION WITH ARCHITECT PRIOR TO BUILDING FABRICATION.
- (M) PROVIDE A MINIMUM OF (8) POWER OUTLET FOR EACH FLEX CLASSROOM. COORDINATE LOCATION WITH ARCHITECT PRIOR TO BUILDING FABRICATION.
- (N) PROVIDE A MINIMUM OF (8) POWER OUTLET FOR EACH TYPICAL CLASSROOM. COORDINATE LOCATION WITH ARCHITECT PRIOR TO BUILDING FABRICATION.
- (O) PROVIDE THE FOLLOWING CONDUITS FOR DATA DROPS IN EACH CLASSROOM:
 - (2) IN EACH WALL FOR A TOTAL OF (8) PER CLASSROOM
 - (2) IN THE CENTER OF THE CLASSROOM FOR WIRELESS ACCESS POINT
 - (1) 2" CONDUIT FOR PROMETHEAN BOARD
 COORDINATE ALL LOCATIONS WITH ARCHITECT PRIOR TO BUILDING FABRICATION.



BUILDING 'B' CLASSROOM AUDIO VISUAL PLAN
BLDG. C, D, E, F, G, H, & I A.V. PLAN (SIM.)

SCALE: 1/8" = 1'-0"

2
AV1.01



BUILDING 'A' CLASSROOM AUDIO-VISUAL PLAN

SCALE: 1/8" = 1'-0"

1
AV1.01

NOTE: THE INTENT OF THIS DRAWING IS TO REPLACE PREVIOUSLY ISSUED SHT. A2.01 DATED 01-14-2022 AND TO INCORPORATE THE WORK SHOWN HEREIN INTO THE CONTRACT. ALL WORK INDICATED SHALL HEREBY BE MADE A PART OF THE CONTRACT.

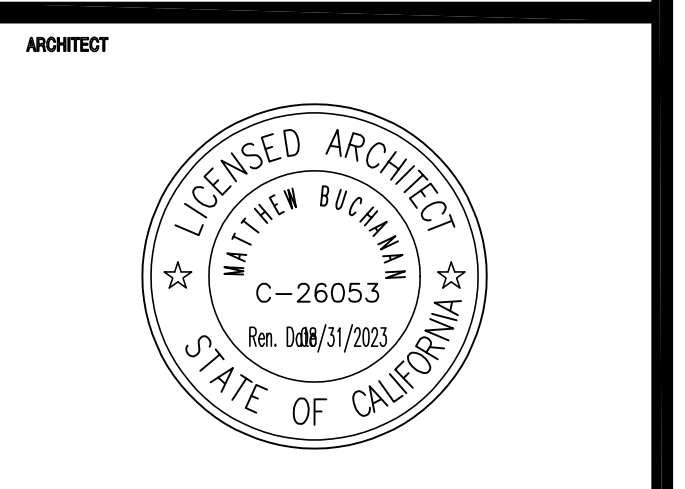
AGENCY

FLEWELLING & MOODY
architecture planning interiors

HEADQUARTERS OFFICE:
815 Colorado Blvd, Suite 200
Los Angeles, CA 90041
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E-Mail: fm-pasadena@flewelling-moody.com

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1035 West Lancaster Boulevard
Lancaster, California 93534
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E-Mail: fm-lancaster@flewelling-moody.com

An Employee Owned Corporation



CONSULTANT

Drawn by _____

Checked by _____

Revisions

No.	Date	Description

All drawings must be checked at the job by the contractor who accepts full responsibility for their accuracy under the contract. There shall be no specifications in contracts heretofore been prepared for a specific site, but not of responsibility for that use to which it is put or any other use to which it is put.

SOUTHERN KERN UNIFIED SCHOOL DISTRICT
TROPICO MIDDLE SCHOOL EXPANSION PROJECT
3180 MOJAVE TROPICO ROAD ROSAMOND, CA 93560

BLDG. A & B CLASSROOM AUDIO VISUAL PLAN

Job No. 2940.000

Date 09-02-21

AV1.01



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 17, 2022 DATE DUE: _____ RFI NO. 1

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

Please provide an overall project schedule showing all the project milestones, including but not limited to, award date, DSA submittal, project duration, completion date, etc.

RESPONSE:

Modular Design Notice to Proceed (NTP) - February 2022
DSA Submittal - May 2, 2022
Project Construction Start - Dec 2022
Project Completion - Dec 2023

Answered By: HPLE Inc.

Date: Feb 08, 2022



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 17, 2022 DATE DUE: _____ RFI NO. 2

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

The project manual, page 6 item 4 - there is a note in red - Modular Company shall be responsible for DSA review and approval process. Can you please confirm this note refers to the Modular Company working in collaboration with the architect of record to provide a drawings package for the modular buildings, which the architect will then include as part of their overall set of drawings for the project and the architect will submit to DSA.

RESPONSE:

Modular company shall collaborate with AOR for the review and approval of modular company drawing package.

Answered By:

Date:

02-07-22

REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 17, 2022 DATE DUE: _____ RFI NO. 3

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

The project manual, page 7 item 14 - refers to this being a prevailing wage project. However, page 20 item 32 mentions Davis Bacon. Please confirm whether this will be prevailing wage or Davis Bacon rates, as these are not always one in the same.

RESPONSE:

This is a prevailing wage Project. Please refer revised requirement (Pt 32. Instruction to Bidders) issued via Addendum No. 01 dated Feb 04, 2022.

Answered By: HPLE Inc.

Date: Feb 08, 2022



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 17, 2022 DATE DUE: _____ RFI NO. 4

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific)

DATE REQUIRED: _____

Has the project been submitted to CGS?

RESPONSE:

No, this project has not been submitted to CGS at this time but it will be prior to submittal to DSA.

Answered By:

Date:

02-07-22

REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 17, 2022 DATE DUE: _____ RFI NO. 5

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

Please confirm whether DVBE advertisement will be required if selecting
OPTION B - Good Faith Effort.

RESPONSE:

Contractor may satisfy the DVBE Advertisement requirement through email solicitation in lieu of the posted Advertisement. SKUSD does not require the contractor to submit the supporting advertisement documentation for Option B (Good Faith Effort) with the Bid. However, Contractor to keep on file those documented efforts (copy of email) for record.

Answered By: HPLE Inc.

Date: Feb 08, 2022

REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 17, 2022 DATE DUE: _____ RFI NO. 6

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

Please provide list of identified DVBE contractors (page 49 - step 1).

RESPONSE:

SKUSD has no recommended DVBE's.
Contractor to follow the DVBE guidelines (as noted on the DVBE Form) to refer registered resources.

Answered By: HPLE Inc.

Date: Feb 08, 2022



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 17, 2022 DATE DUE: _____ RFI NO. 7

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

The project manual, page 58 item 5 of Liquidated Damages, calls for \$1,500/day. Can that amount be reduced to \$500/day?

RESPONSE:

The liquidated damages as applicable for this Contract is \$1000.00 / day.

Answered By: HPLE Inc.

Date: Feb 08, 2022



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 17, 2022 DATE DUE: _____ RFI NO. 8

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

Please provide a soils report.

RESPONSE:

Attached are the following soils report:
- Geological Hazard Report dated July 26,2012 (CBC 2010)
- Geotechnical Engineering Report dated Aug. 24, 2012 (CBC 2010)

These reports are for '**Reference only and subject to change**'. Updated soils report will be issued as soon as possible.

Answered By: 

Date: 02-07-22



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 17, 2022 DATE DUE: _____ RFI NO. 9

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

Please confirm this bid/project is not subject to PSA/PLA or any union labor agreements.

RESPONSE:

SKUSD does not have a PSA/PLA.

Answered By: HPLE Inc.

Date: Feb 08, 2022



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 17, 2022 DATE DUE: _____ RFI NO. 10

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

Please confirm this bid/project is not subject to Skilled and Trained Workforce requirements.

RESPONSE:

All Deployed labor (by Contractor) on this project must comply with labor compliance standards and skill requirement for assigned work. Contractor to also ensure this is complied by all subcontractors of all tiers as applicable (refer Article 39, Pt. A of General Conditions).

Answered By: HPLE Inc.

Date: Feb 08, 2022



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 17, 2022 DATE DUE: _____ RFI NO. 11

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

The project manual, page 98 article 23, states "All utilities, including but not limited to, electricity, water, gas and telephone used on the work, shall be furnished and paid for by CONTRACTOR. CONTRACTOR shall furnish and install necessary temporary distribution systems, including meters if necessary, from distribution points to points on the site where the utility is necessary to perform the work. Upon completion of the work, CONTRACTOR shall remove all temporary distribution systems."
Please confirm that a separate site contractor will be providing such and this is not included in this bid as part of the modular contractor's scope of work.

RESPONSE:

Confirmed.

Answered By: HPLE Inc.

Date: Feb 08, 2022

REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 17, 2022 DATE DUE: _____ RFI NO. 12

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

The project manual, page 99 article 25, states" CONTRACTOR shall provide temporary sanitary toilet facilities as required by law and additional facilities as directed by the IOR for the use of all workers. The facilities shall be maintained in a sanitary condition and left at the site until removal is directed by the IOR. Use of toilet facilities contained in the work under construction on this project is expected to be permitted with the approval of the IOR." Please confirm that a separate site contractor will be providing such and this is not included in this bid as part of the modular contractor's scope of work.

RESPONSE:

Confirmed

Answered By: HPLE Inc.

Date: Feb 08, 2022

REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 17, 2022 DATE DUE: _____ RFI NO. 13

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

The project manual, page 107 article 30, describes cleaning up responsibilities. Please confirm that all final cleaning described in this article will be part of the site contractor's scope of work and is not included in this bid as part of the modular contractor's scope of work.

RESPONSE:

Modular Building Contractor remains responsible for any cleaning (including dumping of trash) associated with their work at site during the entire course of the project.

Answered By: HPLE Inc.

Date: Feb 08, 2022



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 17, 2022 DATE DUE: _____ RFI NO. 14

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

The project manual, page 121 article 45 item 1, states "Within 10 calendar days of award of contract, a detailed estimate giving a complete breakdown of contract price for each project or site, which shall include all subcontractor/supplier agreements showing dollar amount of these agreements to justify the schedule of values."
Please confirm that a schedule of values will fulfill this requirement.

RESPONSE:

Confirmed

Answered By: HPLE Inc.

Date: Feb 08, 2022



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 17, 2022 DATE DUE: _____ RFI NO. 15

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

Please confirm that all utility connections will be done by a separate site contractor and this scope of work is not part of this bid/project of the modular contractor's scope of work.

RESPONSE:

All final utility connections shall be under a separate site contract. Modular contractor shall stub all utilities to a point that is a minimum of 5'-0" outside the line of the building unless specifically noted otherwise. POC's to be coordinated during DSA submittal preparation.

Answered By: 

Date: 02-07-22



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 17, 2022 DATE DUE: _____ RFI NO. 16

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

Please confirm whether Builder's Risk Insurance will be required for this project, and if so, if it will be a requirement only for the site contractor or if it will also be required for the modular contractor.

RESPONSE:

Builders Risk Insurance is not required for this project.

Answered By: HPLE Inc.

Date: Feb 08, 2022



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 17, 2022 DATE DUE: _____ RFI NO. 17

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

If Builder's Risk Insurance is required - please confirm whether Installation Floater Insurance will be acceptable in lieu of Builder's Risk.

RESPONSE:

Builder's Risk insurance is not required for this Project.

Answered By: HPLE Inc.

Date: Feb 08, 2022



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 17, 2022 DATE DUE: _____ RFI NO. 18

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

Please confirm that Dust Control as described in the project manual, page 166 item 28, will be part of the site contractor's scope of work and is not included in this bid/project as part of the modular contractor's scope of work.

RESPONSE:

Modular Building Contractor remains responsible for Dust Control required by the Project Manual associated with their work at site (including but not limited to delivery, staging & installation of the modular buildings) .

Answered By: HPLE Inc.

Date: Feb 08, 2022

REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 17, 2022 DATE DUE: _____ RFI NO. 19

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

Please confirm that site security to include but not limited to fencing, lighting and including delivered/staged modules will be part of the site contractor's scope of work and is not included in this bid/project as part of the modular contractor's scope of work.

RESPONSE:

Modular Building Contractor remains responsible for the security of all scoped Modular Buildings until it set and installed on the Building Foundation. Modular Building Contractor shall not be responsible to provide site fencing but remains responsible to provide additional lighting (as needed) for the delivery, staging & installation of the buildings as deemed necessary (specially if done during early morning hours & other hours of low visibility).

Answered By: HPLE Inc.

Date: Feb 08, 2022



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 17, 2022 DATE DUE: _____ RFI NO. 20

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

Please confirm that portable restrooms required for the project site will be part of the site contractor's scope of work and is not included in this bid/project as part of the modular contractor's scope of work.

RESPONSE:

Confirmed

Answered By: HPLE Inc.

Date: Feb 08, 2022

REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 17, 2022 DATE DUE: _____ RFI NO. 21

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

Please confirm that site mobilization and any permits/fees for such will be part of the site contractor's scope of work and is not included in this bid/project as part of the modular contractor's scope of work.

RESPONSE:

Modular Company Contractor remains responsible for any permits/fees necessary for the their scoped work including but not limited to site mobilization (as needed).

Answered By: HPLE Inc.

Date: Feb 08, 2022



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 17, 2022 DATE DUE: _____ RFI NO. 22

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

Please confirm that traffic control, coordination and any associated fees will be part of the site contractor's scope of work and is not included in this bid/project as part of the modular contractor's scope of work.

RESPONSE:

Modular Company remains responsible for any permits/associated fees necessary for the their scoped work including but not limited to traffic control, any necessary coordination etc.

Answered By: HPLE Inc.

Date: Feb 08, 2022

REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 17, 2022 DATE DUE: _____ RFI NO. 23

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

Please confirm if staging should not be available on site that securing/paying for a staging area for the modules prior to installation will be the responsibility of the Owner in collaboration with the modular contractor.

RESPONSE:

Owner shall assign a dedicated staging area, as needed, for the staging of Modular Buildings at the site prior to installation.

Answered By: HPLE Inc.

Date: Feb 08, 2022



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 17, 2022 DATE DUE: _____ RFI NO. 24

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

Please confirm that all grading, excavating, spoils removal, removal of underground obstacles, etc - ALL site work will be performed by the site contractor in a separate bid/contract and not as part of the modular contractor's scope of work.

RESPONSE:

Confirmed

Answered By: HPLE Inc.

Date: Feb 08, 2022



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 17, 2022 DATE DUE: _____ RFI NO. 25

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

Please confirm single or three phase power.

RESPONSE:

Electrical engineer will have a 3-phase distribution panel that will feed each modular building with single phase feeders.

Answered By:

Date: 02-07-22



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 17, 2022 DATE DUE: _____ RFI NO. 26

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific)

DATE REQUIRED: _____

Do you have electrical drawings available?

RESPONSE:

No electrical drawings at this time. Site electrical drawings will be prepared prior to DSA submittal.

Answered By:

Date:

02-07-22



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 17, 2022 DATE DUE: _____ RFI NO. 27

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

Please confirm number of electrical outlets per classroom to be per PC.

RESPONSE:

See revised Det. 1/AV1.01, 2/AV1.01, and low voltage keynotes M, N & O.
(Bid Clarification No.1_02-07-2022)

Answered By: 

Date: 02-07-22



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 17, 2022 DATE DUE: _____ RFI NO. 28

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

Please confirm whether we are to include embeds, vents and grates for the foundations and tailgate delivery of such in our bid.

RESPONSE:

Modular contractor shall provide all embeds and anchors, site contractor (under separate contract) shall install. Site contractor shall provide and install all vents and grates.

Answered By: 

Date: 02-07-22



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 17, 2022 DATE DUE: _____ RFI NO. 29

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

Storm Water Pollution Prevention - please confirm that a Storm Water Pollution Prevention Plan and related permitting, work, certification requirements, etc. is to be provided by the site contractor from a bid separate from this one and such work will not be the responsibility or scope of the modular contractor.

RESPONSE:

Per initial coordination with our civil engineer and waterboard department, SWPPP will not be required for this project and will not be part of the modular contractor's bid.

Answered By: 

Date: 02-07-22



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 17, 2022 DATE DUE: _____ RFI NO. 30

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

Will hot water be required? If so, please provide water heater size, where it will be placed and what sinks are to receive hot water.

RESPONSE:

Hot water will be required, see revised sheets A2.01, A2.02, A2.03, A2.04, A2.05, A2.06 and keynote no. 33, 34 & 35 (Bid Clarification No.1_02-08-2022)

Answered By: 

Date: 02-07-22



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 17, 2022 DATE DUE: _____ RFI NO. 31

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

Please confirm age range of students which will be occupying these classrooms/restrooms.

RESPONSE:

Students occupying these classrooms/restrooms are in the age group of 12 years - 16 years.

Answered By: HPLE Inc.

Date: Feb 08, 2022



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 20, 2022 DATE DUE: _____ RFI NO. 32

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

Please confirm fire extinguishers are to be modular manufacturer's standard semi recessed.

RESPONSE:

Modular contractor shall provide standard semi-recessed fire extinguishers that is part of their DSA approved PC set.

Answered By: 

Date: 02-07-22



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 20, 2022 DATE DUE: _____ RFI NO. 33

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific)

DATE REQUIRED: _____

Please provide spec for Ecobee Thermostat.

RESPONSE:

Provide Pelican Thermostat with Integrated CO2 Sensor, see attached cut sheet.

Answered By:

Date:

02-07-22



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 20, 2022 DATE DUE: _____ RFI NO. 34

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

Please provide electrical drawings.

RESPONSE:

No electrical drawings at this time.

Answered By: 

Date: 02-07-22



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 20, 2022 DATE DUE: _____ RFI NO. 35

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

Does the District have an EMS system?

RESPONSE:

Existing buildings at this site have an EMS system. New modular buildings will have the Pelican internet-enabled thermostat.

Answered By: 

Date: **02-07-22**



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 20, 2022 DATE DUE: _____ RFI NO. 36

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

Please confirm that modular manufacturer is to provide mirrors, grab bars and ADA toilet paper dispensers only for the restrooms. All/any other accessories to be provided by others. Also, please confirm that accessories provided by modular manufacturer do not need to be submitted for review prior to bid opening.

RESPONSE:

All restroom accessories shown on revised Det. 1/A4.02 and interior elevation keynotes 20, 21, 22, 23, 24, 25 & 26 shall be provided by modular company. (Bid Clarification No.1_02-07-2022)

Answered By: 

Date: 02-07-22



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 20, 2022 DATE DUE: _____ RFI NO. 37

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

Please confirm that Asbestos Abatement Insurance is not applicable to this project.

RESPONSE:

Confirmed.

Answered By: HPLE Inc.

Date: Feb 08, 2022



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 20, 2022 DATE DUE: _____ RFI NO. 38

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

Please confirm that roofing will be standing seam metal - Kynar (colored) roof.
Also, confirm is 22-gauge is acceptable.

RESPONSE:

All building roof material shall be Kynar standing seam metal roof as per modular manufacturer DSA approved PC set. Color shall be selected by architect.

Answered By: 

Date: 02-07-22



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 20, 2022 DATE DUE: _____ RFI NO. 39

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

Please confirm if project is in a WUI zone.

RESPONSE:

Per Cal Fire hazard severity zone map, Tropico Middle school site is not a fire hazard zone area.

Answered By: 

Date: 02-07-22



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 20, 2022 DATE DUE: _____ RFI NO. 40

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

The drawings throughout but for example on A2.01, note 29 calls for a hi-lo drinking fountain, however, drinking fountain location(s) doesn't appear to be shown on the floor plans or elevations. Can you please confirm whether a drinking fountain is required and provide location(s).

RESPONSE:

Keynote #29 (Hi-Lo Drinking Fountain) is shown on Bldg. C (Det.1/A2.02) and Bldg. F (Det.2/A2.03). Delete all callouts '(P) D.F.' as noted on Site Plan, Det. 1/A1.02

Answered By:

Date: 02-07-22



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 20, 2022 DATE DUE: _____ RFI NO. 41

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

Are there plumbing fixture specs available?

RESPONSE:

The following are acceptable plumbing fixture manufacturer's:
1. American Standards - for porcelain sinks, toilets and urinals
2. Chicago or Delta - for sink faucets
3. Sloan - for flush valve

Answered By: 

Date: 02-07-22



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 20, 2022 DATE DUE: _____ RFI NO. 42

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

The restroom roof slope differs at different areas. Please confirm the expectation is 1/4: 12 dual slope.

RESPONSE:

Restroom buildings roof slopes shall be 1/4:12 dual slope.

Answered By: 

Date: 02-07-22



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 20, 2022 DATE DUE: _____ RFI NO. 43

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

Note 5 on A2.01 and subsequent drawings calls for base and upper cabinets:

- a. The end of this note states "All file drawers use accommodate a standard pendaflex hanging file system....". None of the cabinets shown on the interior elevations on A4.01 show cabinets with drawers to support a hanging file system. Confirm whether this was an error and/or provide WI# associated with this cabinet as well as its location(s).
- b. For the typical flex classroom casework elevations, many of the cabinets appear to be WI222, however, the info is not provided. Please confirm.
- c. For the typical flex classroom casework elevations, provide WI# for the 2 tall cabinets.
- d. Confirm if WI cert is required.
- e. Confirm that there will only be 1 upper cabinet as shown on interior elevations, per A4.01.

RESPONSE:

- A. Delete the statement ' All file drawers must accommodate a standard pendaflex hanging file system'.
- B. See revised interior Elevation-A, Det. 2/A4.01 & Elevation B, Det. 1/A4.01 (Bid Clarification no.1_02-07-2022)
- C. See revised interior Elevation-A, Det. 2/A4.01 (Bid Clarification No.1_02-07-2022)
- D. Yes, WI cert will be required
- E. Yes, there is only (1) upper cabinet as shown on Elevation B/Det. 1/A4.01 (Bid Clarification No.1_02-07-2022)

Answered By: _____

Date: 02-07-22



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 28, 2022 DATE DUE: _____ RFI NO. 44

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

Drawing A4.01, Elevation-C shows a door with a view lite, however, the exterior elevations do not show doors with view lites, nor does there appear to be any call outs for it. Please confirm whether exterior doors are to have view lites.

RESPONSE:

Omit view lites as shown on interior elevations Det. 1 & 2/A4.01 (Bid Clarification No.1_02-07-2022)

Answered By: 

Date: 02-07-22



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 28, 2022 DATE DUE: _____ RFI NO. 45

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

Confirm that keynote 24 on drawing A2.01, "sloped" ceiling refers to vaulted ceiling.

RESPONSE:

Yes, sloped refers to PC approved vaulted ceiling.

Answered By:  Date: 02-07-22



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 28, 2022 DATE DUE: _____ RFI NO. 46

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific)

DATE REQUIRED: _____

Confirm whether restroom tile size is to be 4.5x4.5 or 4x4.

RESPONSE:

At 'Interior Elevation Legend', Sht. A4.02, revised ceramic wall tile size to 4 1/4" x 4 1/4". (Bid Clarification No.1_02-07-2022)

Answered By:

Date:

02-07-22



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 28, 2022 DATE DUE: _____ RFI NO. 47

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

On drawing A8.01, the interior finish schedule shows the flooring base for all classrooms (except the flex) as B2, which is ceramic tile cove. Please confirm whether this is correct or if this should be B1-4" rubber base. Also confirm if base is to be the same for the flex and standard classrooms.

RESPONSE:

Replace base interior finish for all typical classrooms to 'B1'. Flex classrooms and typical classrooms shall have the same rubber base finish per 'District Standard Interior Finish Matrix Schedule'. See revised Sht. A8.01 (Bid Clarification No.1_02-07-2022)

Answered By: 

Date: 02-07-22



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 28, 2022 DATE DUE: _____ RFI NO. 48

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

Drawing A4.02, general note B, calls for hand dryers. However, none are shown on the elevations. Please confirm if hand dryers are needed, and if so, at which location(s).

RESPONSE:

See revised Det. 1/A4.02 and interior elevation keynote no. 20 for accessible recessed hand dryer. (Bid Clarification No.1_02-07-2022)

Answered By: 

Date: 02-07-22



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 28, 2022 DATE DUE: _____ RFI NO. 49

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

Drawing A2.01, keynote D states "provide min. 2:12 pitch roof with standing seam metal roof and 20psf snow load....". Please confirm the requirement is for a 20psf roof live load and not a snow load.

RESPONSE:

The 20 PSF is for the snow load factor and is different from the roof live load. Kern County who is the local building official for this project does not require a snow load factor per Kern County Municipal code 17.06.140. Modular company shall be responsible for all DSA requirements which may include a specified snow load factor during plan check process.

Answered By: 

Date: 02-07-22



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 28, 2022 DATE DUE: _____ RFI NO. 50

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

Drawing A2.01, keynote G calls for type K copper piping. Type L is what is typically used and more cost effective than type K. Please confirm if type L will be acceptable.

RESPONSE:

Under 'Scope of Work Keynotes - note G', replace copper pipe to 'Type-L'. Sht. A2.01 thru A2.08 (Bid Clarification No.1_02-07-2022)

Answered By:

Date: 02-07-22



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 28, 2022 DATE DUE: _____ RFI NO. 51

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

Drawing A2.01, keynote 10 calls for "Wall Hung HVAC Unit". Please confirm whether these are to be all electric or gas/electric units.

RESPONSE:

Provide cost for (2) types of 'Wall Hung HVAC Units' so District can decide which unit type to choose from.

1. Gas/Electric unit
2. Electric unit (4 ton heat pump with 5KW strip heat for second stage)

Answered By:

Date: 02-07-22



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 28, 2022 DATE DUE: _____ RFI NO. 52

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

The door hardware spec, page 69, as well as in other areas, calls for electronic locks. Please confirm whether these buildings are incorporating an electronic lock system.

RESPONSE:

Door no. D41 (Staff restroom) is the only door that requires the electronic lock per hardware set no.5. This is a District requirement and is battery operated only.

Answered By: 

Date: 02-07-22



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 28, 2022 DATE DUE: _____ RFI NO. 53

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

The door schedule on drawing A8.01, identifies several restroom doors as having Hardware Group No. 3, which calls for panic hardware. Please confirm if this is indeed the Hardware Group to follow for the restroom doors identified as such on the door schedule.

RESPONSE:

Hardware set no.3 that includes panic hardware is correct.

Answered By: 

Date: 02-07-22



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: January 28, 2022 DATE DUE: _____ RFI NO. 54

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

Confirm whether the exterior window frames should be bronze or clear anodized.

RESPONSE:

Exterior window color shall be bronze anodized.

Answered By: 

Date: 02-07-22



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: February 3, 2022 DATE DUE: _____ RFI NO. 55

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

Drawing A2.07 reflected ceiling plan shows 12 lights per classroom. Typical PC lighting includes 8 light fixtures. Confirm if we are to install 12 or 8.

RESPONSE:

Change number of light fixtures to 8 per classroom.

Answered By: 

Date: 02-07-22



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: February 3, 2022 DATE DUE: _____ RFI NO. 56

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

Confirm low voltage scope of work for modular manufacturer is to provide conduits in wall only stubbed to above ceiling. All low voltage work will be by site GC.

RESPONSE:

Low voltage work as shown on audio-visual plan, security camera, horn plan and scope of work keynotes as on sheets AV1.01, (Bid Clarification No.1_02-07-2022) shall be under the modular contractor's scope of work. Revised 'low voltage scope of work keynotes' shall also apply to Sheets AV1.02, LV1.03 & LV1.04.

Answered By: 

Date: 02-07-22



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: February 3, 2022 DATE DUE: _____ RFI NO. 57

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

Confirm whether the metal floor box is to be provided and installed by the modular manufacturer.

RESPONSE:

Metal floor box per keynote-G, under 'Low voltage scope of work keynotes' shall be provided by modular contractor.

Answered By: 

Date: 02-07-22



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: February 3, 2022 DATE DUE: _____ RFI NO. 58

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

Confirm that modular manufacturer is to install District provided backboxes only for ceiling speakers. Ceiling speakers will be provided and installed by others.

RESPONSE:

Modular company shall provide backboxes only for ceiling speakers.

Answered By: 

Date: 02-07-22



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: February 3, 2022 DATE DUE: _____ RFI NO. 59

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

On drawing LV1.04, keynote A, please confirm that the HDMI, USB and power outlet plate will be provided by the site GC.

RESPONSE:

Modular company shall provide power outlet plate, site GC shall provide HDMI & USB.

Answered By: 

Date: 02-07-22



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: February 3, 2022 DATE DUE: _____ RFI NO. 60

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

Confirm water chlorination testing/certification is not in modular manufacturer's scope of work and will be by site GC.

RESPONSE:

Water chlorination testing and certification shall be under site general contractor scope of work.

Answered By: 

Date: 02-07-22



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: February 3, 2022 DATE DUE: _____ RFI NO. 61

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific)

DATE REQUIRED: _____

Provide a spec for the hose bibb.

RESPONSE:

See attached cut sheet for non-freeze hose recessed box.

Answered By: 

Date: 02-07-22



REQUEST FOR INFORMATION (PREBID)

PROJECT NAME: Tropico Middle School - Expansion F&M Job No. 2940

INFORMATION REQUESTED BY (Company Name): AMS

DATE SENT: February 3, 2022 DATE DUE: _____ RFI NO. 62

CONTACT: _____ PHONE: _____

TITLE OF ISSUE: _____

DRAWING REF.: _____ SPEC. REF.: _____

DESCRIPTION OF PROBLEM / INFORMATION NEEDED: (Be clear and specific) DATE REQUIRED: _____

Provide the model to use for the ceiling heater since the spec sheet provided has different ones with different voltage requirements, etc.

RESPONSE:

Model no. CDF558 with accessory catalog no. CDFRE.

Answered By: 

Date: 02-07-22



TS250 Internet-Enabled Thermostat with Integrated CO² Sensor

The Pelican Internet-Enabled Thermostat with an integrated CO² sensor provides commercial customers with virtual climate and air quality management. The TS250 delivers accurate temperature management, air quality (CO²) management, leading edge energy efficiency, built-in safeties and alarming, and fine tuned comfort. Coupled with the Pelican Web App, the TS250 tracks space temperature, CO² levels, and HVAC operational data in real-time and historically. All information is displayed in real-time online and is viewable on any Internet-connected device.



+ MESH WIRELESS NETWORK

The TS250 communicates wirelessly with a GW400 to reach the Internet. Each TS250 has built-in state-of-the-art wireless mesh network communication and repeating.

+ FAULT ALARMING

Built-in system and space analytics with automated email or text message alerts when a fault is detected.

+ WEB APP

Virtual and central management of TS250 available on all smart phones, tablets, and PCs. Directly manage thermostat temperature and CO² levels through a web browser. Designed for intuitive control over multiple thermostats.

+ HISTORICAL TREND DATA

Online viewable historical data of space temperature, setpoints, HVAC demand, CO² level, and fan demand.

+ INSTALLATION

Industry standard HVAC terminals utilize existing thermostat wire. Included with TS250 is Pelican's innovative limited wiring relay pack (WM500) used in applications where there are only three (3) wires to the HVAC unit.

+ SCHEDULING

Through the Pelican Web App you can schedule the TS250 thermostat for daily, 5-2, or 7-day schedules. Thermostats can also be scheduled as groups, for simple multi-thermostat management.

Designed and assembled in the USA
5-Year Limited Warranty



Specifications

POWER

Hardwire	24VAC, 60Hz; 50 mA
Voltage Range	23 - 30VAC
Relay Current	1.0A running

COMPATIBILITY

24VAC gas, electric, or oil heating systems.
 Conventional and Heat Pump

WIRING

Conventional	R, RC, W, W2, Y, Y2, G, C
Heat Pump	R, RC, O/B, AUX, Y, Y2, G, C

SYSTEM PROTECTION

Four-Minute Compressor Short-Cycle Protection
 Temporary Schedule Override
 Auxiliary/Emergency Heat Efficiency Algorithm
 Keypad Lockout
 Trend Data Analytics and Fault Monitoring

THERMOSTAT RANGE

Operating Range	-20°F to 122°F
Differential Temperature	±0.5°F
Operating Humidity (%RH)	5 to 90% RH; non-condensing
Integrated Room CO ² Sensor	0 - 2000 PPM; +/- 50ppm accuracy
Storage Temperature	-20°F to 160°F

SIZE

Inch	H 3.5 x W 5.97 x D 1.5
mm	H 89 x W 150 x D 38
Horizontal Mounting	

Pelican Wireless Systems | 2655 Collier Canyon Road, Livermore CA 94551
 (888) 512-0490 | sales@pelicanwireless.com

Pelican Wireless Extended Range Gateways - GW400 Series

Plug-and-Play Pelican Internet Connection

Pelican Gateways are simple bridges, which automatically connect all your on-site Pelican devices to your Pelican Web-app. Exceeding commercial security standards, all communication is secure, encrypted, and reliable.

Pelican has two gateway options depending on your networking requirements. The GW400 connects to an existing business Ethernet network using a standard CAT 5 connection. The GW400-LTE is a cellular gateway, which runs on the Pelican AnyWhere 4G/LTE cellular network.

Both gateways can provide Internet connectivity for up to 2000 Pelican devices.



- + Ideal for commercial customers
- + Easy to install and set up
- + Automatic Internet connection
- + Supports up to 2000 Pelican wireless devices
- + Uses Advanced Encryption Standards (AES) from the cloud to end device

ETHERNET CONNECTIVITY

The GW400 gateway is a plug-and-play wired Ethernet device. It plugs into an existing Ethernet switch or router and is designed to the highest enterprise security standards. It uses an outbound only connection, with encrypted end-to-end communication, and the option for DHCP (default) or Static IP addressing. Setup is fast and easy for any installation team.

CELLULAR CONNECTIVITY

The GW400-LTE gateway is an integrated cellular-enabled device, which connects your Pelican devices to the Internet. It can be installed anywhere there is cellular connectivity available, eliminating the need for a direct hardwired Ethernet source. It is designed to meet enterprise level security standards and will only communicate with Pelican products.

GW400 / GW400-LTE Gateways

Key Features and Specifications

FEATURES

INTERNET ACCESS AND DEVICE CONNECTIVITY

- + GW400 uses a standard Ethernet LAN/WAN port for Internet connectivity
- + GW400-LTE includes an integrated 4G/LTE modem for cellular Internet connectivity
- + Gateways support up to 2000 Pelican wireless device connections
- + 2.4 GHz, Wireless 802.15.4
- + Complies with Class B Part 15 of FCC rules
- + Pelican's wireless network co-exists with other wireless network standards, including WiFi
- + Self-creating and self-healing wireless mesh network

SECURITY

- + Advanced Encryption Standards (AES) from the cloud direct to end Pelican device (does not de-encrypt and re-encrypt)
- + GW400 uses outbound established connections, no inbound firewall rules required
- + GW400 defaults to DHCP or can be configured to a Static IP address
- + GW400-LTE communicates on the Pelican AnyWhere cellular network*
- + Gateways come factory locked to only allow for communication with other Pelican hardware
- + Does not interact with customer's internal network
- + Does not use WiFi (802.11) communication and remains separate from the business's enterprise WiFi network

*The Pelican AnyWhere Cellular Network requires you to agree to Pelican's cellular Terms of Service and any associated costs before service can be provided. This cellular service is provided by Pelican Wireless Systems and does not require you to sign any third-party cellular provider agreements.

Specifications

POWER

Hardwire 5 VDC; 200 mA (GW400)
Hardware 5 VDC; 2.0 A (GW400-LTE)

WIRELESS

2.4 GHz, IEEE 802.15.4
Complies with Class B Part 15 of FCC rules

TEMPERATURE

Operating Range -4°F to 122°F
Storage Range -20°F to 160°F

RELATIVE HUMIDITY (non-condensing)

5% to 90% Operating and Storage

CERTIFICATIONS

FCC (GW400 and GW400-LTE)
PTCRB (GW400-LTE)

SIZE

4.5-in x 3.5-in x 1.25-in (114 mm x 89 mm x 32 mm)
Antenna H 7.25-in (184 mm)

MOUNTS

Vertically on flat non-metallic surface

What's in the Box

GW400

Ethernet-enabled Gateway
120 VAC / 5 VAC Power Adapter
10-in CAT5 Ethernet Cable

GW400-LTE

Cellular-enabled Gateway
120 VAC / 5 VAC Power Adapter

Requirements

GW400 requires an active Ethernet port that provides outbound Internet connections (e.g., DSL, Cable, T1)

Web Browser to create a Pelican Site
(minimum of Firefox, Chrome, Safari, Internet Explorer 10, Edge, or any browser that supports HTML5)





Hose & Supply Boxes 8160 Series

Non-Freeze Integral Vacuum Breaker Dual Check Hydrant Recessed Hose Box (Single Temperature)



8160

Fixture May Show Some Available Options

Please visit www.acorneng.com for most current specifications.

Non-Freeze Integral Vacuum Breaker Dual Check Hydrant Recessed Hose Box (Single Temperature)

Non-Freeze Integral Vacuum Breaker Dual Check Hydrant Recessed Hose Boxes are designed for attractive service in both interior and exterior walls providing a concealed hose connection. Valve intended to provide positive freeze resistance with the valve mounted within building's interior. The hydrant features a 1/4 turn ceramic full flow valve with ergonomic wheel handle. Recessed design prevents accidents which are common to surface mounted or protruding hose valves. Units are built to ASSE standards including ASSE 1052, 1053 and 1019-B.

Hose Box is seamless construction, fabricated from 18 gage, type 304 stainless steel and is furnished with four stainless steel clips for anchoring to the wall construction.

Door and Frame are fabricated of type 304 stainless steel and all exterior surfaces polished to a satin finish. Door includes a cam cylinder lock with two keys. Door can easily be removed after opening by releasing hinge pins with a screwdriver.

Valve and Stop Body is cast bronze with a stainless steel face. The body casting is gasketed where it joins the box and is securely anchored with stainless steel tamper-resistant screws. Valve inlet is threaded with both 3/4" NPT male and 1/2" NPT female to make up supply connections.

Screwdriver Stop in supply permits servicing the control valve without shutting down the water supply.

GUIDE SPECIFICATION

Box shall be fabricated from 18 gage, type 304 stainless steel. Frame and door shall be fabricated of type 304 stainless steel with exposed exterior surfaces polished to a satin finish. Door shall have a cam and cylinder lock with two keys. Valve shall be a dual check valve type that provides positive non-freeze protection where water is required and features an integral vacuum breaker, 1/4 turn ceramic full flow valve with ergonomic designed wheel handle and a screwdriver operated stop.

Note: Seepage of a small amount of water may occur from the Vacuum Breaker upon the initial opening and closing of this Hydrant. This is normal operation.



Hose & Supply Boxes 8160 Non-Freeze Integral Vacuum Breaker Dual Check Hydrant Recessed Hose Box (Single Temp.)

BASE MODEL NUMBER (Must Specify)

HOSE BOX WITH WALL FLANGE AND DOOR
 -8160 Dual Check Hydrant Recessed Hose Box

HOSE BOX WITH WALL FLANGE LESS DOOR
 -8161 Dual Check Hydrant Recessed Hose Box

WALL THICKNESS (Must Specify)

- 4"
- 6"
- 8"
- 12"

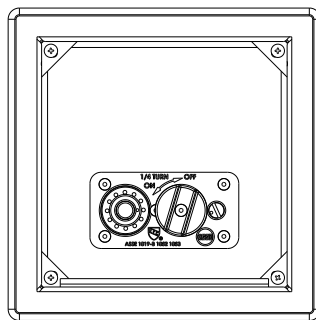
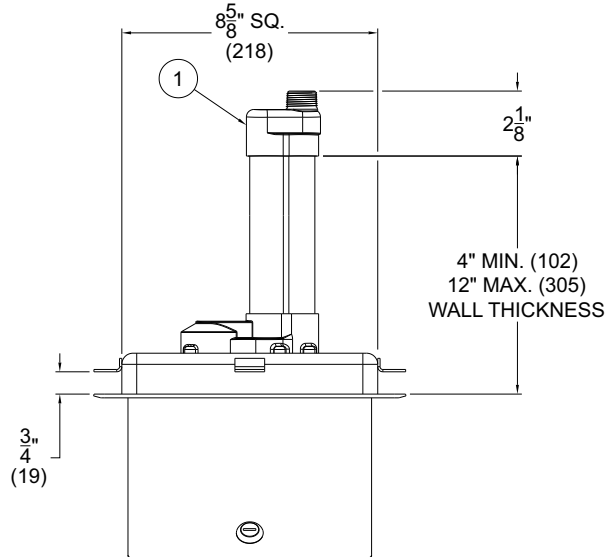
PRODUCT OPTIONS (Must Specify)

- * None Available

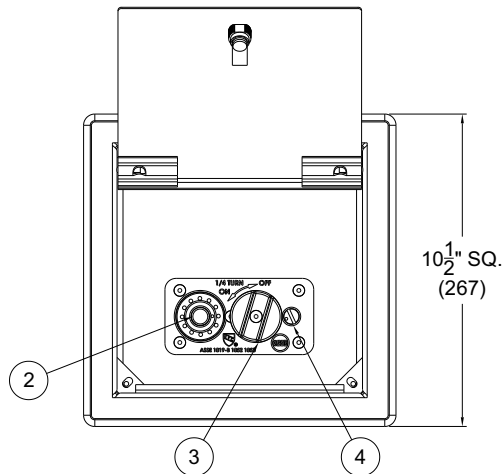
Please visit www.acorneng.com for most current specifications.

NOTES:

1. SUPPLY CONNECTION
2. HOSE CONNECTION
3. WHEEL HANDLE
4. VALVE SCREWDRIVER STOP



MODEL# 8161



MODEL# 8160

WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov

Important: Installation instructions and current rough-in are furnished with each fixture. Do not rough in without certified dimensions. Dimensions are subject to manufacturer's tolerance of plus or minus 1/4" and change without notice. Acorn assumes no responsibility for use of void or superseded data. © Copyright 2006 Acorn Engineering Company

<p>Selection Summary</p> <p>Model No. & Option _____</p> <p>Quantity _____</p>	<p>Approved for Manufacturing</p> <p>Company _____ Title _____</p> <p>Signature _____ Date _____</p>
---	---

GEOLOGIC HAZARDS REPORT

Tropico Middle School
3180 Mojave-Tropico Road
Rosamond, Kern County, California
PL-07513-01

Prepared For

SOUTHERN KERN UNIFIED SCHOOL DISTRICT

July 26, 2012

Prepared by

**Earth Systems
Southern California**
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Palmdale, California 93551

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July 26, 2012

PL-07513-01

Southern Kern Unified School District
P.O. Drawer CC
Rosamond, California 93560

Attention: Mr. Jeffrey Weinstein

Subject: **Geologic Hazards Report**
Tropico Middle School
3180 Mojave-Tropico Road
Rosamond, Kern County, California

Presented herewith is Earth Systems Southern California's Preliminary Geologic Hazards Report prepared, as authorized, for the existing school site referenced above. Earth Systems Southern California appreciates this opportunity to be of service. If you need clarification of the information contained in this report, or if we can be of additional service, please contact the undersigned.

Respectfully submitted,

**Earth Systems
Southern California**

A handwritten signature in blue ink, appearing to read 'Robert T. Ferguson', written over the printed name.

Robert T. Ferguson
Staff Geologist

Distribution: 6 – Southern Kern Unified School District

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**GEOLOGIC HAZARDS REPORT
TROPICO MIDDLE SCHOOL
3190 MOJAVE-TROPICO ROAD
ROSAMOND, KERN COUNTY, CALIFORNIA**

INTRODUCTION

This report presents the results of Earth Systems Southern California's (ESSC) evaluation of potential geologic hazards for the existing Tropico Middle School site located at the northeast corner of Mojave-Tropico Road and Rosamond Boulevard in the community of Rosamond, Kern County, California (see Figure 1). The purpose of this report is to provide a summary of potential geologic hazards that might affect the existing school facility.

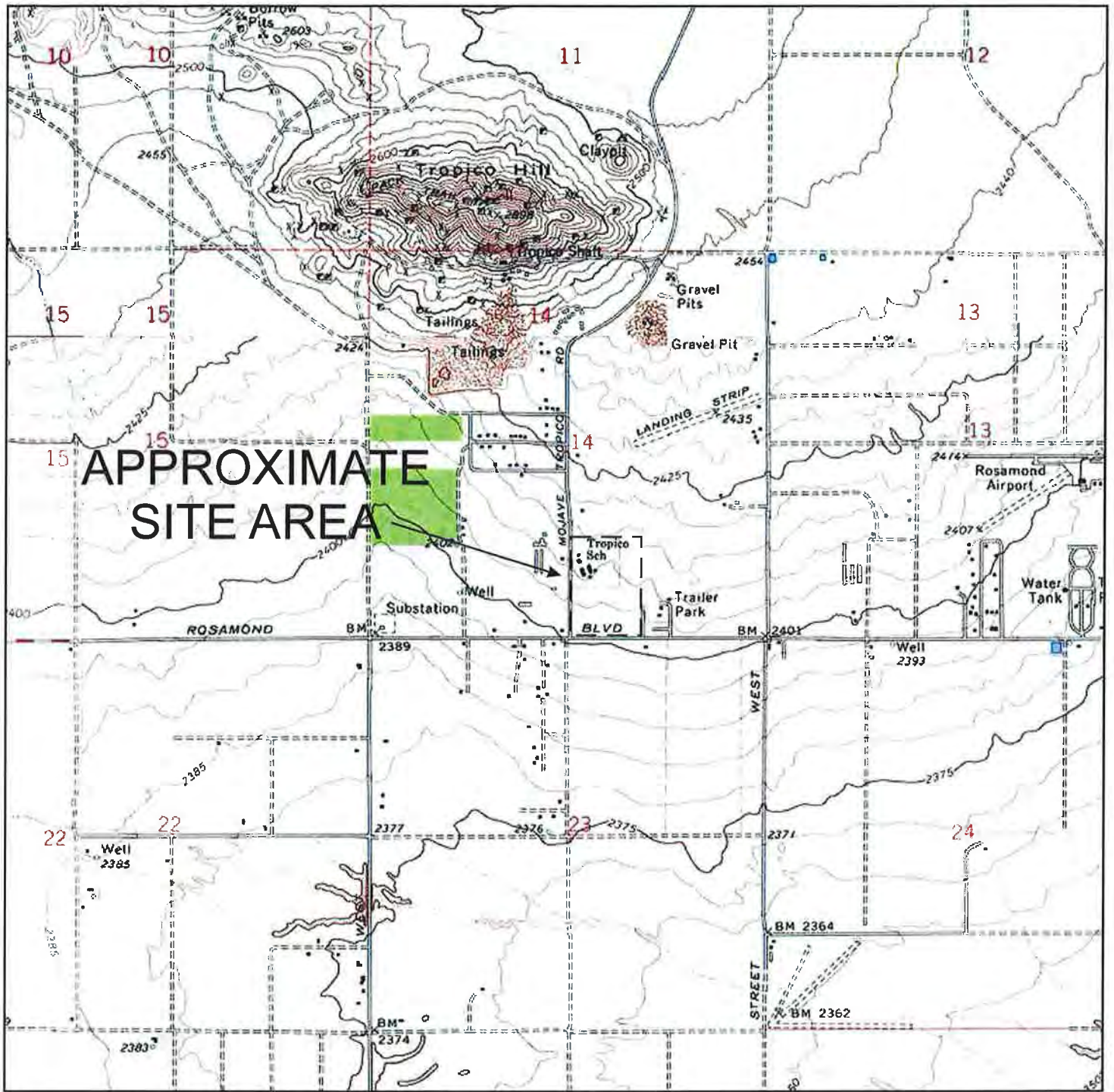
SCOPE OF SERVICES

This report is in response to your request for services authorized on June 11, 2012. The scope of services included a brief reconnaissance of the site, review of selected geological literature, a seismic hazards analysis, and a summarization of the data obtained in this written report. The conclusions and recommendations included in this report are based on Earth Systems Southern California's understanding of the existing school site and past professional experience with similar projects in the Antelope Valley.

SITE DESCRIPTION

The Tropico Middle School property consists of approximately 25 acres located at 3180 Mojave-Tropico Road in the community of Rosamond, Kern County, California (see Figure 1). The latitude of the site is approximately North 34.8665° and the longitude is approximately West 118.2279°. Access to the site is by Mojave-Tropico Road, a paved, improved road adjacent to the western property boundary.


Topographically, the site is nearly level with site drainage downward to the southeast. The mean elevation of the site is approximately 2,415 feet above mean sea level with approximately 10 feet of elevation change across the property. No significant evidence of erosion was noted on the property at the time of our reconnaissance. No "blue-line" drainages cross the site. Vegetation consists of grass playing fields and various landscaped trees and shrubs. School property consisting of undeveloped desert fields is located to the south and east of the existing campus. Existing improvements consist of an administration building, a multi-use room, and various permanent and modular classrooms. The above-cited descriptions are intended to be illustrative, and are specifically not intended for use as a legal description of the subject property.



BASE MAP: U.S.G.S. 7.5 MINUTE ROSAMOND QUADRANGLE, 1973

Figure 1



LOCATION MAP	
TROPICO MIDDLE SCHOOL 3180 MOJAVE-TROPICO ROAD ROSAMOND, KERN COUNTY, CALIFORNIA	
	Earth Systems Southern California
7-26-2012	PL-07513-01

REGIONAL GEOLOGY

The proposed school site is located within the Mojave Desert geomorphic province about 100 km north of Los Angeles (see Figure 2). The Mojave Desert geomorphic province is a triangular-shaped broad interior region of isolated mountain ranges separated by desert plains and basins. The western Mojave Desert is a triangular-shaped structural block bounded on the north by the Garlock fault and along the southwest by the San Andreas fault.

The Antelope Valley is a broad northeast-draining closed depositional basin that lies within the southwestern part of the Mojave Desert. Typical lithographic units within the western Mojave Desert consist of Pre-Tertiary crystalline rocks, Tertiary sedimentary and volcanic rocks, and Quaternary sediments and volcanic rock (see Figure 3). The pre-Tertiary crystalline bedrock is predominantly of plutonic origin with limited exposures of metamorphic rock.

The Tertiary sedimentary rocks within the Antelope Valley are largely terrestrial deposits and include sandstones, shales, conglomerates, and volcanics that were deposited within intermontane basins that are typically of limited areal extent. Up to 5,000 feet of Tertiary-age and younger alluvial sediments have been deposited within the basin that comprises the Antelope Valley.

Quaternary sediments vary in origin and composition from locally derived coarse-grained channel deposits and conglomerates from sources in the adjacent mountains and hills to fine-grained interbedded Pleistocene-age lacustrine and playa deposits. The school site is located in an area of relatively shallow alluvial deposits due to the proximity of Tropic Hill, located approximately 2,700 feet to the north.

LOCAL GEOLOGIC CONDITIONS

The Tropic Middle School campus is located in the western portion of Rosamond, south of the Tropic Hill and west of Rosamond Dry Lake. The site is located near the western limit of the Late Pleistocene Lake Thompson (Dibblee, 1963) in the alluvium filled Antelope Valley (see Figure 3). Surface soils in this area are generally described as Quaternary Alluvial Fan deposits consisting of poorly consolidated silts, sands, and minor clay that exhibit nearly horizontal bedding and dip gently to the southeast. Based on boring log data collected during previous site exploration (ESSC, 2009), this material is uniformly encountered across the site. Bedrock is projected to be several hundred feet below the ground surface.

Faults

No known active or potentially active faults are known to exist within the limits of the existing school site. The site is not located within a currently designated State of California Special Studies Zone for fault rupture hazard (Hart, 1999). The closest known active or potentially active fault to the site is the Rosamond-Willow Springs fault located along the southern margin of the Rosamond Hills, approximately 2,000 feet north of the site. The State of California

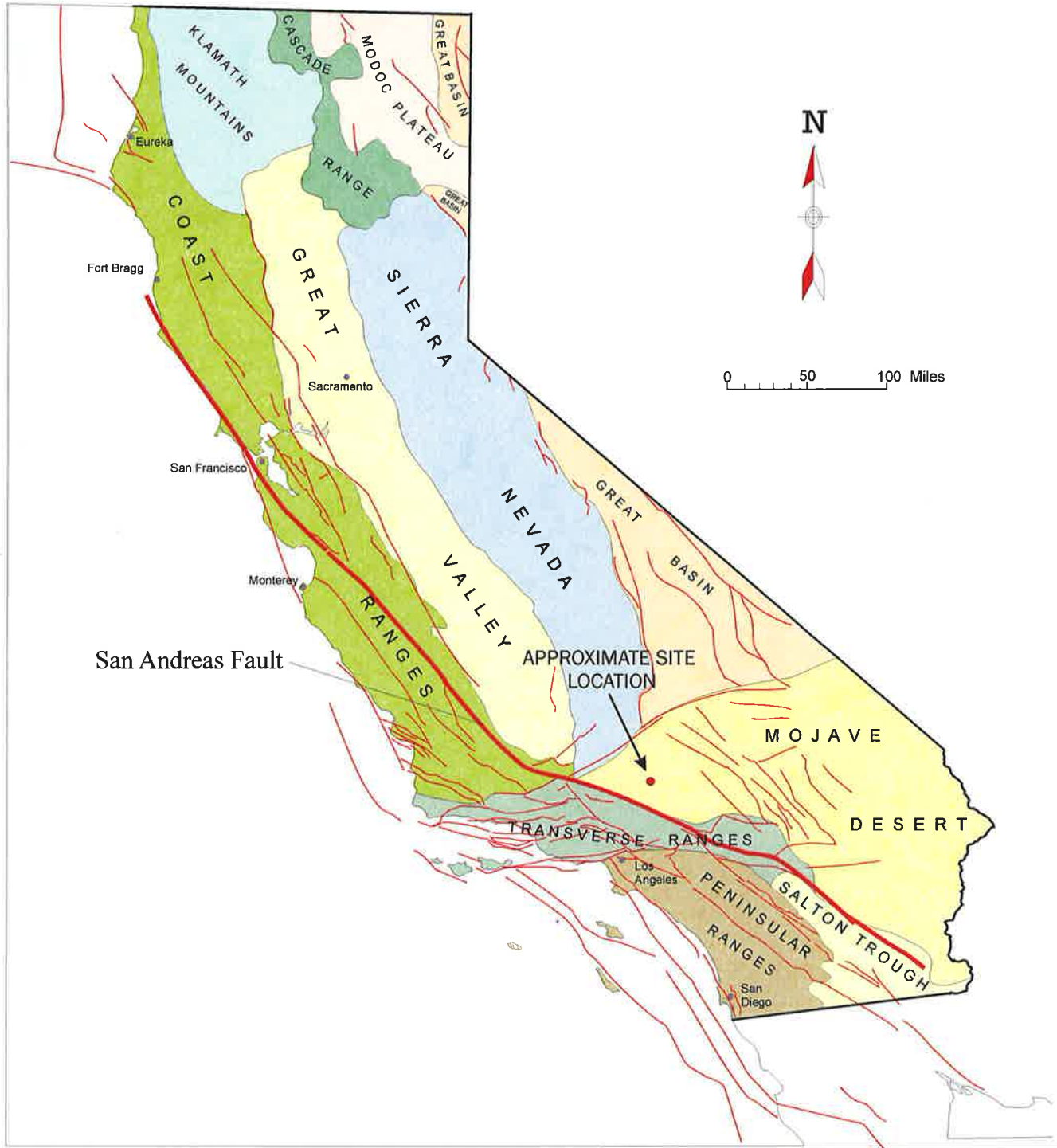


Figure 2

Map showing geomorphic provinces of California and major active and potentially active faults. Fault locations are based on Jennings (1994) and Blake (1995).

STATE OF CALIFORNIA GEOMORPHIC MAP

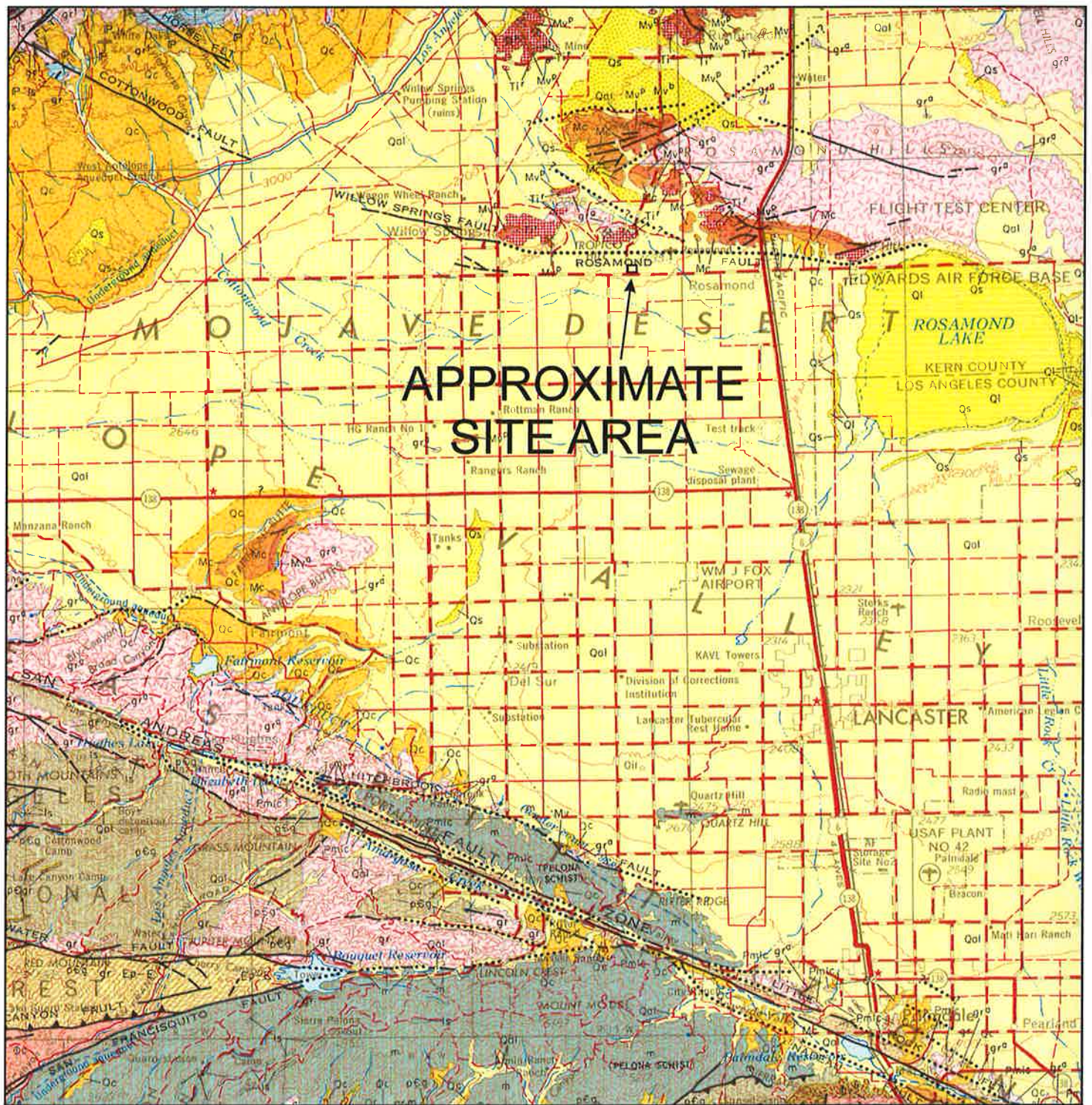
TROPICO MIDDLE SCHOOL
 3180 MOJAVE-TROPICO ROAD
 ROSAMOND, KERN COUNTY, CALIFORNIA



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7-26-2012

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BASE MAP: Smith, Arthur R., 1964, Geologic Map of California, Los Angeles Sheet, California Division of Mines and Geology.

Figure 3

- Qal Quaternary Alluvium
- Ql Quaternary Lake Deposits
- Qc Quaternary Colluvium
- mc Undivided Miocene Nonmarine Rocks
- Ep Paleocene Marine Rocks
- Ti Tertiary Intrusive Rocks
- gr Mesozoic Granite
- m Pre-Cretaceous Metamorphic Rocks
- pCg Pre-Cambrian Granitic Rocks



1 INCH = 4 MILES

REGIONAL GEOLOGIC MAP

TROPICO MIDDLE SCHOOL
 3180 MOJAVE-TROPICO ROAD
 ROSAMOND, KERN COUNTY, CALIFORNIA



Earth Systems
 Southern California

7-26-2012

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Table 1
Fault Parameters

Fault Section Name	Distance		Avg Dip	Avg Dip	Avg Rake	Trace Length	Fault Type	Mean Mag	Mean Return Interval	Slip Rate
	(miles)	(km)	(deg.)	(deg.)	(deg.)	(km)			(years)	(mm/yr)
Garlock (West)	15.0	24.2	90	149	0	98	A	7.6	493	6
San Andreas (Mojave S)	17.3	27.8	90	206	180	98	A	7.7	102	29
San Andreas (Mojave N)	19.7	31.7	90	199	180	37	A	7.8	106	27
Garlock (Central)	31.0	49.9	90	161	0	111	A	7.6	523	7
So Sierra Nevada	31.7	51.1	50	92	-90	112	B	7.5		0.1
San Gabriel	33.9	54.6	61	39	180	71	B	7.3		1
White Wolf	34.8	56.0	75	141	60	63	B	7.1		2
Lenwood-Lockhart-Old Woman Springs	35.1	56.5	90	43	180	145	B	7.5		0.9
Holser, alt 2	35.6	57.3	58	182	90	17	B'	6.7		
Holser, alt 1	36.0	57.9	58	187	90	20	B	6.7		0.4
Pine Mtn	36.1	58.1	45	5	na	62	B'	7.3		
Pleito	37.2	59.8	46	181	90	44	B	7.1		2
San Andreas (Big Bend)	37.7	60.8	90	198	180	50	A	7.8	108	34
San Gabriel (Extension)	38.0	61.2	61	6	180	62	B'	7.2		
White Wolf (Extension)	38.3	61.6	75	136	60	46	B'	6.9		
Santa Susana, alt 2	38.4	61.8	53	10	90	43	B'	6.8		
Northridge	38.8	62.4	35	201	90	33	B	6.8		1.5
Helendale-So Lockhart	39.4	63.4	90	51	180	114	B	7.4		0.6
Del`Valle	39.9	64.2	73	195	90	9	B'	6.3		
Sierra Madre (San Fernando)	40.3	64.9	45	9	90	18	B	6.6		2
Santa Susana, alt 1	40.4	65.0	55	9	90	27	B	6.8		5
Sierra Madre	41.0	66.0	53	19	90	57	B	7.2		2
San Cayetano	42.5	68.3	42	3	90	42	B	7.2		6
Oak Ridge (Onshore)	42.9	69.0	65	159	90	49	B	7.2		4
Santa Ynez (East)	43.0	69.3	70	172	0	68	B	7.2		2
Verdugo	43.2	69.5	55	31	90	29	B	6.8		0.5
Lake Isabella (Seismicity)	43.8	70.4	90	100	na	60	B'	7.1		
Big Pine (East)	44.2	71.1	73	338	na	23	B'	6.6		
Northridge Hills	45.7	73.5	31	19	90	25	B'	7.0		
Simi-Santa Rosa	47.1	75.8	60	346	30	39	B	6.8		1
Clamshell-Sawpit	47.9	77.1	50	334	90	16	B	6.6		0.5
Raymond	50.4	81.1	79	348	60	22	B	6.7		1.5
Gravel Hills-Harper Lk	51.4	82.6	90	41	180	65	B	7.0		0.7
Hollywood	51.6	83.0	70	346	30	17	B	6.6		1
Big Pine (Central)	52.0	83.6	76	167	na	23	B'	6.3		
Elysian Park (Upper)	52.2	84.0	50	15	90	20	B	6.6		1.3
Santa Monica, alt 2	52.4	84.3	50	338	30	28	B	6.7		1
North Salt Lake	53.7	86.4	54	343	na	3	B'	5.9		
San Andreas (San Bernardino N)	54.2	87.1	90	212	180	35	A	7.5	103	22
San Jacinto (San Bernardino)	54.6	87.9	90	225	180	45	A	7.4	205	6

Reference: USGS OFR 2007-1437 (CGS SP 203)

Based on Site Coordinates of 34.8665 Latitude, -118.2279 Longitude

Mean Magnitude for Type A Faults based on 0.1 weight for unsegmented section, 0.9 weight for segmented model (weighted by probability of each scenario with section listed as given on Table 3 of Appendix G in OFR 2007-1437). Mean magnitude is average of Ellworths-B and Hanks & Bakun moment area relationship.

considers this fault to be “potentially active”. The San Andreas fault is considered “active” by the State and is located approximately 17 miles southwest of the site (see Figure 4).

As previously mentioned, the existing school site lies within the Western Mojave structural block that is bounded by the San Andreas and Garlock faults. Within the northern Antelope Valley area, there are the Cottonwood-Willow Springs, Tylerhorse and the Sand Hills Anticline faults that exhibit evidence of either Holocene or Pleistocene rupture. In addition, there are abundant active or potentially active faults located in southern California that are capable of generating earthquakes that could affect the Rosamond area. These include the Sierra Nevada and White Wolf faults located to the north and northwest of the Antelope Valley, the abundant coastal region faults located to the southwest of the San Andreas fault, and several parallel northwest trending faults located east of the Antelope Valley in the Barstow area. The attached Table 1 lists faults from the State’s inventory of significant potentially active and active faults and presents the approximate distances from the school site.

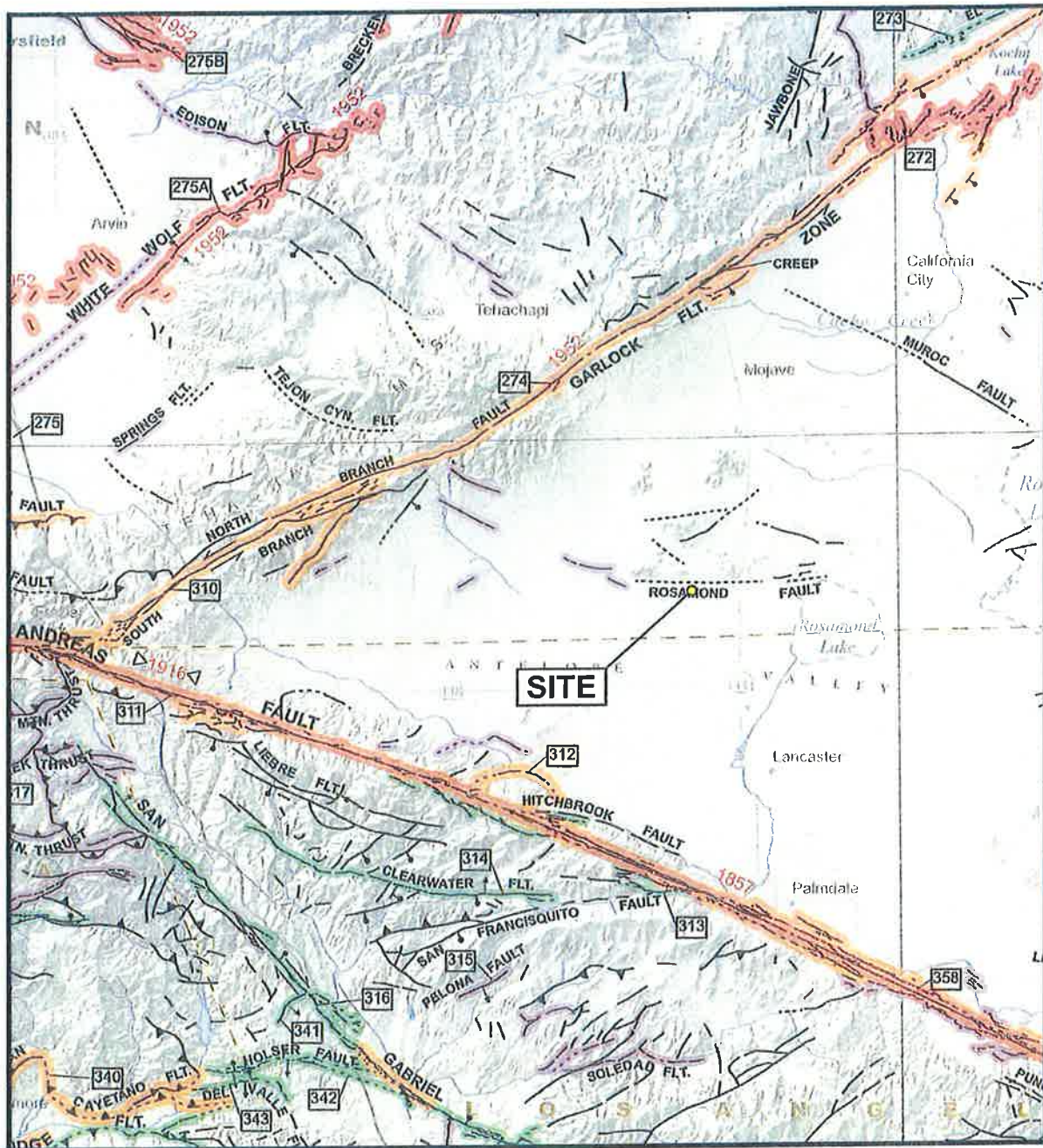
For the purposes of this report, an active fault is defined as a fault that has had displacement within the Holocene epoch or last 11,000 years. A potentially active fault is a fault that does not have evidence of movement within the last 11,000 years, but has moved within the last 1.6 million years.

Groundwater

Shallow groundwater was not encountered in 2008 during the drilling of exploratory borings for a geotechnical study at Tropico Middle School (ESSC, 2009). The maximum depth of exploration was approximately fifty feet below ground surface. Static groundwater levels are projected to be in excess of fifty feet below the ground surface.

Several geohydrologic subunits are recognized in the Antelope Valley and some of these contain well-defined aquifers that have been increasingly pumped in recent years (Duell, 1987). Perched and artesian water tables are also present especially where confined between interbedded lacustrine sediments. The most extensive lacustrine sediments are associated with the very large pluvial Glacial Lake Thompson mentioned above.

The site is located along the north margin of the Lancaster sub-unit of the Antelope Valley Groundwater Basin. The primary source of recharge in this basin is deep percolation of precipitation and runoff. Two primary groundwater zones exist in the Lancaster sub-unit: the principal and deep aquifers. The two aquifers are separated by a sequence of clay deposits that underlie the principal (uppermost) aquifer (Durbin, 1978). The principal aquifer produces most of the water pumped from wells in the valley, and is generally in hydraulic continuity with the ground surface (i.e., unconfined). The deep aquifer is generally confined, and is not exploited as greatly as the principal aquifer due to uneconomical pumping lifts. Groundwater in the Lancaster sub-basin moves from upland areas radially towards a point approximately 5 miles north of the City of Lancaster (Durbin, 1978).



From: Jennings and Bryant, 2010
 Scale: 1inch = 10 miles

Figure 4

REGIONAL FAULTS

Tropico Middle School
 Rosamond, California



Earth Systems
 Southern California

June, 2012

PL-07513-01

Geologic Time Scale			Years Before Present (Approx.)	Fault Symbol	Recency of Movement	DESCRIPTION	
						ON LAND	OFFSHORE
Quaternary	Late Quaternary	Historic				(Displacement during historic time (e.g., San Andreas fault (1906)). Includes areas of known fault creep.	
		Holocene	200			(Displacement during Holocene time)	Fault off coast to the west of the seafloor of Holocene age.
	Early Quaternary	Pleistocene	11,700			Faults showing evidence of displacement during late Quaternary time.	Fault cuts strata of Late Pleistocene age.
			700,000			Undivided Quaternary faults - most faults in this category show evidence of displacement during the last 1,600,000 years; possible exceptions are faults which displace rocks of undifferentiated Plio-Pleistocene age.	Fault cuts strata of Quaternary age.
Pre-Quaternary		1,600,000			Faults without recognized Quaternary displacement or showing evidence of no displacement during Quaternary time. Not necessarily inactive.	Fault cuts strata of Pliocene or older age.	
			4.5 billion (Age of Earth)				

* Quaternary now recognized as extending to 2.6 Ma (Walker and Gellssman, 2009). Quaternary faults in this map were established using the previous 1.6 Ma criterion.

From: Jennings and Bryant, 2010

KEY TO REGIONAL FAULTS

Tropico Middle School
Rosamond, California



Earth Systems
Southern California

June, 2012

PL-07513-01

Depth to groundwater has been recorded in one well in the vicinity the site. In a Kern County well approximately two miles east-northeast of the school site, depth to groundwater was 132 feet from the ground surface (Tom Hardy, Kern County Department of Environmental Health, personal communication.) Fluctuations in groundwater levels may occur due to variations in rainfall, regional climate, and in response to landscape irrigation.

GEOLOGIC HAZARDS

Geologic hazards that may affect the school property include seismic shaking and other earthquake-related hazards, flooding, and erosion.

Fault Rupture

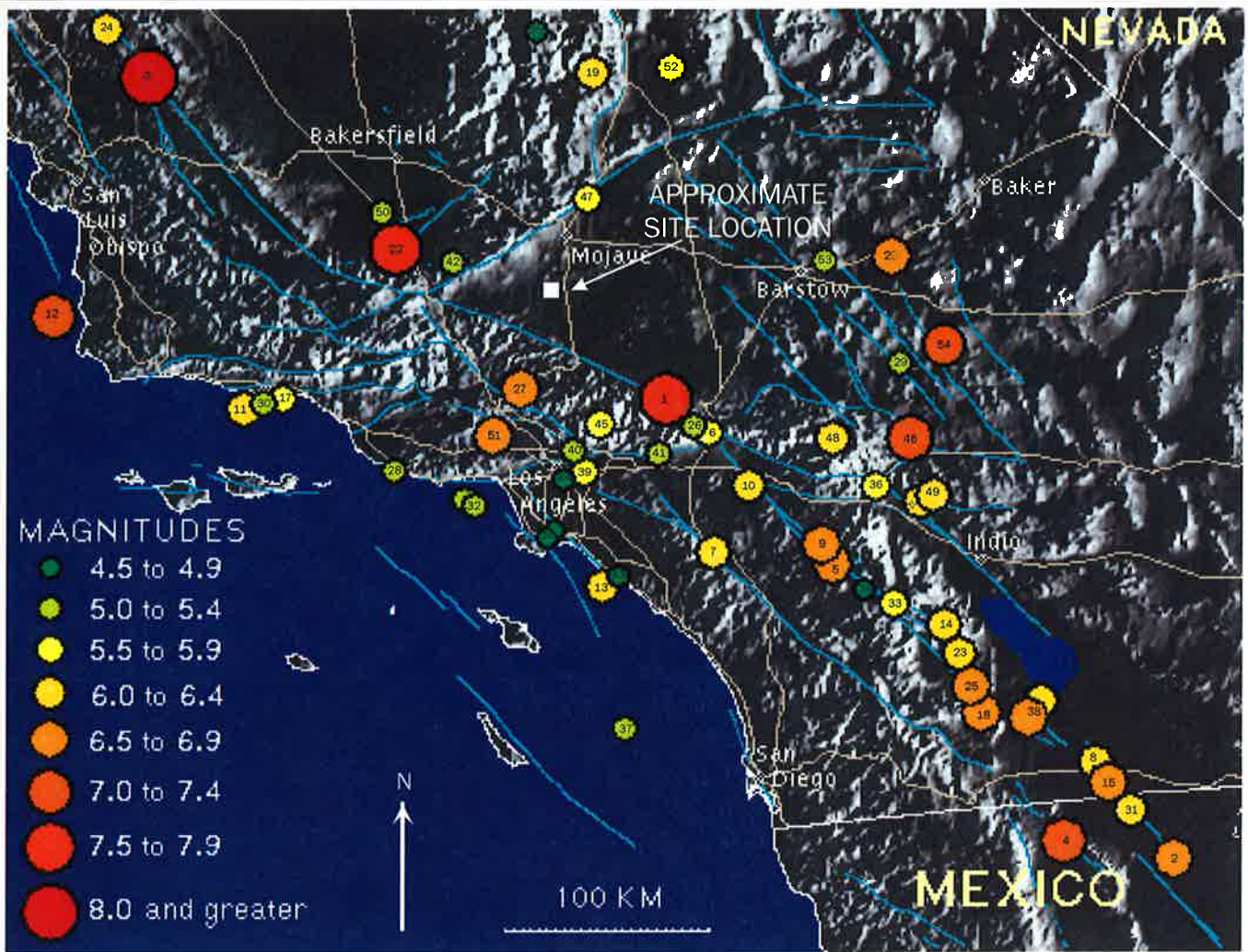
The site is not located within a currently delineated State of California Special Studies Zone for fault rupture potential (Hart, 1999). In addition, no known active faults have been identified on the site. Therefore, the potential for active fault rupture is considered low. While fault rupture would most likely occur along previously established fault traces, future fault rupture could occur at other locations.

Seismic Shaking

The site is located in Southern California, which is a seismically active area. Large numbers of earthquakes are recorded each year in Southern California. Figure 5 depicts epicenters of significant seismic events greater than magnitude 4.5 that have occurred in Southern California between 1812 and 1999. Magnitudes that are above 6 and post date accurate instrumental measurements (after 1933) are based on moment magnitudes (M_w). Magnitudes that are below 6, and earthquakes prior to 1933, are based on local magnitudes (M_L). Major historic earthquakes felt in the vicinity of Rosamond have usually originated from faults located outside the area. With the exception of the 1812 Wrightwood and 1857 Fort Tejon earthquakes, these include the 1872 Owens Valley, 1952 Kern County, 1971 San Fernando, 1987 Whittier Narrows, 1992 Landers, 1994 Northridge, and 1999 Hector Mine earthquakes.

Historically, the San Andreas fault is responsible for two of the three great earthquakes experienced in California. These are the 1857 Fort Tejon and 1906 San Francisco earthquakes. Each event is credited with approximately 200 miles of surface rupture and horizontal displacements as great as 30 feet. Ground shaking was very intense and damage to man-made structures wide spread. The 1857 rupture extended along the San Andreas fault from Parkfield to Cajon Pass and was felt throughout most of California. No significant earthquakes or fault movements have been attributed to this segment of the San Andreas fault since 1857. Prior to 1857, a strong earthquake that occurred in 1812 near Wrightwood, a small community in the eastern San Gabriel Mountains, is believed to have originated on the San Andreas fault.

On March 26, 1872, the greatest recorded earthquake in the western United States, excluding Alaska, occurred along the Owens Valley fault near Lone Pine. The earthquake is estimated to have had a Richter magnitude of +7.4 and significantly shook most of California.



HISTORIC EARTHQUAKES AND EPICENTERS

- | | | |
|--------------------------------|----------------------------------|----------------------------|
| 1. 1812, WRIGHTWOOD | 19. 1946, WALKER PASS | 37. 1986, OCEANSIDE |
| 2. 1852, VOLCANO LAKE | 20. 1947, MANIX | 38. 1987, ELMORE RANCH |
| 3. 1857, FORT TEJON | 21. 1948, DESERT HOT SPRINGS | 39. 1987, WHITTIER NARROWS |
| 4. 1892, LAGUNA SALADA | 22. 1952, KERN COUNTY | 40. 1988, PASADENA |
| 5. 1899, SAN JACINTO | 23. 1954, SAN JACINTO | 41. 1988, UPLAND |
| 6. 1899, CAJON PASS | 24. 1966, PARKFIELD | 42. 1988, TEJON RANCH |
| 7. 1910, ELSINORE | 25. 1968, BORREGO MOUNTAINS | 43. 1989, NEWPORT BEACH |
| 8. 1915, IMPERIAL VALLEY | 26. 1970, LYTLE CREEK | 44. 1989, MONTEBELLO |
| 9. 1918, SAN JACINTO | 27. 1971, SAN FERNANDO | 45. 1991, SIERRA MADRE |
| 10. 1923, NORTH SAN JACINTO | 28. 1973, POINT MAGU | 46. 1992, LANDERS |
| 11. 1925, SANTA BARBARA | 29. 1975, GALWAY LAKE | 47. 1992, MOJAVE |
| 12. 1927, LOMPOC | 30. 1978, SANTA BARBARA | 48. 1992, BIG BEAR |
| 13. 1933, LONG BEACH | 31. 1979, IMPERIAL VALLEY | 49. 1992, JOSHUA TREE |
| 14. 1937, SAN JACINTO | 32. 1979, MALIBU | 50. 1993, WHEELER RIDGE |
| 15. 1940, IMPERIAL VALLEY | 33. 1980, WHITE WASH | 51. 1994, NORTH RIDGE |
| 16. 1941, TORRANCE-GARDENA | 34. 1982, ANZA GAP | 52. 1995, RIDGECREST |
| 17. 1941, SANTA BARBARA | 35. 1983, DURRWOOD MEADOWS SWARM | 53. 1997, CALICO |
| 18. 1942, FISH CREEK MOUNTAINS | 36. 1986, NORTH PALM SPRINGS | 54. 1999, HECTOR MINE |

Figure 5

MAP SHOWING LOCATIONS OF SIGNIFICANT HISTORICAL EARTHQUAKES IN SOUTHERN CALIFORNIA FROM 1812 TO 2000

EARTHQUAKE EPICENTER MAP

TROPICO MIDDLE SCHOOL
3180 MOJAVE-TROPICO ROAD
ROSAMOND, KERN COUNTY, CALIFORNIA



Earth Systems
Southern California

SOURCE: SOUTHERN CALIFORNIA EARTHQUAKE CENTER, WEB PAGE, 2000

7-26-2012

PL-07513-01

In 1952, the White Wolf fault, located approximately 48 miles northwest of Rosamond, was responsible for the Kern County earthquake. The earthquake registered 7.5 on the Richter Scale and did significant damage to the Bakersfield and Tehachapi areas. Considerable damage occurred to unreinforced masonry structures and to railroad tunnels located nearby.

The 1971 San Fernando earthquake resulted in extensive damage to structures in parts of San Fernando and the Santa Clarita Valley. The epicenter of the earthquake was located near Soledad Junction approximately 34 miles southwest of Rosamond. Strong motion accelerographs recorded ground accelerations as high as 1.25 g at Pacoima Dam near the epicenter of the earthquake. Some structures designed in accordance with the Building Code in effect at the time were extensively damaged. Freeways, hospitals, schools, electrical facilities, water projects, and some residential structures sustained light to major damage as a result of severe ground shaking.

The 1987 Whittier Narrows earthquake shook the Antelope Valley for several seconds. The epicenter of this 5.9 magnitude earthquake, located near Monterey Park, was approximately 56 miles south of Rosamond. This earthquake occurred on an unsuspected seismogenic feature known as a buried, or blind, thrust fault that underlies the Elysian Park-Montebello Hills area.

The major 1992 Landers/Big Bear earthquakes also shook the Rosamond area. Damage in the western Antelope Valley was minimal. This earthquake was generated by a system of strike-slip faults in the mountain and desert areas over 90 miles east of Los Angeles. Structural damage and loss of life was limited primarily because of the remote area of occurrence.

The 1994 Northridge earthquake and related aftershocks significantly shook the Rosamond area for 10 to 20 seconds. Like the Whittier Narrows earthquake, this event was produced by a buried thrust fault that underlies portions of the San Fernando Valley and the Santa Susana Mountains.

The last major earthquake to affect the Rosamond area was the 1999 Hector Mine earthquake. The epicenter of this magnitude 7.1 earthquake was approximately 110 miles east of Rosamond. Approximately 26 miles of surface rupture occurred along the Lavic Lake fault and the central section of the Bullion fault.

Table 2 lists select recorded earthquakes felt in the Rosamond area and the distance to the earthquake epicenter and earthquake magnitude.

Table 2
Significant Historical Earthquakes

EARTHQUAKE	~ DISTANCE TO EPICENTER (Miles)	EARTHQUAKE MAGNITUDE*	DATE
Wrightwood	47	7.5	1812
Fort Tejon	94	8.0	1857
Owens Valley	127	8.3	1872
Kern County	46	7.5	1952
San Fernando	33	6.6	1971
Whittier Narrows	56	5.9	1987
Northridge	49	6.7	1994
Hector Mine	111	7.1	1999

* Moment Magnitude after 1933 or above 6, or Local Magnitude prior to 1933 or below 6 (S.C.E.C.)

For school projects, the 2010 California Building Code (CBC) specifies that peak ground acceleration for design purposes can be determined from a site-specific study taking into account soil amplification effects. The United States Geological Survey (USGS, 2009) has undertaken probabilistic earthquake analyses that cover the continental United States. A reasonable site-specific spectral response curve may be developed from the USGS interactive deaggregation web page, which adjusts for site-specific ground factors. The interactive webpage appears to be a precise calculation based on site coordinates. The program incorporates the 2008 USGS/CGS working group consensus methodologies, and the output for base ground motion is a smooth curve based on seven spectral ordinates ranging from 0 to 2 seconds. The USGS interactive deaggregation spectral values are generally within about 5% of the precise site-specific values obtained from other programs such as OpenSHA or EZ-FRISK for the same model and attenuation relationships.

The NGA (Next Generation Attenuation) relationships for spectral response have been used in the analyses that follow. A principal advantage in the NGA relationships is that there estimated site-specific soil velocity (V_{s30}) is used directly for site specific analysis rather than the NEHRP site corrections. The analysis also includes amplification factors (Idriss, 1993) to model the maximum rotated component of the ground motion.

For school projects, the seismic design values are referenced to the Maximum Considered Earthquake (MCE) and, by definition, the MCE has a 2% probability of occurrence in a 50 year period. This equates to a return rate of 2,475 years. Spectral acceleration parameters that are applicable to seismic design are presented in Appendix A. It should be noted that the school project carries a seismic importance factor I of 1.25 and that factor has been incorporated into the "2010 California Building Code" response spectrum. The subject site is within Seismic Design Category D. The site class of on-site soils is Site Class D. The velocity (V_{s30}) was assumed to be 270 meters per second when adjusting for site class.

The Short Period Spectral Response (S_S) for the Maximum Considered Earthquake (MCE) was found to be 1.134 g, and the 1-Second Spectral Response (S_1) was found to be 0.565 g. Site Coefficients F_a and F_v were found to be 1.05 and 1.50, respectively. Spectral Response Parameter S_{MS} was found to be 1.187 g, and S_{M1} was found to be 0.848 g. Based on the mapped values, the Short Period Spectral Response (S_{DS}) was found to be 0.791 g, and the 1 Second Spectral Response (S_{D1}) was found to be 0.565 g. The calculated site-specific Short Period Spectral Response (S_{DS}) was found to be 1.318 g, and the 1 Second Spectral Response (S_{D1}) was found to be 0.900 g. (The more conservative values among the mapped values and site-specific values should be used for design purposes.)

The “Seismic Hazard Deaggregation” plate in Appendix A shows the site specific fault magnitude and distance to site parameters from the USGS probabilistic analysis of seismic shaking. The modal magnitude (M_w) of the MCE is 7.83, and the modal distance from the design fault (Southern San Andreas fault) is 27 km. The peak ground acceleration is shown to be 0.57 g. The following list shows the faults having the highest percentage of contribution in the deaggregation analysis, their radius from the site, and their individual earthquake magnitudes at the MCE level.

```
Principal sources (faults, subduction, random seismicity having > 3% contribution)
Source Category:           % contr.  R(km)  M  epsilon0 (mean values).
California A-faults       72.08    27.8   7.74  1.48
CA Compr. crustal gridded 25.97    10.0   5.94  1.29
Individual fault hazard details if its contribution to mean hazard > 2%:
Fault ID                   % contr.  Rcd(km)  M  epsilon0  Site-to-src azimuth(d)
S.S.Andr.;CH+CC+BB+NM+SM aPriori  2.29    27.6   7.88  1.41  -155.8
SSAnd;PK+CH+CC+BB+NM+SM aPriori  9.32    27.6   7.89  1.41  -155.8
SSA;PK+CH+CC+BB+NM+SM+NSB aPriori  2.48    27.6   7.94  1.38  -155.8
Garlock;GC+GW MoBal       2.36    24.2   7.63  1.44  -33.8
Garlock;GE+GC+GW MoBal    2.66    24.2   7.72  1.39  -33.8
S. San Andreas;SM+NSB MoBal  2.29    27.6   7.43  1.62  -155.8
S. San Andreas;PK+CH+CC+BB+NM Mo  3.84    31.7   7.72  1.66  -126.3
S. San Andreas;PK+CH+CC+BB+NM+SM  2.93    27.6   7.88  1.41  -155.8
S. S.Andr.;PK+CH+CC+BB+NM+SM+NSB  2.35    27.6   7.94  1.38  -155.8
S. San Andreas Unsegmented A-flt  5.30    27.9   7.79  1.43  -155.9
#*****End of deaggregation corresponding to Mean Hazard w/all GMPEs *****#
```

Based on paleoseismic studies by Sieh and others (1989) relating to the recurrence intervals of major seismic events on the San Andreas fault, it is estimated that major earthquakes have occurred along the local segment of the San Andreas fault between intervals that range from approximately 50 to 300 years. The average recurrence interval is estimated to be 132 years. As the last major earthquake on the strike-slip San Andreas fault in this area occurred in 1857, the occurrence of an earthquake in this area within the estimated lifetime of any new construction is considered likely. Based upon studies by the Working Group on California Earthquake Probabilities (1995), the probability of a significant earthquake on the Mojave Segment of the San Andreas fault was estimated to be 26% between 1994 and 2024.

Secondary Seismic Hazards

Secondary seismic hazards related to ground shaking include liquefaction, ground deformation, areal subsidence, tsunamis, and seiches. Due to the inland location of the site, the potential for hazards from tsunamis is considered low. At the present time, no water storage tanks or reservoirs are located immediately upgradient of the site, therefore the potential for flooding due to failure of water storage tanks is considered low at this time.

Seismically induced settlement may occur within the on-site alluvial soils, but would probably occur on an areal basis. The potential for differential settlements of alluvial soils at the site will require evaluation during geotechnical studies for any proposed site improvements.

Liquefaction is the loss of soil strength due to sudden shock (usually due to earthquake shaking), causing the soil to become a fluid mass. In general, for the effects of liquefaction to be manifested at the surface, groundwater levels must be within 50 feet of the ground surface and the soils within the saturated zone must also be susceptible to liquefaction. The potential for liquefaction to occur at this site is considered low due to the relatively deep groundwater table (greater than 50 feet).

Non-tectonic ground deformation consists of cracking of the ground with little to no displacement. This type of deformation is not caused by fault rupture. Rather it is generally associated with differential shaking of two or more geologic units with differing engineering characteristics. Liquefaction may also cause ground deformation. As the site is relatively flat with consistent geologic material (alluvium), and has a low potential for liquefaction, the potential for ground deformation is also considered to be low.

Areal Subsidence and Fissuring

Land subsidence in the Antelope Valley, as a result of groundwater withdrawal, has been a historical problem that became apparent in the 1950's. A study (Ikehara and Phillips, 1994) determined that an approximately 210 square mile area, roughly bounded by Avenue A, Avenue K, 90th Street West and 120th Street East, has subsided about 2 to 7 feet between the 1950's and 1992. Areas of maximum subsidence are located near Avenue I and Sierra Highway and Avenue I and Division Street (see Figure 6). The school site is located outside the area of recorded subsidence. Related potential problems that have resulted from land subsidence within the Antelope Valley include the formation of sinkholes and ground fissures, (LaChapelle and Shlemon, 1992). These phenomena occur primarily in the northwestern portion of Lancaster in the vicinity of Avenue H and Highway 14 (Geolabs, 1991). The formation of fissures is generally considered to be related to tensional forces generated at the edge of subsiding areas, although other factors, such as geologic material type, aquifers, and underlying bedrock geometry are important (Buena Engineers, Inc., 1990). Running water is a primary factor for the development of fissuring, especially where soils are prone to erosion and piping.

Well-casing failures and unstable vertical-control survey stations have also occurred in the Antelope Valley (Ikehara and Phillips, 1994). No evidence of fissuring was noted at the school site at the time of the field reconnaissance. However, the accurate prediction of future areas of

fissuring is beyond the current state of the art for this profession, especially as changes in groundwater pumping and location of well fields could alter the location and magnitude of areal subsidence and associated tensional stresses.

Negative impacts from subsidence in the area of the project site are not known. City planners and civil engineers working in this area, however, should be aware of the potential problems with subsidence, such as damage to engineered structures and utility infrastructure.

Slope Stability

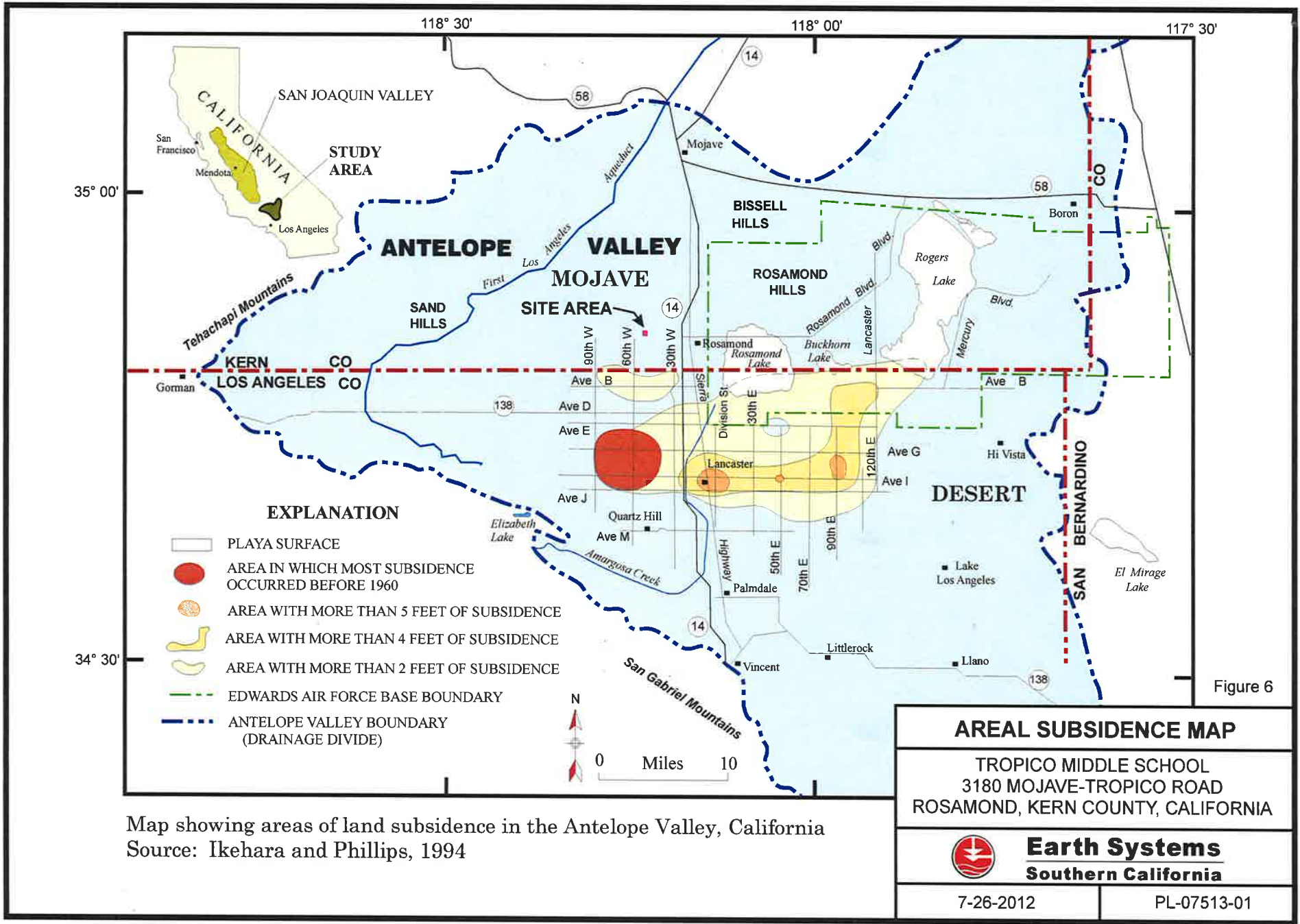
The site area and adjacent land is generally flat. Therefore, potential hazards from slope instability, landslides, or debris flows are considered low.

Settlement

Based upon ESSC's previous geotechnical experience in the area, the shallow surficial soils may be subject to a settlement potential due to low relative compaction or non-uniformity. Remedial grading of the upper site soils will most likely be required for any future building, pavement, and fill placement areas.

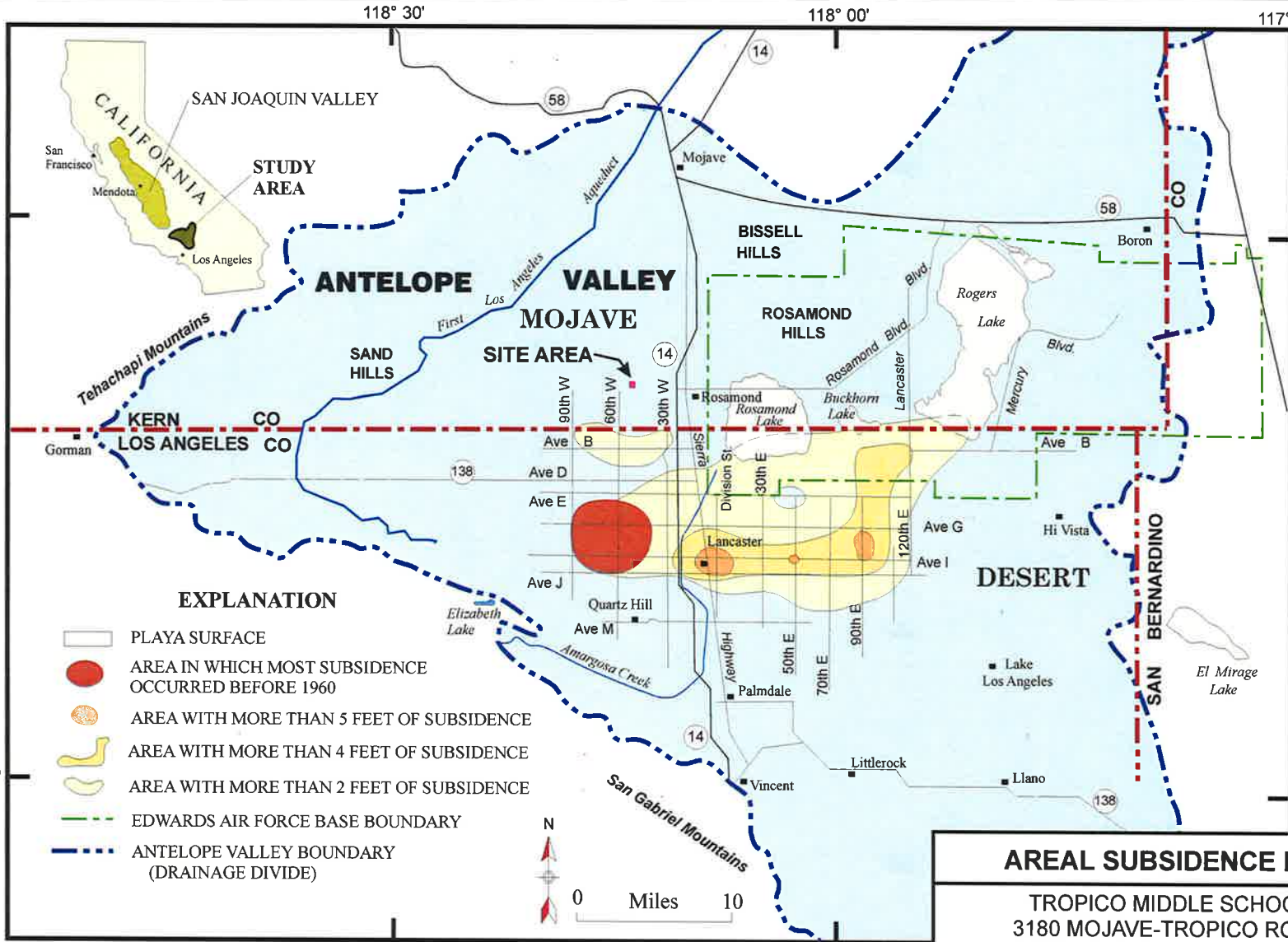
Flooding

The project site is in an area where some sheet flooding and erosion could occur. The very easterly margin of the site is within a currently designated Zone A flood hazard area, while the rest of the site is within a currently designated Zone B flood hazard area as delineated by the Federal Emergency Management Administration (FEMA, 1995). Appropriate project design, construction, and maintenance can minimize the site sheet flooding potential.



Map showing areas of land subsidence in the Antelope Valley, California
 Source: Ikehara and Phillips, 1994

Figure 6



DISCUSSIONS AND CONCLUSIONS

The following is a summary of ESSC's conclusions and professional opinions based on the data collected.

1. The site does not lie within a State of California Special Studies Zone for fault rupture hazard as currently delineated. No known active or potentially active faults exist within the project limits.
2. The primary geologic hazard relative to site development is severe ground shaking from earthquakes originating on the nearby faults. In ESSC's opinion, a major seismic event originating on the local segment of the San Andreas fault would be the most significant earthquake hazard to the site within the estimated design life of the school.
3. Due to the inland location of the site, hazards from tsunamis are considered low. As no water storage reservoirs are currently located upgradient of the site, the potential hazards from seismically induced seiches or reservoir failure at the site are considered low at this time.
4. Due to the relatively flat site, hazards from slope instability, landslides, or debris flows are considered low.
5. The site is not located within an area of documented subsidence due to groundwater withdrawal.
6. Alluvial soils on the site may be susceptible to erosion. Preventative measures to minimize seasonal flooding and erosion should be incorporated into site design, construction, and maintenance.
7. Based on ESSC's previous geotechnical experience in the area, the younger alluvial soils typically exhibit some settlement potential relating to low density and non-uniformity. Remedial grading of the upper site soils will likely be required to provide adequate support for future foundations, pavement, or engineered fill.

PRELIMINARY RECOMMENDATIONS

Based upon the data collected to date, the following recommendations are provided relative to the proposed school site and noted geological hazards.

1. At minimum, all proposed structures should be designed in accordance with building code standards for public school buildings within Seismic Zone 4 as described in the California Building Code. Construction should allow for all plumbing and utility services to be connected with flexible connections and/or provided with convenient shutoffs.
2. The site should be designed to accommodate seasonal sheet flooding and erosion.

- 3. Project specific geotechnical studies should be performed to provide recommendations for site grading, foundation design, pavement design, and other geotechnical considerations relative to site soil conditions.

LIMITATIONS AND UNIFORMITY OF CONDITIONS

The conclusions and preliminary recommendations submitted in this report are based, in part, upon the data obtained from the field reconnaissance, a review of select technical literature, and past experience. The nature and extent of variations from observed conditions may not become evident until construction. If variations then appear evident, it will be necessary to reevaluate the conclusions and recommendations of this report.

In the event of any change in the assumed nature of the proposed project, the conclusions and recommendations contained in this report shall not be considered valid unless the changes are reviewed and the conclusions of this report modified or verified in writing. This report is issued with the understanding that it is the responsibility of Southern Kern Unified School District, or their representatives, to insure that the information and recommendations contained in this report are called to the attention of architects and engineers for the project and incorporated into the plan, and that the necessary steps are taken to see that the contractor and subcontractors carry out such recommendations in the field.

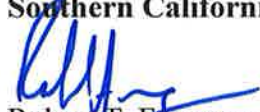
Earth Systems Southern California has prepared this report for the exclusive use of the Southern Kern Unified School District and its authorized agents. As the geologic consultant for this project, Earth Systems Southern California strived to prepare this report in accordance with generally accepted geologic practices in this community at this time. No warranty or guarantee is expressed or implied.


CLOSURE

Earth Systems Southern California trusts this report is sufficient at this time and meets your current needs. Earth Systems Southern California appreciates the opportunity to provide professional geological services for this project. If you have any questions regarding this information or require additional studies, please contact us.

Respectfully submitted,

**Earth Systems
Southern California**


Robert T. Ferguson
Staff Geologist


Paul E. Mooney
Project Engineering Geologist

BIBLIOGRAPHY

- Barrows, A.G., Kahle, J.E., and Beeby, D.J., 1976, Geology and Fault Activity of the Palmdale Segment of the San Andreas Fault Zone, Los Angeles County, California, California Division of Mines and Geology Open File Report 766 LA.
- Behr, Jeff, et al, 2000, Preliminary Report on the 16 October 1999 M7.1 Hector Mine, California, Earthquake, Seismological Society of America Seismological Research Letters, v. 71, no. 1, January/February 2000, p.11-23.
- Bloyd, R.M., Jr., 1967, Water resources of the Antelope Valley-east Kern County water agency area: U.S. Geological Survey Open-File Report, 73p.
- Boore, D.M., Joyner, W.B., and Fumal, T.E., 1997, Equations for estimating horizontal response spectra and peak acceleration from western North America earthquakes – a summary of recent work: Seismological Research Letters, v. 68, no. 1, p. 128-153.
- Buena Engineers, Inc., 1990, Geotechnical evaluation of earth fissures, Tentative Tract 46761, Lancaster, Los Angeles County, California.
- California Division of Mines and Geology, 1972, The Great Owens Valley Earthquake of 1872: California Geology, March, 1972, pp. 51-54.
- California Division of Mines and Geology, 1999, Seismic Shaking Hazard Maps of California, Map Sheet 48.
- Dibblee, T.W., Jr., 1975, Tectonics of the Western Mojave Desert Near the San Andreas Fault, *in* Crowell, J.C., ed., San Andreas Fault in Southern California: California Division of Mines and Geology Special Report 118, pp. 155-161.
- Dibblee, T.W., Jr., 1967, Areal Geology of the Western Mojave Desert, California; U.S. Geological Survey Professional Paper 522, 153 p., scale 1:125,000.
- Dibblee, T.W., Jr., 1963, Geology of the Willow Springs and Rosamond Quadrangles, California: U.S. Geological Survey Bulletin 1089-C, 253 p., scale 1:62,500.
- Duell, L.F.W., Jr., 1987, Geohydrology of the Antelope Valley Area, California, and Design for a Ground-Water-Quality Monitoring Network: U.S. Geological Survey Water-Resources Investigations Report 84-4081, 72 p., scale 1:125,000
- Durbin, T.J., 1978, Calibration of a Mathematical Model of the Antelope Valley Ground-water Basin, California: U.S. Geological Survey Water-Supply Paper 2046, 51 p., scale 1:125,000.
- Earth Systems Southern California, 2009, Geologic Hazards Report, Tropico Middle School, 3180 Mojave Tropico Road, Rosamond, Kern County, California

- Earth Systems Southern California, 2009, Geotechnical Engineering Report Tropico Middle School Expansion, 3180 Mojave-Tropico Road, Rosamond, Kern County, California.
- Federal Emergency Management Agency, 1995, Flood Insurance Rate Map, Map 060075 2025D, Panel 2025 of 2075.
- Geolabs-Westlake Village, 1991, Geological Reconnaissance to Determine Extent of Ground Fissures, 10 Square Miles, Northwest Portion of Lancaster: Consultants' Technical Report dated February 4, 1991, Work Order 7948, 20 p.
- Hart, E.W. 1999 rev., Fault-Rupture Hazard Zones in California: California Division of Mines and Geology Special Publication 42, 38 p.
- Ikehara, M.E., and Phillips, S.P., 1994, Determination of Land Subsidence Related to Ground-Water-Level Declines Using Global Positioning System and Leveling Surveys in Antelope Valley, Los Angeles and Kern Counties, California, 1992: U.S. Geological Survey Water-Resources Investigations Report 94-4184, 101 p.
- Johnson, H.R., 1911, Water resources of Antelope Valley, California: U.S. Geological Survey Water-Supply Paper 278, 92p.
- Jennings, C.W., 1994, Fault Activity Map of California and Adjacent Areas: California Division of Mines and Geology, Geological Data Map No. 6, scale 1:750,000.
- LaChapelle, W.A. and Shlemon, R.J., 1992, Recent shallow desiccation cracks on graded tracts in Lancaster, California: Program and Abstracts, 35th National Conference of the Association of Engineering Geologists, October 2-9, 1992, Los Angeles, California.
- Law Environmental, 1991, Water Supply Evaluation, Antelope Valley, California, Consultants Technical Report dated November 25, 1991, Project No. 58-969601.01.
- Lubetkin, L.K. and Clark, M.M., 1988, Late Quaternary Activity Along the Lone Pine Fault, Eastern California: Geological Society of America Bulletin, v. 100, p. 755-766, May 1988.
- Oakshott, G.B., ed., 1975, San Fernando, California, Earthquake of 9 February 1971: California Division of Mines and Geology Bulletin 196, 463 p.
- Petersen, M.D., Bryant, W.A., Cramer, C.H., Cao, T., Reichle, M.S., Frankel, A.D., Leinkaemper, J.J., McCrory, P.A., and Schwarz, D.P., 1996, Probabilistic Seismic Hazard Assessment for the State of California: California Division of Mines and Geology Open-File Report 96-08, 59 p.
- Sieh, K., Stuiver, M., and Brillinger, D., 1989, A More Precise Chronology of Earthquakes Produced by the San Andreas Fault in Southern California: Journal of Geophysical Research, vol. 94, no. B1, January 10, 1989, pp. 603-623.

Southern California Earthquake Center (S.C.E.C.), 2000, Web Site: <http://www.scecdc.scec.org/>.

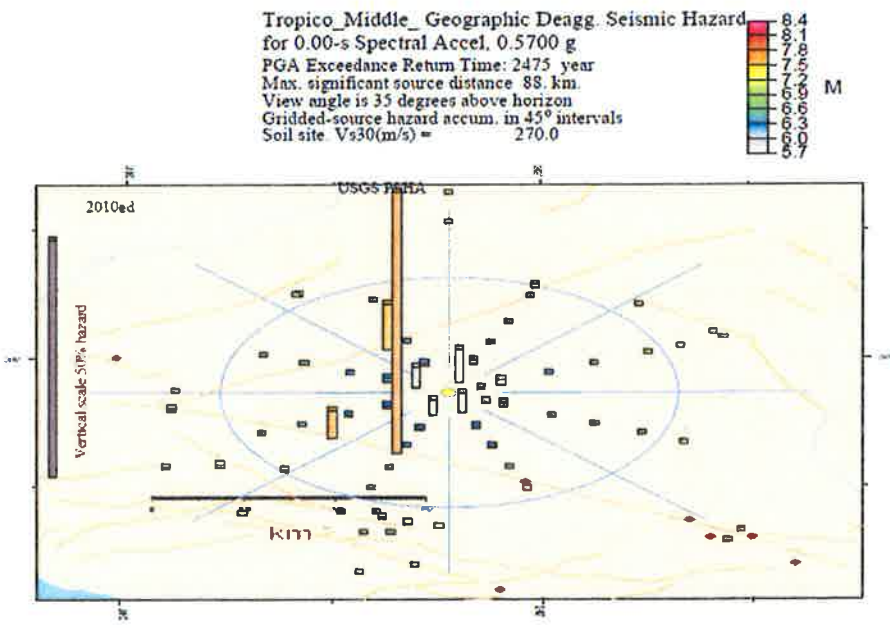
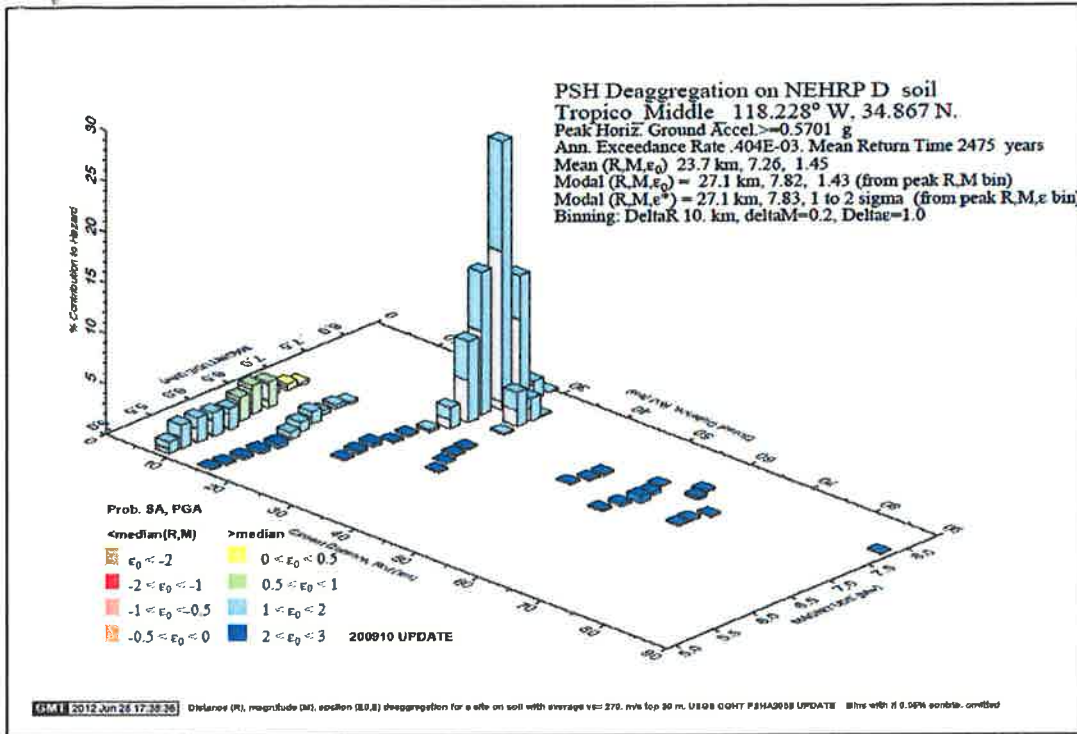
Thompson, D.G., 1929, The Mojave desert region, California, a geographic, geologic and hydrologic reconnaissance: U.S. Geological Survey Water Supply Paper 578,759p.

Woods, M.C., and Seiple, W.R., eds., 1995, The Northridge, California, Earthquake of 17 January 1994: California Department of Conservation, Division of Mines and Geology Special Publication 116, 302 p.

Working Group on California Earthquake Probabilities, 1995, Seismic Hazards in Southern California: Probable Earthquakes, 1994-2024: Bulletin of the Seismological Society of America, vol. 85, no. 2, pp. 379-439.

APPENDIX A

SEISMIC HAZARD DEAGGREGATION
RESPONSE SPECTRA
SPECTRAL RESPONSE VALUES
PLATE AI, SITE PLAN
PLATE AII, CROSS SECTION

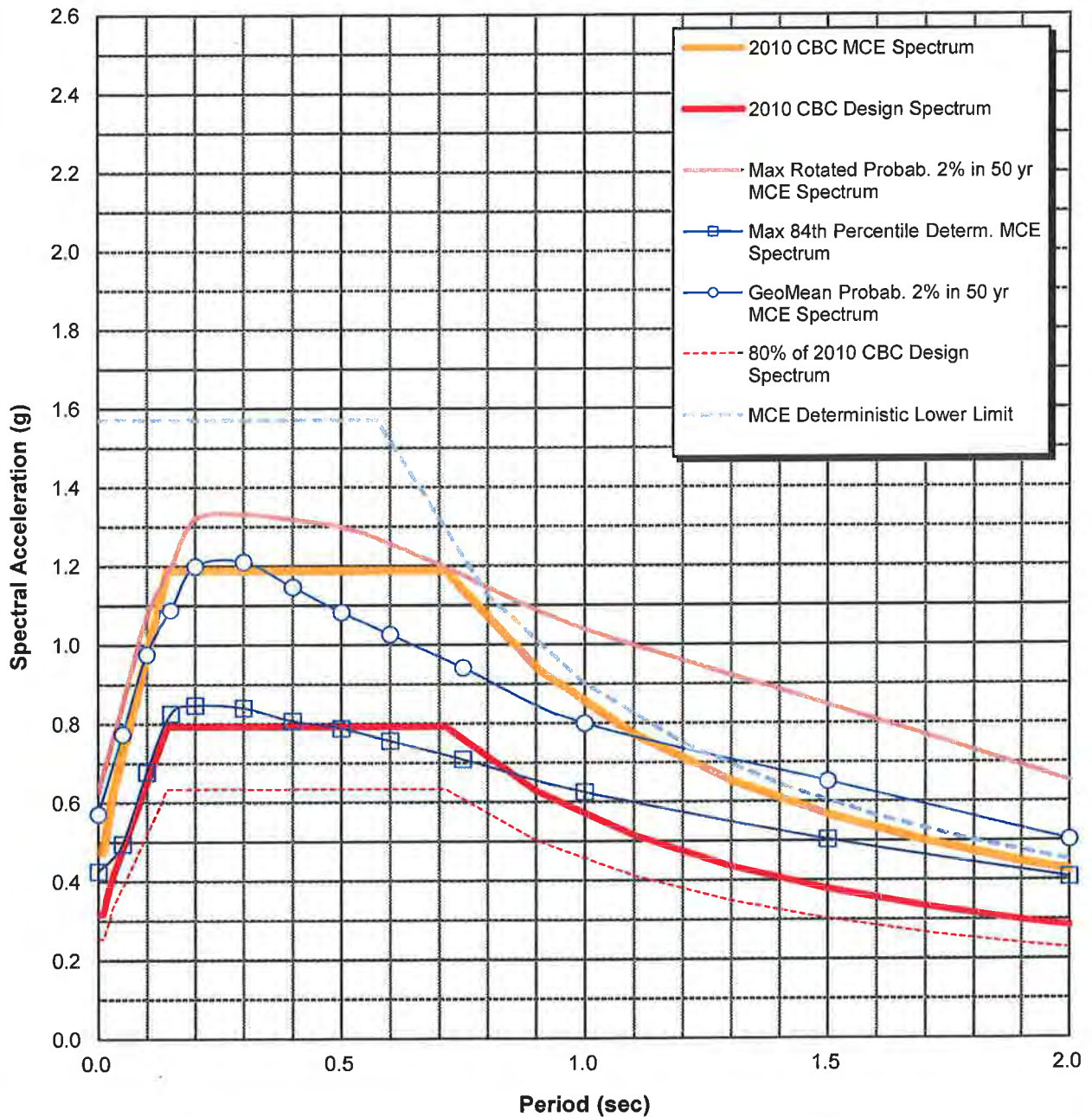


Seismic Hazard Deaggregation

Tropico Middle School
 File No.: PL-07512-01

Earth Systems
Southern California

RESPONSE SPECTRA



Based on USGS National Strong Ground Motion Interactive Deaggregation Website using 2008 Parameters

Site Class: D
 Latitude: 34.8665
 Longitude: -118.2279

Response Spectra

Tropico Middle School
 File No.: PL-07512-01



Earth Systems
Southern California

Spectral Response Values
Probabilistic and Deterministic Response Spectra for MCE compared to Code Spectra
for 5% Viscous Damping Ratio

Natural Period T (seconds)	GeoMean Probab. 2% in 50 yr MCE Spectrum (1) 2475-yr	Rotated Probab. 2% in 50 yr MCE Spectrum (2) 2475-yr	Max 84th Percentile Determin. MCE Spectrum (3)	Determ. Lower Limit MCE Spectrum (4)	Determ. MCE Spectrum (5) max(3,4)	Site Specific MCE Spectrum (6) min(2,5)	2010 CBC MCE Spectrum (7)	Site Specific Design Spectrum (8) 2/3*(6)*	2010 CBC Design Spectrum (9) 2/3*(7)
0.00	0.570	0.627	0.425	1.570	1.570	0.627	0.475	0.418	0.316
0.05	0.772	0.850	0.494	1.570	1.570	0.850	0.724	0.566	0.483
0.10	0.975	1.072	0.677	1.570	1.570	1.072	0.973	0.715	0.649
0.15	1.087	1.195	0.825	1.570	1.570	1.195	1.187	0.797	0.791
0.20	1.199	1.318	0.846	1.570	1.570	1.318	1.187	0.879	0.791
0.30	1.210	1.331	0.839	1.570	1.570	1.331	1.187	0.887	0.791
0.40	1.146	1.317	0.806	1.570	1.570	1.317	1.187	0.878	0.791
0.50	1.082	1.298	0.787	1.570	1.570	1.298	1.187	0.865	0.791
0.60	1.025	1.256	0.755	1.500	1.500	1.256	1.187	0.837	0.791
0.75	0.940	1.175	0.708	1.200	1.200	1.175	1.130	0.783	0.753
1.00	0.799	1.038	0.624	0.900	0.900	0.900	0.848	0.600	0.565
1.50	0.650	0.845	0.502	0.600	0.600	0.600	0.565	0.400	0.377
2.00	0.501	0.651	0.406	0.450	0.450	0.450	0.424	0.300	0.283

* > 80% of (9)

Probabilistic Spectrum from 2008 USGS Ground Motion Mapping Program adjusted for site conditions and maximum rotated component of ground motion using NGA

Reference: ASCE 7-05, Chapters 21.2, 21.3, 21.4 and 11.4

Period (sec)	F	Mapped Acceleration Values		Site Coefficients		Site-Specific	
						Design Acceleration Values	
PGA	1.00						
0.2	1.00	S _s	1.134 g	F _a	1.05	S _{DS}	0.879 g
1.0	1.00	S ₁	0.565 g	F _v	1.50	S _{D1}	0.600 g

Spectral Amplification Factor for different viscous damping, D (%): After Idriss (1993)

1.517-0.321*Ln(D) for 0.1 < T < 0.4 seconds

1.400-0.248*Ln(D) for 0.3 < T < 2.0 seconds

1 g = 980.6 cm/sec² = 32.2 ft/sec²

PSV (ft/sec) = 32.2(Sa)T/(2π)

Key: Probab. = Probabilistic, Determ. = Deterministic, MCE = Maximum Considered Earthquake

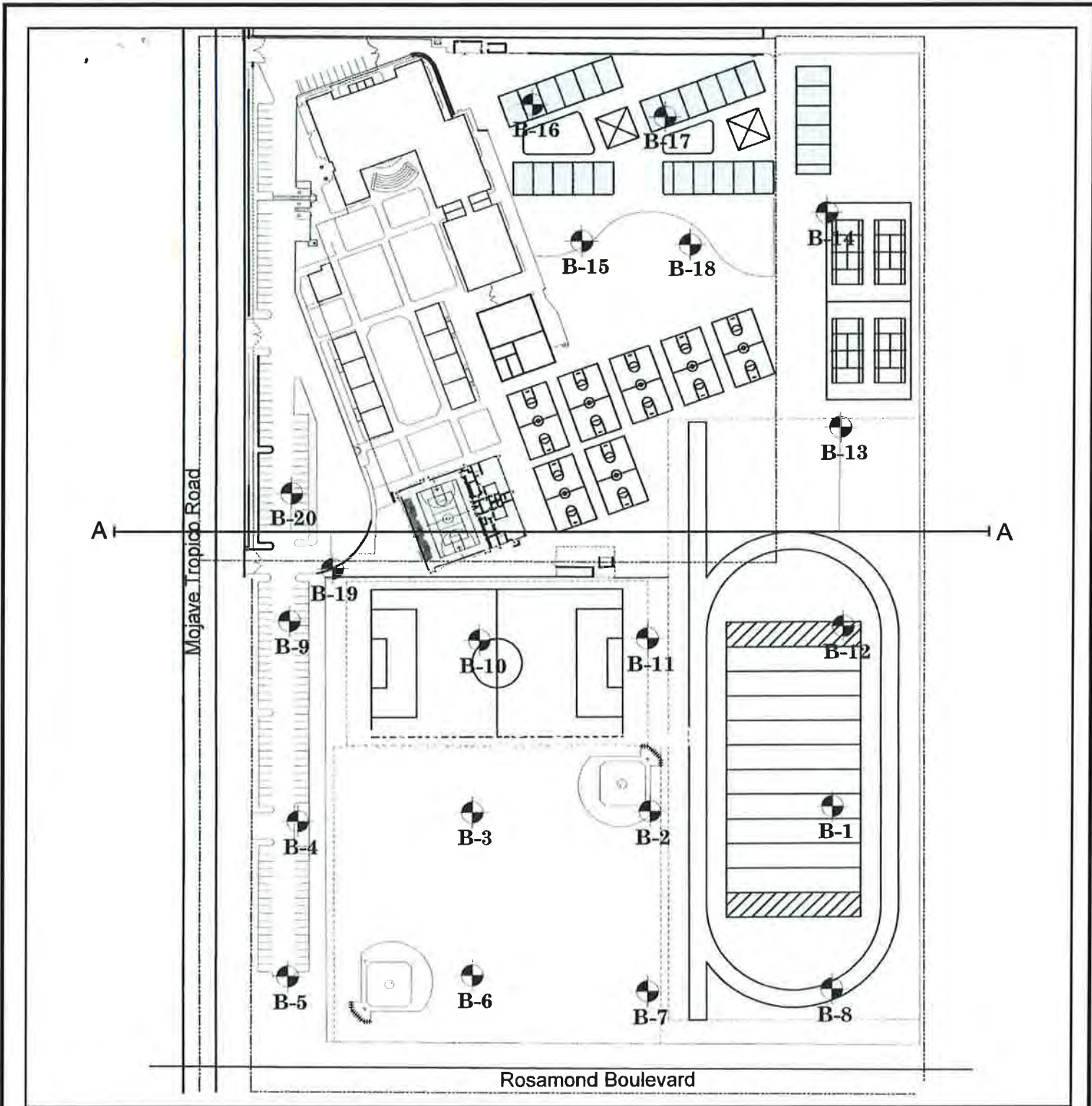



PLATE A1



SITE MAP	
TROPICO MIDDLE SCHOOL 3180 MOJAVE-TROPICO ROAD ROSAMOND, KERN COUNTY, CALIFORNIA	
 Earth Systems Southern California	
7-26-2012	PL-07513-01

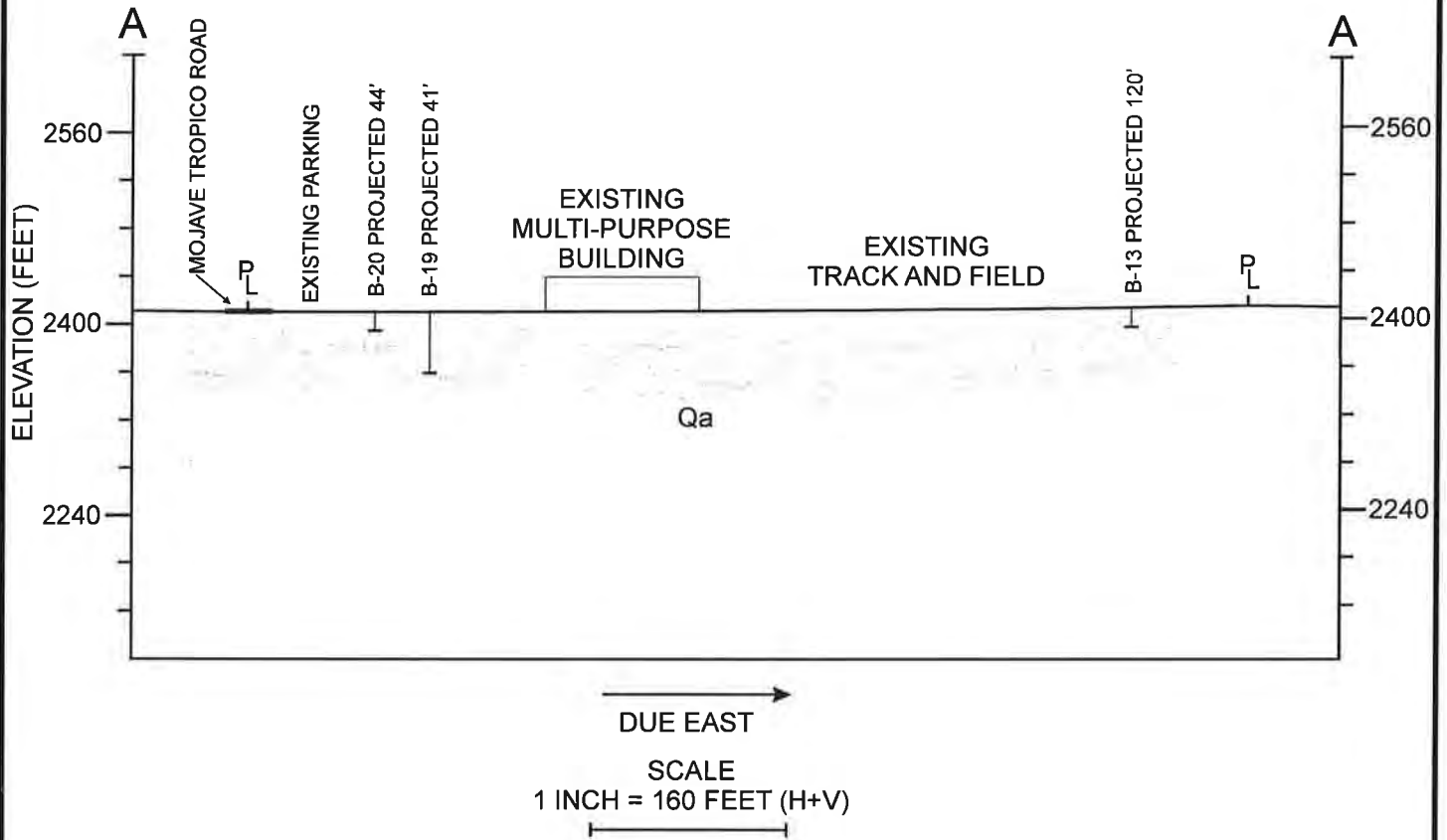


PLATE A-II

LEGEND

Qa QUATERNARY ALLUVIUM

GEOLOGIC CROSS SECTION A-A

TROPICO MIDDLE SCHOOL
3180 MOJAVE TROPICO ROAD
ROSAMOND, KERN COUNTY, CALIFORNIA



Earth Systems
Southern California

7-26-2012

PL-07513-01

GEOTECHNICAL ENGINEERING REPORT

Tropico Middle School Expansion
3180 Mojave-Tropico Road
Rosamond Boulevard and Mojave-Tropico Road
Rosamond, Kern County, California
PL-07513-02

Prepared For

SOUTHERN KERN UNIFIED SCHOOL DISTRICT

August 24, 2012

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August 24, 2012

PL-07513-02

Southern Kern Unified School District
P. O. Drawer CC
Rosamond, California 93560

DSA File Number 15-71

Attention: Mr. Jeffrey Weinstein

Subject: **Geotechnical Engineering Report**
Tropico Middle School Expansion
3180 Mojave-Tropico Road
Rosamond Boulevard and Mojave-Tropico Road
Rosamond, Kern County, California

Presented herewith is Earth Systems Southern California's (ESSC's) Geotechnical Engineering Report prepared, as authorized, for a proposed expansion of the existing Tropico Middle School campus in Rosamond, California. Tropico Middle School is located at 3180 Mojave-Tropico Road, in the unincorporated community of Rosamond, Kern County, California.

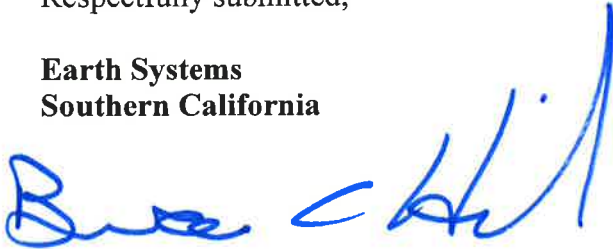
The conclusions and recommendations contained in this Geotechnical Engineering Report are based upon ESSC's understanding of the proposed development and on analyses of the data obtained from the field and laboratory testing programs. The recommendations provided in this report generally relate to criteria for site grading and foundation design. ESSC strives to provide analyses and recommendations in accordance with the applicable standards of care for the geotechnical engineering profession at the time this study was conducted.

This report completes ESSC's scope of geotechnical engineering services authorized on July 23, 2012, which were performed in accordance with ESSC's proposal dated May 31, 2012. Other services that may be required, such as grading observation and construction testing, are additional services and will be billed according to the Fee Schedule in effect at the time such services are provided. Budgets for these services, which are dependent upon design and construction schedules, can be provided when requested.

Earth Systems Southern California appreciates this opportunity to provide professional geotechnical engineering services for this project. If you need clarification of the information contained in this report, or if Earth Systems Southern California can be of additional service, please contact the undersigned.

Respectfully submitted,

**Earth Systems
Southern California**



Bruce A. Hick
Project Geotechnical Engineer

Distribution: 3 – Southern Kern Unified School District
3 – Flewelling & Moody
2 – Seville Construction Services

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**GEOTECHNICAL ENGINEERING REPORT
TROPICO MIDDLE SCHOOL EXPANSION
3180 MOJAVE-TROPICO ROAD
ROSAMOND BOULEVARD AND MOJAVE-TROPICO ROAD
ROSAMOND, KERN COUNTY, CALIFORNIA**

INTRODUCTION

This Geotechnical Engineering Report has been prepared for an expansion to the existing Tropico Middle School campus in Rosamond, California. The Tropico Middle School campus is located at 3180 Mojave-Tropico Road, in the unincorporated community of Rosamond, Kern County, California. The purpose of this report was to evaluate the geotechnical engineering characteristics of the site subsurface soils relative to the anticipated site development.

This report includes:

1. Descriptions of the field exploration and laboratory tests performed.
2. Conclusions and recommendations relating to construction of the proposed middle school campus expansion based upon analyses of data obtained from the exploration and testing programs, and on Earth Systems Southern California's (ESSC's) knowledge of the general and site-specific characteristics of the subsurface soils.

PROJECT DESCRIPTION

Based upon review of the preliminary site plan supplied by Flewelling & Moody, ESSC understands that plans are to construct 10 new classroom/staff/computer/restroom/library buildings. Associated campus improvements include new hard court play areas. It is anticipated that the classroom buildings will be of modular or wood frame construction with slab-on-grade ground floors. Estimated maximum structural loads for these buildings are 2,000 plf for continuous foundations and 80 kips for isolated column loads.

Due to the relatively flat site topography, ESSC has assumed that conventional cut and fill methods will be used to grade the site, with maximum slope heights of five feet. Sewage disposal will be provided by a public sewer system. The above assumptions were used as the basis for the exploration, testing, and analyses programs and for the recommendations contained in this report.

PURPOSE AND SCOPE OF SERVICES

The purpose of ESSC's services was to evaluate the project site soil conditions, and to provide preliminary geotechnical engineering conclusions and recommendations relative to the project site and the proposed development. The scope of services includes the following:

- A. A general geotechnical engineering reconnaissance of the site.
- B. Shallow subsurface exploration of the project site by drilling eight (8) exploratory test borings.
- C. Geotechnical laboratory testing of selected soil samples obtained from the exploratory soil boring excavated for this project.
- D. Review of a Geotechnical Engineering Report dated January 6, 2009 (project number PL-07218-03) by Earth Systems Southern California prepared for a previous proposed expansion to the Tropico Middle School campus. Select information contained in that report was utilized in the preparation of this report.
- E. Engineering analyses of the data obtained from the exploration and testing programs.
- F. A summary of ESSC's findings and recommendations in this written report.

Contained in this report are:

- 1. Discussions on local and site-specific soil conditions.
- 2. Results of laboratory tests and field data.
- 3. Recommendations relating to the proposed site development, including allowable foundation bearing capacity, recommendations for foundation design, estimated total and differential foundation settlements, site grading criteria, lateral earth pressures, soil expansion characteristics, soil corrosion potential, site liquefaction potential, and preliminary pavement sections.

SITE DESCRIPTION

Tropico Middle School is located at 3180 Mojave-Tropico Road, adjacent to the northeast corner of Rosamond Boulevard and Mojave-Tropico Road, in the unincorporated community of Rosamond, Kern County, California. The site is located at approximately 34.8665° latitude and approximately 118.2279° longitude. Access to the existing school is available from Mojave-Tropico Road, a paved improved street located adjacent to the western boundary of the site (see attached Site Plan in Appendix A). Access to the undeveloped portion of the site is available from Mojave-Tropico Road and Rosamond Boulevard, both paved improved streets located adjacent to the western and southern boundaries of the site, respectively.

Topographically, the campus is situated at an elevation of approximately 2,415 feet above mean sea level. The campus is generally flat and level with site drainage downward to the south/southeast at an approximate one to two percent gradient. There is approximately 10 feet of elevation differential across the campus.

At the time of ESSC's field exploration, the northern half of the site contained the existing Tropic Middle School campus while the southern and eastern portions of the site consisted of undeveloped land. Numerous utility lines are anticipated to be located within or adjacent to all proposed construction areas. The above-cited descriptions are intended to be illustrative, and are specifically not intended for use as a legal description of the subject property.

FIELD EXPLORATION

The field exploration for this study, conducted on July 27, 2012, included the drilling and sampling of eight (8) exploratory soil borings within the proposed building areas. The borings were drilled to depths ranging from approximately 16 to 51 feet below the existing ground surface. The borings were drilled with a Mobil B-61 truck-mounted drilling rig using eight-inch diameter continuous flight hollow stem auger in accordance with generally accepted geotechnical exploration procedures (ASTM D 1452). The approximate location of the exploratory borings, as indicated on the attached Site Plan in Appendix A, were determined by sighting and tape measuring from existing site improvements. The exploration locations should be considered accurate only to the degree implied by the measurement method used.

The field exploration for the referenced report dated January 6, 2009 consisted of twenty (20) exploratory borings drilled to depths of approximately 16 to 51 feet below the existing ground surface at the time of drilling. The approximate locations of the borings performed in the vicinity of the proposed additions are also indicated on the attached Plot Plan in Appendix A.

Bulk disturbed samples of the subsurface soils were obtained from tailings developed during excavation of the test borings. These samples were secured for classification and testing purposes and represent a mixture of soils within the noted depths.

Soil samples ("ring samples") were secured from within the soil borings using a three-inch O. D. ring sampler (ASTM D 3550). The sampler shoe is similar to the type specified in ASTM D 1586. A 140-pound hammer falling approximately 30 inches (ASTM D 1586) drove the sampler. The number of blows required to drive the sampler one-foot was recorded in six-inch increments. Recovered soil samples were sealed in plastic containers and brought to ESSC's laboratory for further classification and testing.

The Boring Logs for this report, included in Appendix A, represent ESSC's interpretation of the field logs prepared for each boring by ESSC's staff, along with their interpretation of soil conditions between samples and results of laboratory tests. The Boring Logs for the report dated January 6, 2009 are included in Appendix C. While the noted stratification lines represent approximate boundaries between soil types, the actual transitions may be gradual.

LABORATORY TESTING

After visual and tactile classification in the field, the soil samples were brought to ESSC's laboratory. The soil classifications were checked in accordance with the Unified Soil Classification System and a testing program was established as follows:

- A. Soil samples and field logs were reviewed to assess which samples would be analyzed further.
- B. In-situ moisture content and dry unit weight for soil core samples were developed in accordance with ASTM D 2937.
- C. The relative strength characteristics of the near-surface soils were estimated from the results of direct shear tests (ASTM D 3080) conducted on samples remolded to approximately 90% of maximum dry density as determined by ASTM D 1557 test procedures. The remolded samples were placed in contact with water for at least 24 hours before testing and then sheared under normal loads ranging from approximately 0.5 to 2.3 KSF.
- D. The relative strength characteristics of the subsurface soils were estimated from the results of direct shear tests (ASTM D 3080) conducted on select samples obtained from the ring sampler. The samples were placed in contact with water for at least 24 hours before testing and then sheared under normal loads ranging from 0.5 to 2.3 KSF.
- E. Consolidation tests (ASTM D 2435) were conducted on select samples obtained from the ring sampler. The maximum stress during testing was 4.6 KSF. The samples were saturated at 2.3 KSF to check the hydrocompression potential. The samples were unloaded to 1.2 KSF to check the rebound.
- F. HDR/Schiff & Associates of Claremont, California performed soil chemistry tests on a sample of the site soil provided by ESSC. Tests consisted of sulfate, pH and Soil Resistivity, as well as several other chemical content tests.
- G. Additional tests consisted of Maximum Density-Optimum Moisture (ASTM D 1557) and Expansion Index (ASTM D 4829).

Refer to Appendix B for the laboratory test results. Refer to Appendix C for the laboratory test results from the referenced report dated January 6, 2009. Presentation of the test results provides only that information considered pertinent. References to ASTM and other test standards refer to the standard currently in effect.

SUBSURFACE SOIL CONDITIONS

As discussed in the Site Description section of this report, existing structures and pavements are located within the proposed construction areas. It is anticipated that numerous underground facilities (foundations, slabs, utility lines, etc.) are present within all areas of the proposed construction.

The native soils encountered in the exploratory borings are alluvial deposits, consisting of interbedded layers of silty sands, clayey sands, relatively clean sands and silty clays (SM, SC, SP and CL soil types based upon the Unified Soil Classification System). Some of the upper three to four feet of the native soils were found to be non-uniform and of low relative compaction. The underlying soils were found to be medium dense to dense. The Boring Logs in Appendix A and C

contain more detailed descriptions of the soils encountered in the exploratory test borings. Per 2010 California Building Code (CBC) Table 1613.5.2, the site class is a stiff soil profile (D).

Based upon the consolidation test results, some of the native site soils within the upper three to four feet demonstrate a moderate to high tendency to hydrocompress (experience a loss in volume upon wetting, with or without additional loading; commonly referred to as "collapsing soil". The underlying soils, through the depths tested, were found to have a negligible to slight tendency to hydrocompress.

Based upon the Expansion Index Test (ASTM D 4829) results, the upper site soils are considered to have a "very low" (0-20) expansion potential. Refer to Section G of the Recommendations section for explanations and recommendations for dealing with expansive soils.

GROUNDWATER

Free groundwater was not encountered in the borings at the time of drilling. Boring B-1 was drilled to a depth of approximately 51 feet below the existing ground surface. Static aquifer groundwater levels in the vicinity of the site are estimated to be deeper than 100 feet below the existing surface (boring performed for this report). Fluctuations in groundwater levels may occur due to variations in rainfall, regional climate, and other factors.

DISCUSSION AND CONCLUSIONS

Based upon the field exploration, laboratory testing, ESSC's understanding of the proposed site development, and past experience, it is ESSC's opinion that the site, when modified as recommended in this report, is suitable for the intended construction.

Liquefaction

Liquefaction is defined as a loss of strength of saturated cohesionless soil generally due to seismic shaking. Soil types most susceptible to liquefaction are loose, saturated silty to clean fine sands. Based on the site exploration, the shallow alluvial soils below this site consist of sands that are generally in a medium dense to dense state, or cohesive silts and clays. Static groundwater depths on this site are greater than 50 feet. Where groundwater levels are greater than 50 feet deep, it is generally thought that surface damage from deeper liquefaction will not occur. Therefore, since the static groundwater level under the site is greater than 50 feet deep and since the foundation soils are relatively dense/stiff in nature, it is ESSC's opinion that hazards from liquefaction on this site should be negligible.

Seismically-induced settlement may occur within the on-site alluvial soils. However, the near surface soils will be densified by remedial grading to mitigate most settlement potentials. Additional settlement may occur due to seismic shaking, however, due to the project being located on a relatively broad alluvial fan, this settlement will most likely occur on a regional basis (not confined to the project site).

Site Grading

As discussed in the Soil Conditions Section, the upper three to four feet of the native soils were found to be relatively loose, non-uniform, of low relative compaction, and subject to significant hydrocompression. These upper soils are anticipated to be further disturbed during the demolition/removal of existing on-site improvements. Based upon the above, it is ESSC's opinion that the upper native soils will not provide uniform support for the proposed structures without remedial grading. To provide a more uniform bearing for the proposed structures, it is recommended that a recompacted soil mat be constructed beneath all structural foundations and slab-on-grade construction. Refer to Section A of the Recommendations of this report for more detailed discussions and recommendations regarding site preparation.

Foundation Design and Settlements

If the preliminary recommendations for site preparation and grading are followed, it is ESSC's opinion that conventional shallow (continuous and isolated pad) foundations may be used to support the proposed school buildings and associated structures. If the preliminary recommendations for foundation design and construction are followed, total settlement of the proposed foundations should be approximately three-quarters of an inch. Differential settlement across a 30-foot span may be as high as fifty percent of the total settlement. Refer to Section D of the Recommendations section of this report for more detailed discussions and recommendations regarding foundation design.

RECOMMENDATIONS

Based upon the field exploration, laboratory testing, ESSC's interpretation of data from the exploration and testing programs, and past experience, it is ESSC's opinion that the following recommendations should be incorporated into site preparation, design, and construction of the proposed Tropico Middle School expansion improvements.

A. Site Preparation

1. Any existing slabs, pavements, vegetation (including root balls), debris, trash piles, abandoned underground utilities, and other debris should be removed from the proposed grading areas. It is possible that buried utility lines and other underground facilities (seepage pits, septic tanks, cisterns, etc.) may be present within the proposed construction areas. All such facilities should be removed in their entirety or properly abandoned. All pavements, strippings, and debris should be removed from the site in order to preclude their incorporation in site fill or remedial excavation backfill.
2. Any existing pavement sections or Portland cement pavement, asphalt concrete and aggregate base material can be "ground-up" to particle sizes less than two-inches in maximum size and used in new pavement areas of the project. The subject material **shall not** be used in landscape or building areas of the project. The subject material can be used as a "subbase" material for new pavement areas, placed immediately

below the pavement section aggregate base material. It is recommended that such material be mixed with conventional aggregate base material during placement to help compaction characteristics, but should not be counted as part of the required aggregate base thickness. A representative of the geotechnical consultant should provide placement observation and compaction verification of the subject material.

3. Depressions resulting from removals under Items 1 above should have debris and loose soils removed and filled with suitable soils placed as recommended below.
4. In order to minimize potential settlement problems associated with a structure supported on a nonuniform thickness of compacted fill, the geotechnical engineers should be consulted for site grading recommendations relative to backfilling large and/or deep depressions resulting from removals under Item 1.
5. To provide a more uniform bearing for the proposed structure foundations, building slab-on-grade construction, and structural retaining walls the following remedial grading is recommended:
 - a. Soils beneath the proposed construction areas, including a distance of at least five feet beyond the foundation or structure perimeter, should be excavated a minimum of 48 inches below existing site grade or finished subgrade (pad elevation), whichever is lower. **The base of the remedial excavation across an individual structure area should be a level elevation.** The bottom of the remedial excavation should then be scarified (ripped) 6 inches.
 - b. Additional excavation may be required in building foundation areas, in particularly in "deep" foundation areas (i.e. elevator pits, etc.) in order to obtain a **minimum 24-inch thickness of compacted engineered fill beneath the base of any proposed foundation.**
 - c. All exposed ground surfaces (subgrades) at the base of the remedial excavations should be reviewed for possible loose/soft soils and tested to verify that an "in-place dry density" ("IPD") of at least **105.0 p.c.f.** is present. If this density does not exist at the specified depth, additional excavation will be required until suitable subgrade densities are found.
 - d. The excavated soils may be reused to backfill the remedial excavations provided they are cleaned of any deleterious materials and debris, and are properly moisture conditioned and compacted as recommended in this report. During replacement of the excavated soils in the remedial excavations, and recompaction of the scarified soils, the soils should be moisture conditioned to near optimum moisture content and be uniformly compacted to at least 90% of maximum dry density as determined by ASTM D 1557 test procedures using mechanical compaction equipment. To aid in the compaction operation, fill should be placed in maximum six-inch compacted lifts. **Compaction should be verified by testing.**

- e. The geotechnical consultant's representative should review the site grading following scarification of the bottom of the remedial excavations. Local variations in soil conditions may warrant increasing the depth of remedial excavation. Any deeper areas of loose soils should be removed and be replaced as compacted, engineered fill.
6. To provide a more uniform bearing for the proposed traffic bearing Asphalt Concrete, Portland Cement Concrete pavement construction, any proposed exterior non-traffic bearing concrete flatwork (sidewalks, patios, walkways etc.), hard courts, play courts and temporary relocatable classroom structures, the following remedial grading is recommended:
 - a. Existing soils beneath the proposed pavement sections, including a distance of at least two feet beyond the pavement perimeter, where obtainable, should be excavated a minimum of six inches below existing site grade or finished subgrade, whichever is lower. The bottom of the remedial excavation should then be scarified (ripped) 6 inches.
 - b. The excavated soils may be reused to backfill the remedial excavations provided they are cleaned of any deleterious materials and debris, and are properly moisture conditioned and compacted as recommended in this report. During replacement of the excavated soils in the remedial excavations, and recompaction of the scarified soils, the soils should be moisture conditioned to near optimum moisture content and be uniformly compacted to at least 90% of maximum dry density as determined by ASTM D 1557 test procedures using mechanical compaction equipment. To aid in the compaction operation, fill should be placed in maximum six-inch compacted lifts. **Compaction should be verified by testing.**
 - c. The upper 12 inches of the fill beneath traffic-bearing Portland cement Concrete pavement construction should be compacted to 95% of the maximum dry density. To aid in the compaction operation, fill should be placed in maximum six-inch compacted lifts. **Compaction should be verified by testing.**
 - d. The geotechnical consultant's representative should review the site grading prior to scarification of the bottom of the remedial excavations. Local variations in soil conditions may warrant increasing the depth of remedial excavation. Any deeper areas of loose soils should be removed and be replaced as compacted, engineered fill.
 7. Import soils should be equal to, or better than, the on-site soils in strength, expansion, compressibility, and soil chemistry characteristics. In general, import material should be free of organic matter and deleterious substances, have 100% passing a two-inch sieve, 60% to 100% passing a #4 sieve, no more than 20% passing a #200 sieve, an Expansion Index less than 20, a Liquid Limit less than 35, and a Plasticity Index less than 12. Import soils can be evaluated prior to their use, but will not be prequalified

by the geotechnical consultant. Approval of import soils will be given only after the material is on the project, either in-place, or stockpiled in adequate quantity to complete the project.

8. Backfill around or adjacent to confined areas (i.e. interior utility trench excavations, etc.) may be performed with a lean sand/cement slurry (minimum two sacks of cement) or "flowable fill" material (a mixture of sand/cement/fly ash). The fluidity and lift placement thickness of any such material should be controlled in order to prevent "floating" of any "submerged" structure.
9. Suitable fill soils should be moisture conditioned to at least optimum moisture content and be uniformly compacted to at least 90% of maximum dry density as determined by ASTM D 1557 test procedures using mechanical compaction equipment. To aid in the compaction operation, fill should be placed in maximum six-inch compacted lifts.
10. Shrinkage because of excavation and compaction of the upper site soils is expected to be about 13 percent of any excavated or scarified site soils. This estimate is based upon compactive effort needed to produce an average degree of compaction of approximately 92 percent and may vary depending on contractor methods. During compaction, we estimate an additional 0.1-foot subsidence of the underlying soils. Losses from site clearing and grubbing operations may affect quantity calculations and should also be taken into account. The grading contractor should verify shrinkage and earthwork yardage estimates.
11. Drainage systems for the proposed structures should be designed so that runoff water is diverted away from any structure.
12. Final site grades should be designed and constructed so that all water is diverted away from all structures and not allowed to pond on or near pavement. Drainage devices should be constructed to divert drainage from the project site.
13. It is recommended that ESSC be retained to provide engineering services during the grading, excavation, and foundation phases of development. This continuity of services will allow for the geotechnical review of the design concepts and specifications relative to the recommendations of this report and will more readily allow for design changes in the event that subsurface conditions differ from those currently anticipated.

B. Excavations

1. Standard construction techniques should be sufficient for site excavations. All excavations should be made in accordance with applicable regulations (including CAL/OSHA). Project safety is the responsibility of the contractor and the owner. ESSC will not be responsible for project safety.

2. Open excavations may be cut vertically to a maximum depth of no more than four feet. Excavations extending between 4 and 20 feet deep should be shored or sloped back from the base of the excavation to at least a 1.5:1 (horizontal to vertical) slope or flatter. If excavations dry out, sloughing will occur.
3. During the time excavations are open, no heavy grading equipment or other surcharge loads (i.e. excavation spoils) should be allowed within a horizontal distance from the top of any slope equal to the depth of the excavation (both distances measured from the top of the excavation slope).
4. Adequate measures should be taken to protect any structural foundations, pavements, or utilities adjacent to any excavations.

C. Utility Trenches

Standard construction techniques should be sufficient for site utility trench excavations. The surface of utility trench backfill frequently settles even when backfill is placed under optimum conditions. Structural units or pavement placed over such backfill should be designed to accommodate such movements. Jetting of utility trench backfill is not recommended.

1. Backfill of utilities within right-of-ways should be placed in strict conformance with the requirements of the governing agency. However, as a minimum it is recommended that utility trench backfill should be moisture conditioned and be uniformly compacted to at least 90% of maximum dry density using mechanical compaction equipment. To aid in the compaction operation, utility trench backfill should be placed in maximum six-inch compacted lifts. **Compaction should be verified by testing.**
2. The provisions of this report relative to minimum compaction standards should govern utility trench backfill within the project boundary. In general, service lines extending inside the site should be backfilled with native soils that have been moisture conditioned and uniformly compacted to at least 90% of maximum dry density using mechanical compaction equipment. To aid in the compaction operation, utility trench backfill should be placed in maximum six-inch compacted lifts. **Compaction should be verified by testing.**
3. Backfill operations should be reviewed and tested by the geotechnical engineer's representative to verify conformance with these recommendations.

D. Foundations

1. It is recommended that any building or structure constructed on this site be designed to at least the minimum standards for Seismic Zone 4 as designated by the latest edition of the California Building Code. The following Table is a summary of the estimated seismic parameters typically required for structural design:

Summary of Seismic Parameters – 2010 CBC

Latitude	34.8665°
Longitude	118.2279°
Site Class (2007 CBC Table 1613.5.2)	D
Mapped Spectral Acceleration, Short Period* - S_S	1.134
Mapped Spectral Acceleration, at 1 second* - S_1	0.565
Spectral Response Acceleration, Short Period* - S_{DS}	0.879 g
Spectral Response Acceleration, at 1 second* - S_{D1}	0.600 g

**Based upon USGS Earthquake Ground Motion Parameters, Version 5.0.10 – 2/2011*

2. Foundations for the proposed structures should be supported by **minimum 24-inch thickness of compacted soils** prepared as recommended in Section A. of this report.
3. Excavations for foundations should be cleaned of all loose or unsuitable soils and debris prior to placement of concrete. **Soil generated from the foundation excavations should not be placed below the floor slab unless properly moisture conditioned and compacted.**
4. Continuous (wall, strip or perimeter) foundations for the proposed structures may be proportioned for the following values:
 - a. Design Values: An allowable "net" bearing capacity of 2,000 p.s.f. can be utilized for dead and sustained live loads. This value includes a minimum safety factor of three, and may be increased by 1/3 for total loads, including seismic forces.
 - b. Continuous foundations should be embedded a minimum of 12 inches below the lowest adjacent soil grade for single-story structures, 18 inches for two-story structures, and be a minimum of 12 inches in width. Actual depth, width, and reinforcement requirements for continuous foundations will be dependent on the Expansion Index of the bearing soils (Refer to Section G of Recommendations), applicable sections of the governing building code, and requirements of the structural engineer.
 - c. The allowable bearing capacity for continuous foundations may be increased by 200 psf for each additional six inches of foundation depth and 200 psf for each additional one foot of foundation width. The allowable bearing capacity should not exceed 3,000 p.s.f. for continuous foundations to keep estimated settlements within allowable limits.
5. Isolated pad (column or pier) foundations for the proposed structures may be proportioned for the following values:
 - a. Design Values: An allowable "net" bearing capacity of 2,500 p.s.f. can be utilized for dead and sustained live loads. This value includes a minimum

safety factor of three, and may be increased by 1/3 for total loads, including seismic forces.

- b. Isolated pad foundations should be embedded a minimum of 12 inches below the lowest adjacent soil grade for single-story structures, 18 inches for two-story structures, and be a minimum 24 inches in width. Actual depth, width, and reinforcement requirements for isolated pad foundations will be dependent on the Expansion Index of the bearing soils (Refer to Section G of Recommendations), applicable sections of the governing building code, and requirements of the structural engineer.
 - c. The allowable bearing capacity for isolated pad foundations may be increased by 200 psf for each additional six inches of foundation depth and 200 psf for each additional one foot of foundation width. The allowable bearing capacity should not exceed 3,500 p.s.f. for isolated pad foundations to keep estimated settlements within allowable limits.
6. Friction acting along the foundation base may provide resistance to lateral loading. The coefficient of friction was estimated to be 0.40 for site soils recompacted to approximately 90% of maximum dry density as determined by ASTM D 1557 test methods, and may be used with dead loads. This value includes a reduction factor of 1/3. This value may be increased by 1/3 for total loads, including seismic forces.
 7. Passive earth pressure acting against the sides of foundations or grade beams may provide additional resistance to lateral loading. This pressure was estimated to be 400 Z PSF, where Z = Depth (in feet) below the finished ground elevation. In passive pressure calculations, the upper one-foot of soil should be subtracted from the depth, Z, unless confined by pavement or slab. The resisting pressure provided is an ultimate value. An appropriate factor of safety should be used for design calculations (minimum of 1.5 recommended). Frictional resistance and passive pressure may be combined without reduction.

E. Slab-on-Grade Construction

1. Interior building concrete slab-on-grade construction should be supported by a minimum 54-inch uniform thickness of compacted soils prepared as recommended in Section A. 4. a. of this report (48 inches of excavated and recompacted soils and 6 inches of scarified and recompacted soils). Prior to placement of any slab reinforcement, moisture barrier, or sand material, all slab-on-grade subgrades (both interior and exterior) should be reviewed and tested for the required compaction and uniformity of conditions. **Compaction should be verified by testing.**
2. Exterior concrete slab-on-grade construction should be supported by at least 12 inches of compacted soils, uniform in thickness, prepared as recommended in Section A. 5. of this report (6 inches of excavated and recompacted soils and 6 inches of scarified and recompacted soils). Where slabs will extend over utility trenches, observation

and testing of the trench backfill should be performed to confirm the compaction and uniformity of conditions of the trench backfill. **Compaction should be verified by testing.**

3. Asphalt paved hard courts, ball courts, and tennis courts should be underlain by at least four inches of aggregate base material. The aggregate base material should be compacted to at least 95% of the maximum dry density by mechanical compaction equipment. The aggregate base material should be prime-coated prior to placement of the asphalt concrete. The design consultant may require additional requirements for court design.
4. Reinforcement of slab-on-grade construction is contingent upon the structural engineer's recommendations and the Expansion Index of the supporting soils. Since the mixing of fill soils with native soils could change the Expansion Index, additional tests should be conducted during rough grading to determine the expansion characteristics of the new subgrade soils. As a minimum, it is recommended that all interior and exterior concrete slab-on-grade be reinforced with at least #3 bars on 18-inch centers. **Reinforcement should be placed at mid-depth of the slab.** Additional reinforcement may be required once the final expansion potential of the subgrade soils is known. The structural engineer may also require additional slab-on-grade reinforcement.
5. It should be realized that as a manufactured project, concrete will crack even under ideal conditions. It is ESSC's experience that concrete shrinkage is more pronounced in the Rosamond area due to environmental conditions (high winds, low humidity, and large daily temperature differentials). The use of high slump concrete for foundations and slabs on this project will increase the occurrence and magnitude of shrinkage cracks. It is recommended that the project developers/designers consult with project concrete contractors and concrete suppliers to formulate appropriate mix designs, placement procedures and concrete curing procedures in an attempt to reduce the occurrence and magnitude of concrete shrinkage cracking.
6. Cracks that develop in concrete slab-on-grade should be filled and sealed prior to placing floor coverings. Frequent control joints should be incorporated into the slab construction, particularly in the areas of re-entrant corners, to help control cracking.
7. In areas of moisture sensitive floor coverings, an appropriate vapor barrier should be installed in order to minimize vapor transmission from the subgrade soil to the slab. The vapor barrier should be evaluated for holes and/or punctures, and the edges overlapped and taped, prior to placement of concrete. Any holes or punctures observed should be properly repaired. The barrier should be covered with two inches of sand to help protect it during construction. The sand should be lightly moistened just prior to placing the concrete.
8. Relatively impervious floor coverings (i.e. vinyl, linoleum, etc.) that cover concrete slab-on-grade may block the passage of moisture vapor through the slab, which could result in damage to the floor covering. It is suggested that after the concrete has

sufficiently cured, the slab surface be sealed with a commercial sealant prior to placing the floor covering. The compatibility and recommendations for placing of the concrete sealer, mastic, and floor covering should be verified by the floor covering manufacturer prior to sealing the concrete or placing of the floor covering.

9. It is recommended that the proposed exterior perimeter slabs (sidewalks, patios, walkways, etc.) be designed to be relatively independent of foundation stems (free-floating) to help mitigate cracking due to foundation settlement and/or expansion. Frequent joint spacing should be incorporated into concrete slab-on-grade construction, particularly in the areas of re-entrant corners, to help control cracking.
10. Subgrade soils for all concrete slab-on-grade construction should be moisture conditioned to at least optimum moisture content to a depth of at least 12 inches below the lowest adjacent soil grade within 24 hours prior to placement of concrete. Measures should be taken to maintain optimum moisture until concrete is placed. The required moisture content should be verified a maximum of 24 hours prior to placement of concrete. Actual depths of pre-moistening will be dependent upon the actual Expansion Index of the subgrade soils.

F. Lateral Earth Pressures

1. Based upon analyses, the following lateral earth pressures may be used in the design of any proposed retaining walls, loading docks, light standards, flagpoles, or similar structures:

	<u>Driving Earth Pressure*</u>	<u>Resisting Earth Pressure*</u>
Well drained level soil	37	400***
Well drained 2:1 backfill soil	56	
At-rest (restrained wall)	57**	

*Equivalent fluid pressure (PSF) per foot of soil height.

**For purposes of design, a wall is considered restrained if it is prevented from movement greater than 0.002H (H = height of wall in feet) at the top of the wall.

***The upper one-foot of soil should be subtracted from the depth, Z, unless confined by pavement or slab.

NOTE: The pressures recommended above were based on the assumption that the on site soils will be compacted to approximately 90% of maximum dry density. The use of select granular fill may lower the recommended driving earth pressure. The

resisting pressure provided is an ultimate value. An appropriate factor of safety should be used for design calculations (minimum of 1.5 recommended).

2. Friction acting along the foundation base may provide resistance to lateral loading. The coefficient of friction was estimated to be 0.40 for site soils recompacted to approximately 90% of maximum dry density as determined by ASTM D 1557 test procedures, and may be used with dead loads. This value includes a reduction factor of one-third. This value may be increased by 1/3 for total loads, including seismic forces. Frictional and passive resistance may be combined without reduction.
3. The lateral earth pressure to be resisted by retaining should be increased to allow for surcharge loads. The surcharge considered should include the loads from any structures or vehicle traffic within a distance approximately equal to the height of the retaining wall.
4. Backfill immediately behind any retaining structure should be a free-draining granular material. Comments on the characteristics of import soils will be given by the geotechnical consultant after the material is on the project, either in place, or stockpiled in adequate quantities to complete the project.
5. Backfill behind retaining walls should be with soils that have been properly moisture conditioned to approximately optimum moisture content and uniformly compacted to at least 90% of maximum dry density as determined by ASTM D 1557 test procedures using mechanical compaction equipment. To aid in the compaction operation, retaining wall backfill should be placed in maximum six-inch compacted lifts.
6. Compaction within the area of a 1:1 slope from the bottom of wall excavations should be performed by hand operated compaction equipment. This is intended to reduce potential "locked-in" lateral pressures caused by compaction with heavy grading equipment.
7. Weepholes, backdrains, or an equivalent system of backfill drainage should be incorporated into the retaining wall design (see Plate D-I, Appendix D, for backdrain details). Waterproofing of retaining walls should be provided to help reduce the potential for efflorescent formation.
8. The final grade should be such that all water is diverted away from the retaining wall's foundation or backfill.

G. Expansive Soil

The Expansion Index (ASTM D 4829) of the subgrade soils should be considered when designing foundations. As stated in the Soil Conditions section, the preliminary Expansion Index determination of the on-site soils is in the "very low" (0-20) classification. The foundation and slab-on-grade design recommendations provided in Sections D and E of this report include generally used guidelines in the project area for foundation design for soils with the indicated degree of

expansiveness. These recommendations are minimum and comply with normally accepted geotechnical engineering practices. **However, actual foundation and slab-on-grade construction reinforcement should be determined by the structural engineer based upon site specific conditions such as foundation loading and engineering characteristics of the subgrade soils.**

If the site soils are thoroughly mixed and/or additional fill is added during site preparation, the expansion potential may change. The expansion potential of the new subgrade soils should be determined after the site preparation has been completed, and the final foundation design adjusted accordingly.

H. Preliminary Pavement Sections

No "R"-Value tests were conducted for this report. During site grading, sample(s) should be secured from the exposed pavement subgrade areas, tested, and evaluated for review or revision of the following preliminary pavement sections. Based upon the results of the "R"-Value tests performed for the referenced report dated January 6, 2009 (design "R"-Value = 50), the following sections may be used for developing preliminary earth quantities and paving cost estimates:

Asphalt Concrete Pavement Sections

Traffic Index 4.0 (Automobile or Light Truck Parking)

3.0" Asphalt Concrete on
4.0" Crushed Aggregate Base or equivalent

Traffic Index 5.0 (Automobile and Light Truck Drive Lanes)

3.0" Asphalt Concrete on
4.0" Crushed Aggregate Base or equivalent

Traffic Index 7.0 (Bus/Fire Lanes)

4.0" Asphalt Concrete on
6.0" Crushed Aggregate Base or equivalent

Traffic Index 8.0 (Mojave-Tropico Road)

4.0" Asphalt Concrete on
8.0" Crushed Aggregate Base or equivalent

Traffic Index 10.0 (Rosamond Boulevard)

5.0" Asphalt Concrete on
12.0" Crushed Aggregate Base or equivalent

Asphalt concrete pavement section recommendations are based on the assumption that the pavement section is placed on a minimum 12-inch thick layer of subgrade compacted as recommended in Section A. 6. of the Recommendations of this report. Aggregate base material should be properly moisture conditioned and compacted to at least 95% of the maximum dry density as determined by ASTM D 1557 test procedures using mechanical compaction equipment. **Compaction should be verified by testing.** Pavement sections should be verified with the jurisdictional authority prior to the time of construction.

Portland Cement Concrete Pavement Sections

1. It is recommended that no less than a **six-inch (6")** thick Portland Cement Concrete (P.C.C) section should be considered for design of the proposed traffic bearing pavement sections for this project (Portland Cement Association - Pacific Southwest Region, "Portland Cement Concrete Pavement Design For Light, Medium & Heavy Traffic", Third Printing, 1981). The concrete should have a minimum 28-day Modulus of Rupture of 500 psi (approximately 3,000 psi compressive strength). It is recommended that air entrainment of the concrete be provided.
2. The use of distributed steel in the pavement section is not required by the above structural pavement design, however, steel reinforcement is recommended to help control the effects of shrinkage and temperature cracking. **Reinforcement should be placed at mid-depth of the slab.** Steel reinforcement should not be carried across longitudinal or transverse joints.
3. Transverse contraction joints should be spaced no further than 12 feet apart. Transverse joints should be cut to a depth of 1/4 of the thickness of the concrete slab plus one-quarter inch by sawing or impressed plastic ribbons.
4. Longitudinal joints should be spaced no further than 12 feet apart. Longitudinal joints should be constructed full depth, or by weakening the concrete to a depth described above with a concrete saw or an impressed plastic ribbon.
5. All Portland cement Concrete pavement sections should be placed on a minimum 12-inch thick subgrade compacted to at least 90% of maximum dry density as determined by ASTM D 1557 test procedures as recommended in Section A. 6. of the Recommendations of this report.

I. Soil Chemical Testing

1. The results of the soil chemistry tests on a sample of the near surface soils are included in Appendix B. This information should be utilized by the design engineers for their interpretation pertaining to the reactivity of various construction materials (such as concrete and piping) with the soils.

2. It is recommended that Type II Portland Cement be used in the concrete for the proposed foundations, slabs-on-grade, and drainage structures of this project.
3. Tests should be conducted during grading operations to verify the soil chemistry of the subgrade soils, especially if the soils are thoroughly mixed and additional fill is added during site preparation.

CLIENT OPTIONAL SERVICES

This report was based on the assumption that an adequate program of client consultation, construction monitoring, and testing will be performed during the final design and construction phases to check conformance with the recommendations of this report. Maintaining ESSC as the geotechnical engineering consultant from beginning to end of this project will help provide continuity of services. The recommended services include, but are not necessarily limited to, the following:

- a. Consultation as required during the final design stages of the project.
- b. Review of grading and/or building plans.
- c. Observation and testing during site preparation, grading, placement of engineered fill, and backfill of utility trenches.
- d. Consultation as required during construction.

LIMITATIONS AND UNIFORMITY OF CONDITIONS

The conclusions and recommendations submitted in this report relative to the proposed development are based, in part, upon the data obtained from eight (8) exploratory soil borings, site observations during the field exploration operations, review of a previous report prepared for the site and past experience. The nature and extent of variations between subsurface soil conditions may not become evident until construction. If variations then appear evident, it will be necessary to re-evaluate the recommendations of this report.

In the event of any change in the assumed nature or design of the proposed project as planned, the conclusions and recommendations contained in this report shall not be considered valid unless the changes are reviewed and the conclusions of this report modified or verified in writing. This report is issued with the understanding that it is the responsibility of the Southern Kern Unified School District or of their representatives, to insure that the information and recommendations contained in this report are called to the attention of the architects and engineers for the project and incorporated into the plan. It is also the responsibility of Southern Kern Unified School District or of their representatives, to insure that the necessary steps are taken to see that the contractor and subcontractors carry out such recommendations in the field.

As the geotechnical engineers for this project, ESSC strives to provide services in accordance with generally accepted geotechnical engineering practices in this community at this time. No warranty or guarantee is expressed or implied. This report was prepared for the exclusive use of the Southern Kern Unified School District and their authorized agents.

It is recommended that ESSC be provided the opportunity for a general review of final design and specifications in order that earthwork and foundation recommendations may be properly interpreted and implemented in the design specifications. If ESSC is not accorded the privilege of making this recommended review, ESSC can assume no responsibility for misinterpretation of the recommendations contained in this report.

The scope of ESSC's current services for this report did not include any environmental assessment or investigation for the presence or absence of wetlands, or hazardous or toxic materials in the soil, surface water, groundwater or air, on or below or around the site.

The statements contained in 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 are due to natural processes or to the works of man, on this or adjacent properties. In addition, changes in applicable or appropriate standards occur, whether they result from legislation or the broadening of knowledge. Accordingly, the conclusions of this report may be invalidated, wholly or partially, by changes outside of ESSC's control, and should therefore be reviewed after one year.

CLOSURE

Earth Systems Southern California trusts this report is sufficient at this time and meets your current needs. Earth Systems Southern California appreciates this opportunity to provide professional geotechnical engineering services for this project. If you have any questions regarding the information contained in this report, or if you require additional geotechnical engineering services, please contact us.

Respectfully submitted,

**Earth Systems
Southern California**

Bruce A. Hick
Geotechnical Engineer
R. G. E. #2284

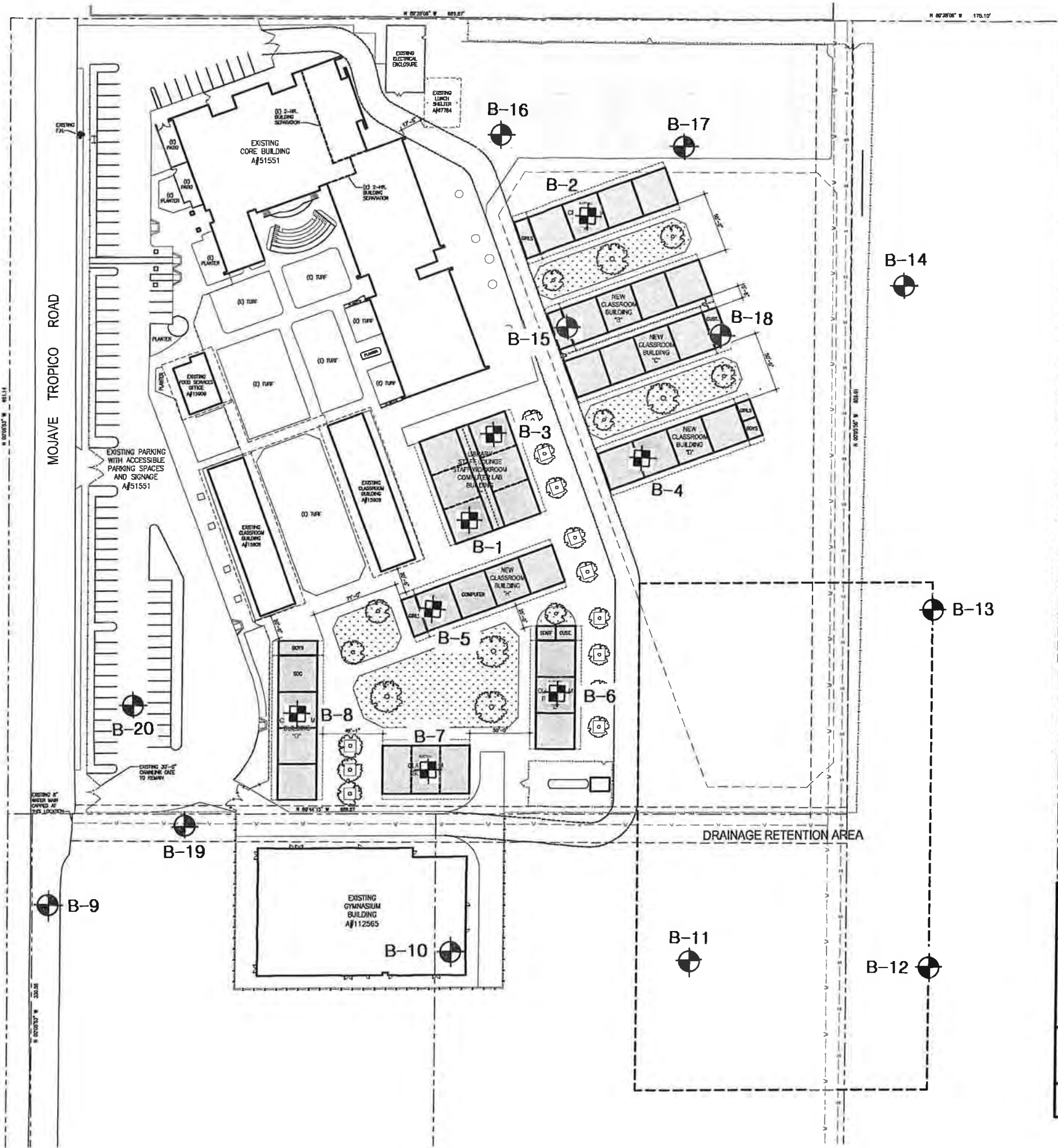


8/24/2012


APPENDIX A


Site Plan

Boring Logs



LEGEND

- 
B-8 DENOTES NUMBER AND APPROXIMATE LOCATION OF EXPLORATORY BORING FOR THIS REPORT.

- 
B-20 DENOTES NUMBER AND APPROXIMATE LOCATION OF EXPLORATORY BORING CONDUCTED FOR REPORT DATED JANUARY 6, 2009.

SITE PLAN	
Tropico Middle School Expansion 3180 Mojave Tropic Road Rosamond, California	
EARTH SYSTEMS SOUTHERN CALIFORNIA	
DATE: 8-24-2012	JOB NO: PL-07513-02

MAJOR DIVISIONS			GRAPH SYMBOL	LETTER SYMBOL	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GP	POORLY-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
				GM	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES
			GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES	
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING NO. 4 SIEVE	CLEAN SAND (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SP	POORLY-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SM	SILTY SANDS, SAND-SILT MIXTURES
			SC	CLAYEY SANDS, SAND-CLAY MIXTURES	
FINE GRAINED SOILS MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY	
			CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS	
			OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY	
	SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS	
			CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS	
			OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS	
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENT

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

UNIFIED SOIL CLASSIFICATION SYSTEM

Tropico Middle School Expansion
Rosamond, California



Earth Systems
Southern California

8/24/2012

PL-07513-02

SYMBOLS COMMONLY USED ON BORING LOGS



Modified California Split Barrel Sampler



Modified California Split Barrel Sampler - No Recovery



Standard Penetration Test (SPT) Sampler



Standard Penetration Test (SPT) Sampler - No Recovery



Perched Water Level



Water Level First Encountered



Water Level After Drilling




Pocket Penetrometer (tsf)



Vane Shear (ksf)

1. The location of borings were approximately determined by pacing and/or siting from visible features. Elevations of borings are approximately determined by interpolating between plan contours. The location and elevation of the borings should be considered
2. The stratification lines represent the approximate boundary between soil types and the transition may be gradual.
3. Water level readings have been made in the drill holes at times and under conditions stated on the boring logs. This data has been reviewed and interpretations made in the text of this report. However, it must be noted that fluctuations in the level of the groundwater may occur due to variations in rainfall, tides, temperature, and other factors at the time measurements were made.

BORING LOG SYMBOLS	
Tropico Middle School Expansion Rosamond, California	
 Earth Systems Southern California	
8/24/2012	PL-07513-02

TERMS DESCRIBING CONSISTENCY OR CONDITION

COARSE GRAINED SOILS

(Major Portion Retained on Number 200 Sieve)

Includes clean gravels and sands described as fine, medium or coarse, depending on distribution of grain sizes, and silty or clayey gravels and sands, condition is rated according to laboratory tests or estimated from resistance to sampler penetration.

Penetration Resistance* California Split Spoon (CSS) Blows/Ft		Penetration Resistance* Standard Pentrometer (SPT) Blows/Ft
0-5	Very Loose	0-4
5-15	Loose	5-10
15-40	Medium Dense	11-30
40-70	Dense	31-50
>70	Very Dense	>50

Fine Grained Soils

(Major Portion Passing the Number 200 Sieve)

Includes inorganic and organic silts and clays, gravelly, sandy or silty clays, and clayey silts. Consistency is rated according to laboratory tests or estimated from resistance to sampler penetration.

Penetration Resistance* California Split Spoon (CSS) Blows/Ft		Penetration Resistance* Standard Pentrometer (SPT) Blows/Ft
0-2	Very Soft	0-2
2-5	Soft	2-4
6-10	Medium Stiff	5-8
11-18	Stiff	9-15
19-36	Very Stiff	16-30
>36		>30

* Penetration resistance based on a 140 pound hammer falling approximately 30 inches.

Apparent Density/Consistency of Soil

Tropico Middle School Expansion
Rosamond, California



Earth Systems
Southern California

8/24/2012

PL-07513-02



Boring No: B-1	Drilling Date: 7-27-12
Project Name: Tropico Middle School	Drilling Method: 8" Hollow Stem Auger
Project Number: PL-07513-02	Drill Type: Mobil B-61
Boring Location: Per Plan	Logged By: Robert Ferguson

Depth (Ft.)	Sample Type		Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	DESCRIPTION OF UNITS
	Bulk	MOD Calif. SPT						
0								
0-1	█		6, 7		SM	95.2	3.8	Light Brown Silty Fine to Medium Sand, Moist, Loose.
1-2		█	4, 7		SM	109.6	2.1	Light Brown Silty Fine to Coarse Sand, Slightly Moist, Loose.
2-3		█	5, 9		SM			Light Brown Silty Fine to Coarse Sand, Moist,
3-4		█	6, 11		SP	102.6	2.1	Light Brown Slightly Silty Fine to Coarse Sand, Slightly Moist, Medium Dense.
4-5		█	6, 13		SP	104.1	2.3	Light Brown Slightly Silty Fine to Coarse Sand, Slightly Moist, Medium Dense.
5-6								
6-7		█	7, 9		SM			Moderate Yellowish Brown Silty Fine Sand, Moist, Medium Dense.
7-8								
8-9		█	7, 12		SM	107.6	4.2	Light Olive Brown Very Silty Fine to Medium Sand, Moist, Medium Dense.
9-10								
10-11								
11-12								
12-13								
13-14								
14-15								
15-16								
16-17								
17-18								
18-19								
19-20								
20-21								
21-22								
22-23								
23-24								
24-25								
25-26								
26-27								
27-28								
28-29								
29-30								
30-31		█	9, 13		SM	106.1	13.5	Light Olive Brown Silty Fine to Medium Sand, Moist, Medium Dense.
31-32								
32-33								
33-34								
34-35								
35-36								
36-37								
37-38								
38-39								
39-40								
40-41								
41-42								
42-43								
43-44								
44-45								
45-46								
46-47								
47-48								
48-49								
49-50								
50-51		█	25, 31		SM	110.3	5.3	Moderate Yellowish Brown Silty Fine to Coarse Sand, Moist, Dense.
51-52								
52-53								
53-54								
54-55								
55								

Total depth = 51'.
 No free groundwater was encountered at time of drilling.
 No Bedrock Encountered
 Note: The stratification lines shown represent the approximate boundaries between soil and/or rock types and the transitions may be gradational.



Boring No: B-2	Drilling Date: 7-27-12
Project Name: Tropico Middle School	Drilling Method: 8" Hollow Stem Auger
Project Number: PL-07513-02	Drill Type: Mobil B-61
Boring Location: Per Plan	Logged By: Robert Ferguson

Depth (Ft.)	Sample Type		Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	DESCRIPTION OF UNITS
	Bulk	MOD Calif. SPT						
0					SM			Brown Silty Fine to Coarse Sand with Gravel to 2", Moist, Medium Dense.
5			10, 19		SM	95.4	4.9	Light Brown Silty Fine to Coarse Sand, Moist, Medium Dense.
			7, 10		SM	107.7	3.8	Light Brown Silty Fine to Coarse Sand with Gravel to 1", Moist, Medium Dense.
			8, 9		SM	107.6	6.6	Moderate Yellowish Brown Silty Fine to Coarse Sand, Moist,
10			4, 6		SM			Moderate Yellowish Brown Silty Fine to Coarse Sand, Moist, Medium Dense.
15			8, 9		SM	108.0	13.6	
20								Total depth = 16'. No free groundwater was encountered at time of drilling. No Bedrock Encountered Note: The stratification lines shown represent the approximate boundaries between soil and/or rock types and the transitions may be gradational.



Boring No: B-3 Project Name: Tropico Middle School Project Number: PL-07513-02 Boring Location: Per Plan	Drilling Date: 7-27-12 Drilling Method: 8" Hollow Stem Auger Drill Type: Mobil B-61 Logged By: Robert Ferguson
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Depth (Ft.)	Sample Type		Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	DESCRIPTION OF UNITS
	Bulk	SPT						
			9, 13		SM	93.0	4.5	Brown Silty Fine to Coarse Sand with Gravel to 1", Moist, Medium Dense.
			8, 8		SM	119.0	4.4	Brown Very Silty Fine to Medium Sand, Moist, Medium Dense.
5			5, 9		SM	114.9	9.0	Brown to Light Brown Silty Fine to Coarse Sand, Moist,
			8, 11		SP	113.8	1.4	Light Brown Gravelly (to 1/2") Fine to Coarse Sand with Slight Silt, Slightly Moist, Medium Dense.
10			11, 11		SM	113.6	4.3	Moderate Yellowish Brown Silty Fine to Medium Sand, Moist, Medium Dense.
			10, 13		SM	110.7	2.4	Light Brown Silty Fine to Medium Sand, Moist, Medium Dense.
15								
20								
<p>Total depth = 16'.</p> <p>No free groundwater was encountered at time of drilling.</p> <p>No Bedrock Encountered</p> <p>Note: The stratification lines shown represent the approximate boundaries between soil and/or rock types and the transitions may be gradational.</p>								



Boring No: B-4 Project Name: Tropico Middle School Project Number: PL-07513-02 Boring Location: Per Plan	Drilling Date: 7-27-12 Drilling Method: 8" Hollow Stem Auger Drill Type: Mobil B-61 Logged By: Robert Ferguson
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Depth (Ft.)	Sample Type		Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	DESCRIPTION OF UNITS
	Bulk	SPT						
			2, 6		SM	98.2	8.4	Brown Silty Fine to Coarse Sand, Very Moist, Loose.
			5, 9		SM	119.7	6.5	Brown Silty Fine to Coarse Sand, Very Moist, Loose.
5			6, 9		SM	111.8	4.4	Light Brown Silty Fine to Coarse Sand, Moist, Medium Dense.
					SM			Light Brown Silty Fine to Coarse Sand with Slight Gravel to 1/2", Moist, Medium Dense.
10			9, 11		SM	110.9	4.2	Light Brown Silty Fine to Coarse Sand with Slight Gravel to 1/2", Moist, Medium Dense.
					SM			Light Brown Silty Fine to Coarse Sand with Slight Gravel to 1/2", Moist, Medium Dense.
15			8, 8		SM	113.2	9.5	
								Total depth = 16'.
								No free groundwater was encountered at time of drilling.
								No Bedrock Encountered
								Note: The stratification lines shown represent the approximate boundaries between soil and/or rock types and the transitions may be gradational.
20								



Boring No: B-5 Project Name: Tropico Middle School Project Number: PL-07513-02 Boring Location: Per Plan	Drilling Date: 7-27-12 Drilling Method: 8" Hollow Stem Auger Drill Type: Mobil B-61 Logged By: Robert Ferguson
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Depth (Ft.)	Sample Type		Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	DESCRIPTION OF UNITS
	Bulk	SPT MOD Calif.						
5			7, 7	SM		94.9	3.2	Light Brown Silty Fine to Coarse Sand, Moist, Loose.
			8, 10	SM		110.1	3.1	Light Brown Silty Fine to Coarse Sand with Gravel to 1", Moist, Medium Dense.
			7, 9	SM		107.9	2.4	Light Brown Silty Fine to Coarse Sand with Gravel to 1", Moist, Medium Dense.
			7, 10	SM		110.7	2.0	Moderate Yellowish Brown Silty Fine to Coarse Sand, Slightly Moist, Medium Dense.
			6, 12	SM		111.5	5.8	Moderate Yellowish Brown Silty Fine to Coarse Sand, Slightly Moist, Medium Dense.
10								
15								
20								<p>Total depth = 16'.</p> <p>No free groundwater was encountered at time of drilling.</p> <p>No Bedrock Encountered</p> <p>Note: The stratification lines shown represent the approximate boundaries between soil and/or rock types and the transitions may be gradational.</p>



Boring No: B-6	Drilling Date: 7-27-12
Project Name: Tropico Middle School	Drilling Method: 8" Hollow Stem Auger
Project Number: PL-07513-02	Drill Type: Mobil B-61
Boring Location: Per Plan	Logged By: Robert Ferguson

Depth (Ft.)	Sample Type		Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	DESCRIPTION OF UNITS
	Bulk	MOD Calif.						
			5, 7		SM	92.2	2.9	Brown Silty Fine to Coarse Sand, Slightly Moist, Loose.
			5, 6		SM	111.5	3.0	Brown Silty Fine to Coarse Sand, Slightly Moist, Loose.
5			5, 7		SM	111.7	3.1	Brown Silty Fine to Coarse Sand, Slightly Moist,
10			5, 8		SP	100.1	2.0	Light Brown Gravelly (to 1") Fine to Coarse Sand with Slight Silt, Slightly Moist,
15			8, 9		SP	106.6	2.1	Light Brown Gravelly (to 1") Fine to Coarse Sand with Slight Silt, Slightly Moist, Medium Dense.
20	<p>Total depth = 16'.</p> <p>No free groundwater was encountered at time of drilling.</p> <p>No Bedrock Encountered</p> <p>Note: The stratification lines shown represent the approximate boundaries between soil and/or rock types and the transitions may be gradational.</p>							



Boring No: B-7
Project Name: Tropico Middle School
Project Number: PL-07513-02
Boring Location: Per Plan

Drilling Date: 7-27-12
Drilling Method: 8" Hollow Stem Auger
Drill Type: Mobil B-61
Logged By: Robert Ferguson

Depth (Ft.)	Sample Type		Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	DESCRIPTION OF UNITS
	Bulk	SPT						
0					SM			
6.7			6, 7		SM	94	2.1	Light Brown Silty Fine to Coarse Sand with Slight Gravel to 3/4", Slightly Moist, Loose.
10.10			10, 10		SM	107	1.4	Moderate Yellowish Brown Silty Fine to Medium Sand, Dry, Medium Dense.
9.10			9, 10		SM	108	3.7	Light Brown Silty Fine to Coarse Sand, Slightly Moist, Medium Dense.
6.10			6, 10		SM	118	2.9	Light Brown Silty Fine to Coarse Sand, Slightly Moist, Medium Dense.
8.10			8, 10		SM	122	6.8	Moderate Yellowish Brown Silty Fine to Coarse Sand with Gravel to 1/2", Slightly Moist, Medium Dense.
13.15			13, 15		SP	110	2.2	Light Moderate Brown Slightly Silty Fine to Coarse Sand, Slightly Moist, Medium Dense.
<p>Total depth = 21'.</p> <p>No free groundwater was encountered at time of drilling.</p> <p>No Bedrock Encountered</p> <p>Note: The stratification lines shown represent the approximate boundaries between soil and/or rock types and the transitions may be gradational.</p>								

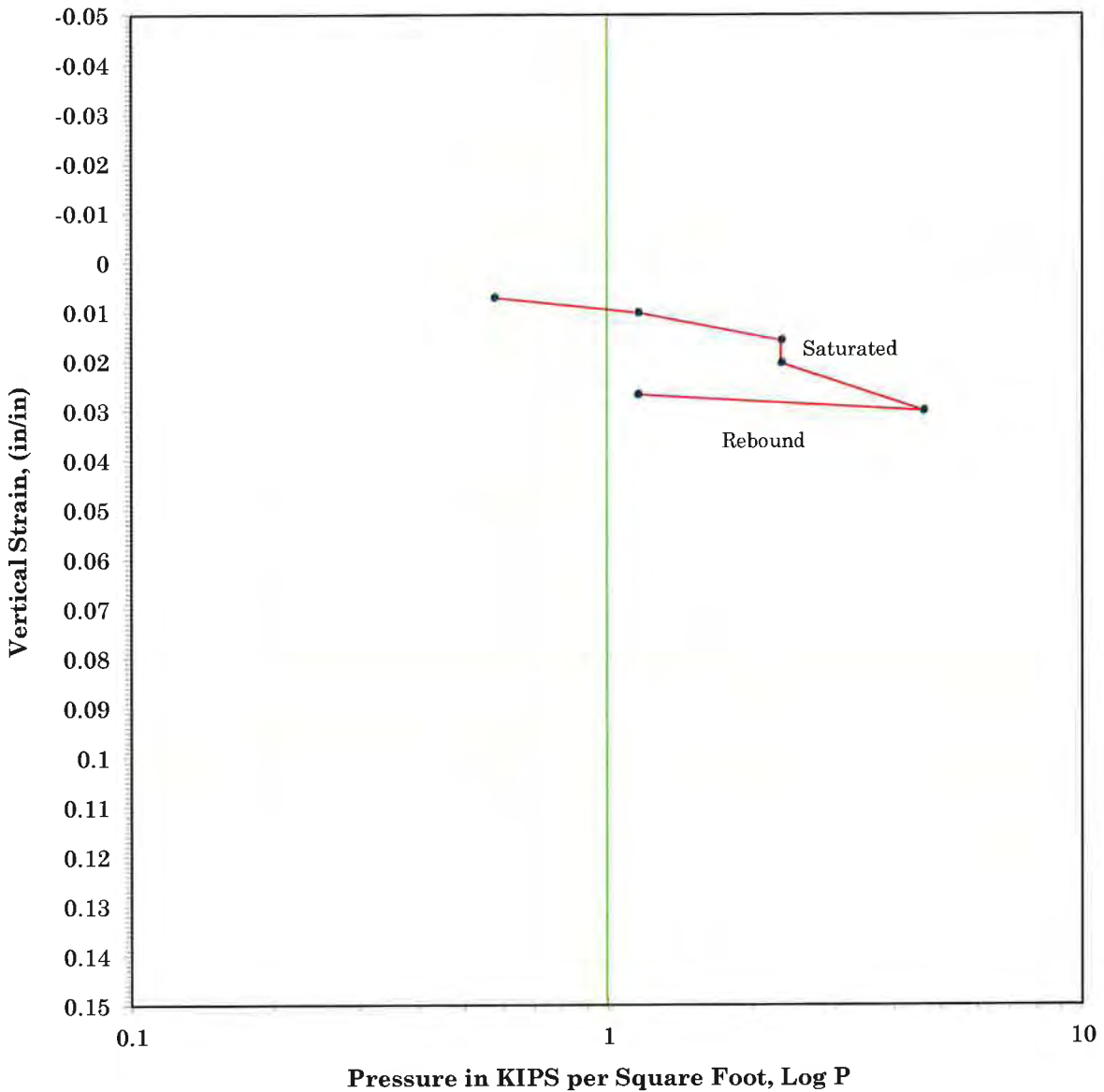


Boring No: B-8 Project Name: Tropico Middle School Project Number: PL-07513-02 Boring Location: Per Plan	Drilling Date: 7-27-12 Drilling Method: 8" Hollow Stem Auger Drill Type: Mobil B-61 Logged By: Robert Ferguson
---	---

Depth (Ft.)	Sample Type		Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	DESCRIPTION OF UNITS
	Bulk	SPT						
					SM			
			7.8			112.8	2.3	Light Brown Silty Fine to Coarse Sand, Dry, Medium Dense.
			5.6		SM	110.5	2.3	Moderate Yellowish Brown Very Silty Fine to Coarse Sand, Dry, Loose.
5			5.6		SM	108.7	4.9	Moderate Yellowish Brown Very Silty Fine to Coarse Sand with Gravel to 1/2", Moist,
					SM			Light Brown Silty Fine to Coarse Sand, Moist,
10			4.5					
					SM			Light Brown Silty Fine to Coarse Sand, Slightly Moist.
15			6.7			105.0	2.8	
								Total depth = 16'.
								No free groundwater was encountered at time of drilling.
								No Bedrock Encountered
20								Note: The stratification lines shown represent the approximate boundaries between soil and/or rock types and the transitions may be gradational.


APPENDIX B

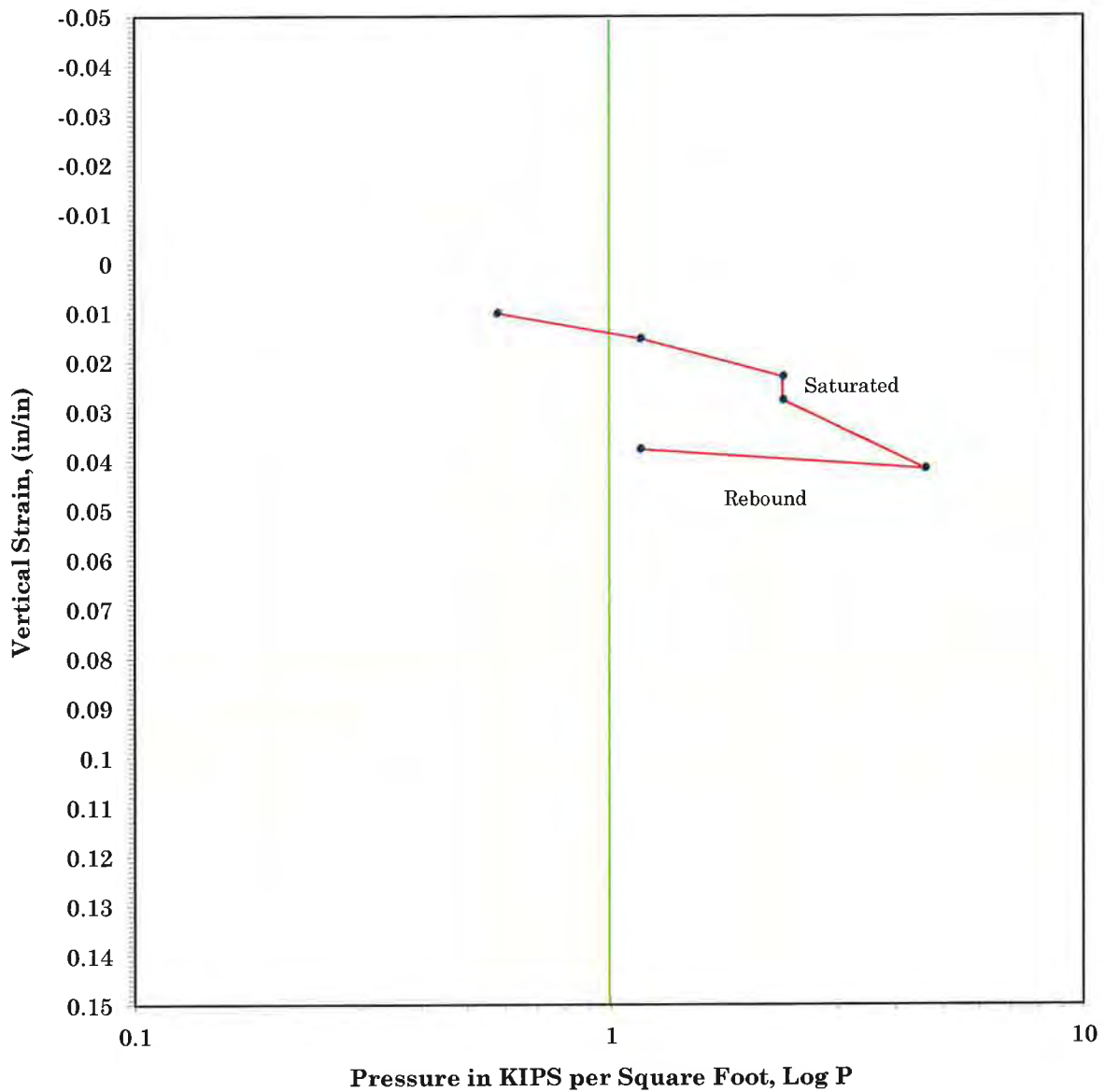
Summary of Laboratory Test Results



Sample Location: Boring #1 @ 7.5'
 Material: Silty Fine to Coarse Sand (SM)
 Initial Dry Density: 102.6 PCF
 Moisture Content: 2.1%
 Percent Hydroconsolidation: 0.5%


* Test Method: ASTM D-2435

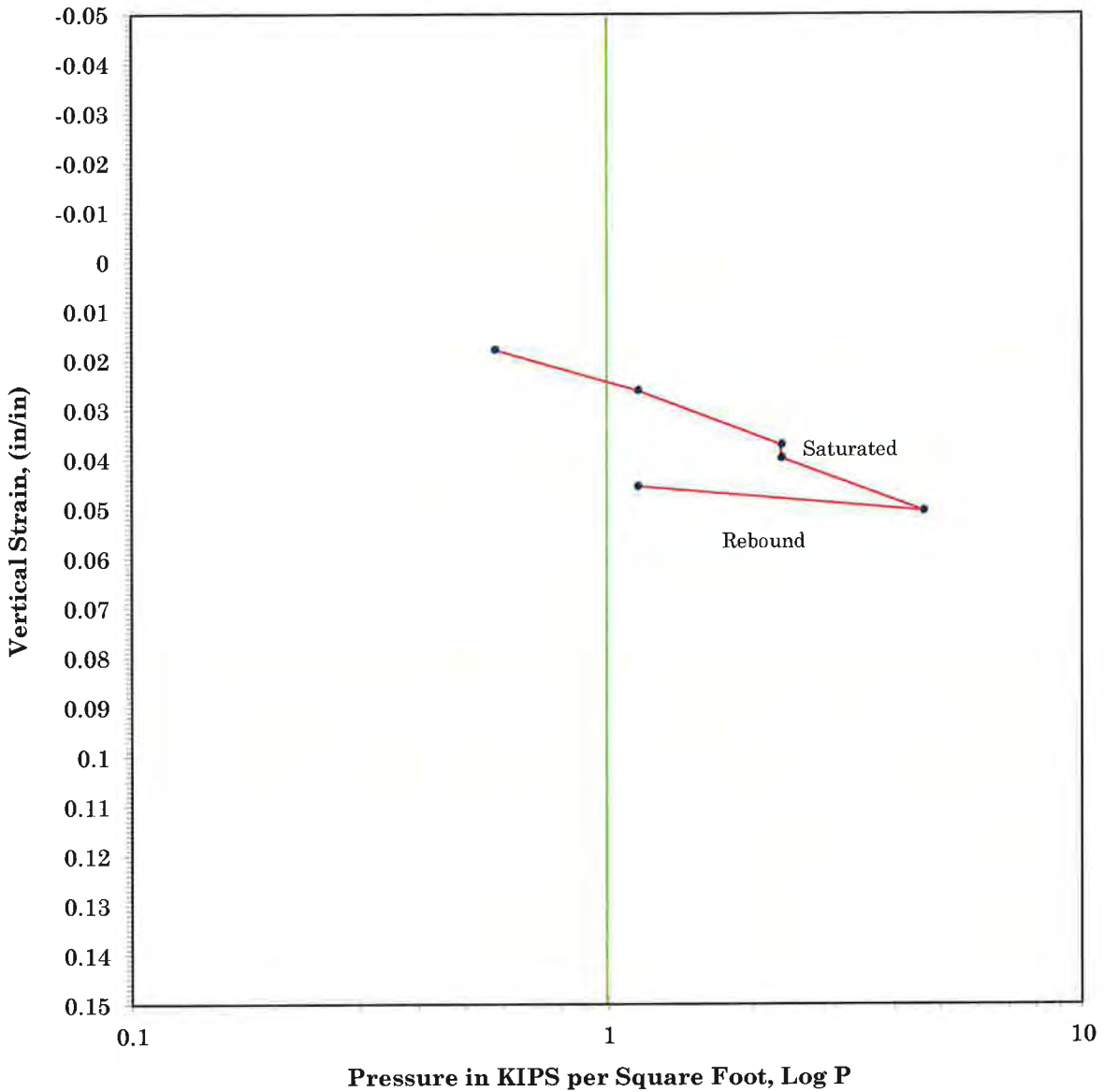
Consolidation Test	
Tropico Middle School Expansion	
Rosamond, California	
 Earth Systems Southern California	
8/24/2012	PL-07513-02



Sample Location: Boring #2 @ 4'
 Material: Silty Fine to Coarse Sand (SM)
 Initial Dry Density: 107.7 PCF
 Moisture Content: 3.8%
 Percent Hydroconsolidation: 0.5%


* Test Method: ASTM D-2435

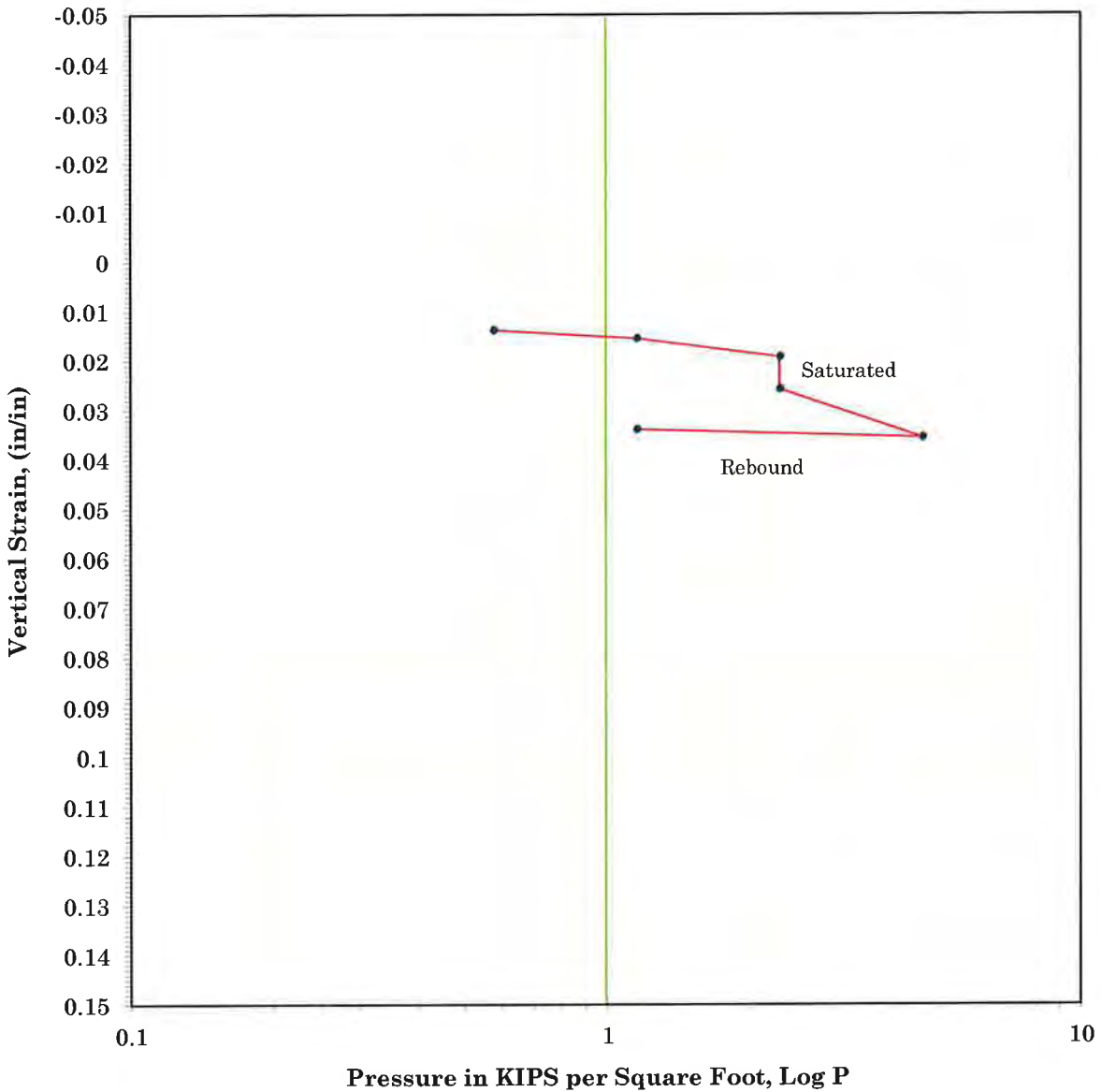
Consolidation Test	
Tropico Middle School Expansion	
Rosamond, California	
 Earth Systems Southern California	
8/24/2012	PL-07513-02



Sample Location: Boring #6 @ 5'
 Material: Silty Fine to Coarse Sand (SM)
 Initial Dry Density: 111.7 PCF
 Moisture Content: 3.1%
 Percent Hydroconsolidation: 0.3%


* Test Method: ASTM D-2435

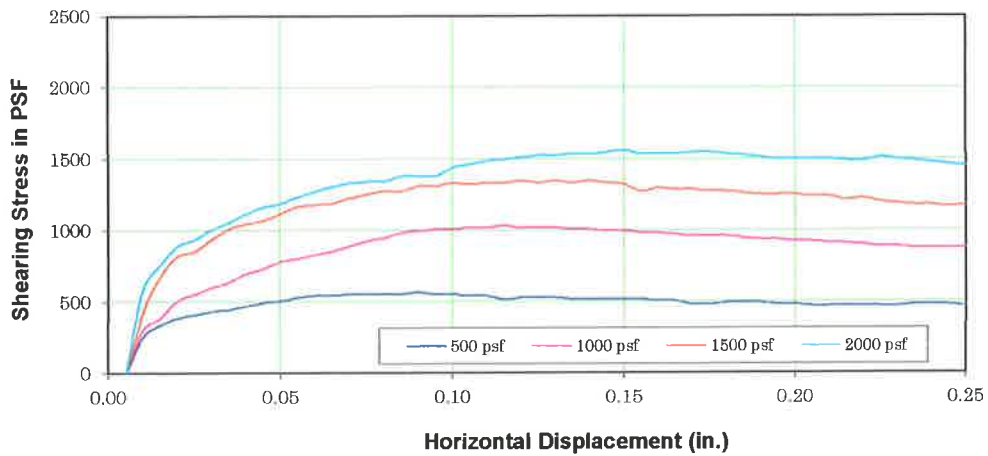
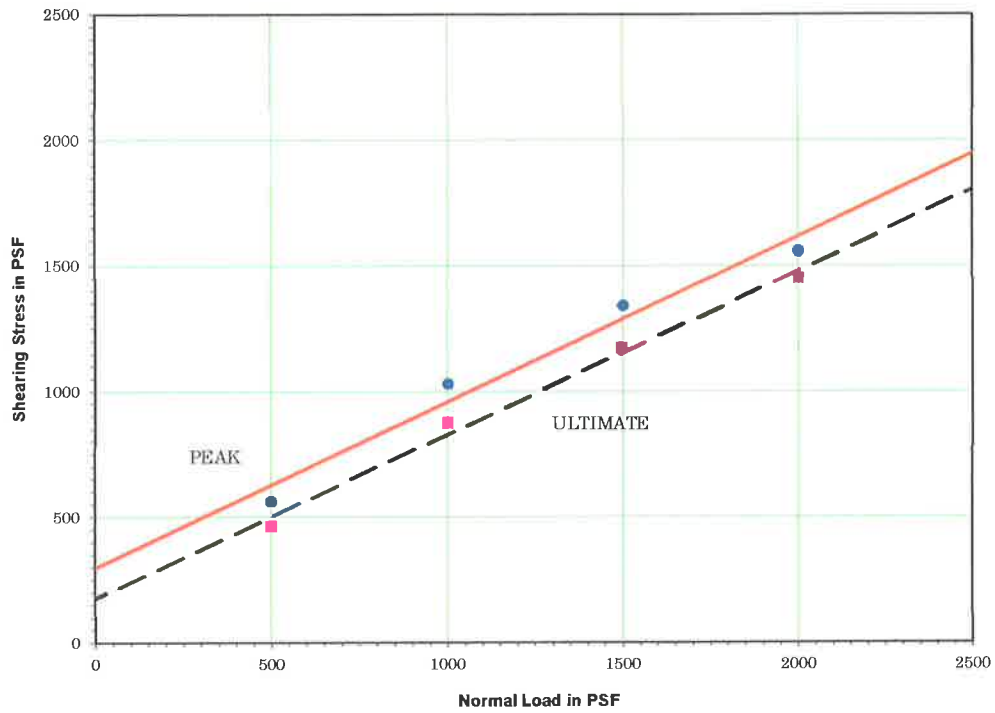
Consolidation Test	
Tropico Middle School Expansion	
Rosamond, California	
 Earth Systems Southern California	
8/24/2012	PL-07513-02



Sample Location: Boring #8 @ 10'
 Material: Silty Fine to Coarse Sand (SM)
 Initial Dry Density: 100.7 PCF
 Moisture Content: 6.0%
 Percent Hydroconsolidation: 0.7%

* Test Method: ASTM D-2435

Consolidation Test	
Tropico Middle School Expansion	
Rosamond, California	
 Earth Systems Southern California	
8/24/2012	PL-07513-02




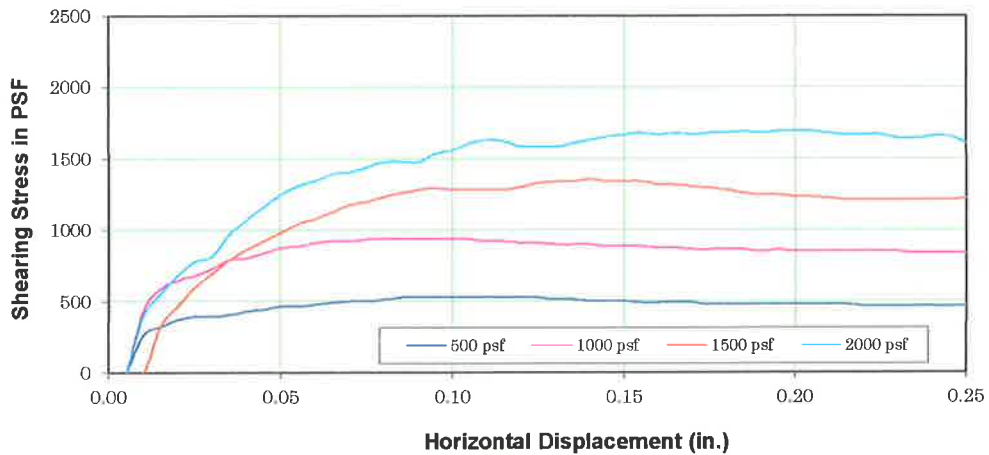
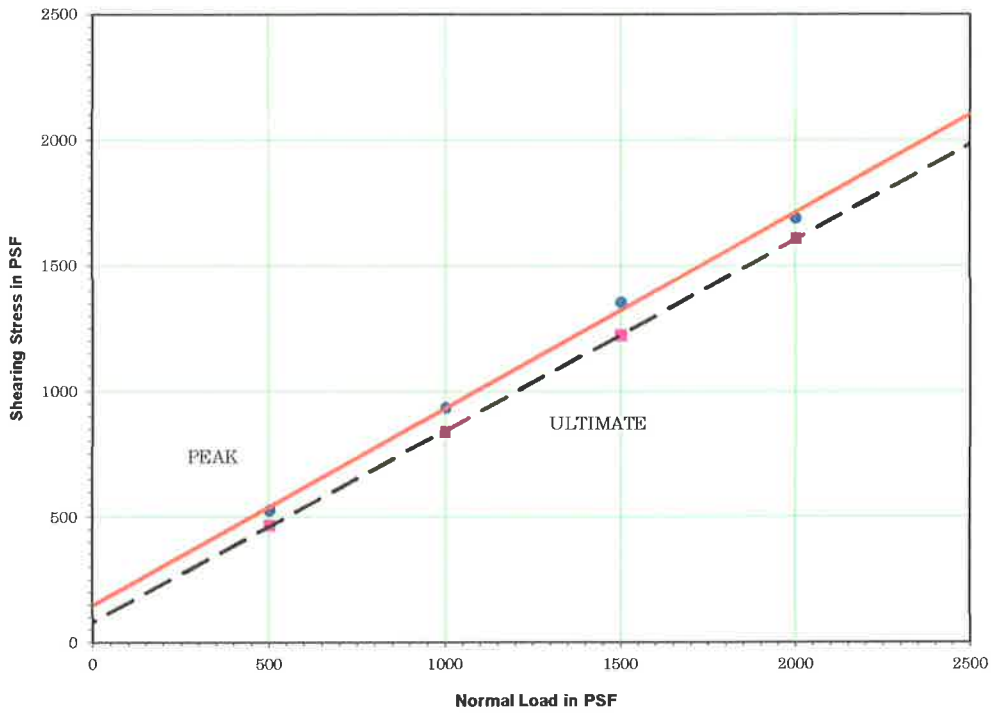
DIRECT SHEAR DATA*

Sample Location: Boring B-1 @ 0-5'
 Material: Silty Fine to Coarse Sand (SM)
 Dry Density (pcf): 117.0
 Average Degree of Saturation: 95.4
 Shear Rate (in/min): 0.004

	Peak	Ultimate
ϕ Angle of Friction (degrees):	33	33
c Cohesive Strength (psf):	300	180
Test Type:	Peak and Ultimate	

* Test Method: ASTM D-3080

DIRECT SHEAR TEST	
Tropico Middle School	
Rosamond, California	
	Earth Systems Southern California
8/24/2012	PL-07513-02




DIRECT SHEAR DATA*

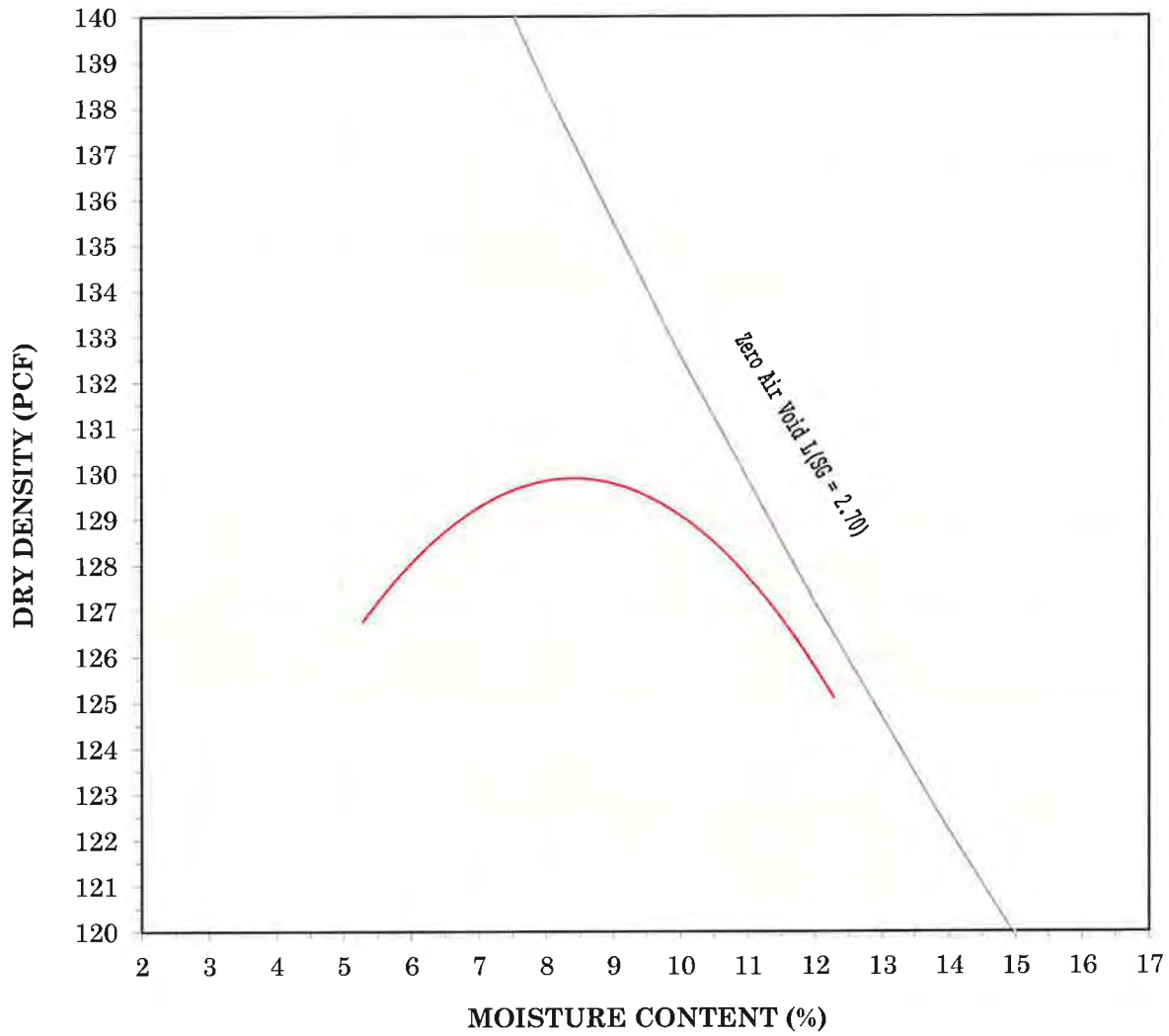
Sample Location: Boring B-3 @ 3'
 Material: Silty Fine to Coarse Sand (SM)
 Dry Density (pcf): 119.0
 Average Degree of Saturation: 91.3
 Shear Rate (in/min): 0.004

	Peak	Ultimate
ϕ Angle of Friction (degrees):	38	37
c Cohesive Strength (psf):	150	80
Test Type:	Peak and Ultimate	

* Test Method: ASTM D-3080

DIRECT SHEAR TEST	
Tropico Middle School	
Rosamond, California	
	Earth Systems
	Southern California
8/24/2012	PL-07513-02

1ne



Maximum Density - Optimum Moisture Characteristics*

Sample Location: Boring #1 @ 0-5'

Material: Light Brown Silty Fine to Coarse Sand (SM)

Maximum Density (pcf): 130.0

Optimum Moisture: 8.5%

* Test Method: ASTM D-1557


MAXIMUM DENSITY - OPTIMUM MOISTURE	
Tropico Middle School Expansion	
Rosamond, California	
 Earth Systems Southern California	
8/24/2012	PL-07513-03

Table 1 - Laboratory Tests on Soil Samples

*Earth Systems Southern California
Tropico Middle School Expansion
Your #PL-7513-02, HDR\Schiff #12-0658LAB
30-Jul-12*

Sample ID	#1 @ 0-5' SM		
Resistivity	Units		
as-received	ohm-cm		44,000
saturated	ohm-cm		8,400
pH			7.8
Electrical			
Conductivity	mS/cm		0.06
Chemical Analyses			
Cations			
calcium	Ca ²⁺	mg/kg	50
magnesium	Mg ²⁺	mg/kg	6.4
sodium	Na ¹⁺	mg/kg	21
potassium	K ¹⁺	mg/kg	20
Anions			
carbonate	CO ₃ ²⁻	mg/kg	ND
bicarbonate	HCO ₃ ¹⁻	mg/kg	137
fluoride	F ¹⁻	mg/kg	6.0
chloride	Cl ¹⁻	mg/kg	0.7
sulfate	SO ₄ ²⁻	mg/kg	8.6
phosphate	PO ₄ ³⁻	mg/kg	6.0
Other Tests			
ammonium	NH ₄ ¹⁺	mg/kg	ND
nitrate	NO ₃ ¹⁻	mg/kg	19
sulfide	S ²⁻	qual	na
Redox		mV	na

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

TABLE B-I

SUMMARY OF EXPANSION INDEX* TESTING

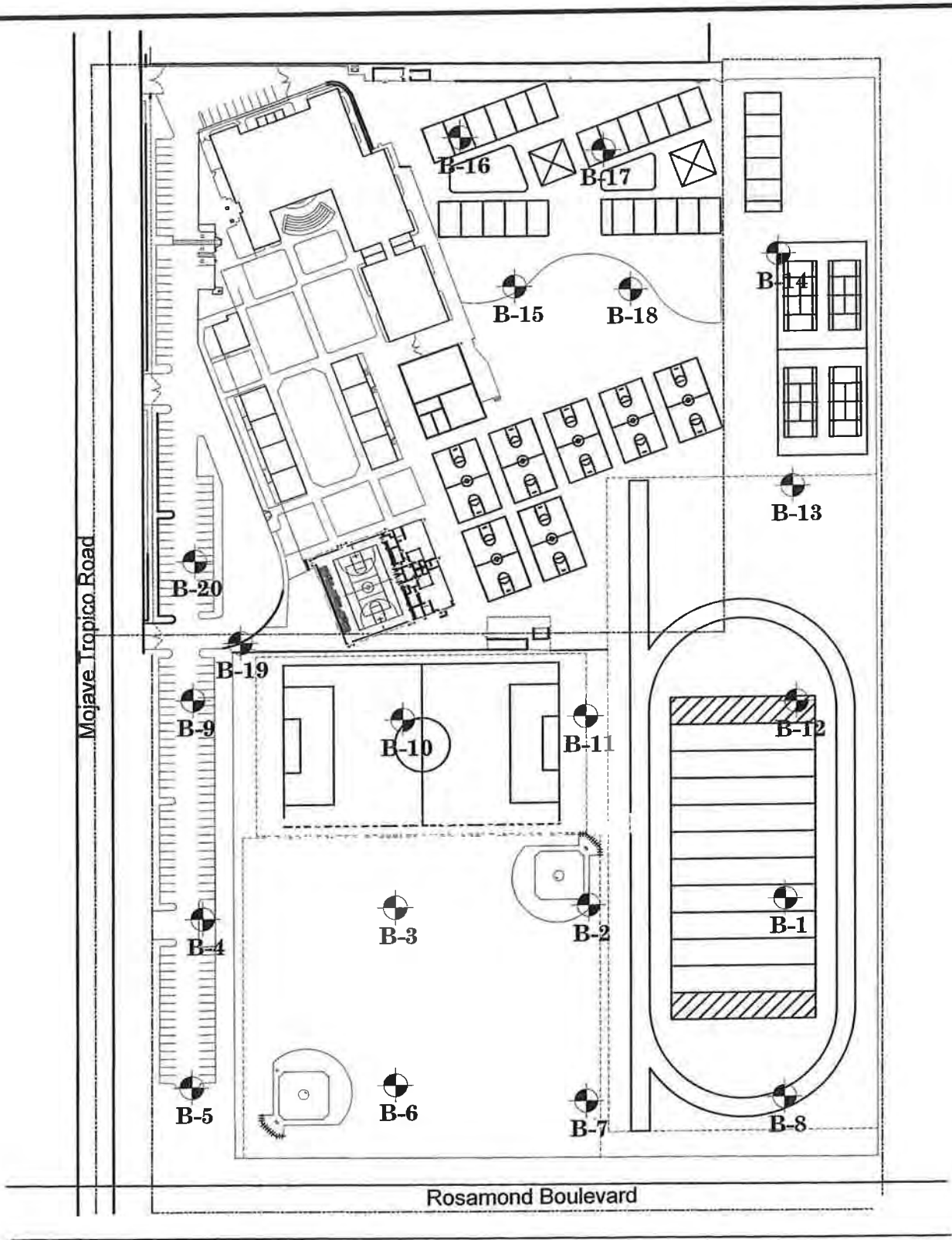
<u>Sample Location</u>	<u>Material Description</u>	<u>Expansion Index</u>	<u>Expansion Potential</u>
Boring #1 @ 0-5 feet	Silty Sand w/ Slight Clay (SM)	0	Very Low

*ASTM D 4829 Test Method


APPENDIX C

Boring Logs and Summary of Laboratory Tests

From Report Dated January 6, 2009




Legend

 Approximate location of soils boring
B-20

Scale 1" ≈ 150 feet



Site Plan	
Tropico Middle School Rosamond, California	
 Earth Systems Southern California	
1/06/09	PL-07218-03

MAJOR DIVISIONS			GRAPH SYMBOL	LETTER SYMBOL	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GP	POORLY-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
				GM	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES
			GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES	
	SAND AND SANDY SOILS	CLEAN SAND (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SP	POORLY-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SM	SILTY SANDS, SAND-SILT MIXTURES
				SC	CLAYEY SANDS, SAND-CLAY MIXTURES
FINE GRAINED SOILS	SILTS AND CLAYS	LIQUID LIMIT <u>LESS</u> THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS	LIQUID LIMIT <u>GREATER</u> THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENT
HIGHLY ORGANIC SOILS					

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

UNIFIED SOIL CLASSIFICATION SYSTEM

Tropico Middle School
Rosamond, California












Earth Systems
Southern California


1/06/09

PL-07218-03

SYMBOLS COMMONLY USED ON BORING LOGS

-  Modified California Split Barrel Sampler
-  Modified California Split Barrel Sampler - No Recovery
-  Standard Penetration Test (SPT) Sampler
-  Standard Penetration Test (SPT) Sampler - No Recovery
-  Perched Water Level
-  Water Level First Encountered
-  Water Level After Drilling
-  Pocket Penetrometer (tsf)
-  Vane Shear (ksf)

1. The location of borings were approximately determined by pacing and/or siting from visible features. Elevations of borings are approximately determined by interpolating between plan contours. The location and elevation of the borings should be considered
2. The stratification lines represent the approximate boundary between soil types and the transition may be gradual.
3. Water level readings have been made in the drill holes at times and under conditions stated on the boring logs. This data has been reviewed and interpretations made in the text of this report. However, it must be noted that fluctuations in the level of the groundwater may occur due to variations in rainfall, tides, temperature, and other factors at the time measurements were made.

BORING LOG SYMBOLS	
Tropico Middle School Rosamond, California	
 Earth Systems Southern California	
1/06/09	PL-07218-03

TERMS DESCRIBING CONSISTENCY OR CONDITION

COARSE GRAINED SOILS

(Major Portion Retained on Number 200 Sieve)

Includes clean gravels and sands described as fine, medium or coarse, depending on distribution of grain sizes, and silty or clayey gravels and sands, condition is rated according to laboratory tests or estimated from resistance to sampler penetration.

Penetration Resistance* California Split Spoon (CSS) Blows/Ft		Penetration Resistance* Standard Pentrometer (SPT) Blows/Ft
0-5	Very Loose	0-4
5-15	Loose	5-10
15-40	Medium Dense	11-30
40-70	Dense	31-50
>70	Very Dense	>50


Fine Grained Soils

(Major Portion Passing the Number 200 Sieve)

Includes inorganic and organic silts and clays, gravelly, sandy or silty clays, and clayey silts. Consistency is rated according to laboratory tests or estimated from resistance to sampler penetration.

Penetration Resistance* California Split Spoon (CSS) Blows/Ft		Penetration Resistance* Standard Pentrometer (SPT) Blows/Ft
0-2	Very Soft	0-2
2-5	Soft	2-4
6-10	Medium Stiff	5-8
11-18	Stiff	9-15
19-36	Very Stiff	16-30
>36		>30

* Penetration resistance based on a 140 pound hammer falling approximately 30 inches.

Apparent Density/Consistency of Soil	
Tropico Middle School Rosamond, California	
 Earth Systems Southern California	
1/6/09	PL-07218-03



Boring No: B-1	Drilling Date: August 27, 2008
Project Name: Tropico Middle School	Drilling Method: 8" Hollow Stem Auger
Project Number: PL-07218-03	Drill Type: Mobil B-61
Boring Location: Per Plan	Logged By: Rob Ferguson

Depth (Ft.)	Sample Type		Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	DESCRIPTION OF UNITS
	Bulk	MOD Calif.						
0								
5			7,9		SM	103	2.0	Light Moderate Brown Silty Fine to Medium Sand, Dry, Medium Dense.
			7,12		SM	102	1.9	Light Moderate Brown Silty Fine Sand, Dry, Medium Dense.
			7,9		SM	118	2.0	Light Moderate Brown Silty Fine to Coarse Sand, Dry, Medium Dense.
			7,9		SM	107	1.7	Light Moderate Brown Silty Fine to Coarse Sand, Dry, Medium Dense.
10			8,10		SM	****	1.9	Light Moderate Brown Silty Fine to Medium Sand, Dry, Medium Dense.
15			22,28		SM	121	1.8	Light Moderate Brown Silty Fine to Coarse Sand with Slight Gravel to 1/2", Dry, Dense.
20			18,23		SM	114	1.9	Light Moderate Brown Silty Fine to Coarse Sand, Dry, Dense.
25					SM			Pale Yellow Brown Silty Fine to Medium Sand with Clay, Slightly Moist, Dense.
30			18,41			122	3.2	
35								
40			25,32		SM	118	5.8	Pale Yellow Brown Silty Fine Sand with Clay, Slightly Moist, Dense.
45								
50			31,50 for 5"		SM	126	4.6	Pale Yellow Brown Silty Fine to Medium Sand with Clay, Slightly Moist, Very Dense.
55								Total depth = 51'. No free groundwater was encountered at the time of drilling. No bedrock encountered. Note: The stratification lines shown represent the approximate boundaries between soil and/or rock types and the transitions may be gradational.



Boring No: B-2 Project Name: Tropic Middle School Project Number: PL-07218-03 Boring Location: Per Plan	Drilling Date: August 27, 2008 Drilling Method: 8" Hollow Stem Auger Drill Type: Mobil B-61 Logged By: Rob Ferguson
--	--

Depth (Ft.)	Sample Type		Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	DESCRIPTION OF UNITS
	Bulk	MOD Calif.						
0								
5			10,14		SM	103	2.1	Light Moderate Brown Silty Fine to Medium Sand, Dry, Medium Dense.
			8,9		SM	115	3.0	Light Moderate Brown Silty Fine to Coarse Sand with Slight Gravel to 1", Slightly Moist, Medium Dense.
			8,9		SM	116	2.5	Light Moderate Brown Very Silty Fine to Medium Sand with Clay, Slightly Moist, Medium Dense.
10			7,12		SM	114	3.3	Light Moderate Brown Silty Fine Sand, Slightly Moist, Medium Dense.
15			7,9		SM	104	6.7	Light Moderate Brown Silty Fine Sand with Clay, Slightly Moist, Medium Dense.
20								Total depth = 16'. No free groundwater was encountered at the time of drilling. No bedrock encountered. Note: The stratification lines shown represent the approximate boundaries between soil and/or rock types and the transitions may be gradational.
25								



Earth Systems

Southern California

1024 West Avenue M-4, Palmdale CA, 93551
 (661) 948-7538/ (661) 948-7963 fax

Boring No: B-3	Drilling Date: August 27, 2008
Project Name: Tropico Middle School	Drilling Method: 8" Hollow Stem Auger
Project Number: PL-07218-03	Drill Type: Mobil B-61
Boring Location: Per Plan	Logged By: Rob Ferguson

Depth (Ft.)	Sample Type		Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	DESCRIPTION OF UNITS
	Bulk	SPT MOD Calif.						
0			6,7,9		SM		1.8	Light Moderate Brown Silty Fine to Medium Sand, Dry, Medium Dense.
5			5,6,6		SM		1.9	Light Moderate Brown Silty Fine to Coarse Sand with Gravel to 1/2", Dry, Medium Dense.
			5,6,12		SM		1.7	Light Moderate Brown Silty Fine Sand with Clay, Dry, Medium Dense.
			3,5,9		SM		1.3	Light Moderate Brown Silty Fine Sand, Dry, Medium Dense.
10			4,6,7		SC		2.4	Light Moderate Brown Clayey Fine Sand with Silt, Slightly Moist, Medium Dense.
					SM			Light Moderate Brown Silty Fine Sand with Clay, Slightly Moist, Medium Dense.
15			2,6,8				7.0	
20								
25								

Total depth = 16'.
 No free groundwater was encountered at the time of drilling.
 No bedrock encountered.
 Note: The stratification lines shown represent the approximate boundaries between soil and/or rock types and the transitions may be gradational.



Earth Systems

Southern California

1024 West Avenue M-4, Palmdale CA 93551
 (661) 948-7538/ (661) 948-7963 fax

Boring No: B-4	Drilling Date: August 27, 2008
Project Name: Tropico Middle School	Drilling Method: 8" Hollow Stem Auger
Project Number: PL-07218-03	Drill Type: Mobil B-61
Boring Location: Per Plan	Logged By: Rob Ferguson

Depth (Ft.)	Sample Type			Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	DESCRIPTION OF UNITS
	Bulk	SPT	MOD Calif.						
0				5,6		SM	101	2.5	Light Moderate Brown Silty Fine to Medium Sand, Slightly Moist, Loose.
				7,8		SM	103	1.5	Light Moderate Brown Very Silty Fine to Medium Sand, Dry, Medium Dense.
5				7,9		SM	111	1.1	Light Moderate Brown Silty Fine to Coarse Sand with Slight Gravel to 1/2", Dry, Medium Dense.
10				7,10		SM	117	4.5	Light Moderate Brown Silty Fine Sand with Clay, Slightly Moist, Medium Dense.
15				9,10		SM	113	1.7	Light Moderate Brown Silty Fine to Medium Sand, Dry, Medium Dense.
20									Total depth = 16'. No free groundwater was encountered at the time of drilling. No bedrock encountered. Note: The stratification lines shown represent the approximate boundaries between soil and/or rock types and the transitions may be gradational.
25									



Earth Systems Southern California

1024 West Avenue M-4, Palmdale CA. 93551
(661) 948-7538/ (661) 948-7963 fax

Boring No: B-5	Drilling Date: August 27, 2008
Project Name: Tropico Middle School	Drilling Method: 8" Hollow Stem Auger
Project Number: PL-07218-03	Drill Type: Mobil B-61
Boring Location: Per Plan	Logged By: Rob Ferguson

Depth (Ft.)	Sample Type			Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	DESCRIPTION OF UNITS
	Bulk	SPT	MOD Calif.						
0						SM			<div style="text-align: right; border: 1px solid black; padding: 2px;">Page 1 of 1</div> Light Moderate Brown Silty Fine to Medium Sand, Dry, Medium Dense. Light Moderate Brown Silty Fine to Coarse Sand, Dry, Medium Dense. Light Moderate Brown Silty Fine to Coarse Sand with Slight Gravel to 1", Dry, Medium Dense. Light Moderate Brown Silty Fine to Medium Sand with Clay, Slightly Moist, Medium Dense. Light Moderate Brown Very Silty Fine to Medium Sand, Slightly Moist, Medium Dense.
1.8			6,6,7			SM	1.8		
5			4,5,9			SM	1.8		
			5,6,6			SM	1.6		
10			5,8,8			SM	5.6		
15			3,8,9			SM	2.8		
20								Total depth = 16'. No free groundwater was encountered at the time of drilling. No bedrock encountered. Note: The stratification lines shown represent the approximate boundaries between soil and/or rock types and the transitions may be gradational.	



Boring No: B-6 Project Name: Tropico Middle School Project Number: PL-07218-03 Boring Location: Per Plan	Drilling Date: August 27, 2008 Drilling Method: 8" Hollow Stem Auger Drill Type: Mobil B-61 Logged By: Rob Ferguson
---	--

Depth (Ft.)	Sample Type		Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	DESCRIPTION OF UNITS
	Bulk	SPT						
4.5			4,5		SM	102	1.7	Light Moderate Brown Silty Fine to Medium Sand, Dry, Loose.
6.7			6,7		SM	104	1.9	Light Moderate Brown Silty Fine to Coarse Sand, Dry, Loose.
6.7			6,7		SM	116	2.0	Light Moderate Brown Very Silty Fine to Coarse Sand, Dry, Medium Dense.
5.9			5,9		SM	111	3.9	Light Moderate Brown Silty Fine to Medium Sand with Clay, Slightly Moist, Medium Dense.
8.8			8,8		SM	112	8.3	Light Moderate Brown Very Silty Fine to Medium Sand with Clay, Moist, Medium Dense.
7.8			7,8		SM	118	2.4	Light Moderate Brown Silty Fine Sand, Dry, Medium Dense.
<p>Total depth = 16'. No free groundwater was encountered at the time of drilling. No bedrock encountered. Note: The stratification lines shown represent the approximate boundaries between soil and/or rock types and the transitions may be gradational.</p>								



Boring No: B-7 Project Name: Tropico Middle School Project Number: PL-07218-03 Boring Location: Per Plan	Drilling Date: August 27, 2008 Drilling Method: 8" Hollow Stem Auger Drill Type: Mobil B-61 Logged By: Rob Ferguson
---	--

Depth (Ft.)	Sample Type		Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	DESCRIPTION OF UNITS
	Bulk	SPT						
0					SM			<div style="text-align: right; border: 1px solid black; padding: 2px;">Page 1 of 1</div> Light Moderate Brown Silty Fine to Medium Sand, Dry, Loose.
5			2,3,3		SM	1.9		
			2,6,7		SM	4.2	Light Moderate Brown Silty Fine Sand with Slight Clay, Slightly Moist, Medium Dense.	
			2,5,8		SM	4.2	Light Moderate Brown Silty Fine to Medium Sand, Slightly Moist, Medium Dense.	
10			2,5,8		SM	11.8	Light Moderate Brown Silty Fine to Medium Sand with Clay, Moist, Medium Dense.	
15			3,6,9		SM	4.9	Light Moderate Brown Silty Fine to Medium Sand, Slightly Moist, Medium Dense.	
20								Total depth = 16'. No free groundwater was encountered at the time of drilling. No bedrock encountered. Note: The stratification lines shown represent the approximate boundaries between soil and/or rock types and the transitions may be gradational.



Boring No: B-8 Project Name: Tropico Middle School Project Number: PL-07218-03 Boring Location: Per Plan	Drilling Date: August 27, 2008 Drilling Method: 8" Hollow Stem Auger Drill Type: Mobil B-61 Logged By: Rob Ferguson
---	--

Depth (Ft.)	Sample Type		Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	DESCRIPTION OF UNITS
	Bulk	MOD Calif.						
0			4.7		SM	111	3.0	Light Moderate Brown Very Silty Fine to Medium Sand, Slightly Moist, Loose.
5			8.8		SM	119	2.6	Light Moderate Brown Silty Fine Sand with Slight Clay, Slightly Moist, Medium Dense.
			5.6		SM	112	3.5	Light Moderate Brown Silty Fine to Medium Sand with Clay, Slightly Moist, Medium Dense.
					SM			Light Moderate Brown Silty Fine to Medium Sand, Dry, Medium Dense.
10			6.9			113	10.9	
					SM			Light Moderate Brown Silty Fine to Coarse Sand, Dry, Medium Dense.
15			16,19			112	2.3	
20								Total depth = 16'. No free groundwater was encountered at the time of drilling. No bedrock encountered. Note: The stratification lines shown represent the approximate boundaries between soil and/or rock types and the transitions may be gradational.



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Boring No: B-9	Drilling Date: August 27, 2008
Project Name: Tropico Middle School	Drilling Method: 8" Hollow Stem Auger
Project Number: PL-07218-03	Drill Type: Mobil B-61
Boring Location: Per Plan	Logged By: Rob Ferguson

Depth (Ft.)	Sample Type			Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	DESCRIPTION OF UNITS
	Bulk	SPT	MOD Calif.						
0									
4.5				4,5		SM	101	1.9	Light Moderate Brown Silty Fine to Coarse Sand with Gravel to 1", Dry, Loose.
6.6				6,6		SM	103	1.9	Light Moderate Brown Silty Fine to Coarse Sand, Dry, Loose.
6.9				6,9		SM	112	2.5	Light Moderate Brown Silty Fine to Coarse Sand, Slightly Moist, Medium Dense.
8.9				8,9		SM	118	2.6	Light Moderate Brown Silty Fine to Medium Sand, Slightly Moist, Medium Dense.
8.9				8,9		SM	112	4.7	Light Moderate Brown Silty Fine to Coarse Sand, Slightly Moist, Medium Dense.
7,11				7,11		SM	114	3.0	Light Moderate Brown Silty Fine to Coarse Sand, Slightly Moist, Medium Dense.
8,9				8,9		SM			Light Moderate Brown Silty Fine to Coarse Sand, Dry, Medium Dense.
100				100			100	0.9	
<p>Total depth = 21'. No free groundwater was encountered at the time of drilling. No bedrock encountered. Note: The stratification lines shown represent the approximate boundaries between soil and/or rock types and the transitions may be gradational.</p>									



Boring No: B-10 Project Name: Tropic Middle School Project Number: PL-07218-03 Boring Location: Per Plan	Drilling Date: August 27, 2008 Drilling Method: 8" Hollow Stem Auger Drill Type: Mobil B-61 Logged By: Rob Ferguson
---	--

Depth (Ft.)	Sample Type		Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	DESCRIPTION OF UNITS
	Bulk	SPT MOD Calif.						
0								<div style="border: 1px solid black; padding: 2px; display: inline-block;">Page 1 of 1</div>
5			10,12		SM	118	1.9	
			7,10		SM	116	1.0	
			8,9		SM	117	1.3	
			12,18		SM	121	1.3	
15			14,16		SP	119	1.8	
20								
25								
30								

Total depth = 16'.
 No free groundwater was encountered at the time of drilling.
 No bedrock encountered.
 Note: The stratification lines shown represent the approximate boundaries between soil and/or rock types and the transitions may be gradational.



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Boring No: B-11 Project Name: Tropico Middle School Project Number: PL-07218-03 Boring Location: Per Plan	Drilling Date: August 27, 2008 Drilling Method: 8" Hollow Stem Auger Drill Type: Mobil B-61 Logged By: Rob Ferguson
--	--

Depth (Ft.)	Sample Type		Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	DESCRIPTION OF UNITS
	Bulk	SPT MOD Calif.						
0			4,6,6		SM		1.5	Light Moderate Brown Silty Fine to Medium Sand, Dry, Medium Dense.
2.5			5,5,5		SM		2.8	Light Moderate Brown Silty Fine to Coarse Sand, Dry, Loose.
5			5,6,6		SM		3.2	Light Moderate Brown Silty Fine to Coarse Sand, Slightly Moist, Medium Dense.
10			2,6,9		SM		4.2	Light Moderate Brown Silty Fine to Coarse Sand, Slightly Moist, Medium Dense.
15			3,5,8		SM		3.5	Light Moderate Brown Silty Fine to Medium Sand, Slightly Moist, Medium Dense.
20								Total depth = 16'. No free groundwater was encountered at the time of drilling. No bedrock encountered. Note: The stratification lines shown represent the approximate boundaries between soil and/or rock types and the transitions may be gradational.
25								
30								



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Boring No: B-12	Drilling Date: August 27, 2008
Project Name: Tropico Middle School	Drilling Method: 8" Hollow Stem Auger
Project Number: PL-07218-03	Drill Type: Mobil B-61
Boring Location: Per Plan	Logged By: Rob Ferguson

Depth (Ft.)	Sample Type		Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	DESCRIPTION OF UNITS
	Bulk	MOD Calif. SPT						
0					SM			
4.5		■	4,5		SM	101	1.7	Light Moderate Brown Silty Fine to Medium Sand, Dry, Loose.
7.7		■	7,7		SM	119	1.6	Light Moderate Brown Silty Fine to Coarse Sand with Slight Gravel to 3/8", Dry, Loose.
6.9		■	6,9		SM	111	2.1	Light Moderate Brown Silty Fine to Medium Sand, Dry, Medium Dense.
8.8		■	8,8		SM	106	1.5	Light Moderate Brown Silty Fine to Coarse Sand, Dry, Medium Dense.
10.11		■	10,11		SM	107	6.4	Light Moderate Brown Silty Fine Sand, Slightly Moist, Medium Dense.
15								
20								
25								
30								

Total depth = 16'.
 No free groundwater was encountered at the time of drilling.
 No bedrock encountered.
 Note: The stratification lines shown represent the approximate boundaries between soil and/or rock types and the transitions may be gradational.



Boring No: B-13 Project Name: Tropico Middle School Project Number: PL-07218-03 Boring Location: Per Plan	Drilling Date: August 27, 2008 Drilling Method: 8" Hollow Stem Auger Drill Type: Mobil B-61 Logged By: Rob Ferguson
--	--

Depth (Ft.)	Sample Type		Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	DESCRIPTION OF UNITS
	Bulk	SPT MOD Calif.						
0			6,5,8		SM		1.7	Light Moderate Brown Silty Fine to Medium Sand, Dry, Medium Dense.
5			5,5,5		SM		2.2	Light Moderate Brown Very Silty Fine to Medium Sand, Dry, Loose.
			5,5,8		SM		0.1	Light Moderate Brown Silty Fine to Medium Sand, Dry, Medium Dense.
10			3,4,9		SM		5.9	Light Moderate Brown Silty Fine to Medium Sand, Slightly Moist, Medium Dense.
15			2,4,9		SP		1.7	Light Moderate Brown Slightly Silty Fine Sand, Dry, Medium Dense.
20								<p>Total depth = 16'. No free groundwater was encountered at the time of drilling. No bedrock encountered. Note: The stratification lines shown represent the approximate boundaries between soil and/or rock types and the transitions may be gradational.</p>
25								
20								



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Boring No: B-14	Drilling Date: August 27, 2008
Project Name: Tropico Middle School	Drilling Method: 8" Hollow Stem Auger
Project Number: PL-07218-03	Drill Type: Mobil B-61
Boring Location: Per Plan	Logged By: Rob Ferguson

Depth (Ft.)	Sample Type		Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	DESCRIPTION OF UNITS
	Bulk	SPT MOD Calif.						
0					SM		1.7	Light Moderate Brown Silty Fine to Coarse Sand, Dry, Medium Dense.
5			6,5,6		SM		1.0	Light Moderate Brown Silty Fine to Medium Sand, Dry, Loose.
			3,3,3		SM		1.2	Light Moderate Brown Silty Fine to Medium Sand, Dry, Medium Dense.
			3,8,9		SM		2.6	Light Moderate Brown Silty Fine to Medium Sand, Slightly Moist, Medium Dense.
10			2,6,9		SM		2.2	Light Moderate Brown Silty Fine to Medium Sand, Slightly Moist, Medium Dense.
15			3,5,6		SM			
20								
25								
20								<p>Total depth = 16'</p> <p>No free groundwater was encountered at the time of drilling.</p> <p>No bedrock encountered.</p> <p>Note: The stratification lines shown represent the approximate boundaries between soil and/or rock types and the transitions may be gradational.</p>



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Boring No: B-15	Drilling Date: November 7, 2008
Project Name: Tropico Middle School	Drilling Method: 8" Hollow Stem Auger
Project Number: PL-07218-03	Drill Type: Mobil B-61
Boring Location: Per Plan	Logged By: Rob Ferguson

Depth (Ft.)	Sample Type			Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	DESCRIPTION OF UNITS
	Bulk	SPT	MOD Calif.						
0				2,3		SM	103	6.1	Light Moderate Brown Silty Fine to Coarse Sand, Slightly Moist, Loose.
5				8,9		SM	112	3.1	Light Moderate Brown Silty Fine to Medium Sand, Slightly Moist, Medium Dense.
				6,9		SM	114	2.4	Light Moderate Brown Silty Fine to Coarse Sand, Dry, Medium Dense.
				10,12		SM	108	2.2	Light Moderate Brown Silty Fine to Coarse Sand with Gravel to 1", Dry, Medium Dense.
10				10,10		SM	111	1.4	Light Moderate Brown Silty Fine to Coarse Sand with Gravel to 1/2", Dry, Medium Dense.
15				21,24		SP	114	1.6	Light Moderate Brown Slightly Silty Fine to Coarse Sand, Dry, Dense.
20									Total depth = 16'. No free groundwater was encountered at the time of drilling. No bedrock encountered. Note: The stratification lines shown represent the approximate boundaries between soil and/or rock types and the transitions may be gradational.
25									



Boring No: B-16	Drilling Date: November 7, 2008
Project Name: Tropic Middle School	Drilling Method: 8" Hollow Stem Auger
Project Number: PL-07218-03	Drill Type: Mobil B-61
Boring Location: Per Plan	Logged By: Rob Ferguson

Depth (Ft.)	Sample Type		Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	DESCRIPTION OF UNITS
	Bulk	SPT						
0								
5			6,7		SM	102	5.9	3" Asphaltic Concrete over 4" Aggregate Base Light Moderate Brown Silty Fine to Coarse Sand, Slightly Moist, Loose.
			5,6		SM	95	6.5	Light Moderate Brown Silty Fine to Medium Sand, Slightly Moist, Loose.
			6,9		SM	108	8.9	Light Moderate Brown Silty Fine to Coarse Sand, Moist, Medium Dense.
10			8,9		SM	106	5.9	Light Moderate Brown Silty Fine to Coarse Sand, Slightly Moist, Medium Dense.
15			10,10		SM	110	3.3	Light Moderate Brown Silty Fine to Coarse Sand with Gravel to 3/8", Slightly Moist, Medium Dense.
20								Total depth = 16'. No free groundwater was encountered at the time of drilling. No bedrock encountered. Note: The stratification lines shown represent the approximate boundaries between soil and/or rock types and the transitions may be gradational.
25								



Boring No: B-17	Drilling Date: November 7, 2008
Project Name: Tropico Middle School	Drilling Method: 8" Hollow Stem Auger
Project Number: PL-07218-03	Drill Type: Mobil B-61
Boring Location: Per Plan	Logged By: Rob Ferguson

Depth (Ft.)	Sample Type			Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	DESCRIPTION OF UNITS
	Bulk	SPT	MOD Calif.						
0				9,10		SM	122	4.1	2" Asphaltic Concrete over 4" Aggregate Base
5				7,7		SM	118	5.2	Light Moderate Brown Silty Fine to Coarse Sand, Slightly Moist, Medium Dense.
				7,8		SM	116	2.9	Light Moderate Brown Silty Fine to Coarse Sand with Slight Gravel to 1", Slightly Moist, Medium Dense.
				8,9		SM	111	4.8	Light Moderate Brown Silty Fine to Coarse Sand with Slight Gravel to 3/4", Slightly Moist, Medium Dense.
10				8,9		SM	108	5.7	Light Moderate Brown Silty Fine to Coarse Sand, Slightly Moist, Medium Dense.
15				8,9		SM	113	11.0	Light Moderate Brown Silty Fine to Medium Sand, Moist, Medium Dense.
20				9,11		SM	106	10.1	Light Moderate Brown Silty Fine to Coarse Sand, Moist, Medium Dense.
25									Total depth = 21'. No free groundwater was encountered at the time of drilling. No bedrock encountered. Note: The stratification lines shown represent the approximate boundaries between soil and/or rock types and the transitions may be gradational.
20									



Boring No: B-18	Drilling Date: November 7, 2008
Project Name: Tropico Middle School	Drilling Method: 8" Hollow Stem Auger
Project Number: PL-07218-03	Drill Type: Mobil B-61
Boring Location: Per Plan	Logged By: Rob Ferguson

Depth (Ft.)	Sample Type			Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	DESCRIPTION OF UNITS
	Bulk	SPT	MOD Calif.						
0									
1				11,11		SM	120	5.4	Light Moderate Brown Silty Fine to Coarse Sand with Slight Gravel to 1/2" , Slightly Moist, Medium Dense.
2				7,9		SM	123	1.8	Light Moderate Brown Silty Fine to Coarse Sand with Slight Gravel to 1" , Dry, Medium Dense.
3				6,8		SM	107	5.3	Light Moderate Brown Silty Fine to Coarse Sand, Slightly Moist, Medium Dense.
4									
5									
6									
7									
8									
9				8,9		SM	107	6.7	Light Moderate Brown Silty Fine to Medium Sand, Slightly Moist, Medium Dense.
10									
11									
12									
13									
14									
15				10,12		SM	109	2.6	Light Moderate Brown Silty Fine to Coarse Sand, Slightly Moist, Medium Dense.
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									

Total depth = 16'.
 No free groundwater was encountered at the time of drilling.
 No bedrock encountered.
 Note: The stratification lines shown represent the approximate boundaries between soil and/or rock types and the transitions may be gradational.



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Boring No: B-19	Drilling Date: November 7, 2008
Project Name: Tropico Middle School	Drilling Method: 8" Hollow Stem Auger
Project Number: PL-07218-03	Drill Type: Mobil B-61
Boring Location: Per Plan	Logged By: Rob Ferguson

Depth (Ft.)	Sample Type		Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	DESCRIPTION OF UNITS
	Bulk	SPT						
0			11,11		SM	112	7.6	2.5" Asphaltic Concrete over 5" Aggregate Base Light Moderate Brown Silty Fine to Coarse Sand, Moist, Medium Dense.
5			7,8		SM	117	2.5	Light Moderate Brown Silty Fine to Coarse Sand, Dry, Medium Dense.
			7,9		SM	114	4.1	Light Moderate Brown Silty Fine to Coarse Sand, Slightly Moist, Medium Dense.
			6,9		SM	113	3.4	Light Moderate Brown Silty Fine to Coarse Sand, Slightly Moist, Medium Dense.
10			8,9		SM	112	4.5	Light Moderate Brown Very Silty Fine to Coarse Sand, Slightly Moist, Medium Dense.
15			8,9		SM	110	4.0	Light Moderate Brown Silty Fine to Coarse Sand, Slightly Moist, Medium Dense.
20			8,13		SM	112	3.0	Light Moderate Brown Silty Fine to Coarse Sand, Slightly Moist, Medium Dense.
30			14,16		SP	****	2.2	Pale Yellow Brown Slightly Silty Fine to Medium Sand, Dry, Medium Dense.
35					SM			Pale Yellow Brown Silty Fine to Medium Sand with Clay, Moist, Dense.
40			16,26		SM	108	12.2	Pale Yellow Brown Silty Fine to Coarse Sand, Moist, Dense.
45					SM			Pale Yellow Brown Silty Fine to Coarse Sand, Moist, Dense.
50			26,41		SM	124	8.8	Pale Yellow Brown Silty Fine to Coarse Sand, Moist, Dense.
55								Total depth = 51'. No free groundwater was encountered at the time of drilling. No bedrock encountered. Note: The stratification lines shown represent the approximate boundaries between soil and/or rock types and the transitions may be gradational.



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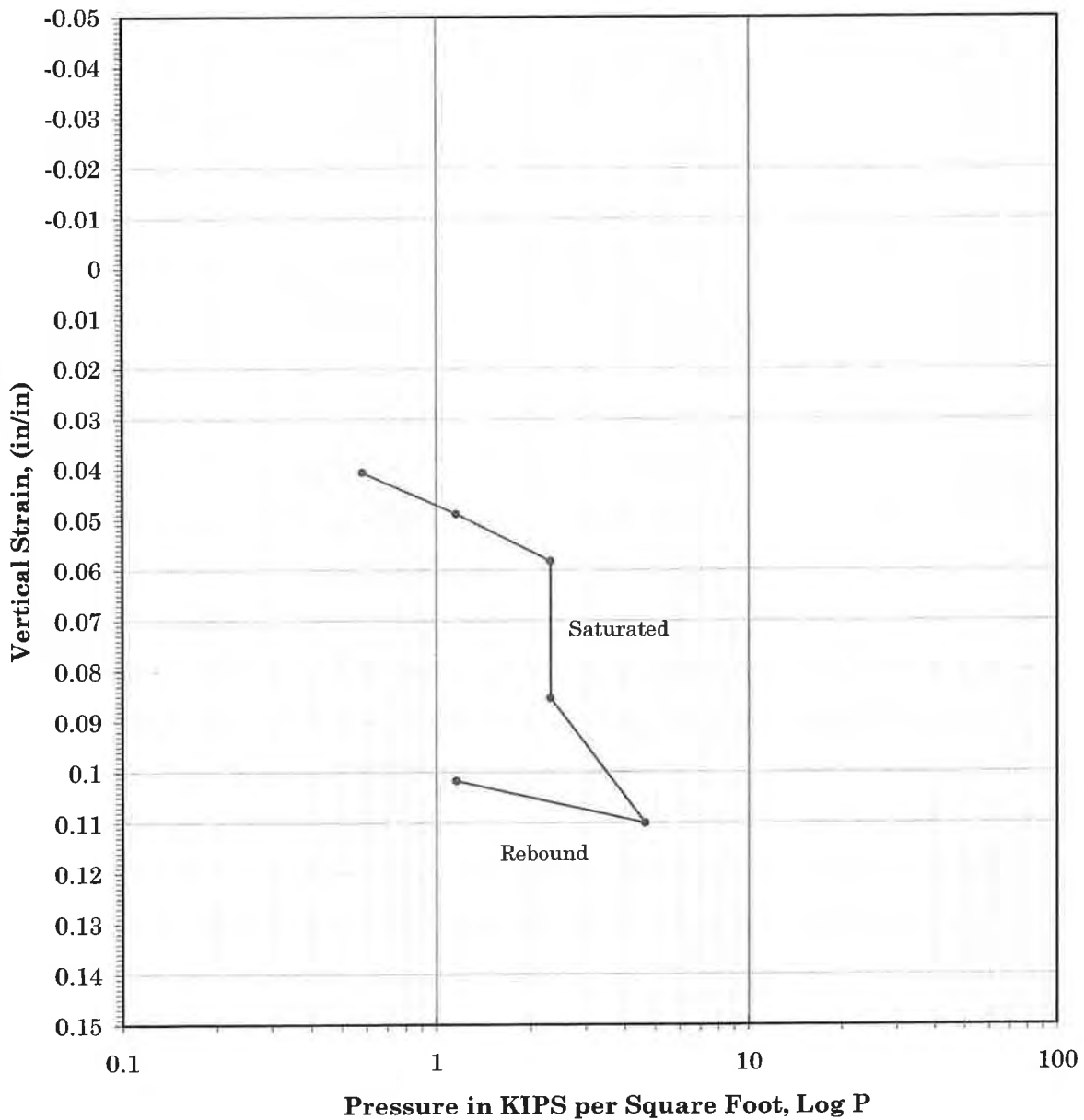
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Boring No: B-20 Project Name: Tropico Middle School Project Number: PL-07218-03 Boring Location: Per Plan	Drilling Date: November 7, 2008 Drilling Method: 8" Hollow Stem Auger Drill Type: Mobil B-61 Logged By: Rob Ferguson
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Depth (Ft.)	Sample Type		Penetration Resistance (Blows/6")	Symbol	USCS	Dry Density (pcf)	Moisture Content (%)	DESCRIPTION OF UNITS
	Bulk	MOD Calif.						
0					SM			
7.9		■	7,9		SM	117	2.4	Light Moderate Brown Silty Fine to Coarse Sand with Slight Gravel to 3/8", Dry, Medium Dense.
9.12		■	9,12		SM	117	2.4	Light Moderate Brown Silty Fine to Coarse Sand, Dry, Medium Dense.
7.8		■	7,8		SM	115	3.0	Light Moderate Brown Silty Fine to Coarse Sand, Slightly Moist, Medium Dense.
10		■	7,9		SP	108	1.8	Light Moderate Brown Slightly Silty Fine to Coarse Sand, Dry, Medium Dense.
15		■	8,9		SM	113	1.8	Light Moderate Brown Silty Fine to Coarse Sand, Dry, Medium Dense.
20								Total depth = 16'. No free groundwater was encountered at the time of drilling. No bedrock encountered. Note: The stratification lines shown represent the approximate boundaries between soil and/or rock types and the transitions may be gradational.

APPENDIX B

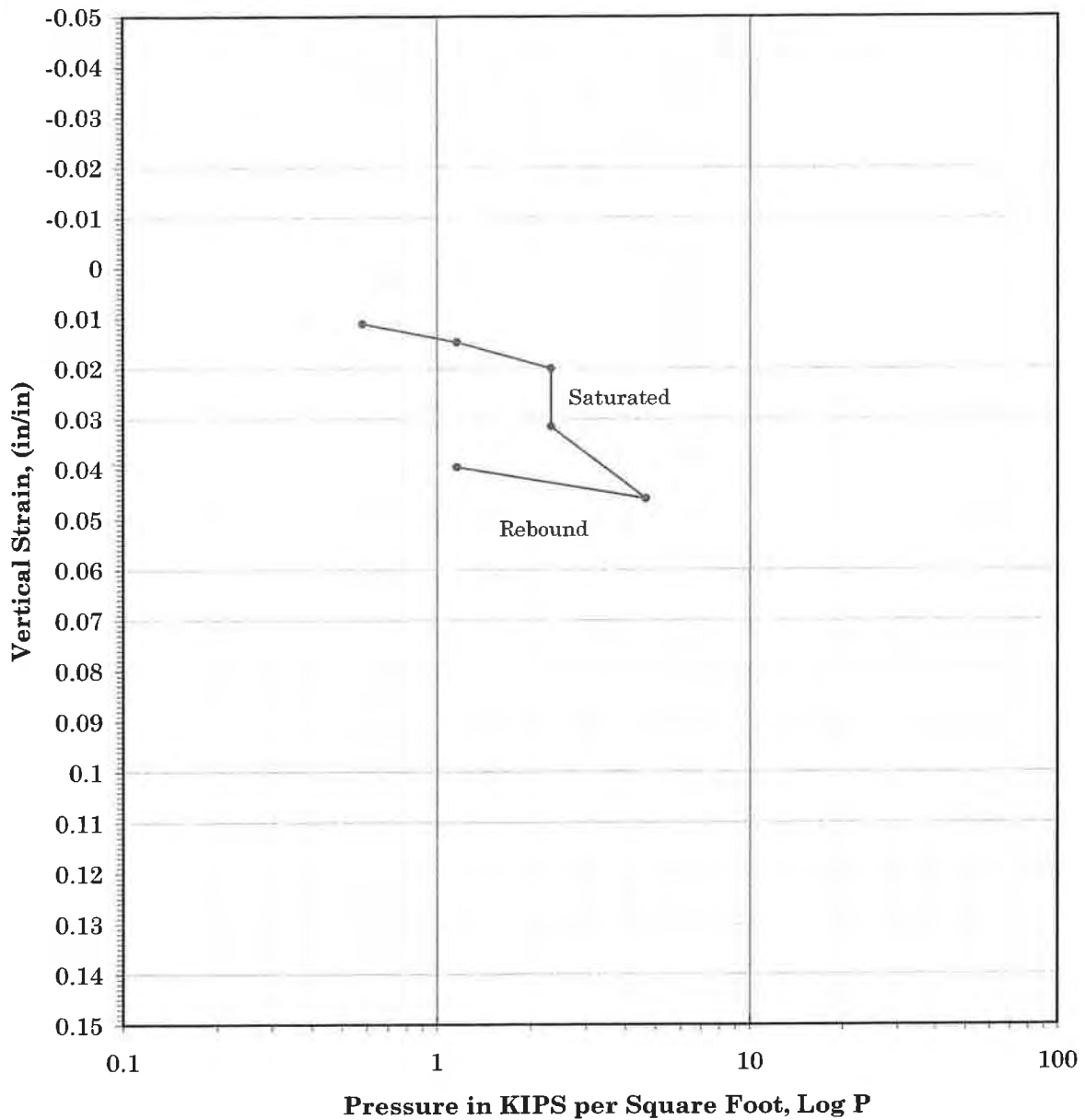
Summary of Laboratory Test Results



Sample Location: Boring 4@3'
 Material: Very Silty Fine to Medium Sand (SM)
 Initial Dry Density: 103.0 PCF
 Moisture Content: 1.5%
 Percent Hydroconsolidation: 2.7%


Consolidation Test	
Tropico Middle School	
Rosamond, California	
 Earth Systems Southern California	
1/6/2009	PL-07218-03

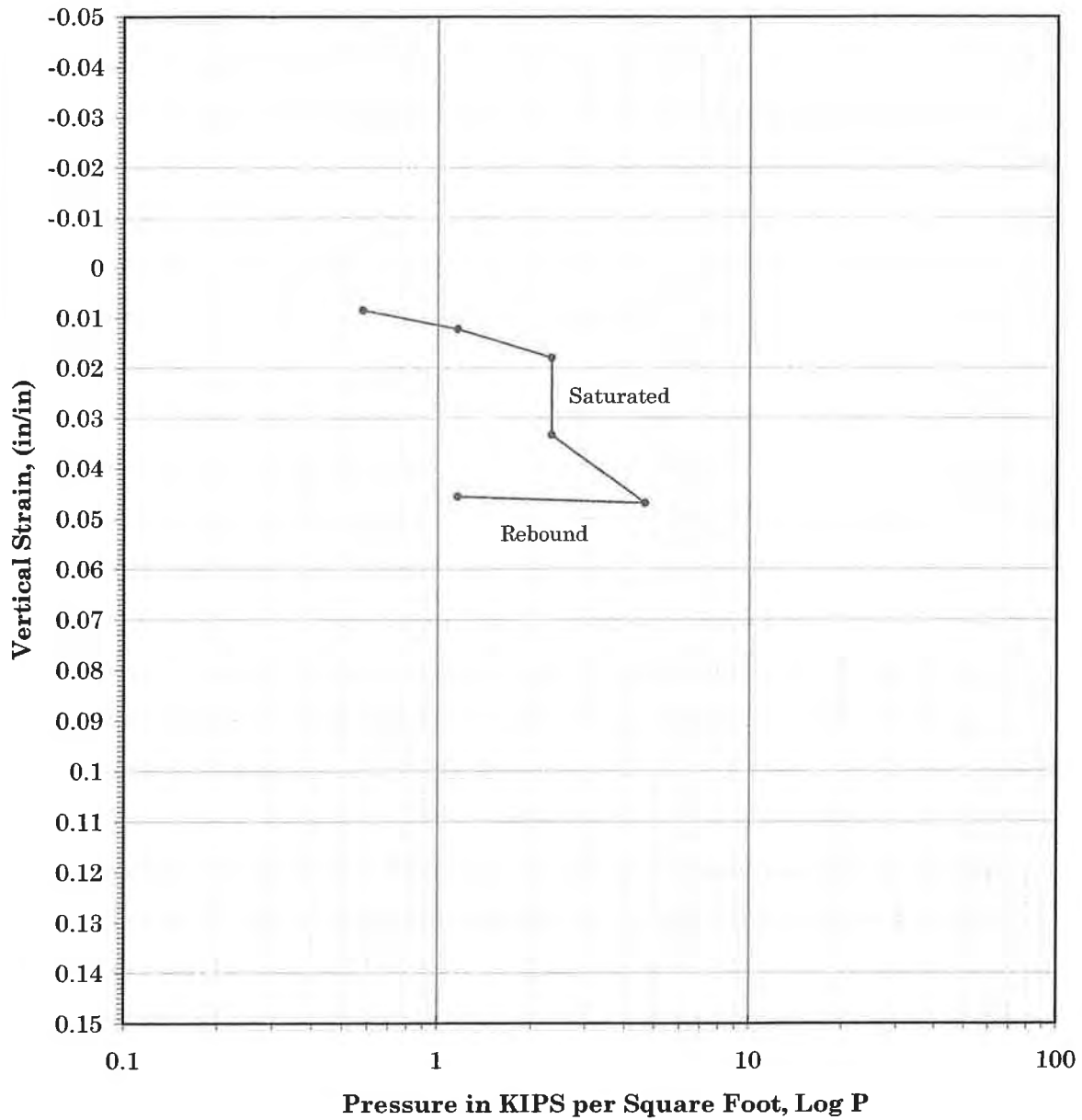
* Test Method: ASTM D-2435



Sample Location: Boring 15@3'
 Material: Silty Fine to Medium Sand (SM)
 Initial Dry Density: 112.0 PCF
 Moisture Content: 3.1%
 Percent Hydroconsolidation: 1.2%


* Test Method: ASTM D-2435

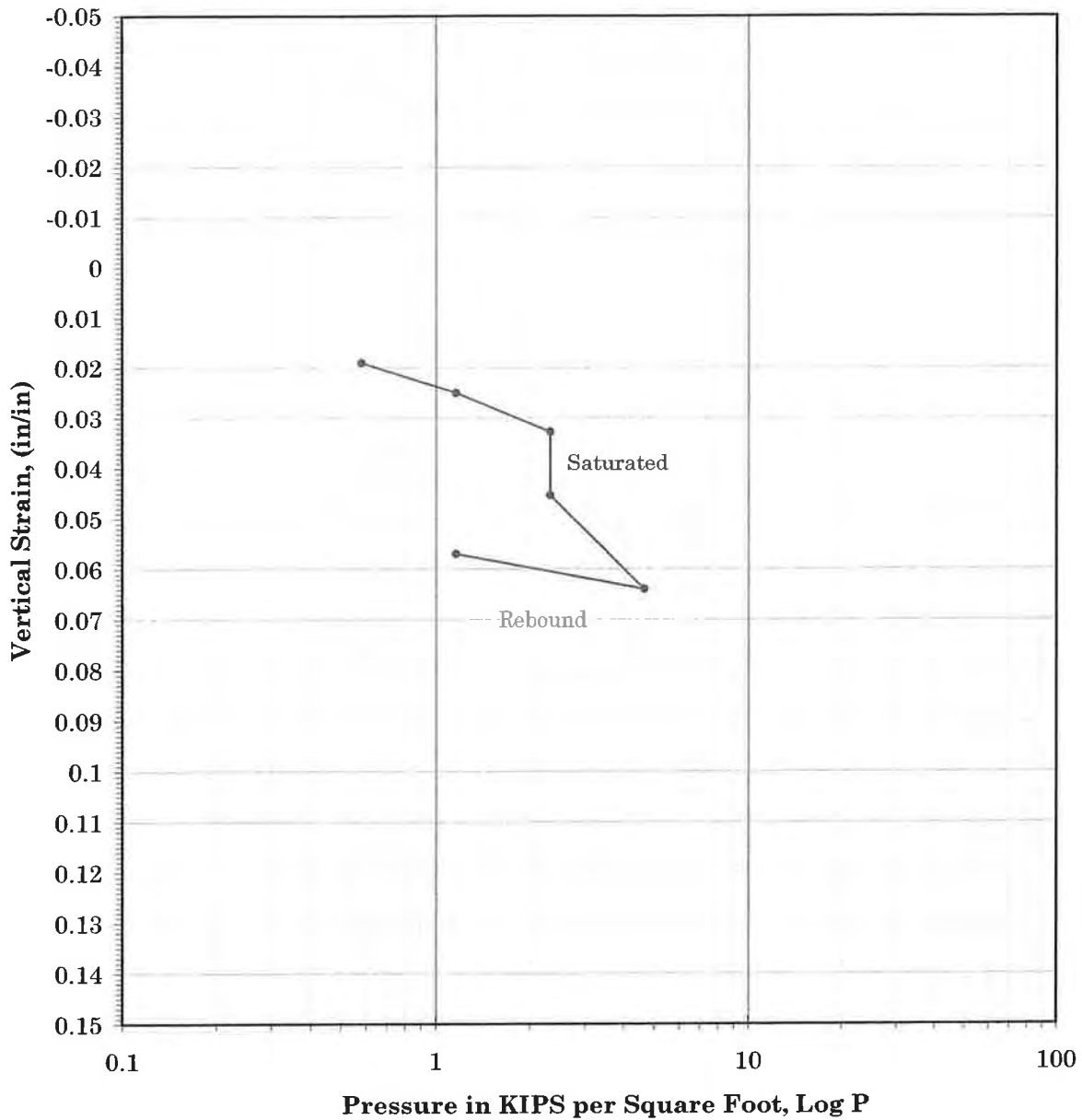
Consolidation Test	
Tropico Middle School	
Rosamond, California	
 Earth Systems Southern California	
1/6/2009	PL-07218-03




Sample Location: Boring 12@4'
 Material: Silty Fine to Coarse Sand (SM)
 Initial Dry Density: 119.0 PCF
 Moisture Content: 1.6%
 Percent Hydroconsolidation: 1.5%

* Test Method: ASTM D-2435

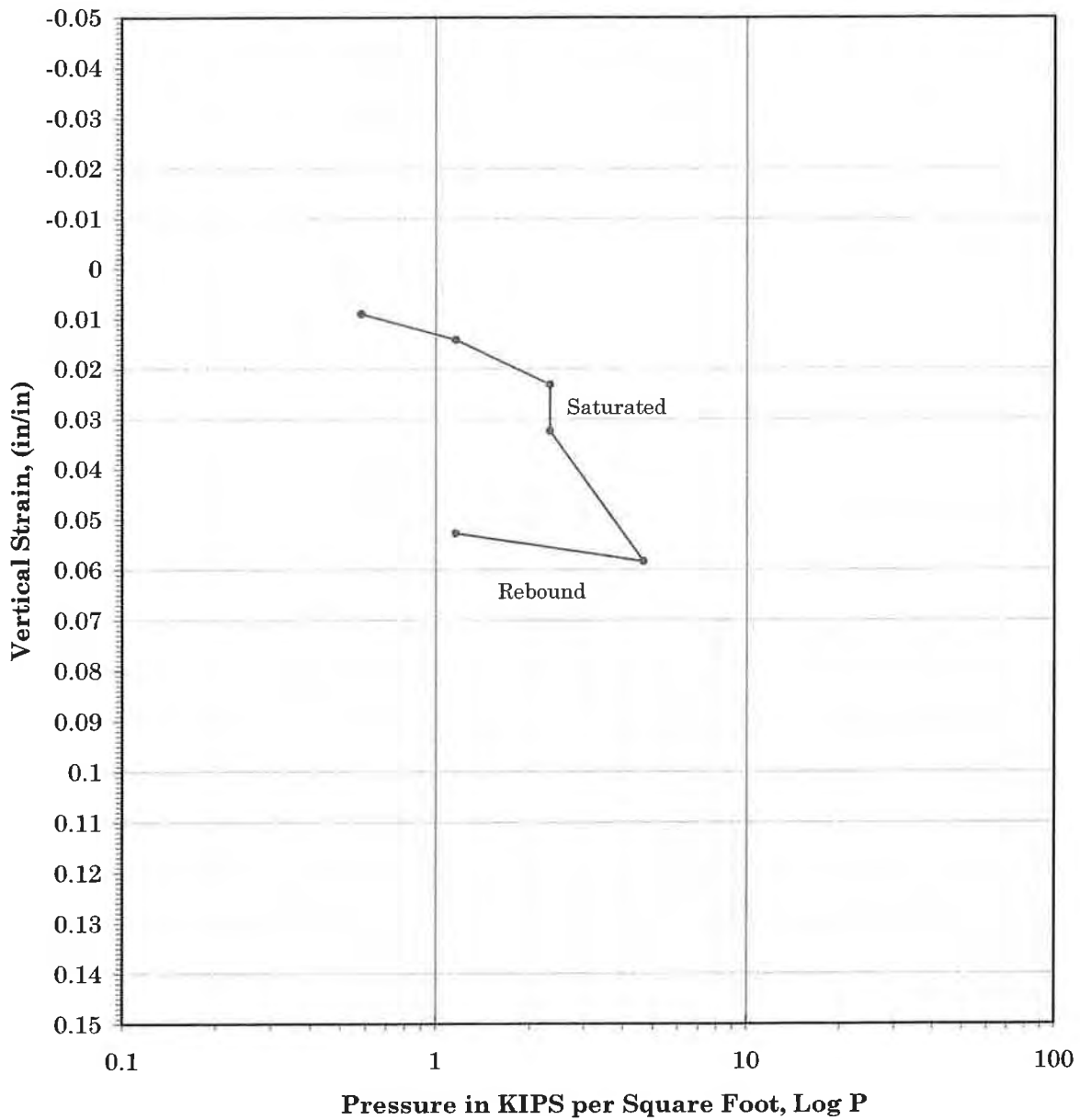
Consolidation Test	
Tropico Middle School	
Rosamond, California	
 Earth Systems Southern California	
1/6/2009	PL-07218-03



Sample Location: Boring 6@5'
 Material: Very Silty Fine to Coarse Sand (SM)
 Initial Dry Density: 116.0 PCF
 Moisture Content: 2.0%
 Percent Hydroconsolidation: 1.3%

Consolidation Test	
Tropico Middle School	
Rosamond, California	
 Earth Systems Southern California	
1/6/2009	PL-07218-03

* Test Method: ASTM D-2435



Sample Location: Boring 19@5'
 Material: Silty Fine to Coarse Sand (SM)
 Initial Dry Density: 114.0 PCF
 Moisture Content: 4.1%
 Percent Hydroconsolidation: 0.9%

Consolidation Test

Tropico Middle School

Rosamond, California

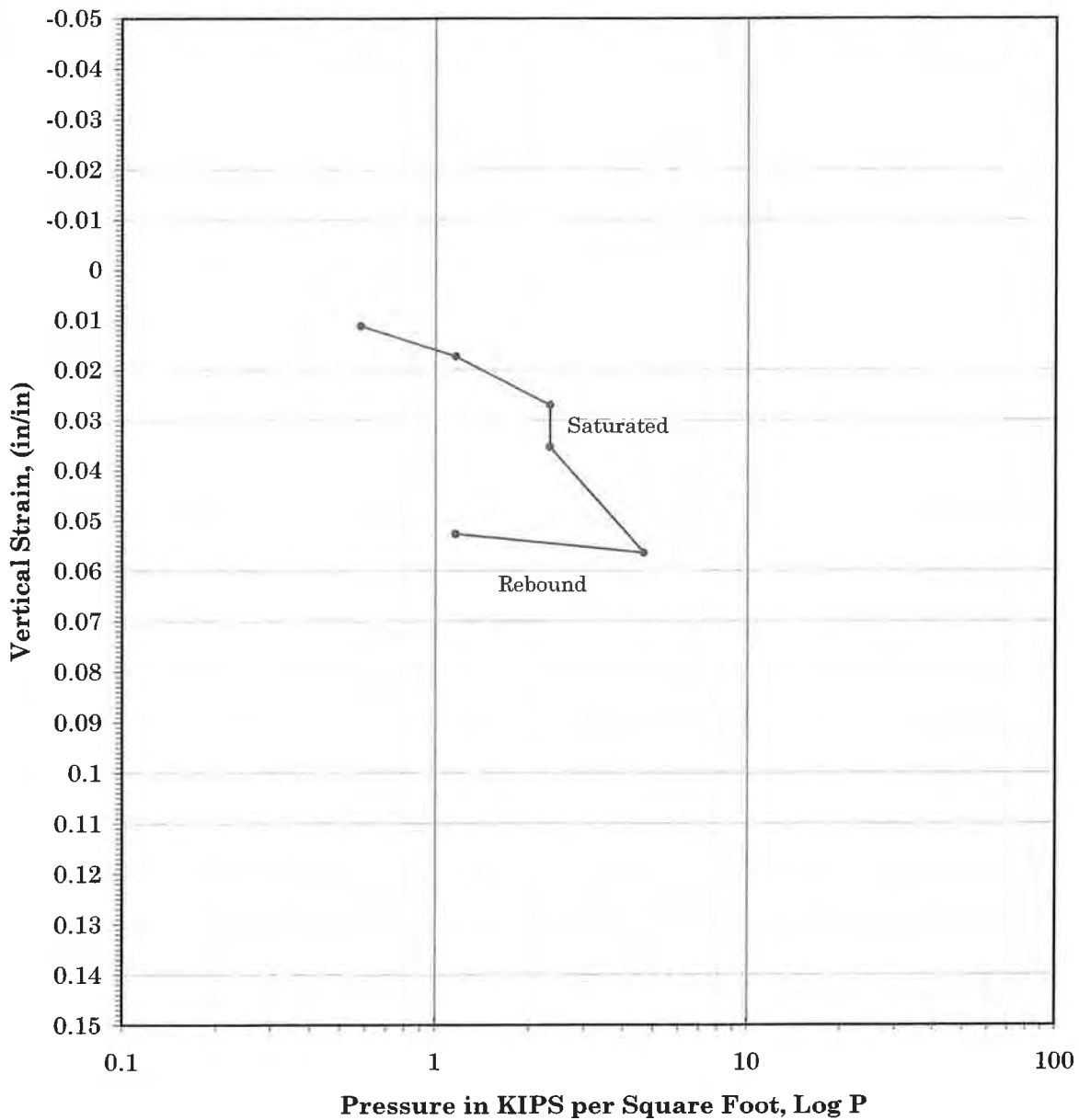


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* Test Method: ASTM D-2435

1/6/2009

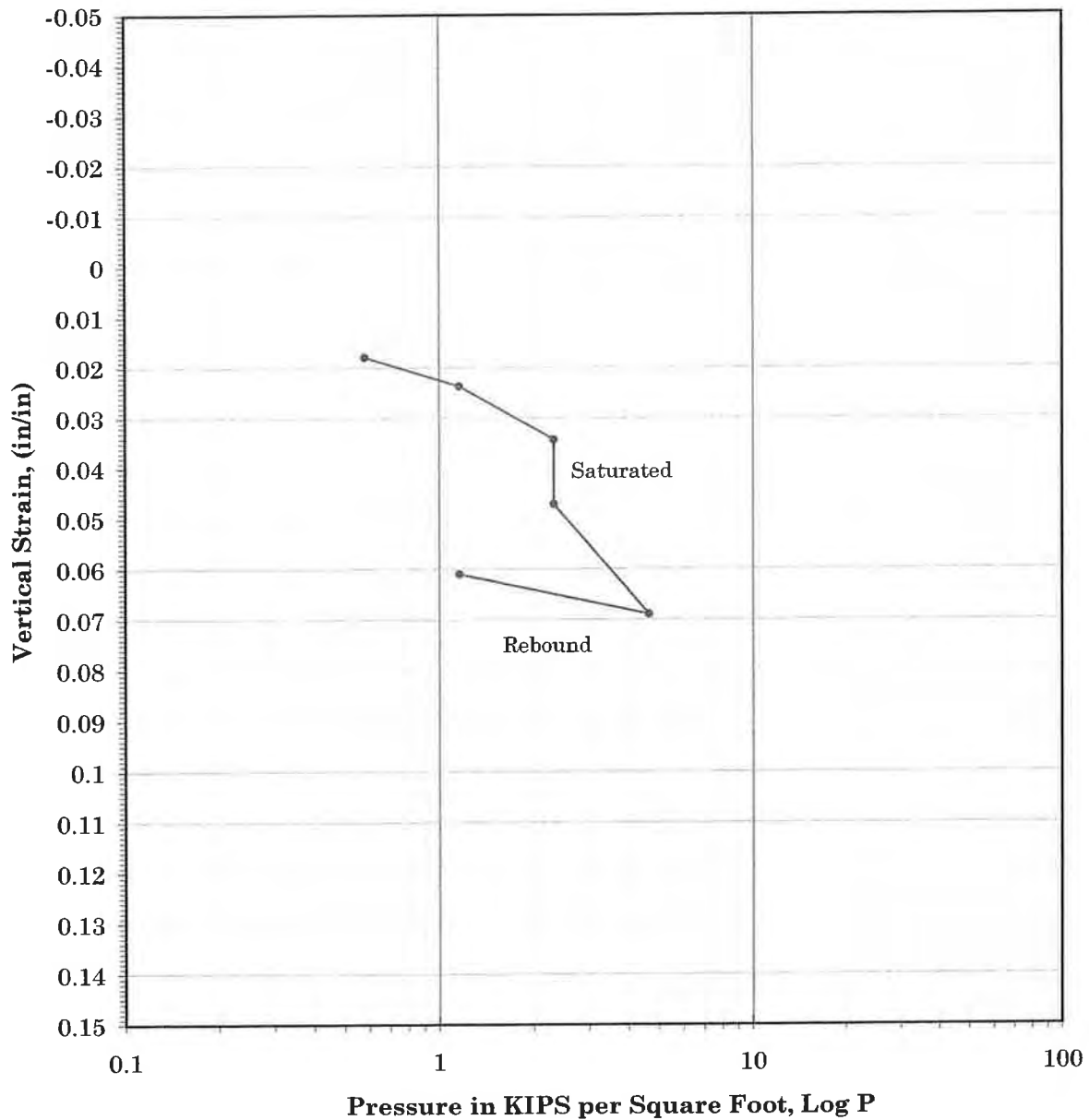
PL-07218-03




Sample Location: Boring 2@6'
 Material: Very Silty Fine to Medium Sand with Clay (SM)
 Initial Dry Density: 116.0 PCF
 Moisture Content: 2.5%
 Percent Hydroconsolidation: 0.8%

Consolidation Test	
Tropico Middle School	
Rosamond, California	
 Earth Systems Southern California	
1/6/2009	PL-07218-03

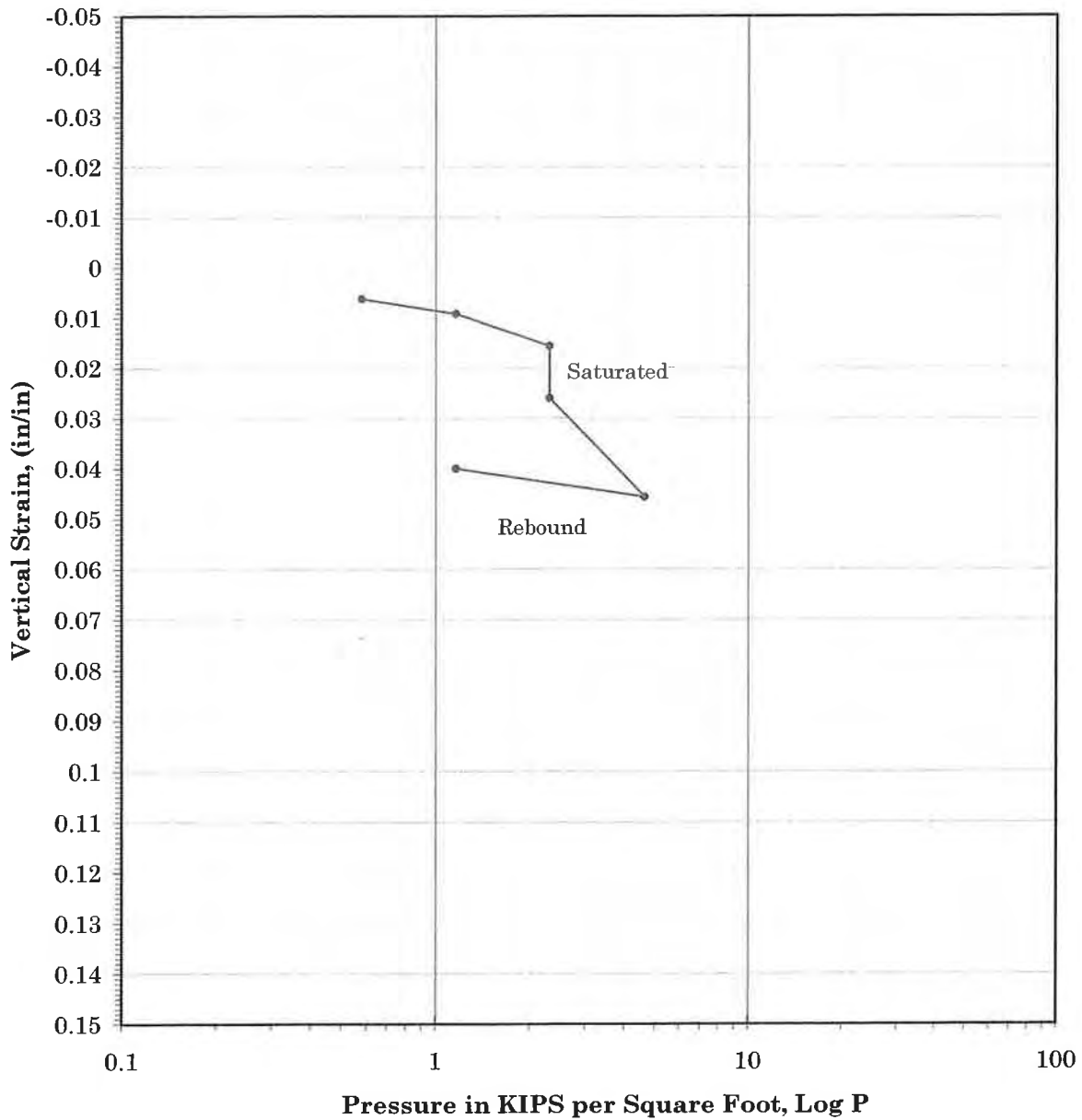
* Test Method: ASTM D-2435




Sample Location: Boring 20@6'
 Material: Silty Fine to Coarse Sand (SM)
 Initial Dry Density: 115.0 PCF
 Moisture Content: 3.0%
 Percent Hydroconsolidation: 1.3%

Consolidation Test	
Tropico Middle School	
Rosamond, California	
 Earth Systems Southern California	
1/6/2009	PL-07218-03

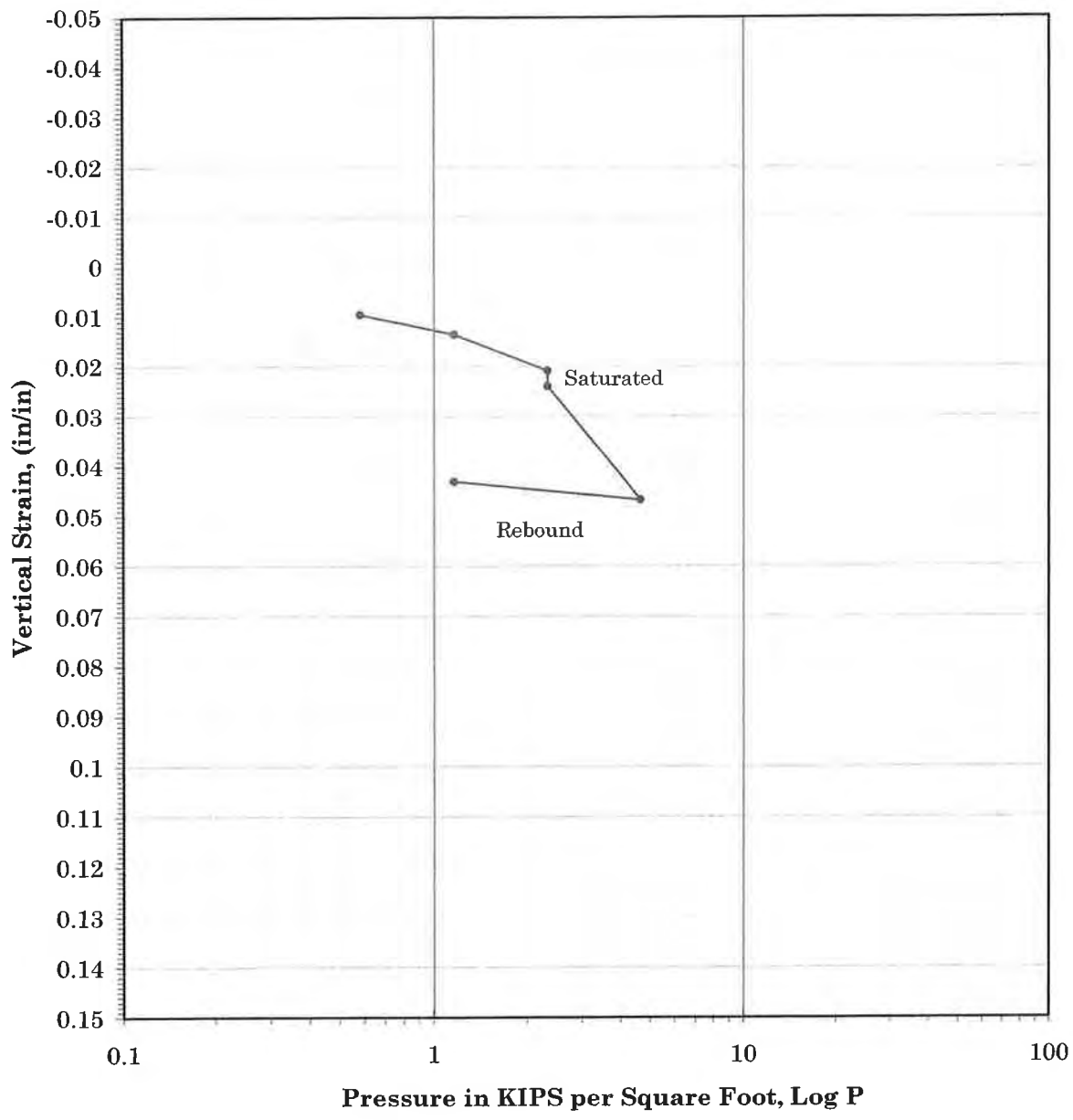
* Test Method: ASTM D-2435




Sample Location: Boring 9@7.5'
 Material: Silty Fine to Medium Sand (SM)
 Initial Dry Density: 118.0 PCF
 Moisture Content: 2.6%
 Percent Hydroconsolidation: 1.0%

Consolidation Test	
Tropico Middle School	
Rosamond, California	
 Earth Systems Southern California	
1/6/2009	PL-07218-03

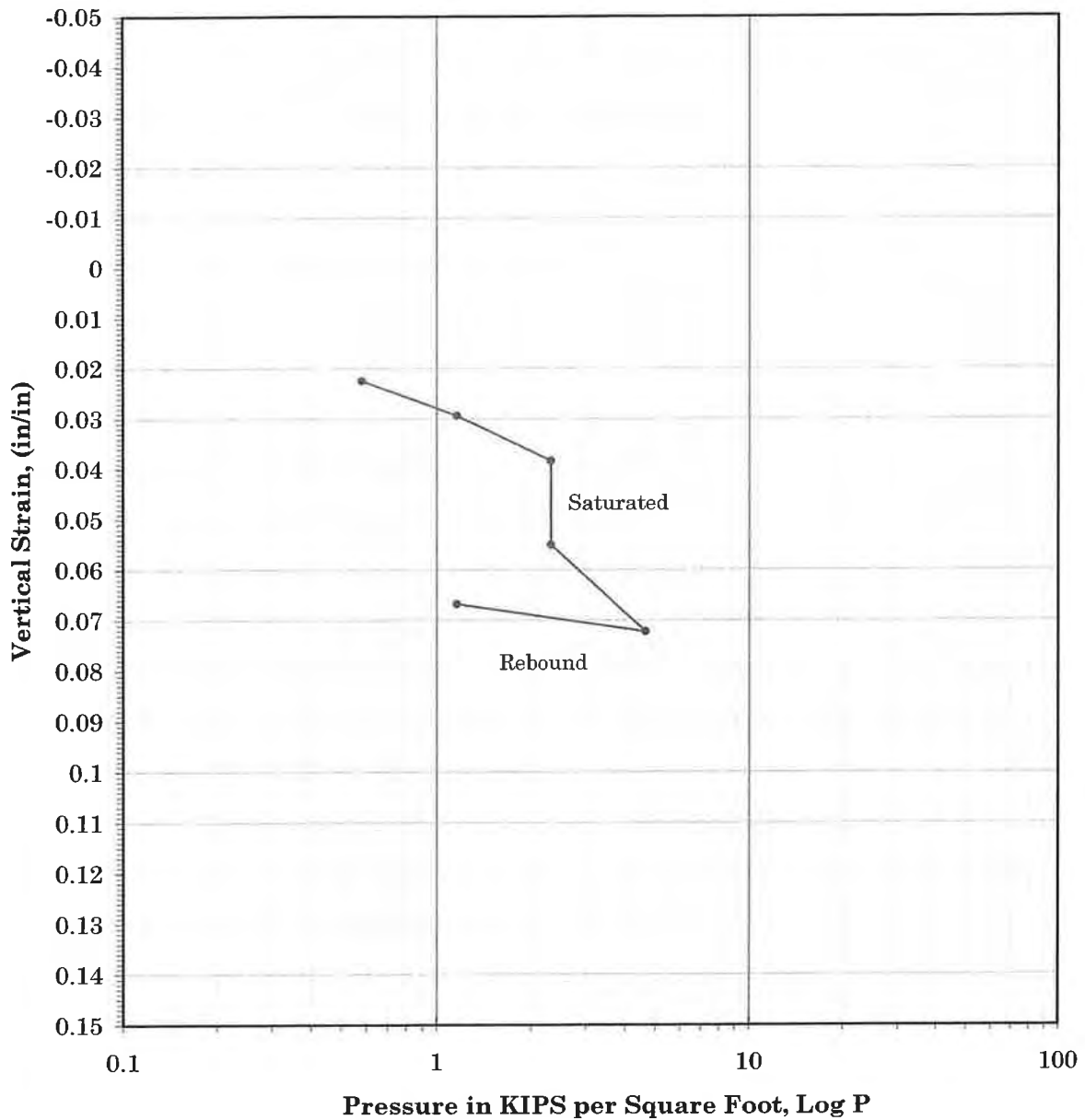
* Test Method: ASTM D-2435



Sample Location: Boring 17@7.5'
 Material: Silty Fine to Coarse Sand with Gravel (SM)
 Initial Dry Density: 111.0 PCF
 Moisture Content: 4.8%
 Percent Hydroconsolidation: 0.3%


Consolidation Test	
Tropico Middle School	
Rosamond, California	
 Earth Systems Southern California	
1/6/2009	PL-07218-03

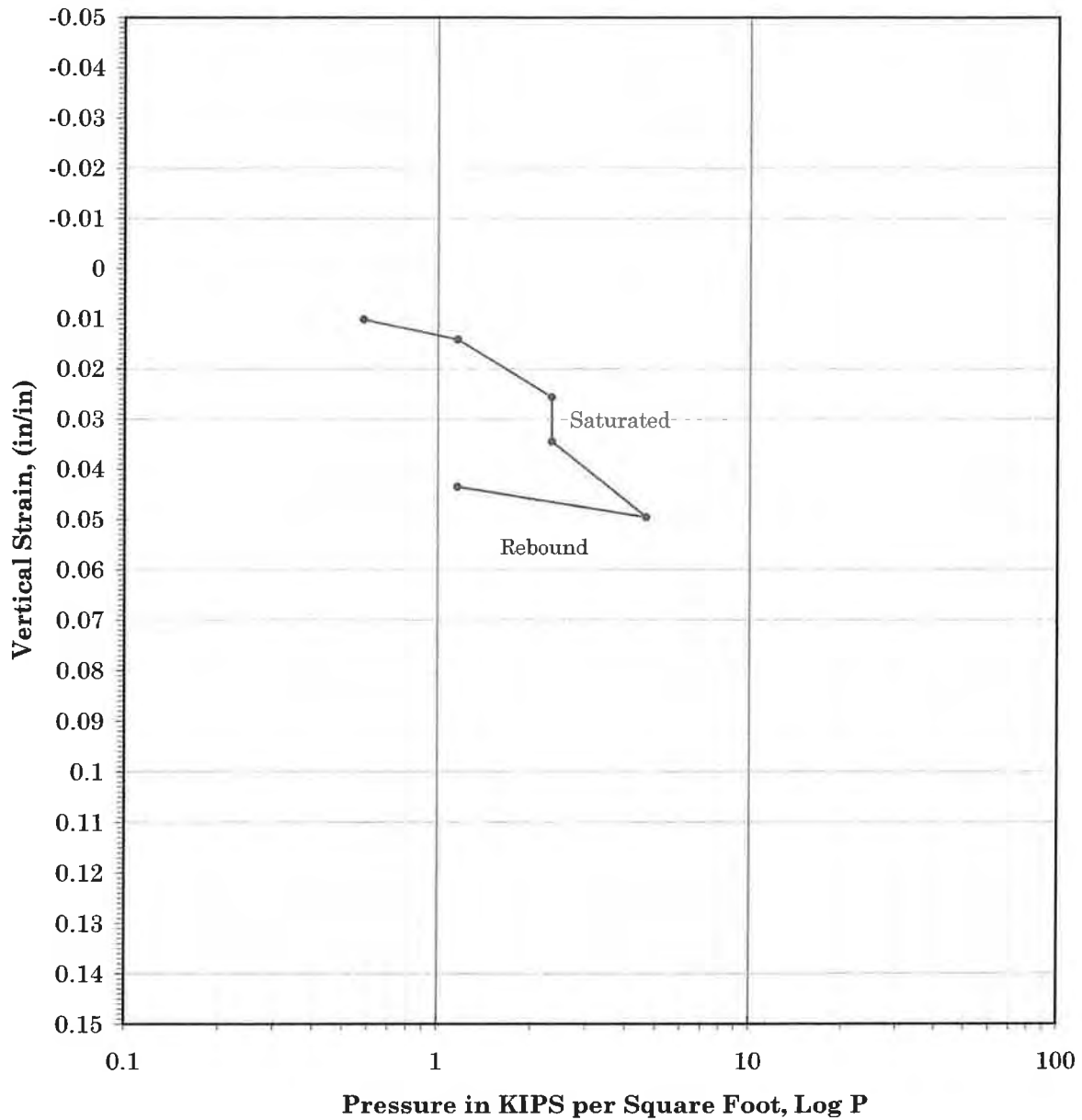
* Test Method: ASTM D-2435



Sample Location: Boring 8@10'
 Material: Silty Fine to Medium Sand (SM)
 Initial Dry Density: 113.0 PCF
 Moisture Content: 10.9%
 Percent Hydroconsolidation: 1.7%


* Test Method: ASTM D-2435

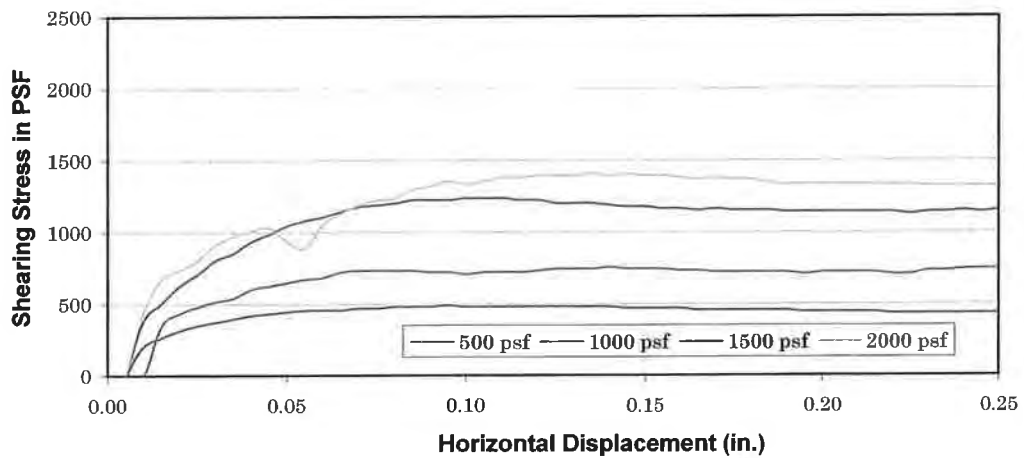
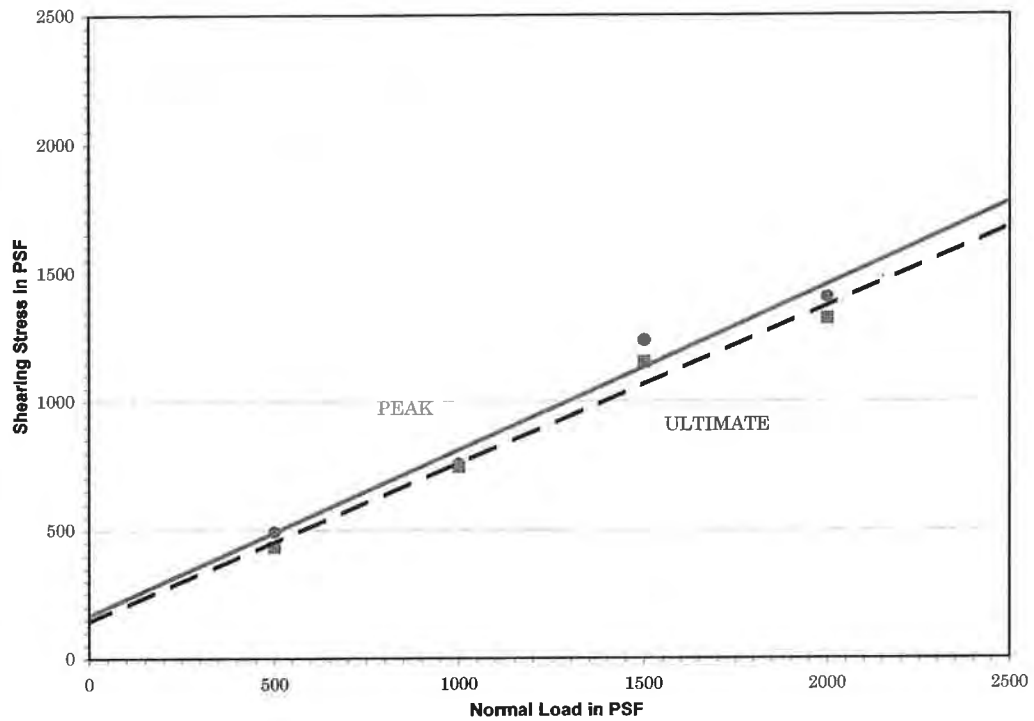
Consolidation Test	
Tropico Middle School	
Rosamond, California	
 Earth Systems Southern California	
1/6/2009	PL-07218-03



Sample Location: Boring 16@10'
 Material: Silty Fine to Coarse Sand (SM)
 Initial Dry Density: 106.0 PCF
 Moisture Content: 5.9%
 Percent Hydroconsolidation: 0.9%

* Test Method: ASTM D-2435

Consolidation Test	
Tropico Middle School	
Rosamond, California	
 Earth Systems Southern California	
1/6/2009	PL-07218-03




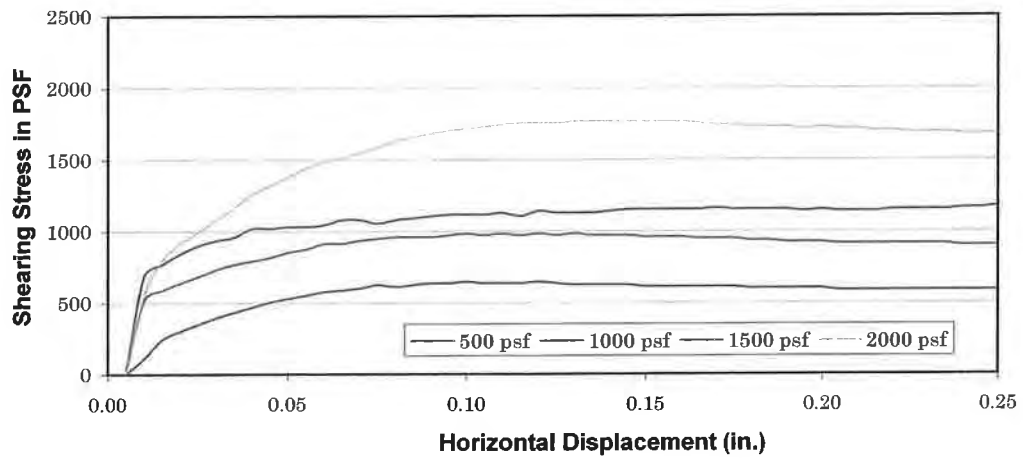
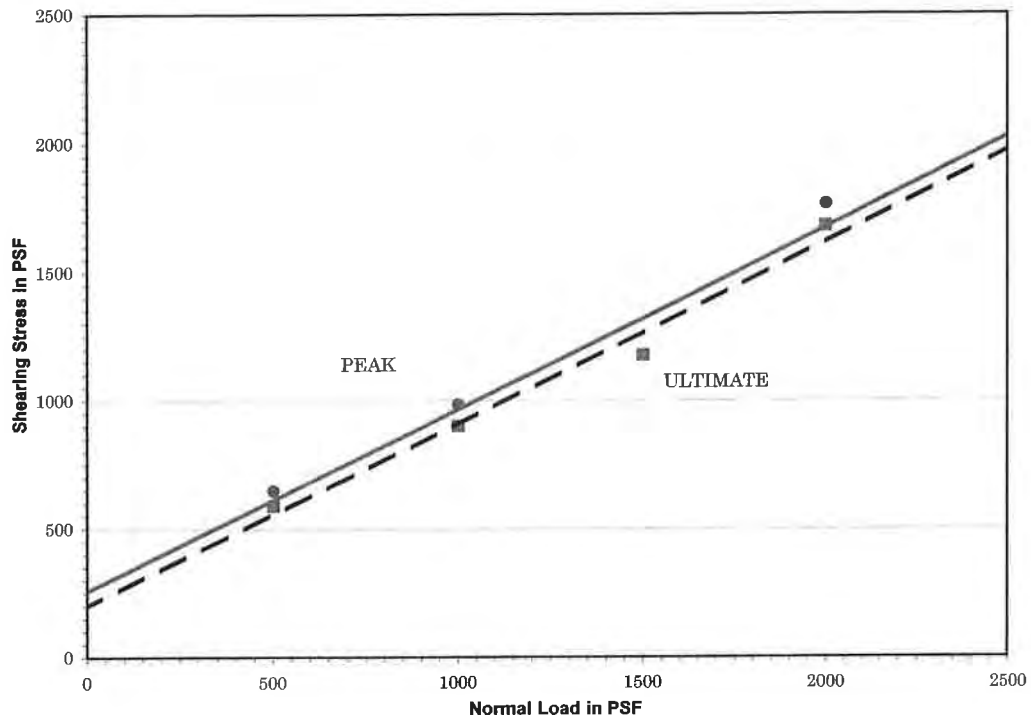
DIRECT SHEAR DATA*

Sample Location: Boring 3@0-5'
 Material: Silty Fine to Coarse Sand (SM)
 Dry Density (pcf): 116.0
 Average Degree of Saturation: 91.6
 Shear Rate (in/min): 0.004

	Peak	Ultimate
φ Angle of Friction (degrees):	33	32
c Cohesive Strength (psf):	160	140
Test Type: Peak and Ultimate		

* Test Method: ASTM D-3080

DIRECT SHEAR TEST	
Tropico Middle School	
Rosamond, California	
	Earth Systems
	Southern California
1/6/2009	PL-07218-03




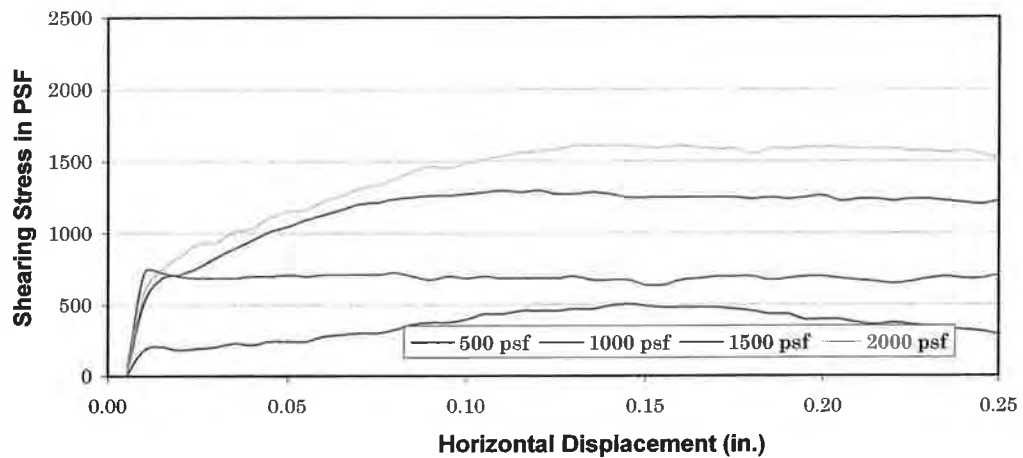
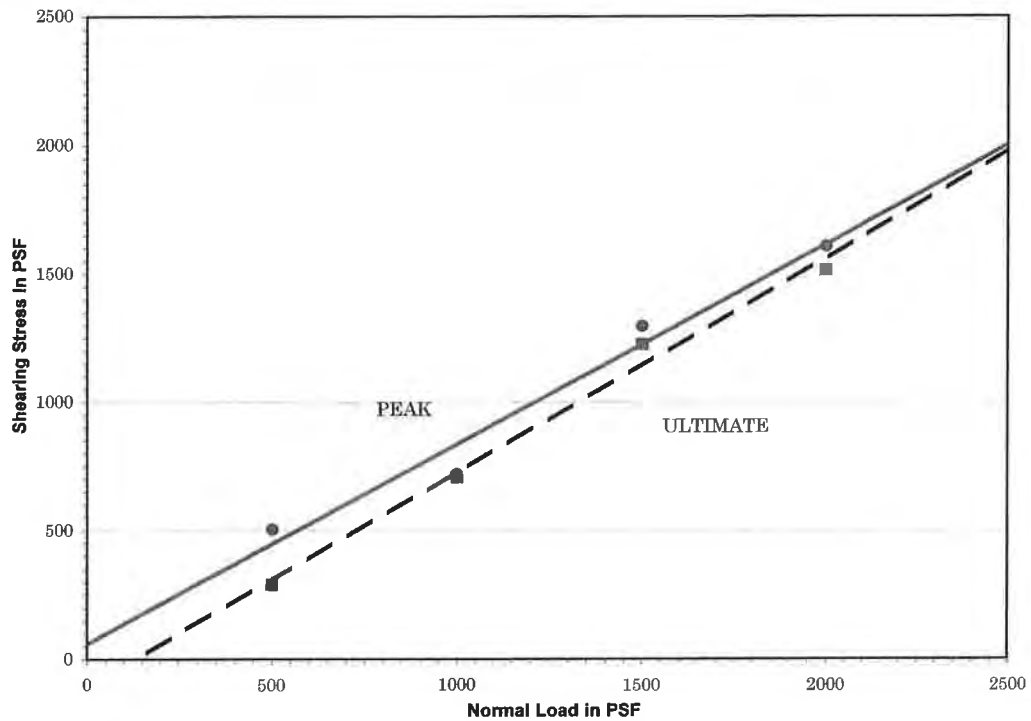
DIRECT SHEAR DATA*

Sample Location: Boring 15@0-5'
 Material: Silty Fine to Coarse Sand (SM)
 Dry Density (pcf): 115.0
 Average Degree of Saturation: 96.9
 Shear Rate (in/min): 0.004

	Peak	Ultimate
ϕ Angle of Friction (degrees):	35	35
c Cohesive Strength (psf):	250	190
Test Type: Peak and Ultimate		

* Test Method: ASTM D-3080

DIRECT SHEAR TEST	
Tropico Middle School	
Rosamond, California	
	Earth Systems
	Southern California
1/6/2009	PL-07218-03




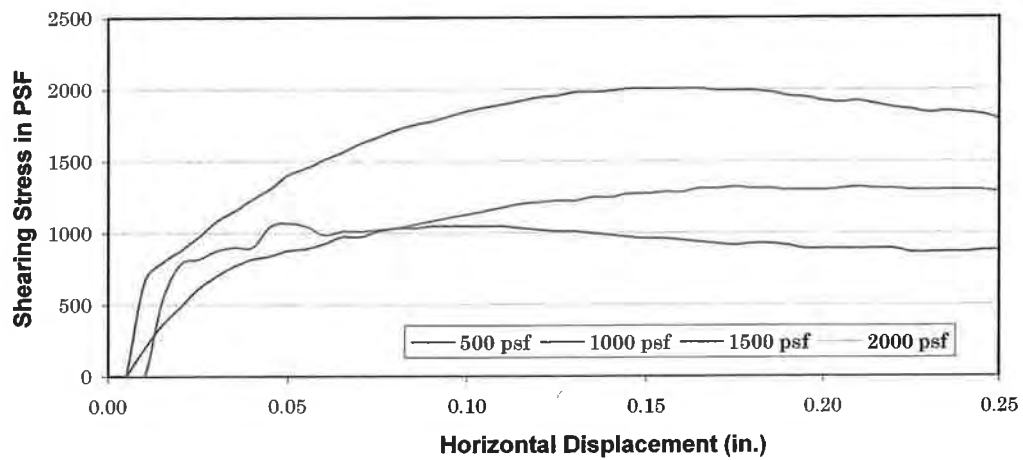
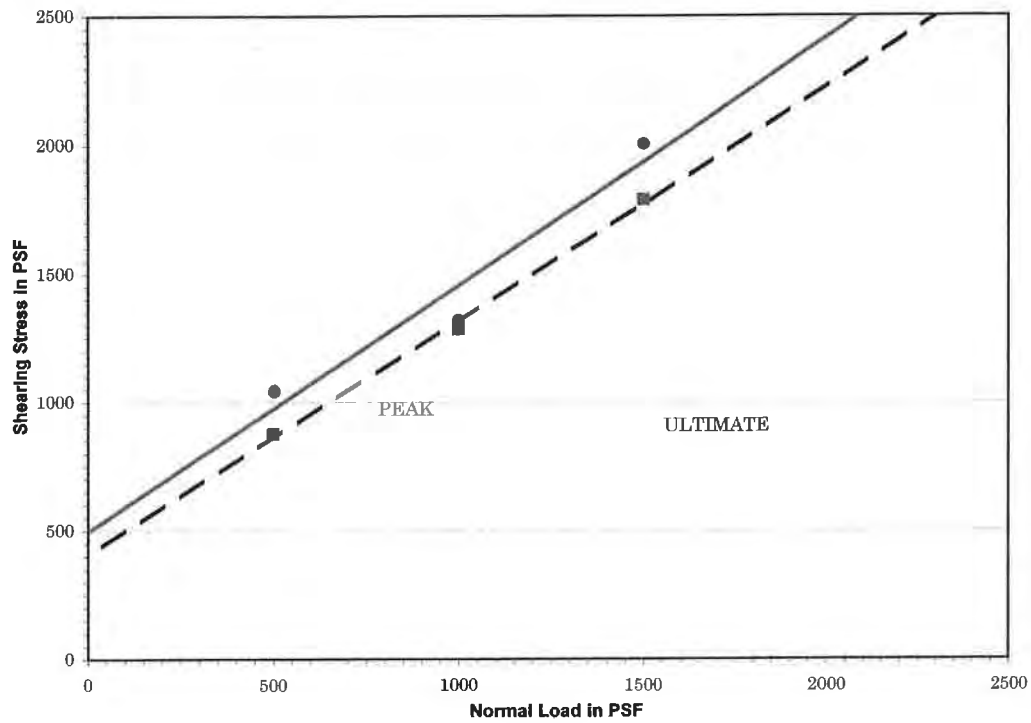
DIRECT SHEAR DATA*

Sample Location: Boring 1@3'
 Material: Silty Fine to Coarse Sand (SM)
 Dry Density (pcf): 102.0
 Average Degree of Saturation: 98.4
 Shear Rate (in/min): 0.004

	Peak	Ultimate
ϕ Angle of Friction (degrees):	38	40
c Cohesive Strength (psf):	60	0
Test Type: Peak and Ultimate		

* Test Method: ASTM D-3080

DIRECT SHEAR TEST	
Tropico Middle School	
Rosamond, California	
	Earth Systems Southern California
1/16/2009	PL-07218-03




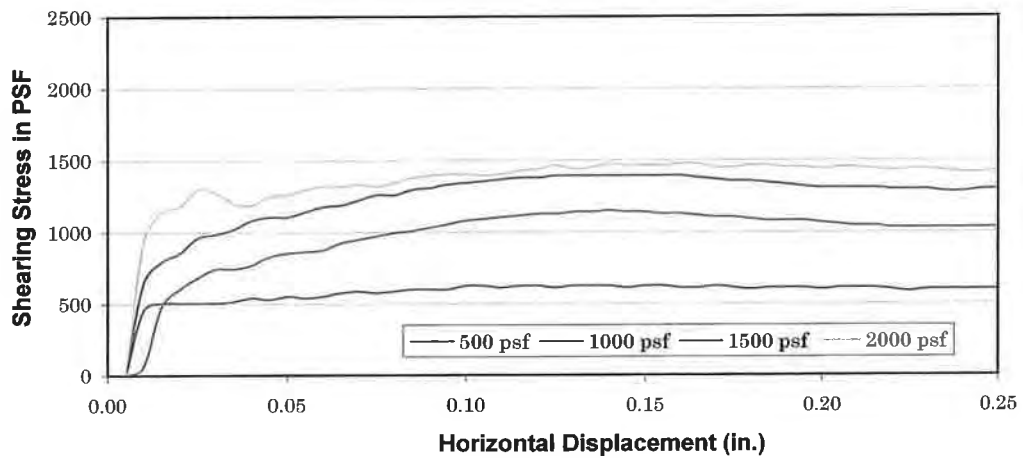
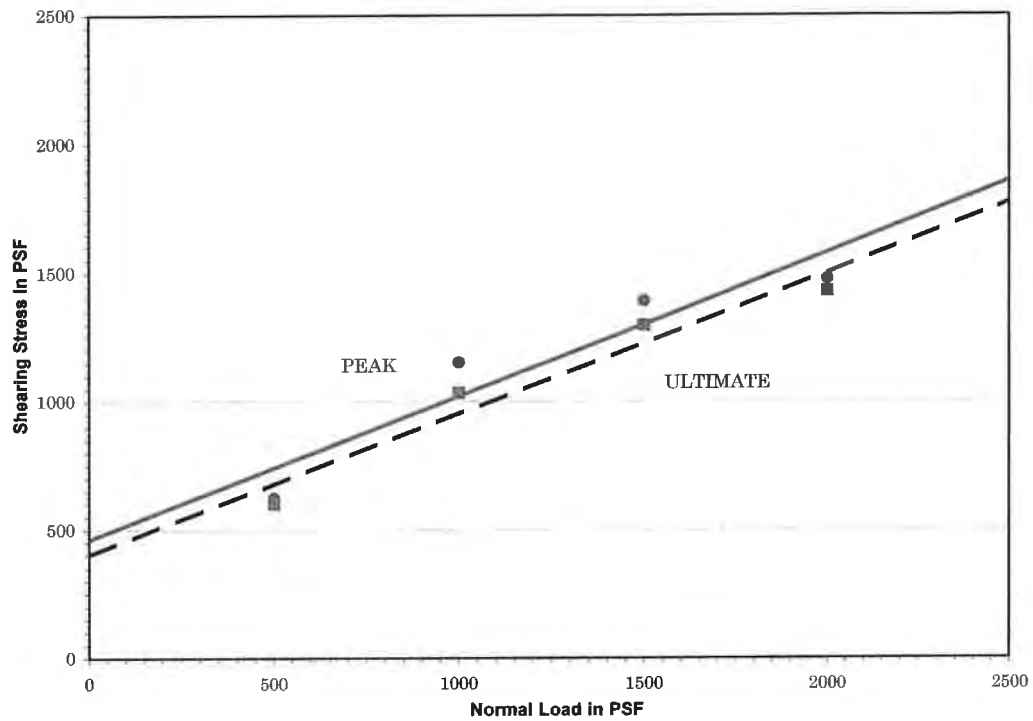
DIRECT SHEAR DATA*

Sample Location: Boring 10@4'
 Material: Silty Fine to Coarse Sand (SM)
 Dry Density (pcf): 116.0
 Average Degree of Saturation: 92.8
 Shear Rate (in/min): 0.004

	Peak	Ultimate
ϕ Angle of Friction (degrees):	44	42
c Cohesive Strength (psf):	490	400
Test Type: Peak and Ultimate		

* Test Method: ASTM D-3080

DIRECT SHEAR TEST	
Tropico Middle School	
Rosamond, California	
	Earth Systems Southern California
1/6/2009	PL-07218-03




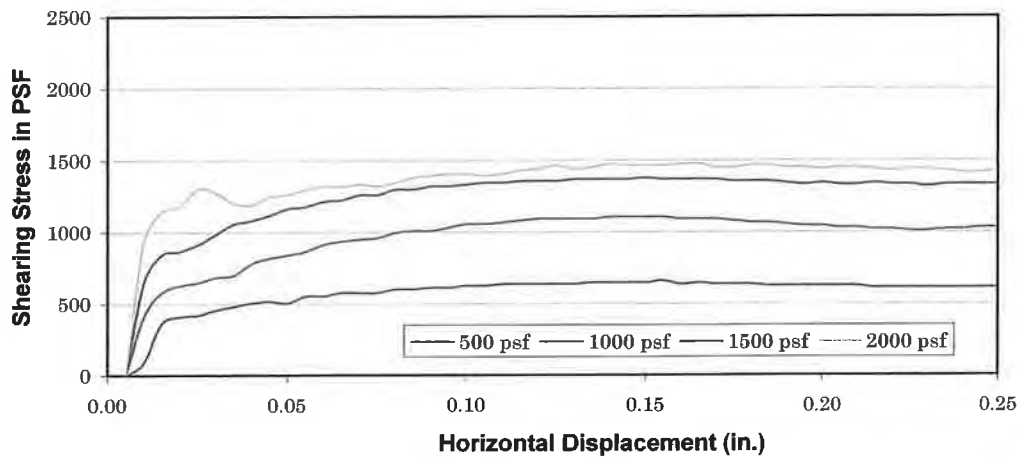
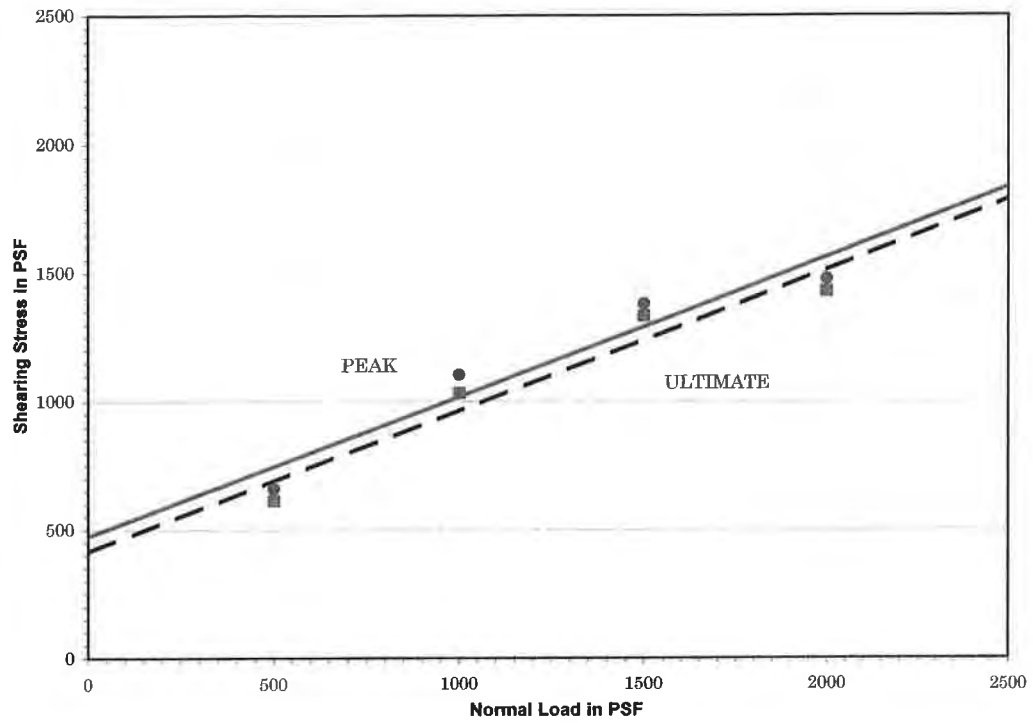
DIRECT SHEAR DATA*

Sample Location: Boring 16@4'
 Material: Silty Fine to Medium Sand (SM)
 Dry Density (pcf): 95.0
 Average Degree of Saturation: 98.5
 Shear Rate (in/min): 0.004

	Peak	Ultimate
ϕ Angle of Friction (degrees):	29	29
c Cohesive Strength (psf):	460	400
Test Type: Peak and Ultimate		

* Test Method: ASTM D-3080

DIRECT SHEAR TEST	
Tropico Middle School	
Rosamond, California	
	Earth Systems Southern California
1/6/2009	PL-07218-03




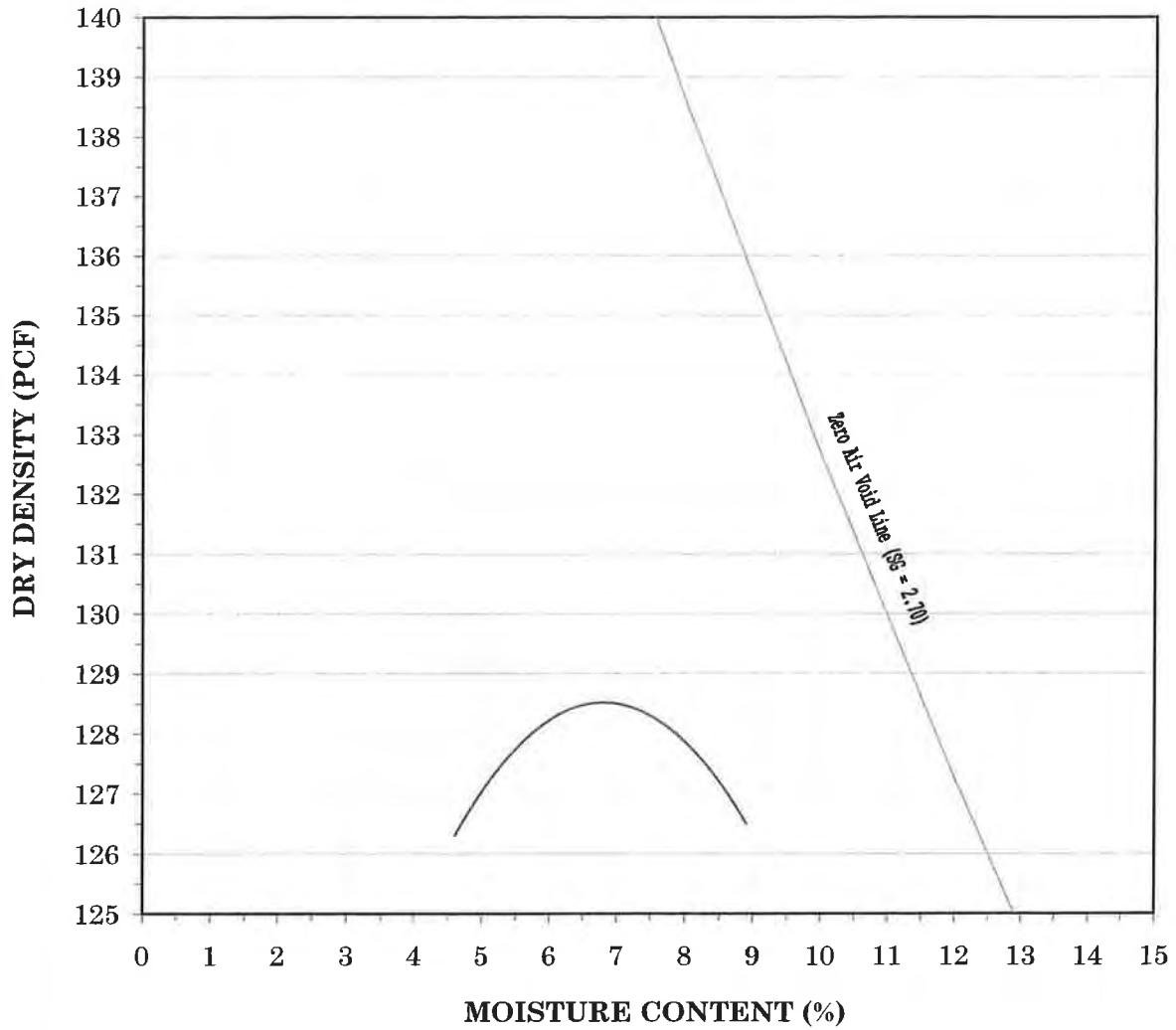
DIRECT SHEAR DATA*

Sample Location: Boring 20@4'
 Material: Silty Fine to Coarse Sand (SM)
 Dry Density (pcf): 117.0
 Average Degree of Saturation: 92.4
 Shear Rate (in/min): 0.004

	Peak	Ultimate
ϕ Angle of Friction (degrees):	29	29
c Cohesive Strength (psf):	470	410
Test Type: Peak and Ultimate		

* Test Method: ASTM D-3080


DIRECT SHEAR TEST	
Tropico Middle School	
Rosamond, California	
 Earth Systems Southern California	
1/6/2009	PL-07218-03

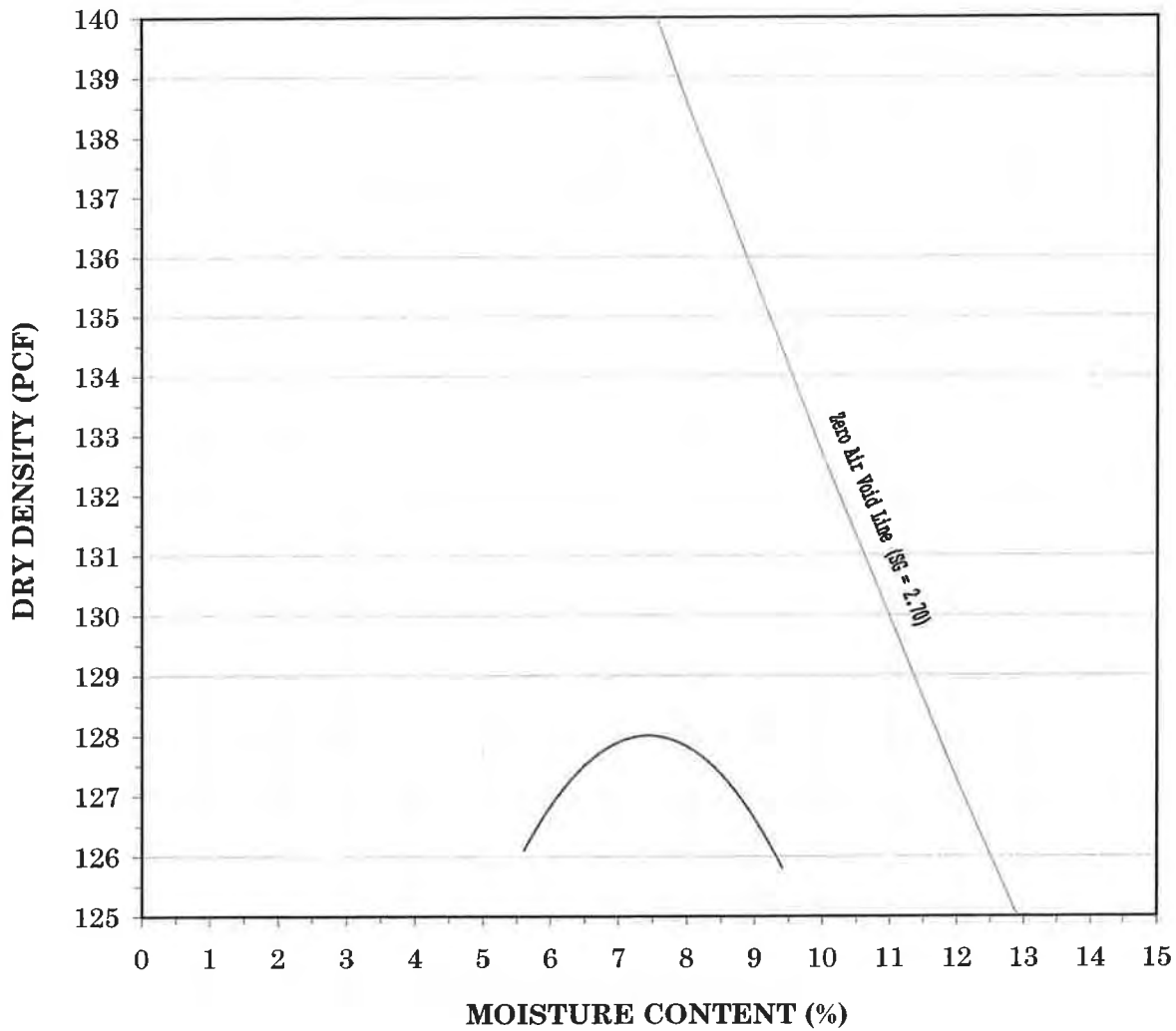


Maximum Density - Optimum Moisture Characteristics*

Sample Location: Boring 3 @ 0-5'
 Material: Silty Fine to Coarse Sand (SM)
 Maximum Density (pcf): 128.5
 Optimum Moisture: 7.0%

* Test Method: ASTM D-1557

MAXIMUM DENSITY - OPTIMUM MOISTURE	
Tropico Middle School	
Rosamond, California	
 Earth Systems Southern California	
1/6/2009	PL-07218-03



Maximum Density - Optimum Moisture Characteristics*


Sample Location: Boring 15 @ 0-5'

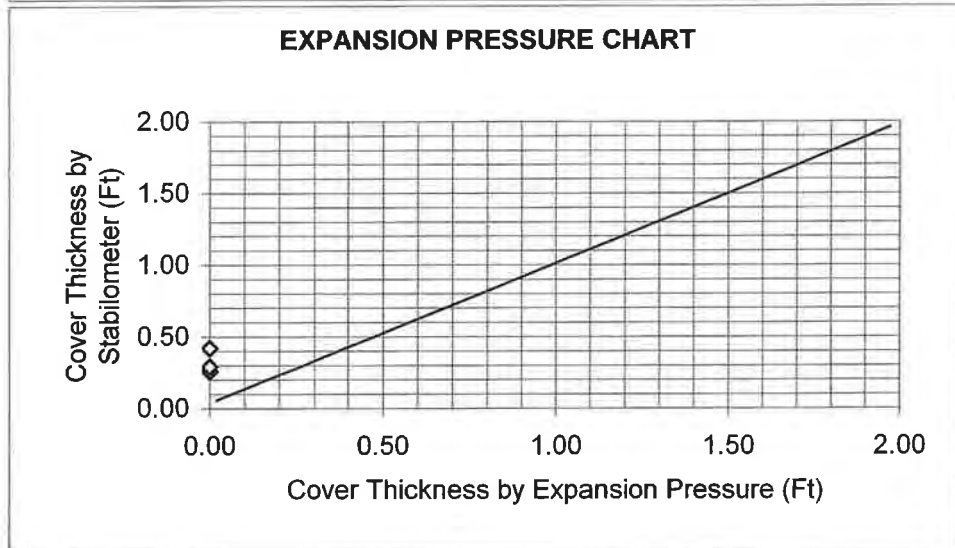
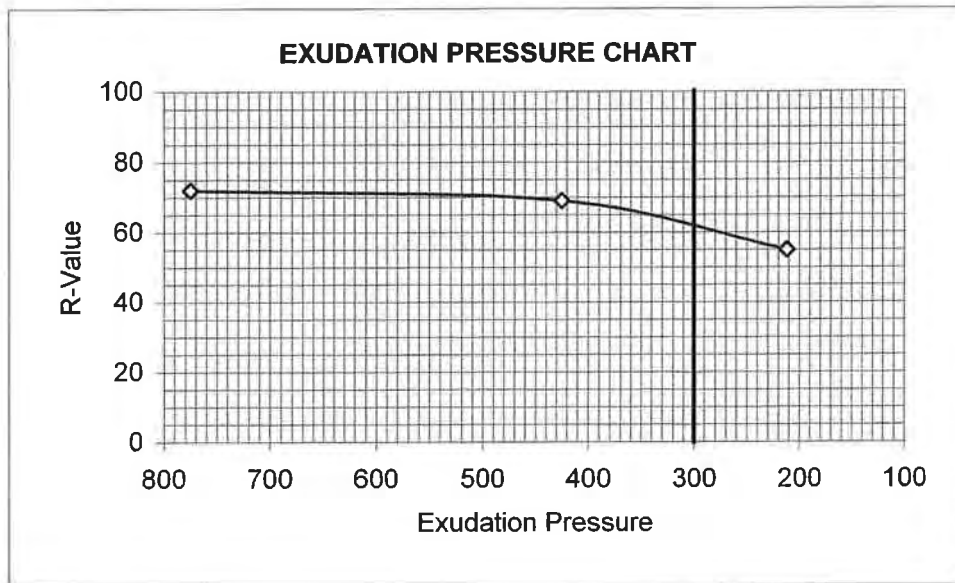
Material: Silty Fine to Coarse Sand (SM)

Maximum Density (pcf): 128.0

Optimum Moisture: 7.5%

* Test Method: ASTM D-1557

MAXIMUM DENSITY - OPTIMUM MOISTURE	
Tropico Middle School	
Rosamond, California	
 Earth Systems Southern California	
1/6/2009	PL-07218-03

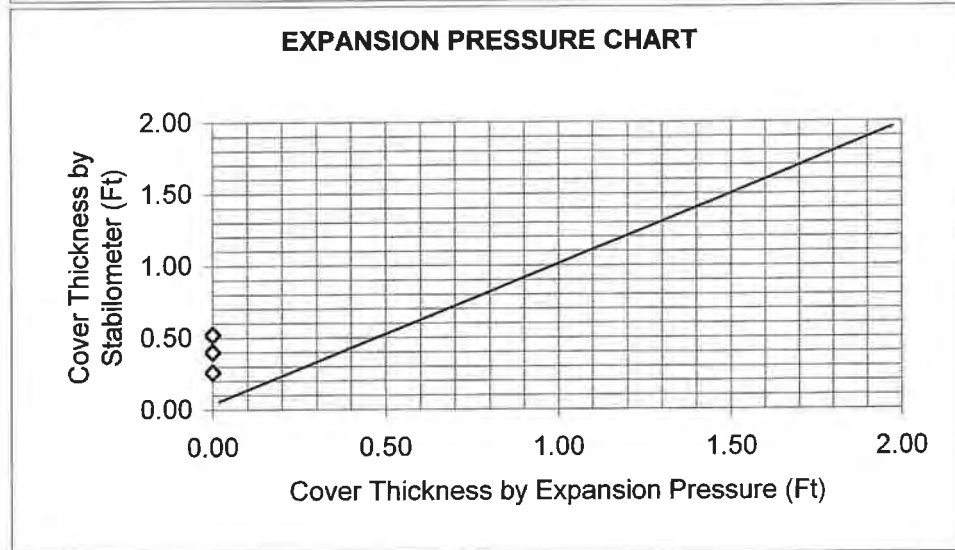
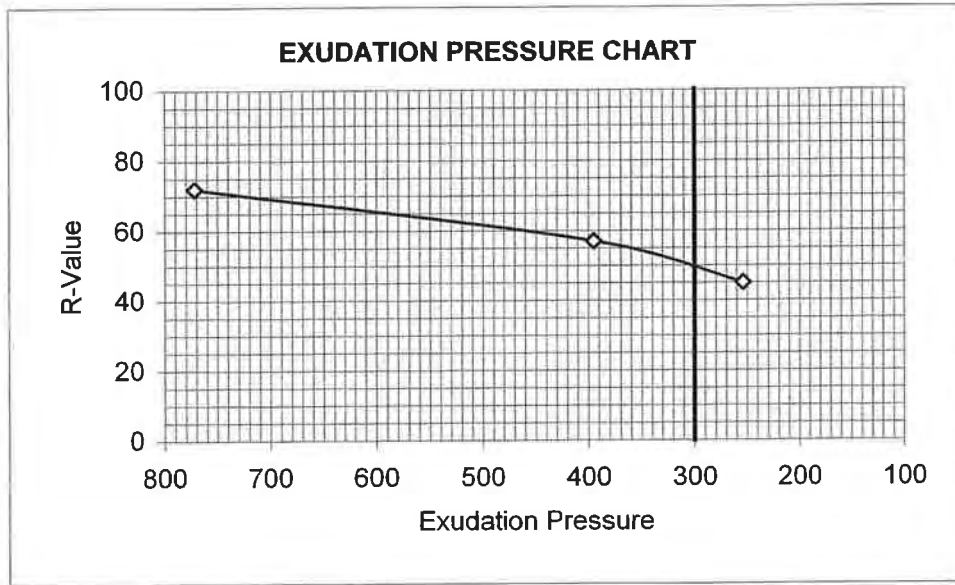


JOB NAME: Tropico Middle School
SAMPLE I. D.: Boring 5 @ 0-5'
SOIL DESCRIPTION: Silty Fine to Coarse Sand (SM)

SPECIMEN NUMBER	A	B	C
EXUDATION PRESSURE	775	425	212
RESISTANCE VALUE	72	69	55
EXPANSION DIAL(0.0001")	0	0	0
EXPANSION PRESSURE (PSF)	0.0	0.0	0.0
% MOISTURE AT TEST	8.9	9.4	10.7
DRY DENSITY AT TEST	129.1	128.1	127.4

R-VALUE @ 300 PSI EXUDATION	62
R-VALUE by Expansion Pressure*	100

**Based on a Traffic Index of 5.0 and a Gravel Factor of 1.70*



JOB NAME: Tropic Middle School
SAMPLE I. D.: Boring 17 @ 0-5'
SOIL DESCRIPTION: Silty Fine to Coarse Sand with Gravel (SM)

SPECIMEN NUMBER	A	B	C
EXUDATION PRESSURE	772	395	254
RESISTANCE VALUE	72	57	45
EXPANSION DIAL(0.0001")	0	0	0
EXPANSION PRESSURE (PSF)	0.0	0.0	0.0
% MOISTURE AT TEST	9.7	10.5	11.3
DRY DENSITY AT TEST	127.1	129.8	129.2

R-VALUE @ 300 PSI EXUDATION	51
R-VALUE by Expansion Pressure*	100

**Based on a Traffic Index of 5.0 and a Gravel Factor of 1.70*

TABLE B-I

SUMMARY OF EXPANSION INDEX* TESTING

<u>Sample Location</u>	<u>Material Description</u>	<u>Expansion Index</u>	<u>Expansion Potential</u>
Boring #3 @ 0-5 Feet	Silty Sand (SM)	0	Very Low
Boring #15 @ 0-5 Feet	Silty Sand (SM)	0	Very Low

*ASTM D 4829 Test Method



Table 1 - Laboratory Tests on Soil Samples

Earth Systems So. Ca.
Tropico Middle School, Rosamond, CA
Your #PL-07218-03, SA #08-1069LAB
4-Sep-08

Sample ID

B #3
@ 0-5'

Table with 3 columns: Resistivity, Units, and values. Rows for as-received and saturated resistivity.

pH 7.7

Electrical

Conductivity mS/cm 0.15

Chemical Analyses

Cations

Table with 4 columns: Name, Formula, Units, and Value. Rows for calcium, magnesium, sodium, and potassium.

Anions

Table with 4 columns: Name, Formula, Units, and Value. Rows for carbonate, bicarbonate, fluoride, chloride, sulfate, and phosphate.

Other Tests

Table with 4 columns: Name, Formula, Units, and Value. Rows for ammonium, nitrate, sulfide, and Redox.

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 C

Soil Fertility Analysis



Locations:

352 Mathew St.
Santa Clara, CA 95050
(408) 727-0330

1594 North Main St.
Orange, CA 92867
(714) 282-8777

Orange office
Lab No: 08-248-0014
September 19, 2008

Earth Systems Southern California
1024 W. Ave. M-4
Palmdale, CA 93551

Attn: Mr. Tim Thomson

TROPICAL MIDDLE SCHOOL
JOB# PL-07218-03

Attached are the results of the analysis performed on a soil sample collected from Tropical Middle School project site and labeled "Site Soil 0-5' Boring #3" and was presumably collected to a depth of 5 feet. The sample was received by Soil and Plant Laboratory on September 4, 2008. This sample was analyzed for nutrient levels and soil suitability in preparation for a new landscape installation of turf sod, trees, shrubs, groundcover and an athletic field.

Analytical Results:

Boron is safely low in this sample. The overall salinity (ECe) is low and safe. The sodium adsorption ratio (SAR) indicates that soluble sodium does not present a hazard.

The reaction of the soil is slightly alkaline at 7.6 on the pH scale. Incorporating soil sulfur at the provided rate and depth would help adjust the pH downward towards a more preferred level. Plants sensitive to alkaline soil conditions should be avoided.

Nitrogen is low while phosphorus and potassium are ample. Calcium, magnesium, manganese, copper and iron are optimum while zinc is low. The organic content of the soil is low at 0.7% of the sample by total dry weight.

The texture of the soil is sandy loam with an estimated water infiltration rate of 0.34 inches per hour. The actual rate of water infiltration may vary depending on the degree of soil compaction.

Comments

When collecting samples to determine nutrient values and chemistry conditions for general landscape plants, the top 12 to 18 inches is of primary interest. This is because the active root zone in which plants take up the majority of water and nutrients is within the top 12 to 18 inches of the soil profile. This is true even for larger specimens. If sub soil chemistry is a concern, it is more useful to submit a sample of the first 12 to 18 inches of soil for nutrient and chemistry evaluation along with a sub soil sample to be tested for potential soil chemistry issues only. Sub soil samples are generally collected from a depth of 18 to 36 inches. If soil chemistry conditions differ in the surface and sub soil, testing each separately will help isolate areas of potential concern.





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Earth Systems Southern California
September 19, 2008

Recommendations

Surface Soil Preparation for Turf, Groundcover and Mass Planting

If feasible, prior to amending the areas where severe compaction exists, the surface soil should be ripped or tilled to a 9-inch depth. Uniformly broadcast and blend the following with existing soil to a 6-inch depth.

AMOUNT PER 1000 SQ. FT.

4 cu. yds. nitrogen fortified organic amendment
(compost* or redwood or fir sawdust)

7 lbs. ammonium sulfate (21-0-0)

5 lbs. soil sulfur

*Rates and fertilizers may have to be adjusted depending on analysis of selected compost.

Tree & Shrub Planting Guidelines

1. Excavate planting pits at least twice the diameter of the rootball.
2. The top of the rootball should be at or slightly above final grade.
3. Organic material is not required in the backfill; however if you wish, the amended surface soil or a soil blend consisting of no more than 10% by volume organic matter can be placed in the upper 12 inches of backfill only. Soil below this depth should not contain any added organic matter because of the threat of plant disease and/or anaerobic soil conditions developing.
4. Place slow release fertilizer tablets in the upper 12 inches of backfill at manufacturer's recommended rates. If fertilizer amended soil is used as a backfill the addition of slow release fertilizer tablets is not necessary.
5. Do not cover the original rootball with other soil. Ideally, a temporary soil berm is often constructed around the outer edge of the rootball to help channel water into the rootball and then into surrounding soil until roots are established in the backfill and the rootball is no longer the sole source of water for the plant.
6. Ideally, a weed and turf free zone, preferably 2-3 ft. in diameter, should be maintained just beyond the diameter of the planting hole. A 2-4 inch deep layer of coarse mulch can be placed around the tree or shrub; mulch should be kept a minimum 4-6 inches from the trunk.

Maintenance Fertilization

For turf, groundcover and mass planting areas, uniformly broadcast sulfur coated urea at the rate of 5 lbs. per 1000 sq. ft. The first application should occur approximately 45 days after planting, with repeat applications every 60-90 days or as growth and color dictate. In early fall and spring, substitute a complete fertilizer such as 16-6-8, or equal, for the sulfur coated urea at the rate of 6 lbs. per 1000 sq. ft. to ensure continuing supplies of phosphorus and potassium. Tree and shrub plantings can be maintained with the above fertilizers; however, the frequency between applications should be every 120 days, with the first application 90 days after planting. Follow each fertilization with a thorough irrigation. When plants have become well established, fertilizer applications can be less frequent.





Page 3
Earth Systems Southern California
September 19, 2008

Maintenance Fertilization Continued

As noted above, zinc is below optimum. When micronutrients are low, especially in an alkaline soil, deficiencies can sometimes show in the plants. If deficiencies show once plants have become established, they may be addressed upon the first sign of deficiency. Symptoms of zinc deficiency symptoms are often characterized by yellow, almost white, interveinal chlorosis on the youngest growth. If these symptoms are apparent once plants are established, then application of manganese chelate may improve appearance. Chelates are generally more effective on alkaline soils than some of the other forms of trace elements.

One option is the Monterey AgResources line of chelated micronutrient formulations under the brand name SEQUESTAR®. These can be applied to foliage as a cover spray at manufacturer's rates if deficiencies begin to show. Products may react with others in the tank in unexpected ways. Be careful to follow manufacturer's label instructions concerning tank mixes.

If we can be of any further assistance, please feel free to contact us.

Jason Gihring

Faxed: 661-948-7963





Project : Tropical Middle School

COMPREHENSIVE SOIL ANALYSIS

Sample Description - Sample ID	Half Sat %	pH	ECe dS/m	Sufficiency Factors										Organic % dry wt.	Lab No.
	TEC	Qual Lime		NO ₃ -N ppm	NH ₄ -N ppm	PO ₄ -P ppm	K ppm	Ca ppm	Mg ppm	Cu ppm	Zn ppm	Mn ppm	Fe ppm		
Site Soil 0-5' Boring #3	11	7.6	0.4	9	1	29	202	1004	110	0.9	4	40	0.7	10478	
	64	None		0.5	2.3	2.8	1.1	0.9	1.3	0.2	0.5	1.5			

Percent of Sample Passing 2 mm Screen										USDA Soil Classification	Lab No.
Gravel %			Sand			Clay					
Ca meq/L	Mg meq/L	Na meq/L	Coarse 5-12	Fine 2-5	Very Coarse 1-2	Coarse 0.5-1	Med. to Very Fine 0.05-0.5	Silt .002-.05	Clay 0-.002	Sandy Loam	10478
1.5	0.7	1.2	3.2	5.0	10.8	17.0	48.8	15.4	8.0		

Saturation Extract Values

Ca meq/L	Mg meq/L	Na meq/L	K meq/L	B ppm	SO ₄ meq/L	SAR
1.5	0.7	1.2	0.4	0.26	0.8	1.1

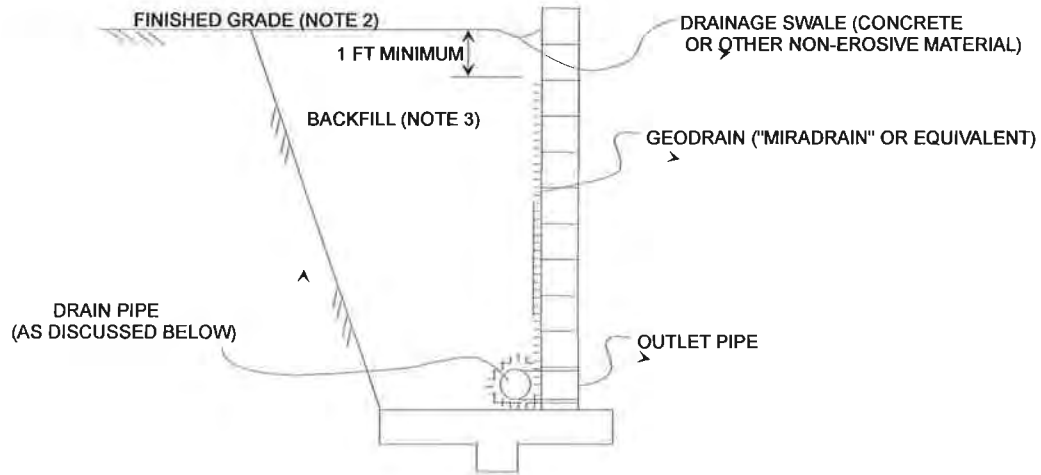
Sufficiency factor (1.0=sufficient for average crop) below each nutrient value. N factor based on 200 ppm constant feed. SAR = Sodium adsorption ratio. Half Saturation %=approx field moisture capacity. Nitrogen(N), Potassium(K), Calcium(Ca) and Magnesium(Mg) by sodium chloride extraction. Phosphorus(P) by sodium bicarbonate extraction. Copper(Cu), Zinc(Zn), Manganese(Mn) & Iron(Fe) by DTPA extraction. Sat. ext. method for salinity (ECe as dS/m), Boron (B), Sulfate(SO₄), Sodium(Na). Gravel fraction expressed as percent by weight of oven-dried sample passing a 12mm(1/2 inch) sieve. Particle sizes in millimeters. Organic percentage determined by Walkley-Black or Loss on Ignition.

* LOW , SUFFICIENT , HIGH

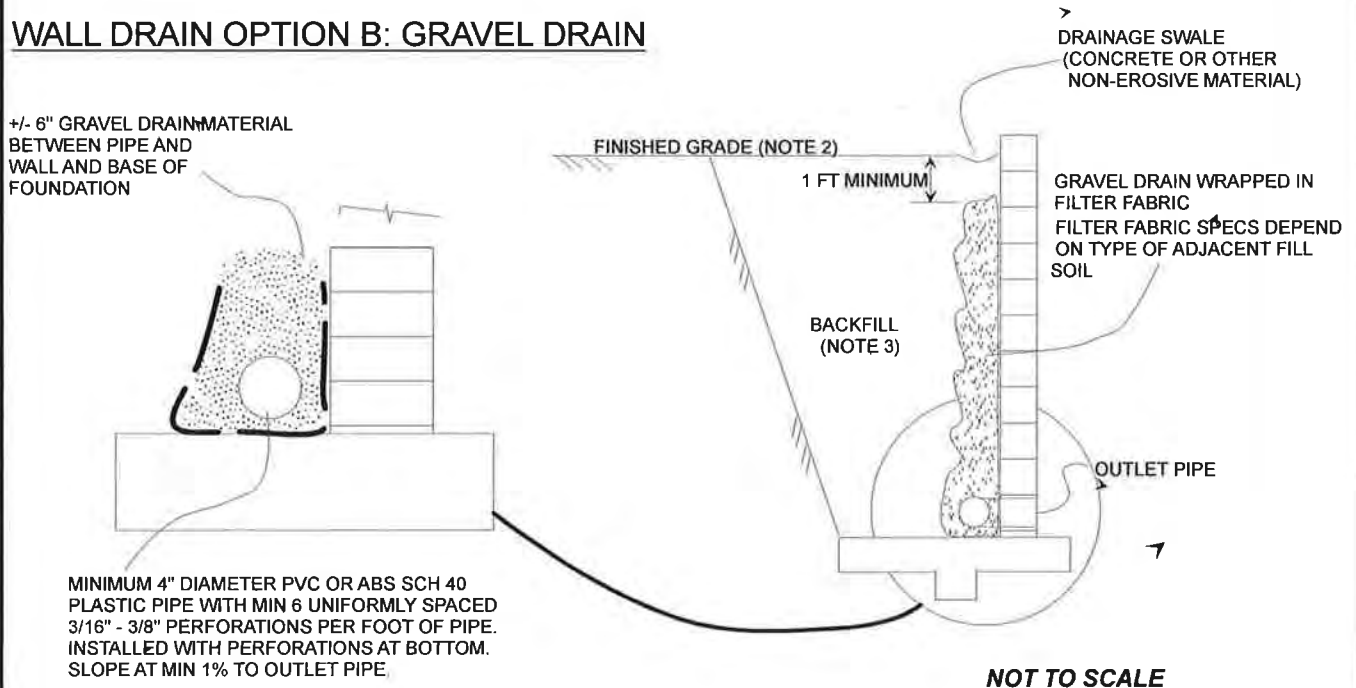
APPENDIX D

Design Plates

WALL DRAIN OPTION A: SYNTHETIC GEODRAIN



WALL DRAIN OPTION B: GRAVEL DRAIN



NOTE 1)

GRAVEL DRAIN MATERIAL SHALL CONSIST OF CLEAN PEA GRAVEL OR 3/8" GRAVEL WRAPPED IN APPROPRIATE FILTER FABRIC* OR CALIFORNIA CLASS II PERMEABLE MATERIAL

NOTE 2)

USE DRAINAGE SWALE OR GRADE TO DRAIN AWAY FROM WALL.

NOTE 3)

ENGINEERED BACKFILL COMPACTED AS RECOMMENDED IN GEOTECHNICAL REPORT. SPECIAL PROVISIONS WILL APPLY TO MODERATELY OR HIGHLY EXPANSIVE BACKFILL

NOTE 4)

WEEP HOLES IN BASE BLOCK COURSE ARE RECOMMENDED. CARE SHOULD BE TAKEN THAT WEEP HOLES ARE NOT COVERED BY EXTERIOR GRADE OR PAVING.

BACKDRAIN DETAILS - EXTERIOR WALLS

Tropico Middle School Expansion
Rosamond, California



Earth Systems
Southern California

8/24/2012

PL-07513-02