LODI UNIFIED SCHOOL DISTRICT
REQUEST FOR QUALIFICATIONS AND PROPOSALS
NEEDHAM ELEMENTARY SCHOOL MODULAR CLASSROOM(S) PROJECT
LEASE-LEASEBACK PRECONSTRUCTION AND CONSTRUCTION SERVICES
RFQ/P # 0917-8217-5

Lodi Unified School District ("District") is seeking proposals from qualified persons, firms, partnerships, corporations, associations, or professional organizations to provide design, constructability review, value engineering, master scheduling, cost estimating, budgeting, and construction services for the development and construction for the **Needham Elementary School Modular Classroom Project Increment II Installation of Modular and/or Prefabricated Classroom Building(s)** ("Project"), in accordance with the lease-leaseback structure under Education Code section 17406 et seq.

The Request for Qualifications and Proposals ("RFQ/P"), which includes instructions for its completion, is available at the District Office, located at 1305 E. Vine Street, Lodi, California, or on the Facilities & Planning page of the District's website (https://www.lodiusd.net/district/departments/business-services/facilities-and-planning). Respondents to this RFQ/P shall submit a completed Statement of Qualifications ("SOQ") along with a sealed Proposal (collectively "RFQ/P Packet").

Respondents must mail or deliver five (5) bound copies, one (1) unbound copy, and one (1) electronic copy on CD/DVD or USB stick of the RFQ/P Packet conforming to the requirements of this RFQ/P to:

LODI UNIFIED SCHOOL DISTRICT
1305 E. Vine Street, Lodi, CA 95240
ATTN: Facilities & Planning Department
RFQ/P # 0917-8217-5

ALL RESPONSES ARE DUE BY 2:00:00 P.M. ON MONDAY, DECEMBER 9, 2019. Oral, telegraphic, facsimile, telephone, or email RFQ/P Packets will not be accepted. RFQ/P Packets received after this date and time will not be accepted and will be returned unopened. The District reserves the right to waive any informalities or irregularities in the RFQ/P Packets. The District also reserves the right to reject any and all RFQ/P Packets and to negotiate contract terms with one or more Respondents.

A mandatory informational meeting and site walk will be conducted on **Thursday, November 21**, **2019**, starting at **2:30 P.M**., at Needham Elementary School, located at 420 S. Pleasant Ave., Lodi, CA 95240.

Questions regarding this RFQ/P may be directed in writing to the District's Facilities & Planning Department, at rfpquestion@lodiusd.net, and must be submitted on or by **4:00 P.M. on Tuesday, November 26, 2019**.

All Respondents, including the Developer that installs the modular and/or prefabricated buildings that will be installed under Increment II of the Project, must be prequalified by the District in accordance with the Public Contract Code sections 20111.5 and 20111.6. Proposed electrical, mechanical, and plumbing subcontractors are also subject to the prequalification requirements as required by Public Contract Code section 20111.6 and must be prequalified prior to negotiation of a Guaranteed Maximum Price. The District's Pre-qualification Application is done on-line, and is available at https://pqbids.com/lodi/.

I. RFQ/P SCHEDULE SUMMARY

The District reserves the right to change the dates on the schedule without prior notice.

DATE	ACTION ITEM
November 13, 2019	Release and advertisement of RFQ/P.
November 21, 2019 at 2:30 P.M.	Mandatory pre-bid meeting.
November 26, 2019 at 4:00 P.M.	Deadline to submit questions.
December 3, 2019	Deadline for District to publish answers to questions via addendum.
December 9, 2019 by 2:00:00 P.M.	Final Proposal Due
December 13, 2019 by 4:00 P.M.	Release of shortlisted Respondents and interview notifications.
Week of December 16th-20th, 2019	Interviews of shortlisted Respondents.
December 23, 2019	Notice to selected developer(s) to start negotiation.

II. BACKGROUND

The District encompasses 350 square miles and serves the cities of Lodi, North Stockton, and the communities of Acampo, Clements, Lockeford, Victor, and Woodbridge in the Central Valley of Northern California. Student enrollment is 29,800, and there are 49 school sites, including, 33 elementary, 7 middle, 4 comprehensive high schools, and 2 continuation high schools.

Needham Elementary School, located at 420 S. Pleasant Ave., Lodi, California serves over 350 students in grades K-6.

III. PROJECT DESCRIPTION AND SCOPE OF SERVICES

A. General

The District is seeking proposals from qualified persons, firms, partnerships, corporations, associations, or professional organizations to provide design, constructability review, value engineering, master scheduling, cost estimating, budgeting, and construction services for the development and construction for the **Needham Elementary School Modular Classroom Project Increment II Installation of Modular and/or Prefabricated Classroom Building(s)** ("Project"), in accordance with the lease-leaseback structure under Education Code section 17406 et seq.

Selected developer shall have experience with the construction of public school facilities—including modular school buildings—and in working with the Office of Public School Construction ("OPSC"), the Division of the State Architect ("DSA"), and Title 24 of the California Code of Regulations. Only Respondents who have been prequalified by the District in accordance with Public Contract Code section 20111.6 are eligible to respond to this RFQ/P.

To submit a proposal, Respondent must be properly licensed by the California Contractors State License Board and registered with the Department of Industrial Relations ("DIR") as required by law. The selected developer will be required to comply with the Labor Code prevailing wage requirements and the District's bonding and insurance requirements. The selected developer shall be required to work cooperatively with District staff, the Board of Education, all other technical consultants, the architect, the project inspector, and any program and/or construction manager, if any, retained by the District for the Project, citizens' oversight committee, other District committees, and the community to facilitate timely and professional completion of the Project.

The Project is further defined in the attached **APPENDIX A**, along with the District's construction budget and schedule for the Project. Respondents' Proposal shall include the proposed fee to perform the Project, including the proposed fees to perform preconstruction services or any other work related to the Project, as requested by the District. Each Respondent must submit a budget for each scope of work as well as an overall cost if the Respondent is given all of the work.

The District intends to select the Respondent that best meets the District's needs to perform the Project. The criteria on which the District makes its determination will be based on the District's adopted best value methodology and criteria provided in this RFQ/P. The District may contract immediately, or during the length of the Project, with a single developer to provide all of the services for the Project, but it may elect to divide the scope of work into phases.

The period of performance shall be commensurate with the duration of the Project. The District may, at its sole discretion, extend the term of any contract associated with this solicitation for five (5) separate twelve (12)-month option periods by providing written notice to the selected developer not less than ninety (90) days before the contract expiration date. The total duration of any associated contract shall not exceed five (5) years.

B. Designation of Representative Manufactures

Not Used.

C. Architect's Stamp Required on DSA Approved Drawings

The District hereby notifies all Respondents that the approved DSA drawings of the modular and/or prefabricated buildings that will be installed under Increment II of the Project must have an architect's stamp as required by DSA.

D. Scope of Work

Although the final scope of work will be negotiated in the executed Agreement (defined below at subparagraph H), the selected developer shall be responsible for performing the following scope of work, at a minimum:

Preconstruction Services:

1. Review design and support documentation for content, constructability, completeness, scheduling, clarity, consistency, and coordination.

2. The construction design documents for the modular and/or prefabricated buildings that will be installed under Increment II of the Project must have an architect's stamp affixed to them as requested by DSA.

3. Undertake value-engineering analysis and prepare reports with recommendations to District and Architect of Record to maintain established program budget and specifications.

4. Provide detailed cost estimates at schematic, design development, and construction document design phases.

5. Expedite design reviews, including modifications, if any, based on value analysis.

6. Provide a proposed Guaranteed Maximum Price ("GMP") for the construction of the project with identified subcontractor bids and self-performed work.

Construction Services:

1. Construction of the Project.

2. Coordination of record drawings and specifications.

3. Compilation of operations and maintenance manuals, warranties/guarantees, and certificates.

4. Obtaining occupancy permits and coordinating testing, documentation, and governmental inspections and approvals.

5. Preparation of accounting and closeout reports and occupancy plan reports.

6. Other responsibilities as necessary for the completion of the program.

E. <u>Lease-Leaseback Structure</u>

The Project will be funded from various sources, and any agreement reached will conform to the statutory framework for the lease-leaseback delivery method pursuant to Education Code section 17406 et seq. Financing for a portion of the construction of the Project will be included in the Agreement (defined below at subparagraph H). During construction, the District shall pay tenant improvement payments. Once the Project is complete, the developer shall lease the completed facilities back to the District for a pre-determined monthly lease payment amount. However, the District intends that the lease will include an early termination payment option for the District.

F. District Project Management Description

The District's Board of Education will be responsible for making final decisions, but the Superintendent will be responsible for day-to-day decisions and may designate a project manager, who will be the primary point of contact between the selected developer and the District.

G. Prequalification of Designated Subcontractors

If used, contractors holding C-4, C-7, C-10, C-16, C-20, C-34, C-36, C-38, C-42, C-43, and/or C-46 licenses (collectively, "MEP subcontractors") shall be prequalified by the District to perform construction work as a first-tier subcontractor on the Project pursuant to Public Contract Code section 20111.6.

H. Registration of Respondent and All Tiers of Subcontractors

The selected developer(s) shall not allow any employee or subcontractor to commence work on any contract or any subcontract until the proof of registration with the Department of Industrial Relations required of the developer or subcontractor has been provided to and accepted by the District.

I. Form of Agreement

Selected developer must be able to execute the District's standard form of Site Lease, Facilities Lease, and Contract Documents (together, "Agreement") attached to this RFQ/P as **APPENDIX B**. After the plans and specifications have been approved by DSA, the Facilities Lease will be amended to include the agreed upon Guaranteed Maximum Price.

J. Indemnity

Respondents to this RFQ/P must acknowledge that they have reviewed the District's indemnity provision set forth in the Facilities Lease (**Appendix B**) and must agree to the indemnity provision and confirm in writing that, if given the opportunity to contract with the District, the Respondent has no substantive objections to the use of the District's standard indemnity provision.

K. Insurance

The District has elected to implement an Owner Controlled Insurance Program ("OCIP") under the Statewide Educational Wrap Up Program ("SEWUP"). The SEWUP Joint Powers Authority ("JPA") will be providing the OCIP on behalf of the District. The OCIP will be primary to other valid and collectable insurance for the District and enrolled parties in the program. The SEWUP JPA will provide Workers' Compensation, Employer's Liability, General & Excess Liability, Contractor's Pollution Liability, and Builder's Risk insurance for all Enrolled Contractors (and their Enrolled Subcontractors of every tier) and other designated parties for work performed at the Project Site. The Owner agrees to pay all premiums associated with the OCIP, unless otherwise stated in the contract documents. Contractors shall remove from its proposal any and all cost of insurance as it relates to coverages provided under the OCIP and similarly your subcontractors shall also remove any and all cost of insurance as it relates to coverages provided under the OCIP.

The SEWUP Contractual Provisions are set forth in Exhibit D-1 to the Facilities Lease (**Appendix B**).

IV. FULL OPPORTUNITY

The District hereby affirmatively ensures that Disadvantaged Business Enterprises ("DBE"), Small Local Business Enterprise ("SLBE"), Small Emerging Local Business Enterprise ("SELBE") and Disabled Veterans Business Enterprise ("DVBE") firms shall be afforded full opportunity to submit qualifications in response to this RFQ/P and will not be discriminated against on the basis of race, color, national origin, ancestry, disability, gender, transgender status, political affiliation, or religion in any consideration leading to the award of contract.

V. LIMITATIONS

This RFQ/P is neither a formal request for bids, nor an offer by the District to contract with any party responding to this RFQ/P. The District reserves the right to add additional prequalified Respondents for consideration after distribution of this RFQ/P if it is found to be in the best interest of the District. All decisions concerning selection of the developer will be made in the best interests of the District. The awarding of the contract pursuant to this RFQ/P, if at all, is at the sole discretion of the District.

The District makes no representation that participation in the RFQ/P process will lead to an award of contract or any consideration whatsoever. The District shall in no event be responsible for the cost of preparing any RFQ/P Packet in response to this RFQ/P.

RFQ/P Packets and any other supporting materials submitted to the District in response to this RFQ/P will not be returned and will become the property of the District unless portions of the materials are designated as proprietary at the time of submittal, and are specifically requested to be returned. Vague designations and/or blanket statements regarding entire pages or documents are insufficient and will not bind the District to protect the designated matter from disclosure. Pursuant to *Michaelis, Montanari, & Johnson v. Superior Court* (2006) 38 Cal.4th 1065, RFQ/P Packets shall be held confidential by the District and shall not be subject to disclosure under the California Public Records Act until after either: (1) the District and the successful Respondent have completed negotiations and entered into an Agreement, or (2) the District has rejected all Proposals. Furthermore, the District will have no liability to the Respondent or other party as a result of any public disclosure of any RFQ/P Packet.

VI. RESTRICTIONS ON LOBBYING AND CONTACTS

From the period beginning on the date of the issuance of this RFQ/P and ending on the date of the award of the contract, no person, or entity submitting in response to this RFQ/P, nor any officer, employee, representative, agent, or consultant representing such a person or entity shall contact through any means or engage in any discussion regarding this RFQ/P, the evaluation or selection process/or the award of the contract with any member of the District, Board of Education, selection members, or any member of the Citizens' Oversight Committee. Any such contact shall be grounds for the disqualification of the Respondent submitting a RFQ/P Packet.

VII. MANDATORY INFORMATIONAL MEETING AND SITE WALK

Each Respondent must attend the mandatory informational meeting and site walk, to be conducted on **THURSDAY, November 21, 2019 at 2:30 P.M**. The meeting will be held at

Needham Elementary School, located at 420 S. Pleasant Ave., Lodi, CA 95240. At this meeting, District representatives will distribute information and materials to further describe the Project, the scope of work, and walk the proposed Project site. Respondents shall consider and address the materials and information distributed at the meeting in their RFQ/P Packets. Respondents that fail to attend the mandatory informational meeting, in its entirety, shall be ineligible for responding to this RFQ/P.

VIII. SUBMITTAL FORMAT

A. Format

Material must be in 8½ x 11 inch format with font no less than 11 point font size. The RFQ/P Packets shall include divider tabs labeled with boldface headers below (e.g. the first tab would be entitled "Executive Summary," the second tab would be entitled "Table of Contents," etc.) Five (5) bound copies, one (1) unbound copy, and one (1) electronic copy of the RFQ/P Packet shall be submitted. Each submittal shall not contain more than (20) single-sided pages or ten (10) double-sided pages, excluding front and back covers, tabs. Submittals containing more than the authorized number of pages will not be considered.

The unbound copy, marked "Copy for Reproduction," shall be formatted as follows:

- No divider sheets or tab
- Text printed on one side only (i.e., no back-to-back pages)
- Pages with proprietary information removed
- A cover sheet listing the firm's name, the total number of pages, and identification of those pages that were removed due to proprietary information

B. General Overview

Each RFQ/P Packet shall include a description of the type, technical experience, backgrounds, qualifications and expertise of the Respondent. The description shall show that the firm possesses the demonstrated skills and professional experience to perform the general functions of the Project and fulfill the goals and vision of the District as its developer for the Project. Submittals shall describe in detail the Respondent's methods and plan for carrying out the Project. Included in this information must be a detailed description of construction scheduling, staging, and logistics based on timelines and information provided by the District in this RFQ/P and the mandatory informational meeting and site walk. Describe the Respondent's approach to the Project, including any creative methodology and/or technology that the Respondent uses or unique resources that the Respondent can offer to the District and Project.

C. Contents

Respondents shall comply with the following requirements for its RFQ/P Packet:

1. TAB 1 – Executive Summary (maximum 1 page)

This should be an overview of the entire RFQ/P Packet with a description of the general approach and/or methodology the Respondent will use to meet the goals and fulfill the general functions as set forth in this RFQ/P.

2. TAB 2 – Table of Contents

This should be a complete and clear listing of the headings and pages to allow easy reference to key information.

3. TAB 3 – Cover Letter Identifying Respondent (maximum 1 page)

This should be a letter of introduction signed by an authorized officer of the Respondent. If the Respondent is a joint venture, duplicate the signature block and have a principal or officer sign on behalf of each party to the joint venture. The letter shall also include:

a) Respondent's name.

b) Address, include any branch office address and point of contact.

c) Telephone number.

d) Facsimile number.

e) Email address.

f) Identify team.

g) Clearly identify the individual(s) who is/are authorized to speak for the Respondent during the evaluation process.

h) And, the following statement:

"[RESPONDENT'S NAME] received a copy of the District's Site Lease and Facilities Lease ("Agreement") attached at Appendix B to the RFQ/P. [RESPONDENT'S NAME] has reviewed the indemnity provisions and insurance requirements contained in the Agreement. If given the opportunity to contract with the District, [RESPONDENT'S NAME] has no objections to the use of the Agreement."

i) Respondent shall certify that no official or employee of the District, nor any business entity in which an official of the District has an interest, has been employed or retained to solicit or assist in the procuring of the resulting contract(s), nor that any such person will be employed in the performance of any/all contract(s) without immediate divulgence of this fact to the District.

4. TAB 4 - Respondent Information

a) A brief history of the Respondent. Please include any former names of the Respondent and the number of years the Respondent has participated in construction as a general contractor under each name. List any reasons for change or name or corporate structure.

b) Provide an organizational chart and resumes of for Respondent. This shall include the names of all joint venture partners, and sub-

consultants with the titles and specific task assignments for the key personnel on the Project. Identify up to three (3) persons who will be primarily responsible for working with the District and their respective roles and responsibilities. If Respondent is selected for an interview, the identified individuals must attend the interview and any required in-person presentations.

The District's evaluation will consider the entire team, therefore, no changes in the Respondent's composition will be allowed without prior written approval by the District. Respondent shall be responsible for any additional costs incurred by a change in personnel.

c) Provide description of Respondent's technical competence, including a description of in-house resources (e.g. computer capabilities, software applications, modeling programs, etc.), and Respondent's ability to draw upon multi-disciplinary staff to address the services required under the RFQ/P.

d) Provide the volume of construction in dollars for each of the past three (3) years.

e) Provide a statement regarding the Respondent's availability and resources.

f) Provide a statement on financial resources, bonding capacity and insurance coverage.

g) Provide a claims statement: Submit a statement indicating any and all suits or claims in which the Respondent or its personnel instigated litigation regarding construction projects within the past five (5) years, and indicating any and all claims in which claims and/or litigation have been pursued against the Respondent. For each listed claim and/or litigation: state the issues in the claim and/or litigation, the status of the claim/litigation, the names of the parties involved, and the outcome, if any.

h) Contractor license number and whether license has been revoked or suspended in the last five (5) years. Respondent must hold a General Building Contractor License (B License), which is current, valid and in good standing with the Contractor's State License Board. Provide the following for each license:

   i. Exact name of license holder on file.

   ii. License Classification.

   iii. License Number.

   iv. Date Issued.

   v. Expiration Date.

vi. Whether license has been suspended or revoked in the past five (5) years. If so, explain.

vii. Provide the same information for all subconsultants and subcontractors.

i) Provide signatory status.

j) Location of nearest local office and main office, if different.

k) Certificate(s) of Insurance identifying the firm's current insurance coverages.

l) Provide Non-Collusion Declaration. (**APPENDIX C-1**.)

m) Provide Iran Contracting Act Certification. (**APPENDIX C-2**.)

5. TAB 5 – Methods and Strategic Plan

Detailed description of Respondent's methods and plan for carrying out the Project, including:

a) The technical and managerial approach to the Respondent's partnership with the District. Take into account the District's goals for the Project and the general functions required. Respondent may identify additional necessary tasks and discuss these in its proposed method to accomplish the work.

b) How Respondent plans to incorporate local subcontracting teams into the Project while complying with the skilled and trained workforce requirements as provided in Public Contract Code section 2600 et seq.

c) How Respondent plans to incorporate construction means and methods into the Project.

d) Proposed cost for completing preconstruction services for the Project for which the Proposal is being submitted.

e) Detailed discussion of costs related to fees, general conditions, insurance, supervision, and management of the construction portion of the scope of work.

f) Preliminary schedule for the project with specific milestones.

Emphasis will be given to the methods and strategic plan as they relate to preconstruction services and how the preconstruction services will transition into the construction services.

6. TAB 6 – Prior Relevant Experience

Description of the Respondent's experience with respect to the areas of public schools or similar construction over the past five (5) years. Specifically, please provide a list of projects

the Respondent has been involved with for the past five (5) years where the total project contracts exceeded five million dollars ($5,000,000) per project. Within that list:

a) Identify all projects involving modular building systems.

b) Identify the method (e.g. lease-leaseback, bid-build, etc.) by which each project was constructed. For lease-leaseback projects, include the total cost of each project and a breakdown of the total cost by preconstruction services and construction services.

c) Include a discussion of Respondent's experience with working with the DSA on public school projects.

d) Identify and include discussion of Respondent's experience with projects performed in an occupied building and/or immediately adjacent to an occupied building and/or campus.

For the projects listed, above, be sure to also include the following information:

a) Project's name and description;

b) Firm's role;

c) Award and completion dates;

d) Project's total value;

e) Amount of fees received;

f) Staffing, including Respondent's team members, subcontractors and consultants;

g) Relationship with owner/client;

h) References: Provide a contact name, telephone number and email address for the owners and indicate which key personnel of Respondent worked on each project; and

i) Discussion of claims, demands, and/or litigation arising from the project and involving the Respondent, and resolution of the same.

j) Include examples of other similar project assignments on the part of the Respondent.

k) Prefabrication and/or modular components as a percent of the project's hard costs, and as a percent of total project square footage; specific prefabrication/modular vendor and model(s).

List projects Respondent has successfully completed that had some or all of the following obstacles, including the creative solutions from the Respondent on how these obstacles were overcome:

a) A very aggressive schedule.

b) Significant budgetary restrictions.

c) Be prepared to expand upon what you did to accommodate:

i. The complexity of the project;
ii. The needs of the clients;
iii. Minimizing inconvenience; and
iv. Maximizing safety.

7. TAB 7 – Contracting History

If any of the following have occurred, please describe in detail the circumstances of each occurrence:

a) Failure to enter into a contract or professional services agreement once selected.

b) Withdrawal of a proposal or bid as a result of an error.

c) Termination or failure to complete a contract.

d) Debarment by any municipal, county, state, federal, or local agency.

e) Involvement in litigation, arbitration, or mediation, whether concluded or ongoing.

f) Conviction of the Respondent or its principals for violating any state or federal antitrust laws by bid or proposal rigging, collusion, or restrictive competition between bidders or proposers, or conviction of any other federal or state law related to bidding or performance of services.

g) Knowing concealment of any deficiency in the performance of a prior contract.

h) Falsification of information or submission of deceptive or fraudulent statement in connection with a contract.

i) Willful disregard for applicable rules, laws, or regulations.

j) Failure to disclose information regarding any of the above may be deemed to indicate an unsatisfactory record of performance. Information regarding any of the above may be considered in determining the suitability of Respondent to perform the needed services. Accordingly, Respondent may describe mitigating factors as part of description of any of the above.

8. TAB 8 – Pricing and Contingency

Pricing will be evaluated based on the: (1) preconstruction services cost or method of calculation; (2) Respondent's fee, which includes profit and overhead; (3) general conditions cost; (4) additional mark-up on subcontractor prices; (5) construction contingency to be applied to errors and omissions; and (6) allowances, if any.

After the Agreement is awarded, and DSA approves the plans and specifications, the selected developer will be required to provide a Guaranteed Maximum Price ("GMP") for the Project. As part of the District review of the GMP, the District will have access to all subcontractor bids, contingency breakdown and tracking documents, general conditions breakdown and tracking documents, and Respondent's fees. The GMP shall include all of Respondent's cost for labor, materials, equipment, overhead and profit, general conditions, contractor contingency, and allowances, if any, but shall specifically exclude the amount of the District contingency. In the event the selected developer realizes a savings on any aspect of the Project, such savings shall be added to the District contingency and expended consistent with the District contingency. In addition, any portion of the contractor contingency and/or allowance remaining after completion of the Project shall be added to the District contingency. The Facilities Lease will be amended to include the agreed upon GMP, if the District proceeds with the construction phase of the Project.

9. TAB 9 – Insurance

Each Respondent must demonstrate that it meets the Contractor Prequalification requirements for District's OCIP, as set forth at section 1.2 of the SEWUP Contractual Provisions contained at Exhibit D-1 to the Facilities Lease (**Appendix B**). Each RFQ/P Packet must also include a letter from the Respondent's insurance company indicating its ability to provide the Required Contractor Provided Insurance Coverages under District's OCIP, as set forth at section 1.7 of the SEWUP Contractual Provisions.

10. TAB 10 – Assurances

The Respondent must acknowledge each of the following items and confirm that it will be willing and able to perform these items:

- **Preconstruction Services:** Respondent shall provide services that relate to the organization and development of the Project prior to the start of construction including the following:
    - **Site Evaluation:** Consult with District staff in relation to the existing site. Selected developer should make site visits, as needed to review the current site conditions. During this evaluation, Respondent may make recommendations relating to soils investigations and utility locations and capacities, in order to minimize unforeseen conditions.
    - **Plan Review:** Provide plan review and constructability services with an emphasis on ensuring that the Project can be completed within the established schedule and within the available budget.
    - **Design Team Meetings:** Attend meetings at the Project site with the architect of record and the design team every two (2) weeks, until plans are ready for submittal to DSA (approximately 6 to 8 weeks, meeting duration is

approximately 2 hours). Ensure that that the approved DSA drawings of the modular and/or prefabricated buildings that will be installed under Increment II of the Project must have an architect's stamp as required by DSA.

- **Value Engineering:** Provide a detailed analysis of all major Project systems with an emphasis on possible value engineering possibilities.

- **Detailed Construction Critical Path Schedule:** Produce detailed construction critical path schedules to be incorporated into the Project documents including identification of the Project critical path and agency approvals.

- **Preliminary and Detailed Estimates:** Provide preliminary construction estimates using like-kind construction costs. Upon receipt of the Project plans and specifications, provide detailed construction estimates showing the values of all major components of the Project.

- **Construction Planning:** Plan the phases and staging of construction, staging areas, temporary fencing, office trailer placement, access, etc. as required.

- **Other services:** Any other services that are reasonable and necessary to control the budget and schedule. List those areas where subconsultants will be required and where the Respondent has in-house expertise. Provide resumes of persons providing each of these services and for key personnel assigned to the Project.

- **Construction Services:**

  - **Project Accounting and Management Systems:** In coordination with District staff, develop the Project accounting and budget management systems. A process of up-to-date costs management will be necessary. During construction, monthly reporting will be required.

  - **General Conditions:** List what is included in the Respondent's general conditions (including full-time and part-time personnel) and a monthly value of the general conditions. Indicate what would be included as a cost of work versus a line item in the general conditions.

  - **Management of Project:** Administer and coordinate on a daily basis the work of all trade contractors the successful Respondent hires to work on the Project. Enforce strict performance, scheduling, and notice requirements. Document the progress and costs of the Project. Report proactively on potential schedule impacts. Recommend potential solutions to schedule problems.

  - **Trade Contractors:** Provide the name(s) and scope(s) of work of each trade contractor for the following trades that the Respondent proposes to use on the Project:

    i. Earthwork
    ii. Storm Drainage
    iii. Structural Steel
    iv. Roofing

v. Metal Framing
vi. Elevators
vii. Plumbing
viii. HVAC
ix. Electrical
x. Concrete

Pursuant to Public Contract Code section 20111.6, each prospective MEP Contractor holding C-4, C-7, C-10, C-16, C-20, C-34, C-36, C-38, C-42, C-43, and/or C-46 licenses shall be prequalified by the District, prior to negotiation of the guaranteed maximum price to perform construction work as a first tier subcontractor on the Project.

11. Tab 11 – Comments to Form of Agreement

Respondents must thoroughly review the Agreement attached to this RFQ/P as **Appendix B** and confirm in writing that, if given the opportunity to contract with the District, Respondent has no substantive objections to the use of the District's standard agreement. Respondent must also identify any term or condition of the Agreement that Respondent requests modifying, deleting, or adding. Respondents must set forth a clear explanation of what modification would be sought and specific alternate language. If selected, Respondent will be precluded from negotiating changes that have not been identified in its RFQ/P Packet. The District will review, but is not obligated to accept, any proposed changes.

IX. BEST VALUE EVALUATION

The RFQ/P Packets will be evaluated based on the District's adopted criteria and rating system to determine the qualified Respondent(s) providing the best value to the District.

A. Essential Criteria

CRITERIA ITEM	DESCRIPTION	MAXIMUM POINTS
VIII. C. 1. Executive Summary	Overview of the entire RFQ/P Packet with a description of the general approach and/or methodology	pass/fail
VIII. C. 2. Table of Contents	A complete and clear listing of the headings and pages	pass/fail
VIII. C. 3. Cover Letter w/all requisite parts	A letter of introduction signed by an authorized officer with requisite parts	pass/fail
VIII. C. 4. Respondent Information a) - m)	Per RFQ/P	40 points

VIII. C. 5. Methods and Strategic Plan	Detailed description of Respondent's methods and plan for carrying out the Project	40 points
VIII. C. 6. Prior Relevant Experience	Experience with respect to the areas of public schools	40 points
VIII. C. 7. Contracting History	Describe in detail the circumstances per RFQ/P	40 points
VIII. C. 8. Pricing & Contingency	Six (6) items as listed	70 points
VIII. C. 9. Insurance	Meets the Contractor Prequalification requirements for District's OCIP	10 points
VIII. C. 10. Assurances	Acknowledge each of the items and confirm that it will be willing and able to perform	10 points
VIII. C. 11. Comments to Form of Agreement	Must also identify any term or condition of the Agreement that Respondent requests modifying, deleting, or adding	pass/fail
		MAXIMUM POINTS: 250

Based on these criteria, District staff assign points to each proposer and then calculate the total points awarded to the proposer. The more points, the higher the proposer is ranked. The highest ranked proposer reflects the best combination of price and qualifications for the Project.

B. District Investigations

The District may perform investigations of proposing parties that extend beyond contacting the references identified in the proposals.

C. Selection of Finalists

RFQ/P Packets shall be evaluated and the Project awarded in the following manner:

1. All proposals received shall be reviewed to determine those that meet the format requirements and the standards specified in RFQ/P.

2. District shall evaluate the qualifications of the Respondents based solely upon the adopted criteria and evaluation methodology, and shall assign a best value score to each proposal. Once the evaluation is complete, all responsive proposals shall be ranked from the highest best value to the lowest best value to the District.

3. The District's Board of Education shall award the Project to the responsive proposer whose proposal is determined, in writing by the Board of Education, to be the best value to the District.

4. If the selected developer refuses or fails to execute the tendered proposed contract, the Board of Education may award the contract to the proposer with the second highest best value score if it deems it to be for the best interest of the District. If the second selected developer refuses or fails to execute the tendered instrument, the Board of Education may award the instrument to the proposer with the third highest best value score if it deems it to be for the best interest of the District.

5. Notwithstanding any other law, upon issuance of a contract award, the District shall publicly announce its award, identifying the entity to which the award is made, along with a statement regarding the basis of the award. The statement regarding the District's contract award and the contract file shall provide sufficient information to satisfy an external audit.

D. Interviews

The District will invite some of the finalists to meet with a District selection committee. Key proposed Project staff will be expected to attend the interview. The interview will be an opportunity for the District selection committee to review the proposal, the firm's history, and other matters the committee deems relevant to firm evaluation with the firm. The interview will start with the firm presenting its proposal and its Project team. The finalists may be required to submit in advance of the interview a more detailed fee proposal. If requested, this fee proposal shall include all charges and costs proposed to be charged to the District, including rates for extra work.

Any comments or objections to the form of Agreement attached hereto as **Appendix B** to this RFQ/P shall be provided in writing before the interview and may be the subject of inquiry at the interview. Any comments or objections to the form of Agreement not provided in writing before the interview will not be entertained by the District.

Following the interviews, it is expected that the selection committee will make best value recommendations to District staff regarding the finalists and awarding the contract. The criteria for these recommendations are identified above.

E. Final Determination and Award

The District reserves the right to contract with any entity responding to this RFQ/P for all or any portion of the work described herein and/or in an agreement offered to the entity, to reject any proposal as non-responsive, and/or not to contract with any firm for the services described herein. The District makes no representation that participation in the RFQ/P process will lead to an award of contract or any consideration whatsoever. The District reserves the right to seek proposals from or to contract with any firm not participating in this process. The District shall in no event be responsible for the cost of preparing any RFQ/P Packet in response to this RFQ/P.

The awarding of contract(s) is at the sole discretion of the District. The District may, at its option, determine to award contracts only for portions of the scope of work. In such case, the successful proposing firm will be given the option not to agree to enter into the Agreement and the District will retain the right to negotiate with any other proposing firm selected as a

finalist. If no finalist is willing to enter into a contract for the reduced scope of work, the District will retain the right to enter into negotiations with any other Respondent responding to this RFQ/P.

The RFQ/P packet, and any other supporting materials submitted to the District in response to this RFQ/P will not be returned and will become the property of the District unless portions of the materials are designated as proprietary at the time of submittal, and are specifically requested to be returned. This RFQ/P does not commit the District to negotiate an agreement with any proposing firm or individual.

X. SUBMISSION GUIDELINES

Respondents to this RFQ/P should mail or deliver five (5) bound copies, one (1) unbound copy, and one (1) electronic copy on CD/DVD or USB stick of the RFQ/P Packet conforming to the requirements of this RFQ/P to:

LODI UNIFIED SCHOOL DISTRICT
1305 E. Vine Street, Lodi, CA 95240
ATTN: Facilities & Planning Department
RFQ/P #0917-8217-5

ALL RESPONSES ARE DUE BY 2:00:00 P.M. ON MONDAY, DECEMBER 9, 2019. Oral, telegraphic, facsimile, telephone or email RFQ/P Packets will not be accepted. RFQ/P Packets received after this date and time will not be accepted and will be returned unopened. The District reserves the right to waive any informalities or irregularities in the RFQ/P Packets. The District also reserves the right to reject any and all RFQ/P Packets and to negotiate contract terms with one or more Respondents.

Questions regarding this RFQ/P may be directed in writing to the District's Planning Analyst, Vickie Brum, at rfpquestion@lodiusd.net and must be submitted on or by **4:00 P.M. on Tuesday, November 26, 2019**. Questions received after the **Tuesday, November 26, 2019** deadline will not be answered.

Each submittal must conform and be responsive to the requirements set forth in this RFQ/P.

The District hereby notifies all Respondents that it will affirmatively insure that, in any contract entered into pursuant to this advertisement, minority business enterprises will be afforded full opportunity to submit its response to this RFQ/P and no respondent will be discriminated against on the grounds of race, color, sex, age, ancestry, religion, marital status, national origin, medical condition or physical disability on consideration for the award.

WE THANK YOU FOR YOUR INTEREST IN THE DISTRICT'S PROJECT.

APPENDIX A
Project Description

BASE PROJECT: This project consists of the Construction of a one-story modular building of approximately 7,680 square feet with (7) seven classrooms, boys' and girls' toilet rooms, electrical room, and custodial room.

ADD ALTERNATE NO. 1 PROJECT: This Add Alternate No. 1 project consists of the Construction of an additional one-story modular building of approximately 1,920 square feet with (2) two classrooms.

ADD ALTERNATE NO. 2 PROJECT: This Add Alternate No. 2 project consists of the Construction of an additional (2) classrooms of approximately 1,920 square feet as an addition to Add Alternate No. 1.

This project will also include: fire alarm, electrical systems, mechanical systems, data and communication infrastructure, casework, and building signage. Additionally, all utilities shall be extended to tie into site utilities, including domestic water, sewer, storm drainage, power and communications, five feet outside building.

The cost for this project, Modular Classroom(s) Increment II, based on the Implementation Plan is $3,328,000.00

The estimated Construction start date for Classroom Increment II is November 12, 2020 with an estimated Construction Completion Date of August 4, 2021.

See Attached:

- Attachment 1: Drawings
- Attachment 2: Technical/Performance Specifications
- Attachment 3: Lodi Unified School District Design Specification Guidelines
- Attachment 4: Lodi Unified School District Telecommunication Standards
- Attachment 5: Geotechnical Engineering and Geologic Hazard Report
- Attachment 6: Responsibility Matrix

NEEDHAM ELEMENTARY SCHOOL - ADDITIONS INCREMENT 2

UNITS C AND D - CLASSROOM - BID PACKAGE

LODI UNIFIED SCHOOL DISTRICT

Abbreviations:

&	And	F.R.P.	Fiberglass Reinforced Plastic	P.D.F.	Power Driven Fastener
∠	Angle			PT.	Paint
@	At	F.V.	Field Verify	PR.	Pair
℄	Centerline	FIN.	Finish	PTN/PART.	Partition
°	Degree	F.F.E.	Finish Floor Elevation	PEN.	Penetration
PREP/⊥	Perpendicular	F.G.	Finish Grade	PERF.	Perforated
℗	Property Line	F.A.	Fire Alarm	P.LAM.	Plastic Laminate
		F.E.	Fire Extinguisher	PL.	Plate
A.F.F.	Above Finish Floor	F.E.C.	Fire Extinguisher Cabinet	PLAS.	Plastering Vent
ACOUS.	Acoustical	FLASH.	Flashing	PLYWD.	Plywood
ADJ.	Adjustable	F.H.MB.	Flat Head Machine Bolt	LBS./#	Pound
AGGR.	Aggregate	F.H.M.S.	Flat Head Machine Screw	PREFAB.	Prefabricated
A.B.	Aggregate Base	F.H.W.S.	Flat Head Wood Screw	P.MF.	Pressed Metal Frame
ALUM./AL.	Aluminum	FL./FLR.	Floor	P.T./P.T..D.F	Pressure Treated
AD	Area Drain	F.D.	Floor Drain		Douglas Fir
A.C.	Asphalt Concrete	FT.	Foot/Feet		
A.V.	Audio Visual	FTG.	Footing	R.	Radius/Riser
AUT.O.	Automatic	FND.	Foundation	R.W.L.	Rain Water Leader
		FURR.	Furring	RDWD.	Redwood
BM.	Beam			REF.	Refrigerator
BLK.	Block	GALV.	Galvanized	REINF.	Reinforced
BLKG.	Blocking	G.I.	Galvanized Iron	REQ'D	Required
BD.	Board	G.S.M.	Galvanized Sheet Metal	RET.	Return
BOT.	Bottom	G.W.H.	Gas Water Heater	R.D.	Roof Drain
BLDG.	Building		Gauge	RKG.	Rough
		GLU.LAM/G.L.B.	Glue Laminated (Beam)	R.O.	Rough Opening
CAB.	Cabinet	G.B.	Grab Bar	R.H.W.S.	Round Head Wood Screw
CATV	Cable T.V.	GR.	Grade	R.B.	Rubber Base
C.I.	Cast Iron	GYP.	Gypsum		
C.B.	Catch Basin	GYP.BD.	Gypsum Wallboard	SECT.	Section
CLKG.	Caulking			S.SK.	Service Sink
CLG.	Ceiling	HDWR.	Hardware	SHT.	Sheet
CNTR./CTR.	Center	HDWD.	Hardwood	S.M.	Sheet Metal
CER.	Ceramic	HDR.	Header	S.M.S.	Sheet Metal Screw
C.L.	Chain Link	HVAC.	Heating/Ventilating Air Conditioning	S.V.	Sheet Vinyl
CB	Chalkboard			SHR/SHWR.	Shower
C.R.	Classroom	H.HT.	Height	SIM.	Similar
CLR.	Clear	H.M.	Hollow Metal	S.C.	Solid Core
C.W.	Cold Water	HOR / HORIZ.	Horizontal	S.	South
COL.	Column	H.B.	Hose Bib	Spec.	Specification
CONC.	Concrete	HR.	Hour (Fire Rating)	SQ.	Square
C.M.U.	Concrete Masonry Unit			SST./S.S.	Stainless Steel
CONN.	Connection	IN.	Inch	STD/STND.	Standard
CONST.	Construction	INFO.	Information	STL.	Steel
C.J.	Construction Joint/ Control Joint	I.D.	Inside Diameter	STOR.	Storage
		INSUL.	Insulation	S.D.	Storm Drain
CONT.	Continous	INT.	Interior	S.D.S.T.	Self-Drilling Self-Tapping
CONTR.	Contractor	INV.	Invert	S.F.	Square Feet
CORR.	Corridor			STRUCT.	Structural
C.M.P.	Corrugated Metal Pipe	JAN.	Janitor	SUSP.	Suspended
C.Y.	Cubic Yard	JT.	Joint	SYM.	Symbol
CUST.	Custodian	JST.	Joist		
				TB.	Tackboard
D.	Deep/Depth	KP.	Kickplate	TEL./TELE.	Telephone
DET./ DTL.	Detail	KIT.	Kitchen	T.V.	Television
DIAG.	Diagonal			TEMP.GLR.	Tempered Clear
DIA./ Ø	Diameter	LAM.	Laminate	T.L.T.	Tempered Low Transmission
DIM.	Dimension	LAV.	Lavatory	THK.	Thick
DIM PT.	Dimension Point	LT.WT.	Light Weight	THRES.	Threshold
D.A.	Disable Accessible	L.F.	Lineal Feet	THRU.	Through
DW.	Dishwasher			T./T.LT.	Toilet
DR.	Door	M.B.	Machine Bolt	T&G	Tongue & Groove
DBL.	Double	MH.	Manhole	T.O.	Top of
DN.	Down	MFR.	Manufacturer	T.O.C.	Top of Curb
DS.	Downspout	M.O.	Masonry Opening	T.O.P.	Top of Pavement
D.I.	Drain Inlet	MAT'L.	Material	T.O.W.	Top of Wall/Top of Walk
DWG.	Drawing	MAX.	Maximum	T.S.	Tube Steel
D.F.	Drinking Fountain	MECH.	Mechanical	TYP.	Typical
		MEMB.	Membrane		
EA.	Each	MTL.	Metal	U.O.N.	Unless Otherwise Noted
E.	East	MEZZ.	Mezzanine		
ELEC.	Electrical	MID.	Minimum	VERT.	Vertical
E.W.C.	Electric Water Cooler	MISC.	Miscellaneous	V.G.D.F.	Vertical Grain Douglas Fir
E.W.H.	Electric Water Heater	M.P.	Multipurpose	V.W.C.	Vinyl Wall Covering
EL.EL.EV.	Elevator				
EMER.	Emergency	(N)	New	W.SCT.	Wainscot
ENCL.	Enclosure	NOM.	Nominal	W.C.	Water Closet
EQ.	Equal	N.	North	W.H.	Water Heater
E.F.	Exhaust Fan	N.I.C.	Not in Contract	WT.	Weight
(E)EXIST.	Existing	N.T.S.	Not to Scale	W.W.M.	Welded Wire Mesh
EXP.	Expansion	NO./#	Number	W.	West/Width
E.J.	Expansion Joint			WDW.	Window
EXT.	Exterior	O.F.O.I.	Owner Furnish, Owner Installed	W.G.	Wire Glass
				W/	With
F.O.C.	Face of Concrete/Curb	O.F.C.I.	Owner Furnish, Contractor Installed	W/O	Without
F.O.F.	Face of Finish			WD.	Wood
F.O.S.	Face of Studs	O.C.	On Center		
FB.	Fiberboard	OPP.	Opposite	YD.	Yard
F.R.L.	Fiberglass Reinforced Laminate	O.H.	Opposite Hand	Y.D.	Yard Drain
		O.D.	Outside Diameter		
		O.H.W.S.	Oval Head Wood Screw		
		OV	Over		
		OA.	Overall		

Symbol Legend:

SHEET NUMBERING SYSTEM
A2.6.3 — Discipline Designation; Drawing Type Designation; Sheet Sequence Beyond Zero; Building Unit Designation

ROOM NAME and NUMBERING REFERENCE
ROOM NAME / A102 — Room Number; Building Designation

KEYNOTE REFERENCE
(All items indicated with a keynote are new)
3.02

SHEET NOTE REFERENCE
SN.01

DEMOLITION NOTE REFERENCE
DN. 01

DETAIL REFERENCE
1 / A101 — Detail Number; Sheet Number

BUILDING SECTION REFERENCE
1 / A101 — Section Number; Sheet Number

WALL SECTION REFERENCE
1 / A101 — Section Number; Sheet Number

STRUCTURAL GRID IDENTIFIER
(center of framing)
AX — Grid Designation; Building Unit Designation

STRUCTURAL GRID IDENTIFIER
(face of framing, concrete or CMU)
AX — Grid Designation; Building Unit Designation

CENTERLINE

WORK POINT CONTROL

REVISION
Revision Number

RADIUS
R=60'-4" (1) — Radius Point Number; Radius Dimension

EXTERIOR ELEVATION REFERENCE
1 / A101 — Elevation Number; Sheet Number

SPECIAL ELEVATION REFERENCE
A101

Architect:

Rainforth Grau Architects
2407 J Street, Suite 300
Sacramento, CA 95816
916.368.7990

Contact: KEVIN ARWOOD

Owner:

1305 E VINE STREET
LODI, CA 95240
209.953.8000

Contact: VICKIE BRUM

Consultants:

Project Information:

SITE LOCATION
420 S. Pleasant Ave
Lodi, CA 95240
209.331.7375

Sheet Index

Applicable Codes:

CONSTRUCTION SHALL COMPLY WITH THE FOLLOWING CODES AND STANDARDS:

TITLE 19, CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS
TITLE 24, CCR, PART 1, 2016 CALIFORNIA ADMINISTRATIVE CODE
TITLE 24, CCR, PART 2, 2016 CALIFORNIA BUILDING CODE, VOL. 1 & 2
TITLE 24, CCR, PART 3, 2016 CALIFORNIA ELECTRICAL CODE
TITLE 24, CCR, PART 4, 2016 CALIFORNIA MECHANICAL CODE
TITLE 24, CCR, PART 5, 2016 CALIFORNIA PLUMBING CODE
TITLE 24, CCR, PART 6, 2016 CALIFORNIA ENERGY CODE
TITLE 24, CCR, PART 9, 2016 CALIFORNIA FIRE CODE
TITLE 24, CCR, PART 10, 2016 CALIFORNIA EXISTING BUILDING CODE
TITLE 24, CCR, PART 11, 2016 CALIFORNIA GREEN BUILDING STANDARDS CODE
TITLE 24, CCR, PART 12, 2016 CALIFORNIA REFERENCED STANDARDS CODE

NFPA 13, 2016 EDITION, INSTALLATION OF SPRINKLER SYSTEMS (CA AMENDMENTS)
NFPA 72, 2016 EDITION, NATIONAL FIRE ALARM AND SIGNALING CODE (CA AMENDMENTS)

UL 464, 2003 AUDIBLE SIGNALING DEVICES FOR FIRE ALARM AND SIGNALING SYSTEMS, INCLUDING ACCESSORIES

UL 521, 7TH EDITION, 1999 HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS

THE CONTRACTOR SHALL KEEP TITLE 24, CCR, PARTS 1-5 ON THE BUILDING SITE AT ALL TIMES.

DSA Procedures:

1. ADDENDA MUST BE STAMPED AND SIGNED BY THE ARCHITECT OF RECORD AND APPROVED BY DSA IN ACCORDANCE WITH CCR TITLE 24, PART 1.
2. THE CONTRACTOR SHALL BE FAMILIAR WITH AND PERFORM THE DUTIES IN ACCORDANCE WITH DSA PROCEDURE 13-01, CONSTRUCTION OVERSIGHT PROCESS.
3. CHANGES TO THE STRUCTURAL, ACCESSIBILITY, OR FIRE AND LIFE-SAFETY PORTIONS OF THE APPROVED PLANS AND SPECIFICATIONS AFTER THE WORK HAS BEEN LET SHALL BE MADE BY A CONSTRUCTION CHANGE DOCUMENT AS REQUIRED IN TITLE 24, PART 1, 4-338 AND CONSTRUCTION CHANGE DOCUMENTS SHALL BE PREPARED AND SUBMITTED TO DSA IN ACCORDANCE WITH DSA IR A-6.
4. SUBSTITUTIONS AFFECTING DSA REGULATED ITEMS WILL BE CONSIDERED AS CHANGES TO THE APPROVED PLANS AND / OR SPECIFICATIONS. THEY ARE TO BE TREATED AS CONSTRUCTION CHANGE DOCUMENTS AND WILL REQUIRE DSA'S APPROVAL PRIOR TO FABRICATION AND INSTALLATION IN ACCORDANCE WITH TITLE 24, PART 1, 4-338 AND DSA IR A-6.
5. THE PROJECT INSPECTOR MUST BE EMPLOYED BY THE OWNER AND APPROVED BY THE ARCHITECT, STRUCTURAL ENGINEER, AND DSA IN ACCORDANCE WITH TITLE 24, PART 1, 4-341.
6. SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NONCOMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE DSA APPROVED DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH TITLE 24, CCR, A CHANGE CONSTRUCTION DOCUMENT OR SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED REPAIR WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE REPAIR WORK.

Scope of Work

ADDITION OF (3) 120 x 32' MODULAR CLASSROOM BUILDINGS

Statement of General Conformance

THE FOLLOWING DRAWINGS OR SHEETS LISTED ON THE COVER OR INDEX SHEET HAVE BEEN PREPARED BY OTHER DESIGN PROFESSIONALS OR CONSULTANTS WHO ARE LICENSED AND/OR AUTHORIZED TO PREPARE SUCH DRAWINGS IN THIS STATE. IT HAS BEEN EXAMINED BY ME FOR:

1) DESIGN INTENT AND APPEARS TO MEET THE APPROPRIATE REQUIREMENTS OF TITLE 24, CALIFORNIA CODE OF REGULATIONS AND THE PROJECT SPECIFICATIONS PREPARED BY ME, AND
2) COORDINATION WITH MY PLANS AND SPECIFICATIONS AND IS ACCEPTABLE FOR INCORPORATION INTO THE CONSTRUCTION OF THIS PROJECT.

THE STATEMENT OF GENERAL CONFORMANCE SHALL NOT BE CONSTRUED AS RELIEVING ME OF MY RIGHTS, DUTIES, AND RESPONSIBILITIES UNDER SECTIONS 17302 AND 81138 OF THE EDUCATION CODE, AND SECTIONS 4-336, 4-341, AND 4-344* OF TITLE 24, PART 1. (TITLE 24, PART 1, SECTION 4-317 (b))

SIGNATURE _____ DATE _____

ARCHITECT OR ENGINEER DESIGNATED TO BE IN GENERAL RESPONSIBLE CHARGE

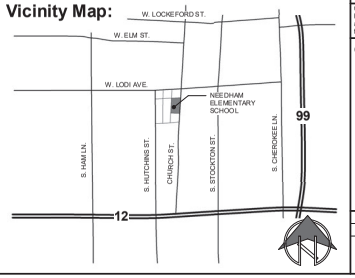
PRINT NAME _____

LICENSE NUMBER _____ EXPIRATION DATE _____

LIST COMPLETELY, ITEMS REVIEWED AND ACCEPTED:

CIVIL, FOOD SERVICE, MECHANICAL, ELECTRICAL, AND LANDSCAPE

Vicinity Map:



rainforth grau architects

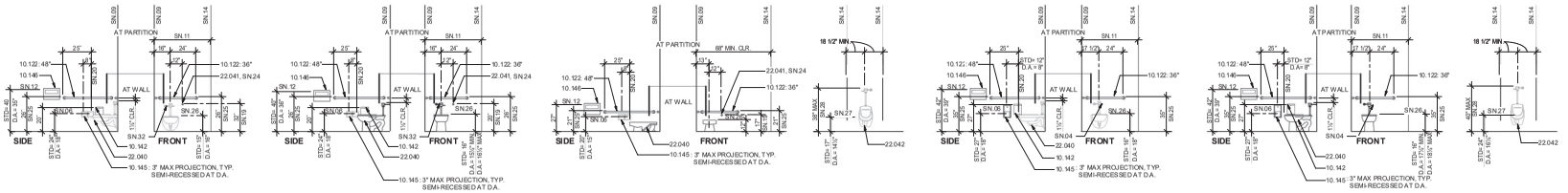
LICENSED ARCHITECT — JEFFREY ALAN ARWOOD — C-14648 — 6/21 RENEWAL DATE — STATE OF CALIFORNIA

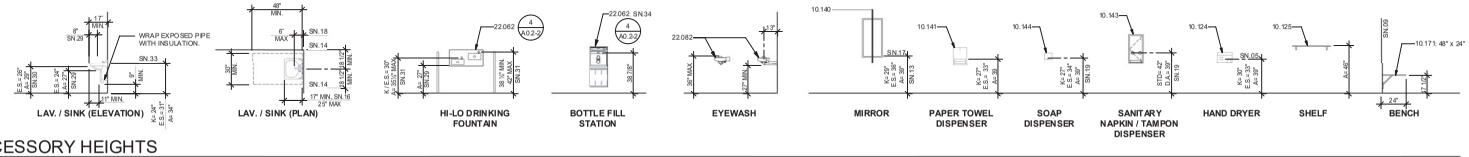
NEEDHAM ELEMENTARY SCHOOL - ADDITIONS INCREMENT 2
LODI UNIFIED SCHOOL DISTRICT

Revision

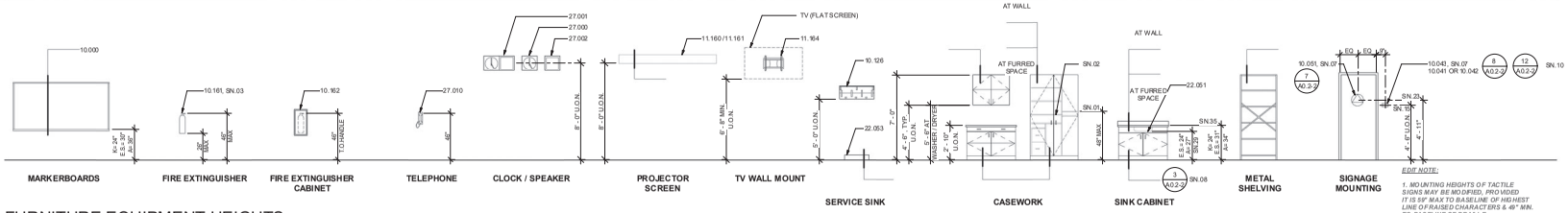
COVER SHEET

PROJECT NO. 18-1366
DATE 11/8/19
SHEET **A0.1-2**





FIXTURE AND ACCESSORY HEIGHTS



EDIT NOTE:

1. BUBBLER AT SINKS SHALL BE ROTATED 15 DEGREES FROM THE FRONT. COORDINATE WITH PLUMBING

EDIT NOTE:

1. MOUNTING HEIGHTS OF TACTILE SIGNS MAY BE MODIFIED, PROVIDED IT IS 59" MAX TO BASELINE OF HIGHEST LINE OF RAISED CHARACTERS & 48" MIN. TO BASELINE OF BRAILLE

FURNITURE EQUIPMENT HEIGHTS

14 TYPICAL MOUNTING HEIGHTS AND ATTACHMENT REFERENCES

1/4" = 1'-0"

LEGEND

A	ADULT / STAFF
E.S.	ELEMENTARY SCHOOL
K	KINDERGARTEN

GENERAL NOTES

1. TYPICAL MOUNTING HEIGHTS AND DETAILS APPLY TO ENTIRE PROJECT, WHETHER REFERENCED OR NOT, UNLESS OTHERWISE NOTED.
2. ALL DISABLED ACCESSIBLE DIMENSIONS, ARE MAXIMUM DIMENSIONS UNLESS OTHERWISE NOTED.
3. HEIGHTS ARE MEASURED FROM FINISH FLOOR, UNLESS OTHERWISE NOTED.

SHEET NOTES

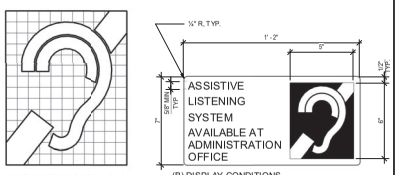
SN.01	TOP OF SHELF
SN.02	MIDDLE SHELF FIXED
SN.03	PROVIDE 2X BLOCKING PER DETAIL
SN.04	AT ACCESSIBLE WATER CLOSETS, FLUSH CONTROL HANDLE SHALL BE MOUNTED ON THE WIDE SIDE OF THE TOILET ENCLOSURE
SN.05	TO OPERATOR OR PUSH BUTTON
SN.06	DIMENSION TO CENTERLINE OF TOILET PAPER ROLL POSITION
SN.07	PROVIDE AT ALL TOILET ROOM DOORS
SN.08	AT DISABLED ACCESSIBLE CASEWORK
SN.09	TO FACE OF FINISH
SN.10	FOR SIGNS MOUNTED BACK-TO-BACK ON WINDOW GLAZING, SEE SPECIFICATIONS FOR REQUIREMENTS.
SN.11	60" CLR MIN. TO FINISH WALL/ PARTITION/ FIXTURE
SN.12	TOP OF OPENING
SN.13	34" MAX. IF MIRROR IS NOT MOUNTED OVER A LAV. OR COUNTER; TOP OF MIRROR 74" MIN. FOR HIGH SCHOOL & ADULTS.
SN.14	FACE OF OBJECTS OR WALLS
SN.15	CENTERLINE OF SIGN.
SN.16	80" MINIMUM AT SINK
SN.17	BOTTOM EDGE OF REFLECTIVE SURFACE
SN.18	FROM FARTHEST DEPTH OF THE CLEAR FLOOR SPACE TO FACE OF PLUMBING AND OTHER OBSTACLES
SN.19	TO CENTERLINE CONTROL HANDLE OR BUTTON
SN.20	FRONT EDGE OF WATER CLOSET.
SN.21	AT CHILDREN'S DRINKING FOUNTAIN
SN.22	WHEELCHAIR, CLEAR FLOOR SPACE: 30"X48"
SN.23	CENTERLINE OF SYMBOL
SN.24	WHERE SPECIFIED (ELEMENTARY / KINDERGARTEN)
SN.25	TOP OF GRAB BAR
SN.26	TOP OF SEAT
SN.27	LIP HEIGHT
SN.28	FLUSH HANDLE HEIGHT
SN.29	MINIMUM KNEE CLEARANCE
SN.30	MINIMUM APRON CLEARANCE
SN.31	BUBBLER HEIGHT
SN.32	NO TOILET MOUNTED FLUSH VALVE AT CHILDREN'S ACCESSIBLE WATER CLOSET
SN.33	MAXIMUM HEIGHT
SN.34	FOR BOTTLE FILL STATION AT DRINKING FOUNTAIN
SN.35	TO TOP OF SINK RIM; WHERE OCCURS.

KEYNOTES

10.000	MARKERBOARD
10.041	SIGNAGE: ROOM IDENTIFICATION
10.042	SIGNAGE: TACTILE EXIT
10.043	SIGNAGE: TOILET ROOM IDENTIFICATION
10.051	SIGNAGE: TOILET ROOM DOOR SYMBOL
10.122	TOILET ACCESSORY: GRAB BAR
10.124	TOILET ACCESSORY: HAND DRYER
10.125	TOILET ACCESSORY: SHELF
10.126	TOILET ACCESSORY: MOP AND BROOM HOLDER
10.140	TOILET ACCESSORY: MIRROR
10.141	TOILET ACCESSORY: PAPER TOWEL DISPENSER
10.142	TOILET ACCESSORY: SANITARY NAPKIN DISPOSAL
10.143	TOILET ACCESSORY: SANITARY NAPKIN/TAMPON DISPENSER
10.144	TOILET ACCESSORY: SOAP DISPENSER
10.145	TOILET ACCESSORY: TOILET PAPER DISPENSER
10.146	TOILET ACCESSORY: TOILET SEAT COVER DISPENSER
10.161	FIRE EXTINGUISHER
10.162	FIRE EXTINGUISHER AND CABINET
10.171	METAL LOCKERS: BENCH
11.160	PROJECTION SCREEN: ELECTRICAL
11.161	PROJECTION SCREEN: MANUAL
11.164	TELEVISION WALL MOUNT
22.040	WATER CLOSET
22.041	MANUALLY OPERATED CONCEALED FLUSH VALVE
22.042	URINAL
22.051	SINK
22.053	SERVICE SINK
22.062	BOTTLE FILL STATION
22.082	EYEWASH
27.000	CLOCK
27.001	CLOCK/SPEAKER
27.002	SPEAKER
27.010	TELEPHONE: WALL MOUNT

EDIT NOTES:

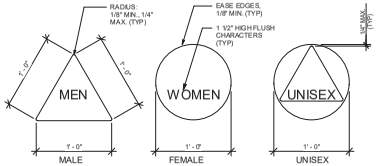
1. ROOM IDENTIFICATION SIGNS & TACTILE EXIT SIGNS: REQUIRE ADEQUATE WALL SPACE BETWEEN DOOR & ADJACENT WINDOW AS REQUIRED TO MOUNT SIGNS.
2. IF MOUNTED ON WINDOW, COORDINATE MULLION LOCATIONS SO AS NOT TO INTERFERE WITH ROOM I.D. OR TACTILE EXIT SIGNS. MOUNTING HEIGHT TO COMPLY WITH 703.4 OF 2010 ADA STANDARDS. AND 2010 CBC 11718.5.7



INTERNATIONAL SYMBOL OF ACCESS FOR HEARING IMPAIRED

15 02-15K - ASSISTIVE LISTENING SYSTEM2

SCALE AS INDICATED



NOTE:

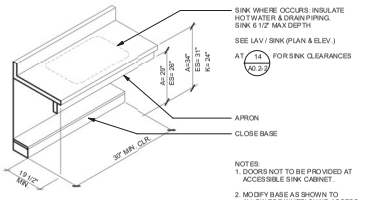
1. TEXT ON DOOR SYMBOL TO BE AS INDICATED ON DRAWINGS

EDIT NOTE:

1. "UNISEX" MAY REPLACED WITH "STAFF".

7 TOILET ROOM DOOR SYMBOLS

1 1/2" = 1'-0"

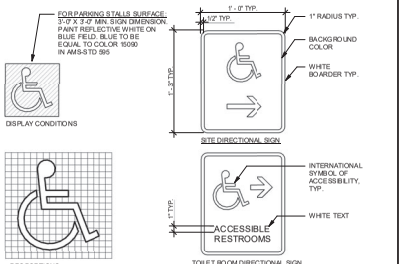


NOTES:

1. DOORS NOT TO BE PROVIDED AT ACCESSIBLE SINK CABINET.
2. MODIFY BASE AS SHOWN TO ALLOW FOR WHEELCHAIR ACCESS.
3. EXTEND FLOORING TO BACKSIDE OF CABINET.

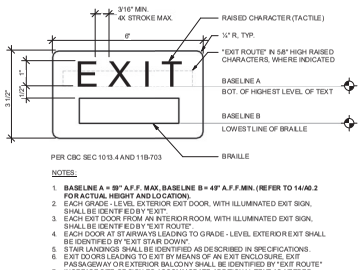
3 DISABLED ACCESSIBLE CASEWORK

1/2" = 1'-0"



16 SYMBOL OF ACCESSIBILITY

NOT TO SCALE

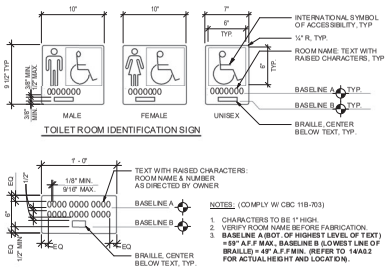


NOTES:

1. **BASELINE A = 59" A.F.F. MAX, BASELINE B = 48" A.F.F.MIN. (REFER TO 14/A0.2 FOR ACTUAL HEIGHT AND LOCATION).**
2. EACH GRADE - LEVEL EXTERIOR EXIT DOOR, WITH ILLUMINATED EXIT SIGN, SHALL BE IDENTIFIED BY "EXIT".
3. EACH EXIT DOOR FROM AN INTERIOR ROOM, WITH ILLUMINATED EXIT SIGN, SHALL BE IDENTIFIED BY "EXIT ROUTE".
4. EACH DOOR AT STAIRWAYS LEADING TO GRADE - LEVEL EXTERIOR EXIT SHALL BE IDENTIFIED BY "EXIT STAIR DOWN".
5. STAIR LANDINGS SHALL BE IDENTIFIED AS DESCRIBED IN SPECIFICATIONS.
6. EXIT DOORS LEADING TO EXIT BY MEANS OF AN EXIT ENCLOSURE, EXIT PASSAGEWAY OR EXTERIOR BALCONY SHALL BE IDENTIFIED BY "EXIT ROUTE"
7. INCREASE SIZE OF SIGN TO ACCOMMODATE ADDITIONAL TEXT AS NEEDED. CHARACTER HEIGHT, WHEN NOT INDICATED, SHALL BE 5/8" MIN.

12 TACTILE EXIT SIGNAGE

6" = 1'-0"

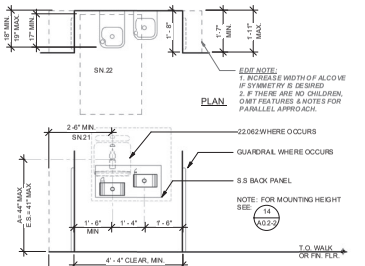


NOTES: (COMPLY W/ CBC 11B-703)

1. CHARACTERS TO BE 1" HIGH.
2. VERIFY ROOM NAME BEFORE FABRICATION.
3. **BASELINE A (BOT. OF HIGHEST LEVEL OF TEXT) = 59" A.F.F MAX., BASELINE B (LOWEST LINE OF BRAILLE) = 48" A.F.F MIN. (REFER TO 14/A0.2 FOR ACTUAL HEIGHT AND LOCATION).**

8 IDENTIFICATION SIGNS

1 1/2" = 1'-0"



4 DRINKING FOUNTAIN ALCOVE

1/2" = 1'-0"

NEEDHAM ELEMENTARY SCHOOL - ADDITIONS INCREMENT 2

LODI UNIFIED SCHOOL DISTRICT

△ Revision

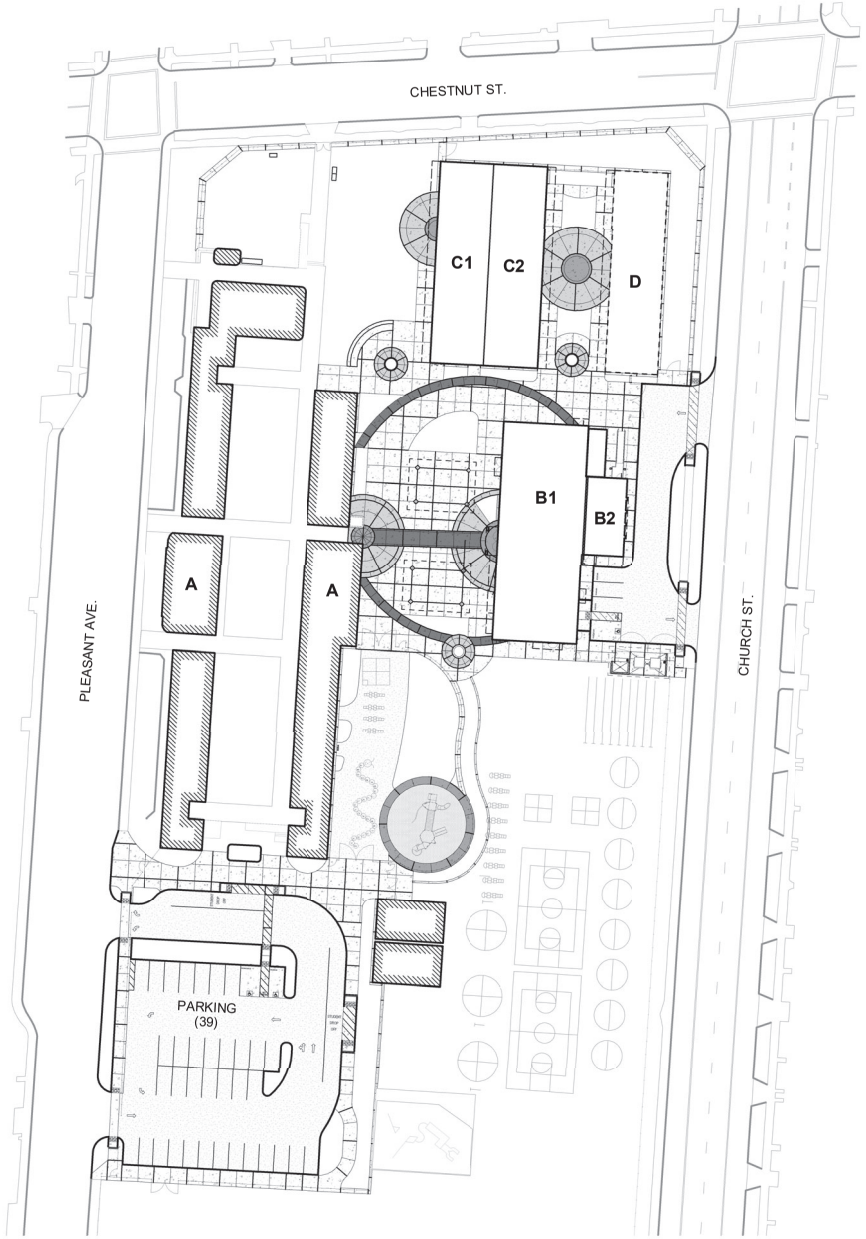
TYPICAL MOUNTING HEIGHTS AND DETAILS

INCREMENT 2

PROJECT NO. 18-1366

DATE 11/8/19

SHEET **A0.2-2**



1 OVERALL SITE PLAN
1" = 30'-0"

LEGEND

- ASSUMED PROPERTY LINE
- UNIT DESIGNATION NEW BUILDINGS
- UNIT DESIGNATION EXISTING BUILDINGS
- UNIT DESIGNATION ALTERNATE BUILDINGS
- EXPANSION JOINT
- CONCRETE WALK / PAVING CONTROL JOINT
- EXPOSED AGGREGATE CONCRETE PAVING
- INTEGRAL COLORED CONCRETE PAVING COLOR (1)
- INTEGRAL COLORED CONCRETE PAVING COLOR (2)
- ASPHALT CONCRETE PAVING
- CHAIN LINK FENCE
- CMU WALL
- TRUNCATED DOMES

GENERAL NOTES

1. CONTRACTOR SHALL PROVIDE TEMPORARY FENCING DURING CONSTRUCTION TO SECURE ENTIRE AREA OF WORK.
2. TEMPORARY CONSTRUCTION FENCING IDENTIFIED IS FOR SPECIFIC SITE LOCATION REQUIREMENTS. IT IS THE CONTRACTORS RESPONSIBILITY TO COORDINATE THE REMAINDER OF THE PROJECTS TEMPORARY CONSTRUCTION FENCING PER SPECIFICATIONS.
3. CONTRACTOR SHALL COMPLY WITH THE 2016 CALIFORNIA FIRE CODE CHAPTER 33, FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION, THROUGHOUT THE ENTIRE PROJECT.
4. FENCE GRAPHICS AS SHOWN IN THE LEGEND ARE SCHEMATIC. ACTUAL FENCE POST LOCATIONS ARE TO BE COORDINATED BY THE CONTRACTOR.
5. WHERE WALKS CONNECT TO DOOR OPENINGS, SEE

6. PARKING STALLS SHALL BE STRIPED USING WHITE PAINT (U.O.N.). STRIPES SHALL BE 4" WIDE.
7. PROVIDE 3/4" CHAMFER AT EXPOSED EDGES OF CONCRETE, UNLESS OTHERWISE INDICATED.

SHEET NOTES

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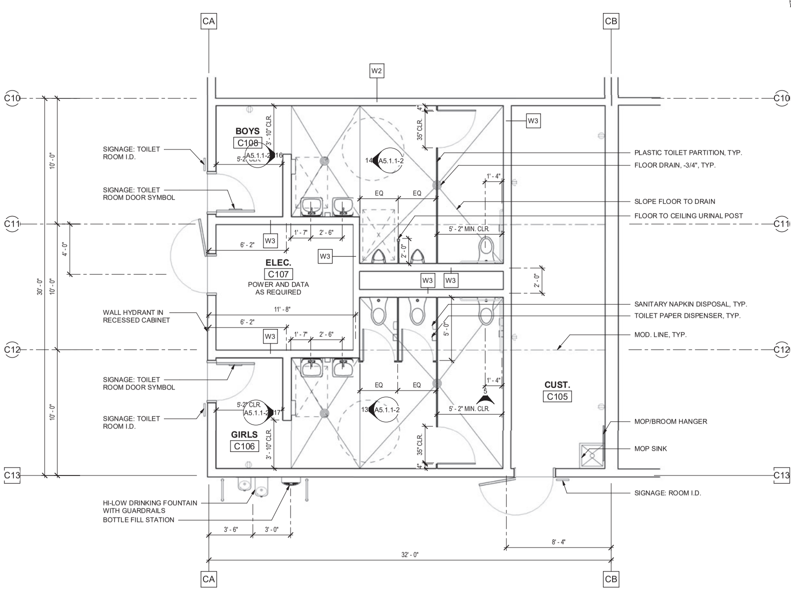
NEEDHAM ELEMENTARY SCHOOL - ADDITIONS INCREMENT 2

LODI UNIFIED SCHOOL DISTRICT

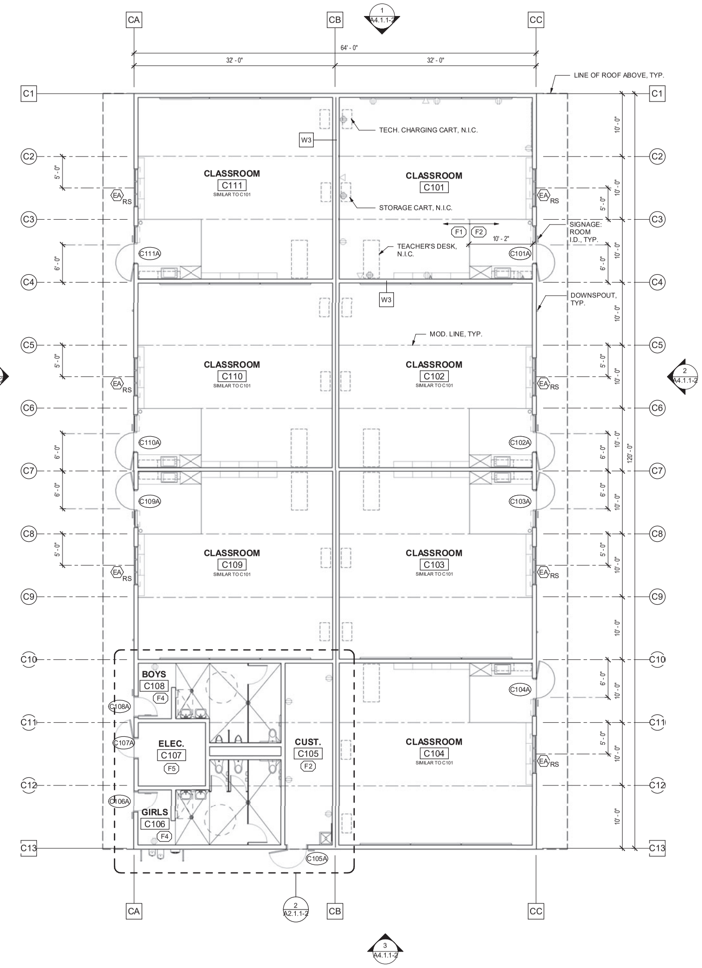
Revision

REFERENCE OVERALL SITE PLAN

PROJECT NO. 18-1366
DATE 11/8/19
SHEET A1.1.1-2



2 UNIT C ENLARGED TOILET ROOM
1/4" = 1'-0"



1 UNIT C FLOOR PLAN
1/8" = 1'-0"

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LEGEND

WOOD STUD WALL: SEE STRUCTURAL FOR SIZE AND SPACING. WHERE NOT INDICATED ON STRUCTURAL, PROVIDE 2x6 STUDS @ 16" O.C., UNLESS OTHERWISE NOTED.

CONSECUTIVE NUMBERING CONVENTION FOR INTERIOR ELEVATIONS AND ROOM FINISHES.

WINDOW (PLAN VIEW) — Window Covering Location

DOOR REFERENCE

WINDOW OR LOUVER REFERENCE — Window Covering Reference RS=Roller Window Shades

DATA OUTLET

DUPLEX POWER OUTLET

QUAD POWER OUTLET

30" X 48" CLEAR SPACE

60" DIAMETER TURNAROUND

GENERAL NOTES

1. FOR MOUNTING HEIGHTS, LOCATIONS, AND DETAILS, INCLUDING THOSE FOR DISABLED ACCESSIBILITY, REFER TO SHEET A0.2
2. DIMENSIONS AT EXTERIOR WALLS ARE TO FACE OF STUD, UNLESS OTHERWISE NOTED.
3. DIMENSIONS AT INTERIOR WALLS ARE TO CENTER OF STUD, UNLESS OTHERWISE NOTED.

FLOOR FINISH

F1 CARPET
F2 RESILIENT FLOORING: LINOLEUM
F3 RESILIENT FLOORING: SAFETY FLOORING
F4 EPOXY
F5 CONCRETE: SEALED
F6 RESILIENT FLOORING: SHEET VINYL
F7 RESILIENT FLOORING: RUBBER FLOORING

SOUND ISOLATION NOTES

1. XXXX INDICATES SOUND ISOLATION WALL TYPE. SEE A3.X.X FOR DETAILS
2. GYPSUM WALLBOARD IS 5/8" TYPE "X", UNLESS OTHERWISE NOTED
3. PROVIDE 2 CONTINUOUS BEADS OF SEALANT BETWEEN STUD TRACK OR SILL PLATE & FINISH FLOOR
4. WHERE 2 LAYERS OF GYPSUM WALLBOARD OCCURS, STAGGER THE JOINTS: DO NOT TAPE THE INNER LAYER, UNLESS REQUIRED BY FIRE ASSEMBLY.
5. PENETRATIONS THROUGH GYPSUM WALLBOARD ABOVE CEILINGS
   A. DUCTWORK: PROVIDE 1 INCH GAP ALL AROUND AND FILL WITH SOUND INSULATION
   B. CONDUIT / PIPING: CAULK ALL AROUND WITH SEALANT
6. ELECTRICAL BOXES FOR LIGHTING, POWER, SIGNAL AND ALARM
   A. LOCATE EACH BOX IN SEPARATE STUD CAVITY. DO NOT MOUNT BACK-TO-BACK OUTLETS ON THE SAME STUD. AT LOCATIONS WHERE THESE REQUIREMENTS CANNOT BE MET, REVIEW LAYOUT WITH ARCHITECT PRIOR TO INSTALLATION
   B. WRAP WITH "BOX PADS", SPECIFIED IN DIVISION 26

SOUND ISOLATION WALL TYPES

W1 (2) LAYERS OF GYP. BOARD, SOUND INSULATION, (2) LAYERS OF GYP. BOARD

W2 (2) LAYERS OF GYP. BOARD, SOUND INSULATION

W3 SOUND INSULATION

DESIGN DEVELOPMENT DRAWINGS

APPROVAL OF CONSISTENCY WITH DISTRICT PROGRAM

APPROVAL ______

DATE ______

NEEDHAM ELEMENTARY SCHOOL - ADDITIONS INCREMENT 2

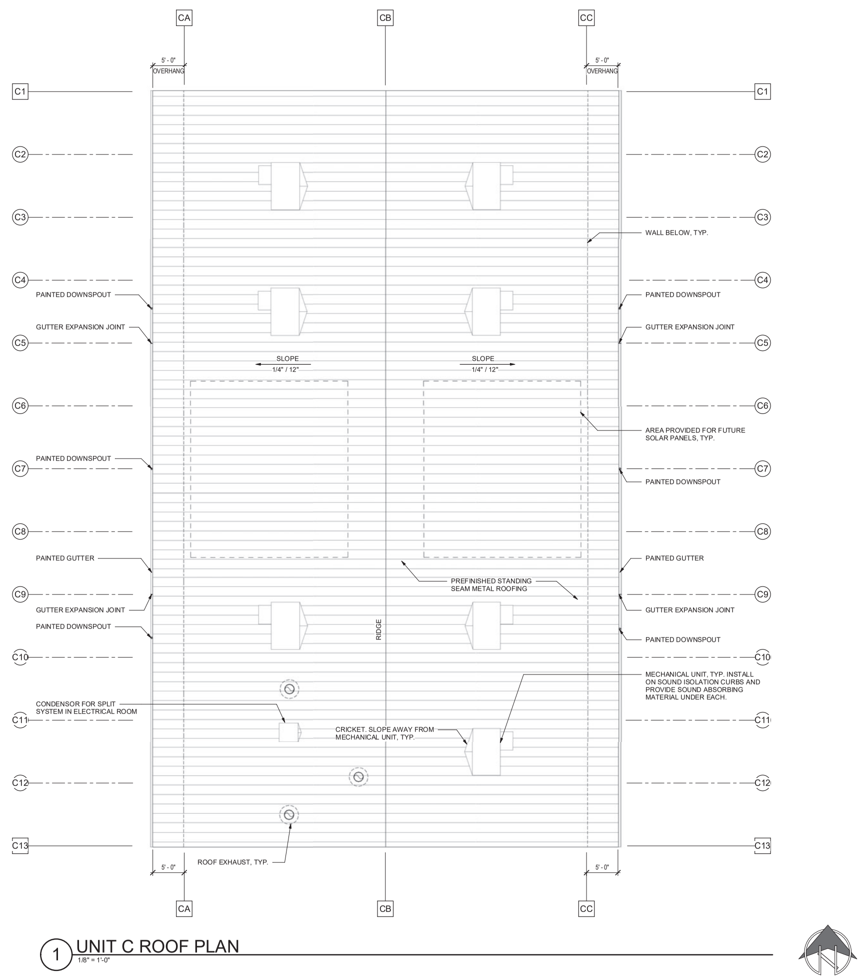
LODI UNIFIED SCHOOL DISTRICT

DESIGN DEVELOPMENT

FLOOR PLAN - UNIT C

Revision	DRAWN ML	PROJECT NO. 18-1366
	CHECKED JH	DATE 11/8/19
	SCALE As indicated	SHEET
	UPDATED 11/8/2019 3:41:56 PM	A2.1.1-2

CADFILE D:\1366-Needham ES_Central_Buildings_mfuzi3ZN2A.rvt



1 UNIT C ROOF PLAN
1/8" = 1'-0"

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2101 Capitol Ave, Suite 100, Sacramento, CA 95816 | 916.368.7990

GENERAL NOTES

1. CRICKETS SLOPE MIN. 1/4" PER FOOT, 90° TO TOE OF CRICKET.
2. DOWNSPOUTS ARE 3" DIAMETER STEEL PIPE, UNLESS OTHERWISE NOTED.
3. MANUFACTURER TO SHOW COMPLIANCE WITH SOLAR READY AREA REQUIREMENTS. NO EQUIPMENT, VENTS, ETC. TO BE LOCATED IN THIS AREA.
4. CONNECT DOWNSPOUTS TO STORM DRAIN, UNLESS OTHERWISE NOTED.

DESIGN DEVELOPMENT DRAWINGS

APPROVAL OF CONSISTENCY WITH DISTRICT PROGRAM

APPROVAL ____________

DATE ____________

NEEDHAM ELEMENTARY SCHOOL - ADDITIONS INCREMENT 2

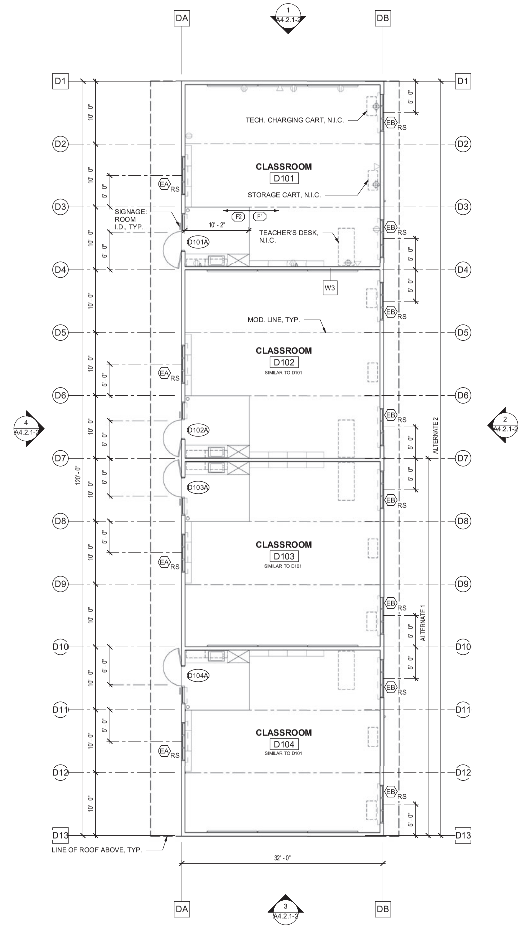
LODI UNIFIED SCHOOL DISTRICT

DESIGN DEVELOPMENT

ROOF PLAN - UNIT C

Revision	DRAWN ML	PROJECT NO. 18-1366
	CHECKED JH	DATE 11/8/19
	SCALE 1/8" = 1'-0"	SHEET
	UPDATED 11/8/2019 3:41:59 PM	A2.1.2-2

CADFILE



1 UNIT D FLOOR PLAN
1/8" = 1'-0"

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LEGEND

WOOD STUD WALL: SEE STRUCTURAL FOR SIZE AND SPACING. WHERE NOT INDICATED ON STRUCTURAL, PROVIDE 2x6 STUDS @ 16" O.C., UNLESS OTHERWISE NOTED.

CONSECUTIVE NUMBERING CONVENTION FOR INTERIOR ELEVATIONS AND ROOM FINISHES.

WINDOW (PLAN VIEW) — Window Covering Location

DOOR REFERENCE — A101B

WINDOW OR LOUVER REFERENCE — Window Covering Reference RS=Roller Window Shades

- DATA OUTLET
- DUPLEX POWER OUTLET
- QUAD POWER OUTLET
- 30" X 48" CLEAR SPACE
- 60" DIAMETER TURNAROUND

GENERAL NOTES

1. FOR MOUNTING HEIGHTS, LOCATIONS, AND DETAILS, INCLUDING THOSE FOR DISABLED ACCESSIBILITY, REFER TO SHEET A0.2
2. DIMENSIONS AT EXTERIOR WALLS ARE TO FACE OF STUD, UNLESS OTHERWISE NOTED.
3. DIMENSIONS AT INTERIOR WALLS ARE TO CENTER OF STUD, UNLESS OTHERWISE NOTED.

FLOOR FINISH

F1 CARPET
F2 RESILIENT FLOORING: LINOLEUM
F3 RESILIENT FLOORING: SAFETY FLOORING
F4 EPOXY
F5 CONCRETE: SEALED
F6 RESILIENT FLOORING: SHEET VINYL
F7 RESILIENT FLOORING: RUBBER FLOORING

SOUND ISOLATION NOTES

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2. GYPSUM WALLBOARD IS 5/8" TYPE "X", UNLESS OTHERWISE NOTED
3. PROVIDE 2 CONTINUOUS BEADS OF SEALANT BETWEEN STUD TRACK OR SILL PLATE & FINISH FLOOR
4. WHERE 2 LAYERS OF GYPSUM WALLBOARD OCCURS, STAGGER THE JOINTS: DO NOT TAPE THE INNER LAYER, UNLESS REQUIRED BY FIRE ASSEMBLY.
5. PENETRATIONS THROUGH GYPSUM WALLBOARD ABOVE CEILINGS
   A. DUCTWORK: PROVIDE 1 INCH GAP ALL AROUND AND FILL WITH SOUND INSULATION
   B. CONDUIT / PIPING: CAULK ALL AROUND WITH SEALANT
6. ELECTRICAL BOXES FOR LIGHTING, POWER, SIGNAL AND ALARM
   A. LOCATE EACH BOX IN SEPARATE STUD CAVITY. DO NOT MOUNT BACK-TO-BACK OUTLETS ON THE SAME STUD. AT LOCATIONS WHERE THESE REQUIREMENTS CANNOT BE MET, REVIEW LAYOUT WITH ARCHITECT PRIOR TO INSTALLATION
   B. WRAP WITH "BOX PADS", SPECIFIED IN DIVISION 26

SOUND ISOLATION WALL TYPES

W1 (2) LAYERS OF GYP. BOARD, SOUND INSULATION, (2) LAYERS OF GYP. BOARD
W2 (2) LAYERS OF GYP. BOARD, SOUND INSULATION
W3 SOUND INSULATION

DESIGN DEVELOPMENT DRAWINGS

APPROVAL OF CONSISTENCY WITH DISTRICT PROGRAM

APPROVAL ____________

DATE ____________

NEEDHAM ELEMENTARY SCHOOL - ADDITIONS INCREMENT 2

LODI UNIFIED SCHOOL DISTRICT

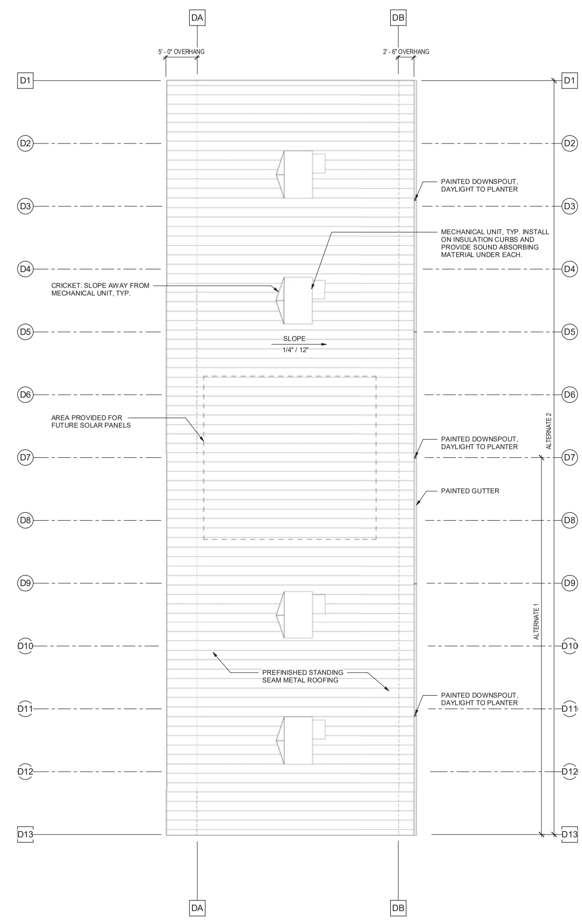
DESIGN DEVELOPMENT

FLOOR PLAN - UNIT D

UNIT D

Revision	DRAWN Author	PROJECT NO. 18-1366
	CHECKED Checker	DATE 11/8/19
	SCALE 1/8" = 1'-0"	SHEET
	UPDATED 11/8/2019 3:42:03 PM	A2.2.1-2

CADFILE



1 UNIT D ROOF PLAN
1/8" = 1'-0"

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GENERAL NOTES

1. CRICKETS SLOPE MIN. 1/4" PER FOOT, 90° TO TOE OF CRICKET.
2. DOWNSPOUTS ARE 3" DIAMETER STEEL PIPE, UNLESS OTHERWISE NOTED.
3. MANUFACTURER TO SHOW COMPLIANCE WITH SOLAR READY AREA REQUIREMENTS. NO EQUIPMENT, VENTS, ETC. TO BE LOCATED IN THIS AREA.
4. CONNECT DOWNSPOUTS TO STORM DRAIN, UNLESS OTHERWISE NOTED.

DESIGN DEVELOPMENT DRAWINGS

APPROVAL OF CONSISTENCY WITH DISTRICT PROGRAM

APPROVAL ____________

DATE ____________

NEEDHAM ELEMENTARY SCHOOL - ADDITIONS INCREMENT 2

LODI UNIFIED SCHOOL DISTRICT

DESIGN DEVELOPMENT

ROOF PLAN - UNIT D

UNIT D

Revision	DRAWN ML	PROJECT NO. 18-1366
	CHECKED JH	DATE 11/8/19
	SCALE 1/8" = 1'-0"	SHEET
	UPDATED 11/8/2019 3:42:06 PM	A2.2.2-2

CADFILE
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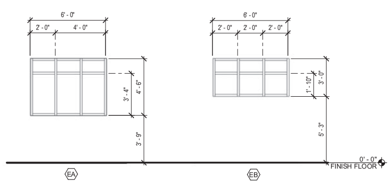
Unit	DOORS								FRAMES					NOTES	Door Location
	NO.	SIZE	TYPE	MAT	FIN.	RATING (MIN.)	GLASS	HDWR. GROUP	FRAME TYPE	FRAME FINISH	HEAD	JAMB	THRESH		
UNIT C															
Exterior															
UNIT C	C101A	3'-0" x 7'-0"	B	H.M.	PT.	-	GL-3 (T)	-	2	PT.	-	-	-		Exterior
UNIT C	C102A	3'-0" x 7'-0"	B	H.M.	PT.	-	GL-3 (T)	-	2	PT.	-	-	-		Exterior
UNIT C	C103A	3'-0" x 7'-0"	B	H.M.	PT.	-	GL-3 (T)	-	2	PT.	-	-	-		Exterior
UNIT C	C104A	3'-0" x 7'-0"	B	H.M.	PT.	-	GL-3 (T)	-	2	PT.	-	-	-		Exterior
UNIT C	C105A	3'-0" x 7'-0"	A	H.M.	PT.	-	-	-	1	PT.	-	-	-		Exterior
UNIT C	C106A	3'-0" x 7'-0"	A	H.M.	PT.	-	-	-	1	PT.	-	-	-		Exterior
UNIT C	C107A	3'-0" x 7'-0"	A	H.M.	PT.	-	-	-	1	PT.	-	-	-		Exterior
UNIT C	C108A	3'-0" x 7'-0"	A	H.M.	PT.	-	-	-	1	PT.	-	-	-		Exterior
UNIT C	C109A	3'-0" x 7'-0"	B	H.M.	PT.	-	GL-3 (T)	-	2	PT.	-	-	-		Exterior
UNIT C	C110A	3'-0" x 7'-0"	B	H.M.	PT.	-	GL-3 (T)	-	2	PT.	-	-	-		Exterior
UNIT C	C111A	3'-0" x 7'-0"	B	H.M.	PT.	-	GL-3 (T)	-	2	PT.	-	-	-		Exterior
UNIT D															
Exterior															
UNIT D	D101A	3'-0" x 7'-0"	B	H.M.	PT.	-	GL-3 (T)	-	2	PT.	-	-	-		Exterior
UNIT D	D102A	3'-0" x 7'-0"	B	H.M.	PT.	-	GL-3 (T)	-	2	PT.	-	-	-		Exterior
UNIT D	D103A	3'-0" x 7'-0"	B	H.M.	PT.	-	GL-3 (T)	-	2	PT.	-	-	-		Exterior
UNIT D	D104A	3'-0" x 7'-0"	B	H.M.	PT.	-	GL-3 (T)	-	2	PT.	-	-	-		Exterior

WINDOW TYPES



EXTERIOR WINDOWS
1/4" = 1'-0"

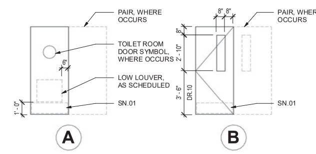
LEGEND

DOOR
AL. ALUMINUM
H.M. HOLLOW METAL

FINISH
PT. PAINT
PRE. PRE-FINISHED

GLASS
- NO GLAZING
GL-1 (T) NOT USED
GL-2 (T) CLEAR INSULATING VISION GLASS, FULLY TEMPERED
GL-3 (T) TINTED INSULATING VISION GLASS, FULLY TEMPERED
GL-4 (T) NOT USED
GL-5 NOT USED
GL-6 NOT USED
GL-7 NOT USED
GL-8 (T) NOT USED
GL-9 (T) NOT USED

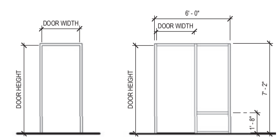
DOOR TYPES



DOOR CODE COMPLIANCE

1. EXIT DOORS SHALL BE OPERABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT.
2. INSTALL FLOOR STOPS IN LOCATION NOT TO CAUSE TRIPPING HAZARD IN PATH OF TRAVEL, 4" MAX FROM WALL.

DOOR FRAME TYPES



FRAME MATERIAL = H.M., TYP.
TYPE 1

FRAME MATERIAL = H.M., TYP.
GLAZING: GL-3 (T)
TYPE 2

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GENERAL NOTES

1. PROVIDE DOUBLE PANE INSULATING GLASS AT EXTERIOR DOORS, UNLESS OTHERWISE NOTED.

SHEET NOTES

SN.01 SMOOTH, UNINTERRUPTED SURFACE, 10" HIGH ON PUSH SIDE OF DOOR

DESIGN DEVELOPMENT DRAWINGS

APPROVAL OF CONSISTENCY WITH DISTRICT PROGRAM

APPROVAL ____________

DATE ____________

NEEDHAM ELEMENTARY SCHOOL - ADDITIONS INCREMENT 2

LODI UNIFIED SCHOOL DISTRICT

DESIGN DEVELOPMENT

SCHEDULES

UNITS C AND D

Revision	DRAWN ML	PROJECT NO. 18-1366
	CHECKED JH	DATE 11/8/19
	SCALE 1/4" = 1'-0"	SHEET
	UPDATED 11/8/2019 3:42:12 PM	A3.1.1-2

CADFILE
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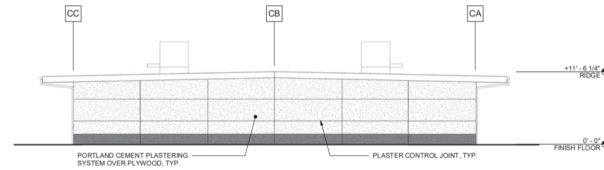
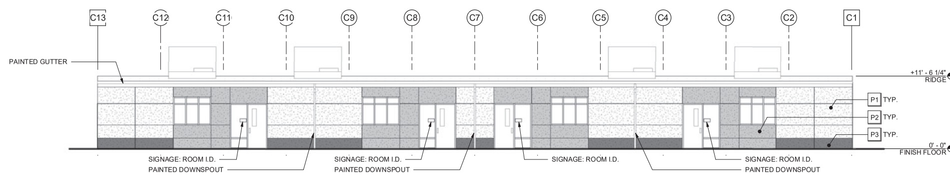
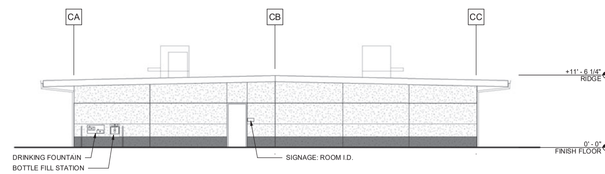


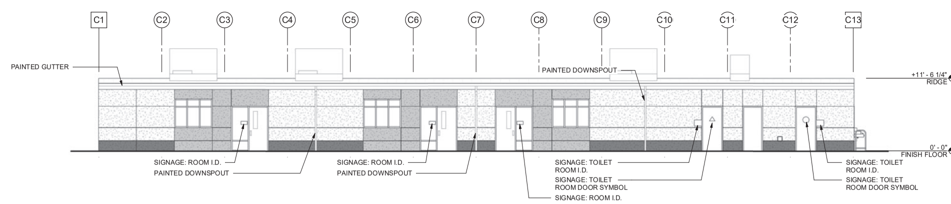
1 UNIT C ELEVATION
1/8" = 1'-0"



2 UNIT C ELEVATION
1/8" = 1'-0"



3 UNIT C ELEVATION
1/8" = 1'-0"



4 UNIT C ELEVATION
1/8" = 1'-0"

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EXTERIOR COLOR SCHEDULE

☐	MATERIAL	COLOR
P1	LATH & PLASTER	PLASTER FINISH COLOR 1 (1) (2)
P2	LATH & PLASTER	PLASTER FINISH COLOR 2 (1) (2)
P3	LATH & PLASTER	PLASTER FINISH COLOR 3 (1) (2)

(1) CUSTOM COLORS TO BE SUBMITTED PER SPECIFICATIONS.

(2) COLOR BANDS ARE SHOWN ON THE FOREGROUND ELEVATIONS ONLY and ARE INTENDED TO CONTINUE AROUND ENTIRE BUILDING UNLESS SPECIFICALLY SHOWN DIFFERENTLY ON THE ELEVATION. (IE: BUILDING ENTRANCES and COVERED WALKWAY COLUMNS)

GENERAL NOTES

1. TYPICAL NOTES ON ONE ELEVATION APPLY TO ALL ELEVATIONS.
2. FOR MOUNTING HEIGHTS, LOCATIONS, AND DETAILS, INCLUDING THOSE FOR DISABLED ACCESSIBITY, REFER TO SHEET A0.2

DESIGN DEVELOPMENT DRAWINGS

APPROVAL OF CONSISTENCY WITH DISTRICT PROGRAM

APPROVAL ____________

DATE ____________

NEEDHAM ELEMENTARY SCHOOL - ADDITIONS INCREMENT 2

LODI UNIFIED SCHOOL DISTRICT

DESIGN DEVELOPMENT

EXTERIOR ELEVATIONS - UNIT C

UNIT C

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EXTERIOR COLOR SCHEDULE

☐	MATERIAL	COLOR
P1	LATH & PLASTER	PLASTER FINISH COLOR 1 (1) (2)
P2	LATH & PLASTER	PLASTER FINISH COLOR 2 (1) (2)
P3	LATH & PLASTER	PLASTER FINISH COLOR 3 (1) (2)

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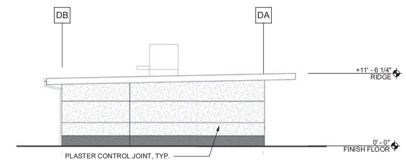
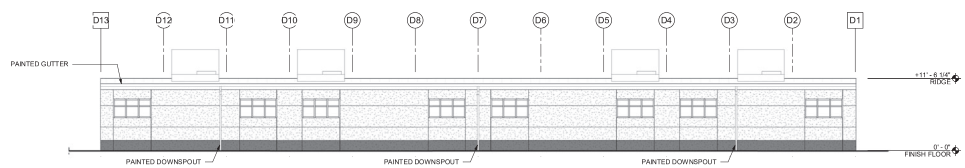
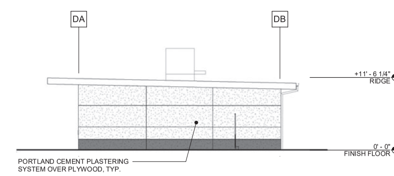
2. FOR MOUNTING HEIGHTS, LOCATIONS, AND DETAILS, INCLUDING THOSE FOR DISABLED ACCESSIBILITY, REFER TO SHEET A0.2



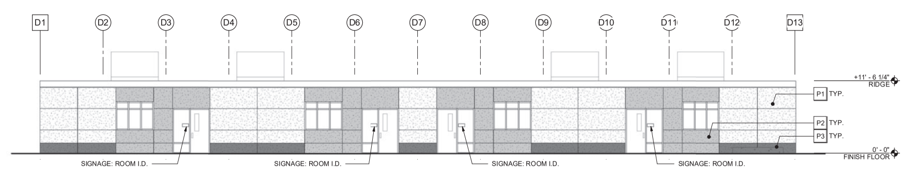
1 UNIT D ELEVATION
1/8" = 1'-0"



2 UNIT D ELEVATION
1/8" = 1'-0"



3 UNIT D ELEVATION
1/8" = 1'-0"



4 UNIT D ELEVATION
1/8" = 1'-0"

DESIGN DEVELOPMENT DRAWINGS

APPROVAL OF CONSISTENCY WITH DISTRICT PROGRAM

APPROVAL ______

DATE ______

NEEDHAM ELEMENTARY SCHOOL - ADDITIONS INCREMENT 2

LODI UNIFIED SCHOOL DISTRICT

DESIGN DEVELOPMENT

EXTERIOR ELEVATIONS - UNIT D

UNIT D

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	UPDATED 11/8/2019 3:42:33 PM	

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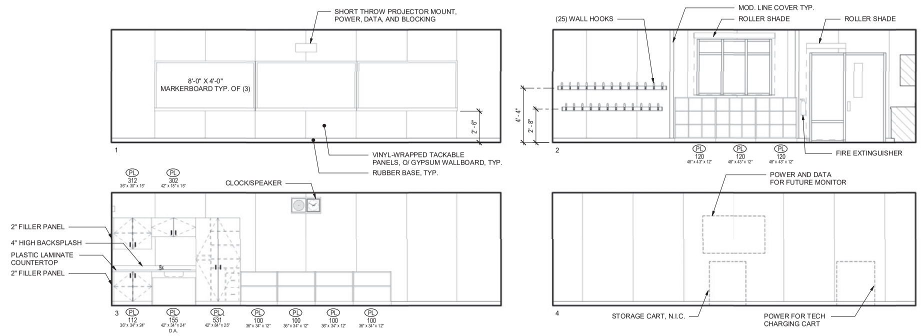
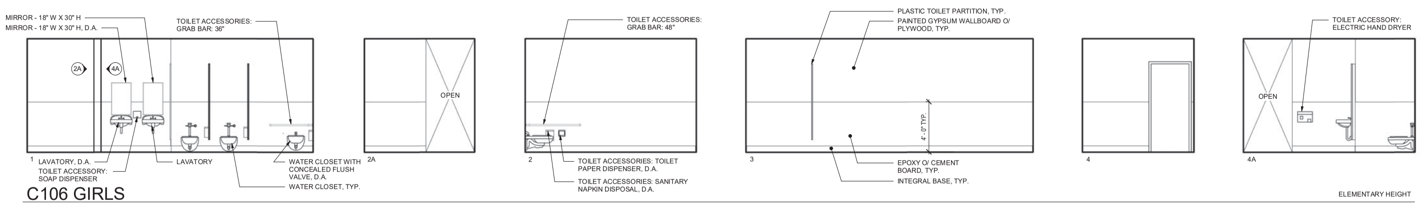


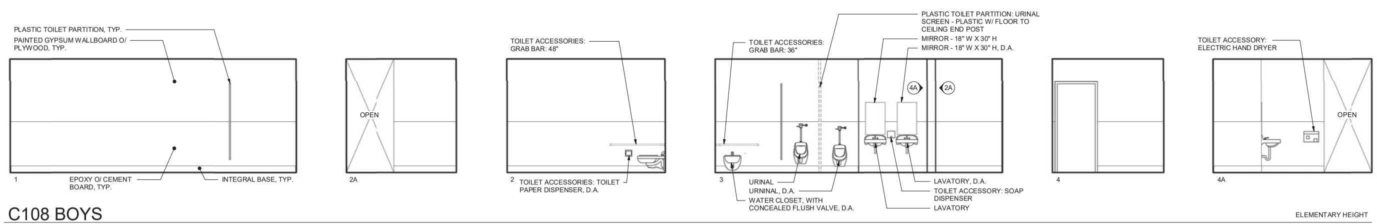
C101 TYPICAL CLASSROOM

1/4" = 1'-0"



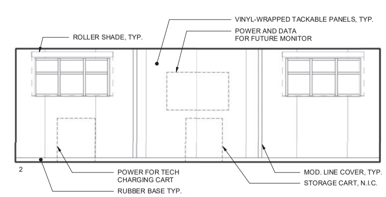
C106 GIRLS

1/4" = 1'-0"



C108 BOYS

1/4" = 1'-0"



D101 CLASSROOM

1/4" = 1'-0"

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LEGEND

CONSECUTIVE NUMBERING CONVENTION FOR INTERIOR ELEVATIONS AND ROOM FINISHES.

CASEWORK REFERENCE

- TYPE: PL - PLASTIC LAMINATE
- INDICATES ALL DRAWERS AND DOORS TO HAVE LOCKS INSTALLED
- W. I. NUMBER / MANUFACTURER'S NUMBER
- WIDTH x HEIGHT x DEPTH

GENERAL NOTES

1. D.A. INDICATES DISABLED ACCESSIBLE
2. FOR MOUNTING HEIGHTS, LOCATIONS, AND DETAILS, INCLUDING THOSE FOR DISABLED ACCESSIBITY, REFER TO SHEET A0.2
3. FOR TYPICAL ANCHORAGE DETAILS, SEE A0 SERIES DRAWINGS

DESIGN DEVELOPMENT DRAWINGS

APPROVAL OF CONSISTENCY WITH DISTRICT PROGRAM

APPROVAL

DATE

NEEDHAM ELEMENTARY SCHOOL - ADDITIONS INCREMENT 2

LODI UNIFIED SCHOOL DISTRICT

DESIGN DEVELOPMENT

INTERIOR ELEVATIONS - UNITS C AND D

UNITS C AND D

Revision	DRAWN ML	PROJECT NO. 18-1366
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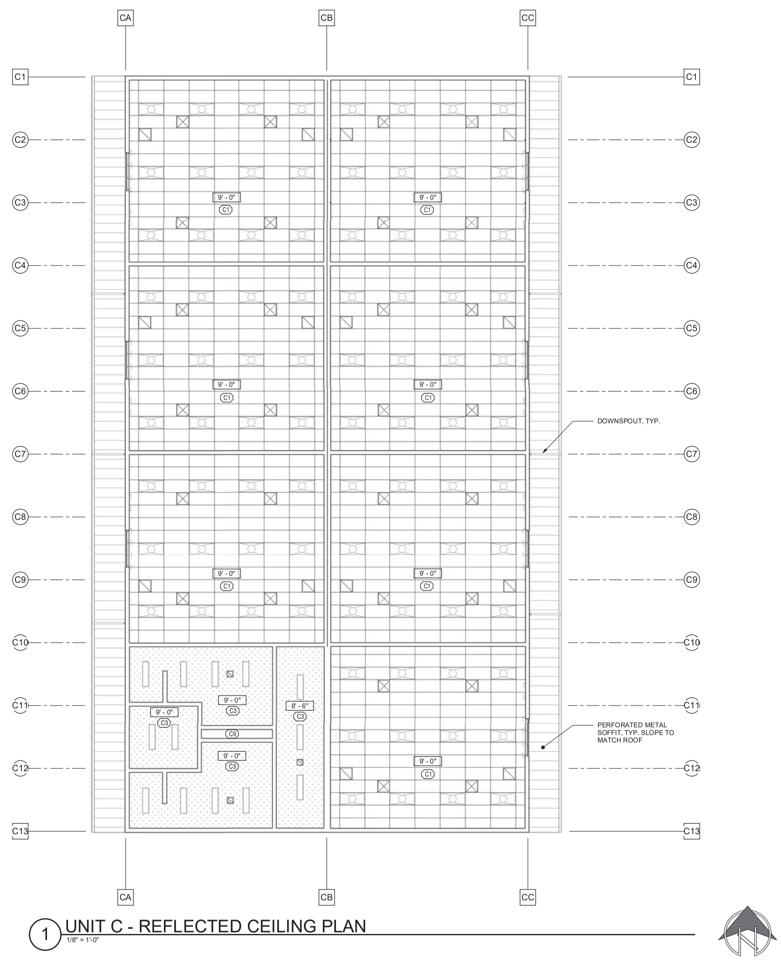
	SCALE As indicated	SHEET A5.1.1-2
	UPDATED 11/8/2019 3:42:33 PM	

C101 | C106 | C108 | D101



1 UNIT C - REFLECTED CEILING PLAN
1/8" = 1'-0"

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LEGEND

- RECESSED LIGHT FIXTURE
- SURFACE MOUNTED LIGHT FIXTURE
- SUSPENDED LIGHT FIXTURE
- SUPPLY AIR REGISTER
- RETURN AIR REGISTER
- EXHAUST AIR REGISTER
- AD ACCESS DOOR
- RECESSED LIGHT FIXTURE
- EXIT SIGN
- X'-X" INDICATES HEIGHT OF CEILING ABOVE FINISH FLOOR

FINISHES

CEILING

C1 2'X4' SUSPENDED ACOUSTICAL CEILING PANEL
C2 PERFORMATED METAL PANELS
C3 GYPSUM WALLBOARD
C4 LATH AND PLASTER
C5 NOT USED
C6 NOT USED
C7 NOT USED
C8 NOT USED
C9 NO CEILING

GENERAL NOTES

1. ALL CEILING GRIDS ARE CENTERED IN ROOM, UNLESS OTHERWISE NOTED.

DESIGN DEVELOPMENT DRAWINGS

APPROVAL OF CONSISTENCY WITH DISTRICT PROGRAM

APPROVAL __________

DATE __________

NEEDHAM ELEMENTARY SCHOOL - ADDITIONS INCREMENT 2

LODI UNIFIED SCHOOL DISTRICT

DESIGN DEVELOPMENT

REFLECTED CEILING PLAN - UNIT C

UNIT C

Revision	DRAWN ML	PROJECT NO. 18-1366
	CHECKED JH	DATE 11/8/19
	SCALE 1/8" = 1'-0"	SHEET
	UPDATED 11/8/2019 3:40:37 PM	A6.1.1-2

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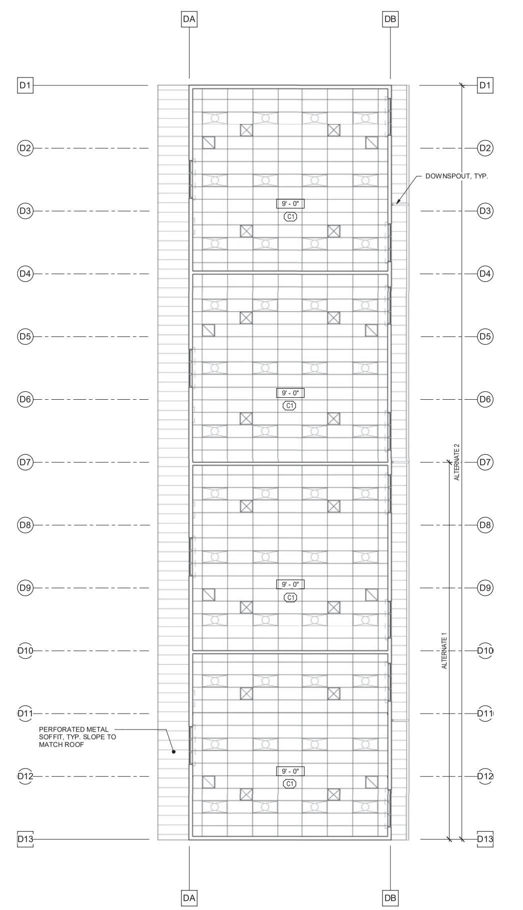

1 UNIT D - REFLECTED CEILING PLAN
1/8" = 1'-0"

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LEGEND

- RECESSED LIGHT FIXTURE
- SURFACE MOUNTED LIGHT FIXTURE
- SUSPENDED LIGHT FIXTURE
- SUPPLY AIR REGISTER
- RETURN AIR REGISTER
- EXHAUST AIR REGISTER
- AD ACCESS DOOR
- RECESSED LIGHT FIXTURE
- EXIT SIGN
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FINISHES

CEILING

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GENERAL NOTES

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DESIGN DEVELOPMENT DRAWINGS

APPROVAL OF CONSISTENCY WITH DISTRICT PROGRAM

APPROVAL ______

DATE ______

NEEDHAM ELEMENTARY SCHOOL - ADDITIONS INCREMENT 2

LODI UNIFIED SCHOOL DISTRICT

DESIGN DEVELOPMENT

REFLECTED CEILING PLAN - UNIT D

UNIT D

Revision	DRAWN ML	PROJECT NO. 18-1366
	CHECKED JH	DATE 11/8/19
	SCALE 1/8" = 1'-0"	SHEET
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PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Sealants and backing for interior and exterior joints.

1.2 RELATED REQUIREMENTS

A. Pertinent Sections specifying sealants or referencing this Section for sealant products and installation requirements.

1.3 REFERENCES AND STANDARDS

A. California Building Code (CBC), edition as noted on Drawings, as adopted by the California Division of the State Architect (DSA).

B. California Green Building Standards Code, edition as noted on Drawings, as adopted by the California Division of the State Architect (DSA).

C. American Concrete Institute (ACI) Publications and Standards: Standards and manuals listed refer to the latest edition as of the issue date of this Project Manual.

1. ACI 302.1R, Guide to Concrete Floor and Slab Construction.
2. ACI 360R-10, Guide to Design of Slabs-on-Ground.

D. ASTM International:

1. C 834, Standard Specification for Latex Sealants.
2. C 919, Standard Practice for Use of Sealants in Acoustical Applications.
3. C 920, Standard Specification for Elastomeric Joint Sealants.
4. C 1193, Standard Guide for Use of Joint Sealants.
5. C 1247, Standard Test Method for Durability of Sealants Exposed to Continuous Immersion in Liquids.
6. C 1248, Standard Test Method for Staining of Porous Substrate by Joint Sealants.
7. C 1311, Standard Specification for Solvent Release Sealants.
8. C 1330, Standard Specification for Cylindrical Sealant Backing for Use with Cold Liquid-Applied Sealants.
9. C 1521, Standard Practice for Evaluating Adhesion of Installed Weatherproofing Sealant Joints.
10. D 1667, Standard Specification for Flexible Cellular Materials - Poly (Vinyl Chloride) Foam (Closed-Cell).
11. E 90, Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.

E. South Coast Air Quality Management District (SCAQMD):

1. Rule 1168, Adhesive and Sealant Applications.

F. U.S. Food & Drug Administration (FDA):

1. Code of Federal Regulations, Title 21, 21 CFR 177.2600, Rubber Articles Intended for Repeated Use.

1.4 DEFINITIONS

A. Sealant Terminology per ASTM C 834 and ASTM C 920:

1. Type C: Clear / translucent sealant.
2. Type OP: Opaque pigmented sealant.
3. Type S: Single component sealant.
4. Type M: Sealant with two or more components.
5. Grade NS: Nonsag sealant.
6. Grade P: Pourable sealant.
7. Grade -18ºC: Sealant with low temperature flexibility tested to -18ºC (0ºF).
8. Grade 0ºC: Sealant with low temperature flexibility tested to 0ºC (32ºF).
9. Grade NF: Sealant does not meet low temperature flexibility requirements.
10. Class12-1/2: Sealant capable of handling movement, either contraction or expansion, of 12.5 percent of the original joint width.
11. Class 25: Sealant capable of handling movement, either contraction or expansion, of 25 percent of the original joint width.
12. Class 35: Sealant capable of handling movement, either contraction or expansion, of 35 percent of the original joint width.
13. Class 50: Sealant capable of handling movement, either contraction or expansion, of 50 percent of the original joint width.
14. Class 100 / 50: Sealant capable of handling movement of 50 percent contraction and 100 percent expansion.
15. Use Related to Exposure:
    a. Use NT: Nontraffic.
    b. Use T: Traffic.
    c. Use I: Immersible.
16. Use Related to Material:
    a. Use A: Sealant used in contact with aluminum.
    b. Use G: Sealant used in contact with glass.
    c. Use M: Sealant used in contact with mortar.
    d. Use O: Sealants used in contact with all other materials other than those previously listed.

1.5 ADMINISTRATIVE REQUIREMENTS

A. Submittal Procedures:

1. Action Submittals and Informational Submittals shall be submitted in accordance with Section 01 3300, Submittal Procedures.
2. Sustainable Design Submittals shall comply with the additional requirement of Section 01 8113, Sustainable Design Requirements.
3. Closeout Submittals shall be submitted in accordance with Section 01 7700, Closeout Procedures.

B. Pre-Installation Meeting: Conduct at Project site.

1.6 ACTION SUBMITTALS

A. Product Data: For each type of product indicated, demonstrate compliance with specified attributes.

1. Include color chart from manufacturers for each joint sealant product required.
2. Provide certification by joint sealant manufacturer that materials provided for this Section are 100 percent asbestos-free.

B. Samples for initial Selection: In form of manufacturer's standard bead samples, consisting of strips of actual products showing full range of colors available, for each product exposed to view.

C. Samples for Verification: For each kind and color of joint sealant required, provide Samples with joint sealants in 1/2 inch wide joints formed between two 6 inch long strips of material matching the appearance of exposed surfaces adjacent to joint sealants.

D. CAL-Green Submittals:

1. Product Data – VOC Limits: For adhesives, sealants, fillers and primers, documentation including printed statement of VOC contents, comply with limits specified in Section 01 6116.

E. Joint-Sealant Schedule: Include the following information.

1. Joint-sealant application, joint location, and designation.
2. Joint-sealant manufacturer and product name.
3. Joint-sealant formulation.
4. Joint-sealant colors (multiple colors will be required).

1.7 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer.

B. Product Certificates: For each kind of joint sealant and accessory, from manufacturer.

C. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, indicating that sealants comply with requirements.

1. Preconstruction Compatibility and Adhesion Test Reports from sealant manufacturer, indicating the following:

a. Materials forming joint substrates and joint-sealant backings have been tested for compatibility and adhesion with joint sealants.
b. Interpretation of test results and written recommendations for primers and substrate preparation needed for adhesion.

D. Sample of manufacturers' warranty.

E. Record of Pre-Installation Meeting.

1.8 CLOSEOUT SUBMITTALS

A. Warranty and Guarantee: Submit executed warranty and extended Contractor guarantee.

1.9 QUALITY ASSURANCE

A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for installation of sealants and backing required for this Project.

B. Use only new materials and products, unless existing materials or products are specifically shown otherwise on the Drawings to be salvaged and re-used.

C. Single Source Responsibility: Obtain each kind of joint sealant from single source from single manufacturer.

D. Materials, components, assemblies, workmanship and installation are to be observed by the Project Inspector. Work not so inspected is subject to uncovering and replacement.

E. Mockups: Install sealant in mockups of assemblies specified in other Sections that are indicated to receive joint sealants specified in this Section. Use materials and installation methods specified in this Section.

1.10 DELIVERY, STORAGE AND HANDLING

A. Deliver materials to project site in original factory wrappings and containers, labeled with identification of manufacturer, product name and designation, color, expiration period for use, pot life, curing time, and mixing instructions for multicomponent materials.

B. Store and handle materials in compliance with manufacturer's recommendations to prevent their deterioration or damage due to moisture, high or low temperatures, contaminants, or other causes.

1.11 FIELD CONDITIONS

A. Environmental Conditions: Do not proceed with installation of joint sealants under the following conditions:

1. When ambient and substrate temperature conditions are outside the limits permitted by joint sealant manufacturer.
2. When joint substrates are wet.

B. Joint Width Conditions: Do not proceed with installation of joint sealants where joint widths are less than allowed by joint sealant manufacturer for application indicated.

C. Joint Substrate Conditions: Do not proceed with installation of joint sealants until contaminants capable of interfering with their adhesion are removed from joint substrates.

1.12 WARRANTY AND GUARANTEE

A. Manufacturer: In addition to the Contractor's Standard Guarantee, furnish Owner with manufacturer's fully executed written warranty for sealant against defects in materials and workmanship for a period of 5 years:

B. Contractor: in addition to its standard Contract Guarantee under the Contract, furnish Owner a special extended written five-year guarantee, cosigned by installer, for sealant, agreeing to replace any and all joints that leaks or otherwise fails to perform as required within guarantee period as a result of failure of materials or installation workmanship at not additional cost to the Owner.

PART 2 - PRODUCTS

2.1 DESIGN AND PERFORMANCE CRITERIA

A. Sustainable Design:

1. VOC Limits for field-applied adhesives, sealants, fillers, coatings and primers shall comply with limits specified in Section 01 6116.

B. Building Envelope: Make watertight and weatherproof.

1. Exterior work that does not remain watertight and all work which does not retain all properties inherent in the product as stipulated by the manufacturer will be considered faulty.

2.2 SYSTEM DESCRIPTION

A. Provide elastomeric joint sealants that have been produced and installed to establish and to maintain watertight and airtight continuous seals without causing staining or deterioration of joint substrates.

B. Provide joint sealants for interior applications that have been produced and installed to establish and maintain airtight continuous seals that are water resistant and cause no staining or deterioration of joint substrates.

C. Design Requirements:

1. Seal building joints with non-sag type sealant.
2. Seal floor joints with self-leveling or slope grade self-leveling type sealant.

2.3 MATERIALS, GENERAL

A. Compatibility: Provide joint sealants, joint fillers, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer based on testing and field experience.

B. Liquid-Applied Joint Sealants: Comply with ASTM C 920 and other requirements indicated for each liquid-applied joint sealant specified, including those referencing ASTM C 920 classifications for type, grade, class, and uses related to exposure and joint substrates.

1. Suitability for Immersion in Liquids. Where sealants are indicated for Use I for joints that will be continuously immersed in liquids, provide products that have undergone testing according to ASTM C 1247. Liquid used for testing sealants is deionized water, unless otherwise indicated.

C. Stain-Test-Response Characteristics: Where sealants are specified to be non-staining to porous substrates, provide products that have undergone testing according to ASTM C 1248 and have not stained porous joint substrates indicated for Project.

D. Suitability for Contact with Food: Where sealants are indicated for joints that will come in repeated contact with food, provide products that comply with 21 CFR 177.2600.

E. Colors: Provide color of exposed joint sealants to comply with the following:

1. Provide colors matching selections made by Architect from manufacturer's full range of colors for products of type indicated.
2. Request color selection for all products listed without a preselected color.

2.4 SILICONE JOINT SEALANTS

A. Single-Component, Nonsag, Neutral-Curing Silicone Joint Sealant: ASTM C 920, Type S, Grade NS, Class 100 / 50, for Use NT.

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
   a. Dow Corning Corporation; 790.
   b. Sika Corporation, Construction Products Division; Sikasil® WS-290.
   c. Substitutions: Per Division 01.

B. Single-Component, Nonsag, Neutral-Curing Silicone Joint Sealant: ASTM C 920, Type S, Grade NS, Class 50, for Use NT.

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
   a. Dow Corning Corporation; 795.
   b. Sika Corporation, Construction Products Division; Sikasil® WS-295.
   c. Substitutions: Per Division 01.

C. Single-Component, Nonsag, One Part RTV Neutral-Curing Silicone Joint Sealant: ASTM C 920, Type S, Grade NS, Class 25, designed for adhering to low energy surfaces common in sheet or peel and stick weather resistant barriers.

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
   a. Dow Corning Corporation; 758.
   b. Sika Corporation, Construction Products Division; Sikasil®-N Plus.
   c. Substitutions: Per Division 01.

D. Mildew-Resistant, Single-Component, Acid-Curing Silicone Joint Sealant: ASTM C 920, Type S, Grade NS, Class 25, for Use NT, A and O.

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
   a. Dow Corning Corporation; 786 Mildew Resistant.
   b. GE Advanced Materials - Silicones; Sanitary SCS1700.
   c. Substitutions: Per Division 01.

2.5 URETHANE JOINT SEALANTS

A. Single-Component, Nonsag, Urethane Joint Sealant: ASTM C 920, Type S, Grade NS, Class 35, for Use NT.

1. Products: Subject to compliance with requirements, provide one of the following:
   a. BASF Building Systems; MasterSeal® NP 1.
   b. Sika Corporation, Construction Products Division; Sikaflex®-1a.
   c. Substitutions: Per Division 01.

B. Multicomponent, Nonsag, Urethane Joint Sealant: ASTM C 920, Type M, Grade NS, Class 25, for Use NT, M, A and O.

1. Products: Subject to compliance with requirements, provide one of the following:
   a. BASF Building Systems; MasterSeal® NP 2.
   b. Sika Corporation, Construction Products Division; Sikaflex®-2c NS.
   c. Substitutions: Per Division 01.

C. Multicomponent Urethane Joint Sealant: ASTM C 920; self-leveling, Type M, Grade P, Class 25, Uses T, M, A, O, and approved by manufacturer for wide joints up to 1-1/2 inches.

1. Products: Subject to compliance with requirements, provide one of the following:
   a. BASF Building Systems; MasterSeal® SL 2.
   b. Sika Corporation, Construction Products Division; Sikaflex® 2c SL.
   c. Substitutions: Per Division 01.

2.6 BUTYL JOINT SEALANTS

A. Butyl-Rubber-Based Joint Sealants: ASTM C 1311, type recommended by roofing manufacturer to suit application and meet requirements of this Section.

1. Products: Subject to compliance with requirements, provide one of the following:
   a. Bostik, Inc.; Chem-Calk 300.
   b. Pecora Corporation; BC-158.
   c. Substitutions: Per Division 01.

2.7 MILDEW-RESISTANT JOINT SEALANTS

A. Mildew-Resistant Joint Sealants: Formulated for prolonged exposure to humidity with fungicide to prevent mold and mildew growth.

1. Single-component silicone, mildew resistant, acid curing, ASTM C 920, Type S, Grade NS, Class 25, Use NT.
2. Products: Subject to compliance with requirements, provide one of the following:
   a. Dow Corning Corporation; 786-M White.
   b. GE Construction Sealants; SCS1700 Sanitary.
   c. Substitutions: Per Division 01.

2.8 ACRYLIC LATEX JOINT SEALANTS

A. Latex Joint Sealant: Acrylic latex or siliconized acrylic latex, nonsag, paintable, nonstaining. ASTM C 834, Type OP, Grade NF.

1. Products: Subject to compliance with requirements, provide one of the following:
   a. Pecora Corporation; AC-20.
   b. Sherwin Williams; 950A.
   c. Substitutions: Per Division 01.

2.9 ACOUSTICAL JOINT SEALANTS

A. Acoustical Sealant; ASTM C 834, nonsag, paintable, nonstaining latex sealant. Effectively reduce airborne sound transmission through perimeter joints and openings in building construction as demonstrated by testing representative assemblies according to ASTM E 90.

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
   a. Pecora Corporation; AC-20® or AC-20® FTR (Fire & Temperature Rated).
   b. Substitutions: Per Division 01.

2.10 JOINT SEALANT BACKING

A. General: Provide sealant backings of material and type that are nonstaining; are compatible with joint substrates, sealants, primers and other joint fillers; and are

approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.

B. Cylindrical Sealant Backer Rods: ASTM C 1330, Type C (closed-cell material with a surface skin), as approved in writing by joint-sealant manufacturer for joint application indicated, and of size, shape and density to control sealant depth and otherwise contribute to producing optimum sealant performance.

C. Bond-Breaker Tape: Polyethylene tape or other plastic tape as recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint filler materials or joint surfaces at back of joint where such adhesion would result in sealant failure. Provide self-adhesive tape where applicable.

2.11 MISCELLANEOUS MATERIALS

A. Primer: Material recommended by joint sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint sealant-substrate tests.

B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming in any way joint substrates and adjacent nonporous surfaces, and formulated to promote optimum adhesion of sealants with joint substrates.

C. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

D. Spall Repair Mortar: Two-component structural epoxy binder and sand aggregate, producing a mortar that is easily worked and troweled. Early-set system designed specifically for the repair of industrial concrete floors subject to hard wheeled traffic. Compatible with joint filler and recommended by the joint filler manufacturer in writing.

1. Products: Subject to compliance with requirements, provide one of the following:
    a. Metzger / McGuire; Armor-Hard.
    b. Substitutions: Per Division 01.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint sealant performance. Do not proceed with installation of joint sealants until unsatisfactory conditions have been corrected.

B. Commencement of work indicates acceptance of substrates.

3.2 PREPARATION

A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with recommendations of joint sealant manufacturer and the following requirements:

1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
2. Clean concrete, masonry, unglazed surfaces of ceramic tile, and similar porous joint substrate surfaces by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining from above cleaning operations by vacuuming or blowing out joints with oil-free compressed air.
3. Remove laitance and form release agents from concrete.
4. Clean metal, glass, porcelain enamel, glazed surfaces of ceramic tile, and other nonporous surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants.

B. Spall Repair: Repair spalled joints in concrete slabs to produce joints of profiles recommended by joint sealer manufacturers.

C. Joint Priming: Prime joint substrates where indicated or where recommended by joint sealant manufacturer based on preconstruction joint sealant-substrate tests or prior experience. Apply primer to comply with joint sealant manufacturer's recommendations. Confine primers to areas of joint sealant bond; do not allow spillage or migration onto adjoining surfaces.

D. Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

E. Remove sealant and prepare joints in existing exterior locations as directed by representative of sealant manufacturer specified in this work.

3.3 INSTALLATION OF JOINT SEALANTS

A. General:

1. Comply with joint sealant manufacturer's printed installation instructions applicable to products and applications indicated, except where more stringent requirements apply.
2. Seal around all penetrations, holes, gaps, surface mounted fixtures and pipes entering building including light fixtures, mounting brackets and other similar items.

B. Sealant Installation Standard: Comply with recommendations of ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.

C. Joint Sealants at Building Exterior and Interior:

1. Seal the following joints with joint sealant:
   a. Expansion and control joints in exterior walls, copings, parapets.
   b. Joints between metal panels.
   c. Joints between door and window frames and adjacent materials.
   d. Joints between cabinets and countertops and walls.
   e. Control joints in interior partitions, including portion above ceilings.
   f. Expansion and control joints in solid exterior soffits.
   g. Control joints in interior ceilings and soffits.
2. Apply continuous bead of joint sealant in the following locations during installation of materials specified elsewhere:
   a. In lap joints of sheet metal construction.
   b. Roofing panels and roof-related sheet metal and flashing.
   c. Between partition floor and ceiling tracks and adjacent construction.
   d. Between end stud of partition and adjacent construction.
   e. Under door sills and thresholds.
      1) Set all sills and thresholds in continuous double bead of sealant. Provide sealant at butt ends of thresholds against door frame, around door frame and between threshold and resilient floor covering.
3. Apply acoustic sealant at acoustic separations to make assembly airtight.
   a. Seal perimeter and intersections of finish.
   b. Seal around electrical boxes and other penetrations of finish; seal holes within electrical boxes; seal conduit ends.
   c. Seal pipes which penetrate acoustic separations.
4. Apply joint sealant at joints not specifically mentioned above which require sealant to meet the performance criteria cited in this Section.

D. Installation of Sealant Backer Rods: Install sealant backer rods to comply with the following requirements:

1. Install joint fillers of type indicated to provide support of sealants during application and at position required to produce the cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
   a. Do not leave gaps between ends of joint fillers.
   b. Do not stretch, twist, puncture, or tear joint fillers.
   c. Remove absorbent joint fillers that have become wet prior to sealant application and replace with dry material.
2. Install bond breaker tape between sealants where backer rods are not used between sealants and joint fillers or back of joints.

E. Sealant Installation: Install sealants by proven techniques that result in sealants directly contacting and fully wetting joint substrates, completely filling recesses provided for each joint configuration, and providing uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability. Install sealants at the same time sealant backings are installed.

F. Tooling of Nonsag Sealants: Immediately after sealant application and prior to time skinning or curing begins, tool sealants to form smooth, uniform beads of configuration indicated, to eliminate air pockets, and to ensure contact and adhesion of sealant with sides of joint. Remove excess sealants from surfaces adjacent to joint. Do not use tooling agents that discolor sealants or adjacent surfaces or are not approved by sealant manufacturer.

1. Provide concave joint configuration per Figure 8A in ASTM C 1193, unless otherwise indicated.
2. Provide flush joint configuration, per Figure 8B in ASTM C 1193, where indicated.
3. Provide recessed joint configuration, per Figure 8C in ASTM C 1193, of recess depth and at locations indicated.
    a. Use masking tape to protect adjacent surfaces of recessed tooled joints.

G. Acoustical Sealant Installation: At sound-rated assemblies and elsewhere as indicated, seal construction at perimeters, behind control joints, and at openings and penetrations with a continuous bead of acoustical sealant. Install acoustical sealant at both faces of partitions at perimeters and through penetrations. Comply with ASTM C 919 and with manufacturer's written recommendations.

H. Joint Fillers in Refrigerated Rooms: Apply joint filler only after rooms have been brought down to the final temperature for five (5) days. Provide supplemental heat and dual dispensing system as required to apply in strict accordance with the manufacturer's directions.

3.4 DEFECTIVE WORK

A. Repair damaged and defective work and eliminate functional and visual defects. Where repair is not possible replace work. Adjust joints for uniform appearance.

B. Cut out and remove damaged or deteriorated joint sealants immediately so that and installations with repaired areas are indistinguishable from original work.

3.5 CLEANING AND PROTECTION

A. Clean off excess sealants or sealant smears adjacent to joints as work progresses by methods and with cleaning materials approved by manufacturers of joint sealants and of products in which joints occur.

B. Clean excess adhesive from exposed surfaces of neoprene compression seal with solvent cleaner as recommended by manufacturer.

C. Protect joint sealants during and after curing period from contact with contaminating substances or from damage resulting from construction operations or other causes so that they are without deterioration or damage at time of Substantial Completion.

3.6 SEALANT SCHEDULE

A. Color Selections: Architect will provide color selections and locations for each sealant type and for Contractor's use. Not all locations will have the same color. Custom colors will be required.

B. General:

1. Joints in construction between interior and exterior spaces and other designated or required locations to provide effective barrier against passage of elements:
   a. Multicomponent, Nonsag, Urethane Joint Sealant: ASTM C 920, Type M, Grade NS, Class 25, for Use NT, M, A and O.
   b. Single-Component, Nonsag, Urethane Joint Sealant: ASTM C 920, Type S, Grade NS, Class 25, for Use NT.
2. Specialty perimeters where required for appearance or weather tightness:
   a. Multicomponent, Nonsag, Urethane Joint Sealant: ASTM C 920, Type M, Grade NS, Class 25, for Use NT, M, A and O; capable of 50 percent extension and compression movement.
   b. Single-Component, Nonsag, Urethane Joint Sealant: ASTM C 920, Type S, Grade NS, Class 35, for Use NT.
   c. Single-Component, Nonsag, Neutral-Curing Silicone Joint Sealant: ASTM C 920, Type S, Grade NS, Class 50, for Use NT.
   d. Single-Component, Nonsag, Neutral-Curing Silicone Joint Sealant: ASTM C 920, Type S, Grade NS, Class 100 / 50, for Use NT.

C. Exterior Locations:

1. Joints Bordered by Glass: Single-component, nonsag, neutral-curing silicone joint sealant, ASTM C 920, Type S, Grade NS, Class 50, for Use NT.
2. Joints Bordered by Plastic: Single-component, nonsag, neutral-curing silicone joint sealant, ASTM C 920, Type S, Grade NS, Class 100 / 50, for Use NT.
3. Horizontal Joints in Exterior Walks Abutting Building Walls, Interior Concrete Floors: Multicomponent urethane sealant, self-leveling; ASTM C 920, Grade P, Class 25, Uses T, M and A.
   a. Where walks abut structural slabs or stoops.
   b. Where walks abut exterior wall of buildings.
   c. Where exposed interior concrete slabs abut vertical surfaces.
   d. Where sealant is shown on the Drawings for concrete slabs.
4. Membrane Roofing Sealants: Types recommended by roofing manufacturer and complying with requirements of this Section.
5. Steep Slope Roofing Sealants: Types recommended by roofing manufacturer and complying with requirements of this Section.
6. Sheet Metal and Roof Accessory Sealants: Types recommended by roofing manufacturer and complying with requirements of this Section.
7. Exterior Sheet Metal Lap Joints: Types recommended by manufacturer and complying with requirements of this Section.

8. Joints Between Concrete Panels, and Between Concrete Panels and Other Work: Single-component, nonsag, neutral-curing silicone joint sealant, ASTM C 920, Type S, Grade NS, Class 100 / 50, for Use NT.
9. Exterior Metal Panel Butt Joints and Trim: Types recommended by manufacturer and complying with requirements of this Section.
10. All Other Exterior Joints:
    a. Single-component, nonsag, neutral-curing silicone joint sealant, ASTM C 920, Type S, Grade NS, Class 100 / 50, for Use NT.
    b. Single-component, nonsag, neutral-curing silicone joint sealant, ASTM C 920, Type S, Grade NS, Class 50, for Use NT.
    c. Around perimeters of frames where door, window and louver frames abut concrete, masonry or other building materials.
    d. Expansion and control joints in masonry.
    e. Masonry at dissimilar material or at dissimilar masonry.
    f. Sills and thresholds.
    g. At miscellaneous locations where sealant is shown on Drawings.

D. Interior Locations:

1. Expansion and Control Joints:
    a. Multicomponent, Nonsag, Urethane Joint Sealant: ASTM C 920, Type M, Grade NS, Class 25, for Use NT, M, A and O.
    b. Single-Component, Nonsag, Urethane Joint Sealant: ASTM C 920, Type S, Grade NS, Class 35, for Use NT.
    c. Around perimeters of frames where door, window and louver frames abut concrete, masonry or other building materials.
    d. Expansion and control joints in masonry walls.
    e. Masonry at dissimilar material or at dissimilar masonry.
    f. Sills and thresholds.
    g. At miscellaneous locations where sealant is shown on Drawings.
2. Interior Concrete Slabs on Grade:
    a. Warehouse Slabs, Subject to Wheeled Traffic: Two-component, 100 percent solids content epoxy joint filler.
    b. Refrigerated Room Slabs: Two-component, 100 percent solids content polyurea elastomer joint filler.
    c. All Other Locations: Urethane, self-leveling; ASTM C 920, Grade P, Class 25, Uses T, M and A; single component.
3. Interior Wet Areas, Around Plumbing Fixtures, Countertops Abutting Walls, Food Service Applications: Mildew-resistant, single-component, acid-curing silicone joint sealant, ASTM C 920, Type S, Grade NS, Class 25, for Use NT, A and O.
4. Interior Static Dry Joints as Required to Dress Appearance: Acrylic latex or siliconized acrylic latex joint sealant, ASTM C 834, Type OP, Grade NF
5. Sound Control Applications: Acoustical Sealant, ASTM C 834

a. Where Required for Sound Control with Limited Flame Spread: Acoustical sealant, ASTM C 834, fire-rated type.

6. Interior Concrete Slab Floors of Generator or Fuel Storage Tank Rooms (On-Grade or Suspended): Fuel Resistant Traffic Sealants.
7. Interior Tilt-Up Concrete Vertical Joints, Non-Wet Locations: Acrylic latex or siliconized acrylic latex sealant, nonsag, paintable, nonstaining, ASTM C 834, Type OP, Grade NF.
8. Interior Tilt-Up Concrete Vertical Joints, Wet locations: Mildew-resistant, single-component, acid-curing silicone joint sealant, ASTM C 920, Type S, Grade NS, Class 25, for Use NT, A and O.

END OF SECTION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Hollow metal doors.
2. Pressed metal frames.

1.2 RELATED REQUIREMENTS

A. Section 07 9200, Joint Sealants.

B. Section 08 8000, Glazing.

C. Section 09 2423, Portland cement Plastering.

D. Section 09 9100, Painting.

1.3 REFERENCES AND STANDARDS

A. California Building Code (CBC), edition as noted on Drawings, as adopted by the California Division of the State Architect (DSA).

B. California Green Building Standards Code, edition as noted on the Drawings, as adopted by the California Division of the State Architect (DSA).

C. American National Standards Institute (ANSI)/ Door and Hardware Institute (DHI)/Steel Door Institute (SDI):

1. ANSI A250.6: Recommended Practice for Hardware Reinforcing on Standard Steel Doors and Frames.
2. ANSI A250.7: Nomenclature for Steel Doors and Steel Door Frames.
3. ANSI A250.8: Recommended Specifications for Standard Steel Doors and Frames.
4. ANSI A250.10: Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames.
5. ANSI/SDI A250.11: Recommended Erection Instructions for Steel Frames.
6. ANSI/DHI A115: Hardware Preparation in Hollow Metal Doors and Frames.

D. ASTM International (ASTM):

1. A366: Specification for Steel, Carbon, Cold-Rolled Sheet, Commercial Quality.
2. A568: Specification for General Requirements for Steel, Carbon and High-Strength Low-Alloy Hot-Rolled Sheet and Cold-Rolled Sheet.
3. A653: Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.

4. A1008: Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability.
5. A1011: Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability.

E. Hollow Metal Manufacturers Association (HMMA) Division of the National Association of Architectural Metal Manufacturers (NAAMM):

1. Hollow Metal Manual.

F. National Builders Hardware Association (NBHA):

1. Recommended Location of Builder's Hardware.

G. National Fire Protection Association (NFPA):

1. No. 80: Fire Doors and Windows.
2. No. 252: Fire Tests of Door Assemblies.

H. Steel Door Institute (SDI):

1. SDI-107: "Hardware on Steel Doors Reinforcement--Application.
2. SDI-111C: Recommended Louver Details for Standard Steel Doors.

I. Underwriters Laboratories (UL):

1. UL 10B: Fire Tests of Door Assemblies.
2. UL 10C: Positive Pressure Fire Tests of Door Assemblies.

1.4 ADMINISTRATIVE REQUIREMENTS

A. Submittal Procedures:

1. Action Submittals and Informational Submittals shall be submitted in accordance with Section 01 3300, Submittal Procedures.
2. Sustainable Design Submittals shall comply with the additional requirement of Section 01 8113, Sustainable Design Requirements.
3. Closeout Submittals shall be submitted in accordance with Section 01 7700, Closeout Procedures.

B. Coordination:

1. Hardware supplier shall furnish steel door and frame manufacturer with accepted hardware schedule, hardware templates, and samples of physical hardware where necessary to ensure correct fitting and installation.
2. Preparation includes sinkages and cutouts for mortise and concealed hardware.

1.5 ACTION SUBMITTALS

A. Shop Drawings:

1. Show parts, connections and anchorages, adjacent materials, fully dimensioned and noted.
2. Include the following specific information:
    a. Elevation [and material] of doors and frames.
    b. Jamb and head details.
    c. Hardware preparation locations and reinforcing details of doors and frames.
    d. Door and frame location schedule.
    e. Complete door and frame descriptive nomenclature.
    f. Material description and gages.
    g. Meeting stile details.
    h. Methods of anchorage.
    i. [Glass molding details.]
    j. [Louver details.]
3. Use same reference numbers for details and openings as those indicated on Drawings.

B. Product Data: Submit list and complete descriptive data of products proposed for use. Include the following:

1. Manufacturer's specifications.
2. Manufacturer's installation instructions.
3. Manufacturer's maintenance instructions.

1.6 INFORMATIONAL SUBMITTALS

A. Sample of manufacturers' warranty.

1.7 CLOSEOUT SUBMITTALS

A. Warranty: Submit executed warranty.

1.8 QUALITY ASSURANCE

A. Use only new materials and products, unless existing materials or products are specifically shown otherwise on the Drawings to be salvaged and re-used.

B. Use materials and products of one manufacturer whenever possible.

C. Materials, components, assemblies, workmanship and installation are to be observed by the Project Inspector. Work not so inspected is subject to uncovering and replacement.

D. Manufacture labeled doors and frames in strict conformance with the specifications and procedures of Underwriters Laboratories Inc. (UL) or Warnock Hersey.

1.9 DELIVERY, STORAGE AND HANDLING

A. Deliver undamaged products to job in manufacturer's sealed containers and/or original bundles with tags and labels intact.

B. Store materials in an upright position, protected under cover, dry conditions at least 4 inches off the ground and in areas so as to not interfere with the progress of the work. Doors with dents or other defects not repairable will be rejected.

C. Transport, store and handle in strict conformance with the manufacturer's written recommendations.

D. Assembled frames shall be stored in a vertical position, 5 units maximum in a stack.

E. Do not use non-vented plastic or canvas shelters, because these create a humidity chamber and promote rusting. Remove wet wrapping or packing from doors and frames immediately. Provide 1/4 inch space between doors and between frames to promote air circulation.

1.10 FIELD CONDITIONS

A. Verify that conditions are correct and proper for installation of products. Obtain accurate job dimensions of openings including floor elevations. Ascertain correct locations and arrangements of anchorage required to accommodate work.

1.11 WARRANTY

A. Manufacturer: In addition to the Contractor’s Standard Guarantee, furnish Owner with manufacturer's fully executed written warranty for doors and frames against defects in materials and workmanship, including twisting, buckling or warping.

1. Warranty shall cover replacement of door plus costs of hanging and finishing.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Steel Doors and Frames: Titan Metal Products, Inc., Merced CA; Door Components, Inc., Fontana, CA; Steelcraft; or equal SDI Certified manufacturer.

2.2 DESIGN AND PERFORMANCE CRITERIA

A. Fire-Rated Assemblies:

1. Fire-Rated Door Assemblies: Complying with NFPA 80 and listed and labeled by approved testing agency as part of a fire door assembly, complete with type of fire door hardware to be used, based on testing at positive pressure according to NFPA 252 or UL 10C.
2. Fire-Rated, Borrowed-Lite Assemblies: Complying with NFPA 80 and listed and labeled by approved testing agency for fire-protection ratings indicated based on testing according to NFPA 257 or UL 9.

B. Smoke- and Draft-Control Assemblies: Provide an assembly with gaskets listed and labeled for smoke and draft control by approved testing agency based on testing according to UL 1784 and installed in compliance with NFPA 105.

C. Testing and Labeling Agency for Labeled Assemblies: Underwriters Laboratories, Inc. (UL), Intertek Testing Services-Warnock Hersey (ITS-WH), or other qualified testing agency acceptable to authorities having jurisdiction.

2.3 MATERIALS

A. Hot-Rolled Steel Sheets and Strip: Commercial quality carbon steel, pickled and oiled, complying with ASTM A568 and ASTM A1011.

B. Cold-Rolled Steel Sheets: Commercial-quality carbon steel complying with ASTM A568 and A1008, exposed, matte finish, oiled.

C. Galvanized Steel Sheets: Commercial-quality zinc-coated carbon steel complying with ASTM A653 with A60 or G60 zinc coating.

D. Supports and Anchors: Fabricated of not less than 18-gage galvanized sheet steel.

E. Inserts, Bolts, and Fasteners: Manufacturer's standard units.

F. Shop-Applied Paint: Rust-inhibitive primer, either air dried or baked on, suitable as a base for specified finish paints.

2.4 FABRICATION - GENERAL

A. Conform to requirements of SDI or NAAMM.

B. Fabricate steel doors and frames to required profiles and sizes by forming with edges straight and sharp.

C. Exterior doors and frames shall be fabricated from specified galvanized-steel sheets.

D. Fit and fabricate accurately with corner hairline joints and all surfaces free from warp, wave, buckle, and other defects.

E. Welding:

1. In accordance with AWS standards for high-grade hollow metal work.
2. Grind exposed beads smooth.

F. Fabricate exposed faces of doors only from cold-rolled steel.

G. Fabricate frames from either cold-rolled or hot-rolled steel (at fabricator's option).

2.5 FINISH HARDWARE PREPARATION

A. Prepare steel doors and frames to receive mortised and concealed hardware, including cutouts, reinforcing, drilling, and tapping, in accordance with final Finish Hardware

Schedule and templates provided by hardware suppliers. Preparation shall comply with ANSI A115, where applicable, and SDI-107.

THE FOLLOWING REINFORCING ALSO IN TABLE 1 OF ANSI A250.6

B. Provide minimum gage hardware reinforcing in accordance with Table 4 of ANSI A250.8 or Table 1 of ANSI A250.6, except as follows:

1. Provide 7 gauge (0.167 inch, 4.2 mm) steel reinforcement for hinges.
2. Provide 12 gauge (0.093 inch, 2.3 mm) for lock strikes and closers.
3. Provide 14 gauge (0.067 inch, 1.7 mm) for surface applied hardware.

C. Provide reinforcement at head of frames for surface mounted closers at doors whether or not closers are indicated.

D. Punch lock jamb of frames; install rubber door silencers, 3 at single doors and 4 at each pair of doors. For pairs of doors, locate door silencers at head, 2 for each door. Omit silencers at tabled doors.

E. Provide steel housing closures for hardware mortise to prevent intrusion of plaster, mortar or concrete.

F. Provide full height, 3/4 inch deep x width of rabbet, polystyrene insulation at back of frames which will be fully grouted in-place using mortar type grout only and where continuous hinges are scheduled to be installed. Insulation is intended to act as a concrete block-out for future field drilling or tapping.

G. Concealed Overhead Closers: Provide spaces, cutouts, reinforcing, and provisions for fastening in top rail of doors or head of frames as applicable.

H. Reinforce steel doors and frames to receive surface-applied hardware.

1. Perform drilling and tapping for mortise hardware at factory to templates furnished by hardware vendor.
2. Drilling and tapping for surface-applied hardware shall be done by hardware installer;

I. Locate finish hardware as shown on final shop drawings or, if not shown, in accordance with NBHA publication "Recommended Location for Builder's Hardware."

2.6 HOLLOW METAL DOORS

A. Prior to fabrication, verify every opening condition, including size, and coordinate with door sizes as shown on Drawings and approved submittals.

B. Fabrication:

1. Shop fabricate to required sizes and shapes.
2. Form and weld with straight arises, edges and corners; surfaces free from warp, wave, buckle, dents or other defects.

3. Use of excessive plastic filler to conceal manufacturing defects is not acceptable. Construct in accordance with HMMA specifications and standards (latest edition) in addition to requirements as indicated in these Specifications.
4. Door faces and core reinforcing shall be formed from A60 Galvanealled Sheet Steel, conforming to ASTM A653.

C. ANSI/SDI Classification:

1. Exterior: Level 3, Model 2, seamless composite construction.
   a. Face sheets shall be 14-gage.
   b. Insulated for a minimum "U" value of 0.24 except where opening into unconditioned spaces.
2. Interior Non-Fire-Rated: Level 2, Model 2, seamless composite construction.
   a. Face sheets shall be 18-gage.
   b. Core: Honeycomb laminated to the inside of both face sheets.
3. Interior Fire-Rated: Level 2, Model 2, seamless composite construction.
   a. Face sheets shall be 18-gage unless otherwise required for required rating.
   b. Core: Mineral fiber or as standard with manufacturer to meet scheduled fire rating.
   c. Rating: As scheduled.
4. **[Full Glazed: Level 3, Model 3, stile and rail, tubular edge without seams.**
   a. **Face sheets shall be 16-gage.]**

D. Exterior Doors:

1. The top and bottom of out-swinging exterior doors shall be closed with either a flush or inverted channel cap not less than 16 gauge, welded, filled, and finished smooth to provide protection from entry of water inside door.
2. Openings to be provided in the bottom closure to permit the escape of entrapped moisture

E. Vertical edges shall be beveled 1/8 inch in 2 inches.

F. Make cutouts for required louvers and glazing.

2.7 DOOR ACCESSORIES

A. Non-Rated Louvers: Stationary non-vision, 1-inch thick; with security grille; Model PLSL by Anemostat Door Products, or equal.

1. Face Plate: Removable 12 gauge cold rolled steel lattice and security grille with 13/16 inch square holes on 1 inch centers.
2. Louver Blades: 18 gauge cold rolled steel.
3. Provide manufacturer's zinc plated galvanized material at exterior locations.
4. Provide manufacturer's galvanized wire insect screens at exterior locations.
5. Finish: Manufacturer's standard primer and field painted to match door color.
6. Fasteners shall be located on secure side of door.

B. Rated Louvers: Stationary non-vision blade type, 1-inch thick, with security grille, fusible link, and operating lever; Model FLDL-UL-SG by Anemostat Door Products, or equal.

1. Materials: 18-gauge steel blades and frame.
2. Finish: Manufacturer's standard primer and field painted to match door color.
3. Fasteners shall be located on secure side of door.
4. Frame shall be fire tested with UL and WHI mark to match rating of door.

C. Vision Frames: 20 gauge (0.042 inch, 1.0 mm) cold rolled steel, low profile, two-piece with mitered and welded corners with counter-sunk mounting holes for flush assembly; "LoPro" by Anemostat, or equal.

1. Finish: Manufacturer's standard primer and field painted to match door color.
2. Size: As indicated on the Drawings and to receive scheduled glass thickness.
3. Frame shall be fire tested with UL and WHI mark at fire-rated doors where noted in door schedule.

2.8 PRESSED METAL FRAMES

A. Provide steel frames of the types and styles indicated on the Drawings.

B. Gages: In accordance with SDI recommendations for the door Grade specified.

1. At Doors: Not less than 16 gage.
2. At Windows Independent of Doorframe: Not less than 20 gage.
3. Label Frames: 14 or as included in UL test procedure.

C. Prior to fabrication, verify every substrate opening condition, including size and wall thickness, and coordinate with door sizes as shown on Drawings and approved submittals.

D. Construction: Manufacturer's standard, modified where shown and specified.

1. Factory-assembled and weld into a single unit by frame manufacturer. Saw-miter or cope and tab frame miters, and continuously weld at return, face, rabbet, and stop.
2. Shop fabricate with straight arises, edges and corners; surface free from warp, wave, buckle, dents or other defects. Use of excessive metallic filler to conceal manufacturing defects is not acceptable.
3. Cross section profile as shown, depth to suit wall thickness.
4. Header and jambs secured at corners by internal welding of faces or by welded splice plates, and further secured at webs by welding or mechanical interlock; exposed joints neat and tight.
5. Provide continuous steel nailing flange at exterior side (no corner cutout at head/jamb intersection - flange to run continuous around corner).
6. See Article "Finishing" for required moisture proofing/sound deadening coating.
7. At joints of intersecting mullions, seal with 3M "Lightweight Body Filler" followed by 3M "Ultrapro MSP Sprayable Seam Sealer," or equal.

E. Anchors:

1. General:
   a. Provide at 2'-0" maximum spacing.
   b. Anchor bottom of frame within 2 inches of floor to wood framing, or concrete curb (where occurs) with expansion anchors, both sides.
   c. Provide minimum 2 anchors at head of frames over 2'-6" wide, and minimum 4 anchors per door jamb.
   d. Anchors shall provide stiffness and rigidity to keep frames square, in accurate position without twisting, buckling or warping.
   e. Position one jamb anchor above top butt reinforcement and one jamb anchor below bottom butt reinforcement.
   f. At rated openings, anchors shall be UL approved for use on labeled frames.
2. Anchor Types:
   a. New Wall, Wood Framing:
      1) Wood Stud Anchors: 16 gauge (0.053 inch, 1.3 mm), 2 inches wide steel anchor straps, securely welded inside each jamb at interior side(s).
   b. New Wall, Metal Framing:
      1) Steel Stud Anchors: 16 gauge (0.053 inch, 1.3mm) securely welded inside each jamb at interior side(s).
   c. Other areas: As required for secure, installation as recommended by the HMMA.

F. Moisture Proofing/Sound Deadening Coating:

1. Exterior Frames and Frames Anchored to Masonry Walls: Coat inside (concealed) faces of pressed metal frames with fibered water based, asphalt emulsion similar to autobody undercoating.
2. Apply over shop primer 1/8 inch thick and thoroughly dry before handling.

G. Special Frames: 16 gauge (0.053 inch, 1.3 mm) with integral stop formed to cross section profile indicated.

1. Provide muntins, mullions, and impose sections required, removable glazing stops or molding secured with tamper-proof oval head self-tapping screws set in countersunk holes at 12 inches on center.
2. Weld corners of frame, grind smooth on exposed frames.
3. Structure shall be adequate to withstand 25 lbs/sf wind load normal to glass surface.

2.9 FINISHING

A. General:

1. Prior to and after primer is applied, store and protect doors properly to prevent the possibility of rusting or moisture damage.

2. Verify and coordinate primer compatibility with finish painting.

B. Shop Painting:

1. After fabrication, thoroughly clean surfaces of mill scale, rust, oil, grease, dirt, and other foreign matter, and chemically treat with phosphate compound so as to assure maximum paint adhesion.
2. After pre-treatment of galvanized metal, apply shop coat of rust-inhibitive primer of even consistency in order to provide a uniformly finished surface, ready to receive finish painting.
3. Finish shall comply with ANSI A250.10.
4. **[Provide different colored shop primer to differentiate galvanized from non-galvanized products when delivered to Project site.]**
5. Back coat frames with asphaltic emulsion wherever frames will be in contact with masonry.

C. Doors and frames shall be re-primed on-site prior to finish painting specified in Section 09 9100, Painting.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Prior to installation of the work of this Section, carefully inspect and verify that the installed work of other trades is complete to the point where this installation may properly commence.

B. Do not install doors in frame openings that are not plumb, are out of tolerance for size or alignment, or would hinder door operation.

C. Verify that specified items may be installed in accordance with the approved design.

D. Confirm that opening sizes and tolerances are acceptable and ready to receive this work.

E. In the event of discrepancy, immediately notify Architect. Do not proceed in discrepant areas until discrepancies have been fully resolved.

3.2 INSTALLATION - GENERAL

A. Install metal doors and frames and accessories in conformance with reviewed Shop Drawings and manufacturer's data, and as specified herein.

3.3 INSTALLATION OF FRAMES

A. Install frames in accordance with ANSI/SDI A250.11.

B. Securely fasten frames to wall construction involved (wire anchors not acceptable); anchor bottom of frame within 2 inches of floor to wood framing or concrete curb (where occurs) with expansion anchors, both sides.

1. Set frames accurately in position, plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is complete, remove temporary braces and spreaders leaving surfaces smooth and undamaged.
   a. In masonry construction, locate 4-wall anchors per jamb minimum or at 2'-0" on center maximum and aligned with hinge and strike locations. Coordinate installation of anchors and grouting of frames with other trades.
2. At exterior wall locations where frame is installed in a wall with a concrete curb base, fill the bottom void of the frame with non-shrink grout to match the height of the concrete curb. Repair frame modifications to a blemish free new condition. Do not cut or modify the frame if it conflicts with the concrete curb. If concrete curb conflicts with frame, adjust or modify curb as required.
3. Anchor to floor slab with powder type actuated fasteners through floor anchors attached to frames.
4. Anchor securely to metal studs with 4 No. 12 sheet metal screws per anchor.
5. Anchor continuous nailing flange securely to wood studs with 4 No. 12 inches x 2 inches flat head wood screws per anchor. Attach anchor straps at interior side and interior straps with 4 10d ring shank nails per anchor.
6. Seal perimeter of frames to fill space between frame and adjoining material. Seal exterior, exposed fastener heads to make waterproof. Sealant materials and application shall conform to applicable requirements of Section 07 9200, Joint Sealant.
7. When installing new frames in existing openings, remove existing finishes sufficiently to properly install and adequately fasten new frame. Prepare openings as required to receive new frame. Provide misc. shimming, blocking, backing, straps, etc. to fully prepare opening for new frame. Patch and repair surfaces when completed to match adjacent finishes.

C. Install door flashing system components as described in this specification, indicated in Drawings and as recommended by the flashing manufacturer.

D. Install fire-rated frames in accordance with NFPA Standard No. 80.

3.4 INSTALLATION OF DOORS

A. Hang with clearances noted in Section 08 7100, Door Hardware, unless otherwise indicated or required for rated assemblies. Apply hardware in conformance with ANSI 250.08 and the manufacturer's written instructions.

B. Place fire-rated doors with clearances as specified in NFPA Standard No. 80.

C. Do not erect members that are observed to be warped, bowed, deformed, or otherwise damaged or defaced to such extent as to impair strength or appearance. Remove and replace members that have been damaged in process of erection.

D. Removable Glazing Stops: Install with tamperproof screws, with sealant at penetrations to pressed metal frame.

E. Louvers: Install with tamperproof screws as provided by the manufacturer.

F. Coordinate installation of hardware including installation of intrusion detection system components and wiring.

G. Intrusion alarm: Coordinate wiring and sensor installation with electrical.

3.5 PROTECTION

A. Protect work and materials of this Section prior to and during installation, and protect the installed work and materials of other trades.

B. In the event of damage, immediately make repairs and replacements necessary to the approval of the Architect and at no additional cost to the Owner.

3.6 ADJUSTING

A. Prime Coat Touch-up: Immediately after erection, sand smooth any rusted or damaged areas of prime coat and apply touch-up of compatible air-drying primer.

B. Immediately prior to punch list walk-through, check and re-adjust operating finish hardware items, leaving metal doors and frames undamaged and in complete operating condition.

END OF SECTION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Exterior storefront framing.
2. **[Exterior manual-swing entrance doors and door-frame units.]**

B. Work Specified in Other Sections to be Provided by this Section:

1. Entrance Door Hardware.
   a. All hardware items for aluminum entrances are provided by the storefront supplier, according to hardware groups and requirements of Section 08 7100, Door Hardware.

1.2 RELATED REQUIREMENTS

A. Section 07 9200, Joint Sealants, for sealant installation at perimeter of aluminum-framed systems.

B. Section 08 7100, Door Hardware, for entrance door hardware.

C. Section 08 8000, Glazing, for non-rated glazing and fire-protection-rated glazing.

1.3 REFERENCES AND STANDARDS

A. California Building Code (CBC), edition as noted on Drawings, as adopted by the California Division of the State Architect (DSA).

B. California Green Building Standards Code, edition as noted on Drawings, as adopted by the California Division of the State Architect (DSA).

C. 36 CFR 1191 - Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities; Final Rule; Federal Register, July 26, 1991; updated 2010.

D. American Architectural Manufacturers Association (AAMA):

1. AAMA/NWWDA 101/I.S.2/A440-8, North American Fenestration Standard / Specification for Windows, Doors and Unit Skylights.
2. AAMA 501, Methods of Test for Exterior Walls.
3. AAMA 611, Voluntary Specification for Anodized Architectural Aluminum.
4. AAMA 1503, Voluntary Test Method for Thermal Transmittance and Condensation Resistance of Windows, Doors and Glazed Wall Sections.
5. AAMA 2605, Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels.
6. AAMA / CAWM 301-90, Forced Entry Resistance Tests for Windows.

E. American National Standards Institute (ANSI):

1. ICC / ANSI A117.1, Standard for Accessible and Usable Buildings and Facilities.

F. ASTM International:

1. A 123, Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
2. A 153, Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
3. A 240, Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications.
4. B 221, Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
5. C 864, Standard Specification for Dense Elastomeric Compression Seal Gaskets, Setting Blocks, and Spacers.
6. C 1048, Standard Specification for Heat-Strengthened and Fully Tempered Flat Glass.
7. D 2000, Standard Classification System for Rubber Products in Automotive Applications.
8. E 84, Standard Test Method for Surface Burning Characteristics of Building Materials.
9. E 283, Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen.
10. E 330, Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference.
11. E 331, Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference.
12. E 547, Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Cyclic Static Air Pressure Difference.

G. American Society of Civil Engineers (ASCE):

1. ASCE 7, Minimum Design Loads and Associated Criteria for Buildings and Other Structures.

1.4 DEFINITIONS

A. General: For fenestration industry standard terminology and definitions refer to American Architectural Manufacturers Association (AAMA) - AAMA Glossary (AAMA AG).

B. ADA / ABA Accessibility Guidelines: U.S. Architectural & Transportation Barriers Compliance Board's "Americans with Disability Act (ADA) and Architectural Barriers Act (ABA) Accessibility Guidelines for Buildings and Facilities."

1.5 ADMINISTRATIVE REQUIREMENTS

A. Submittal Procedures:

1. Action Submittals and Informational Submittals shall be submitted in accordance with Section 01 3300, Submittal Procedures.
2. Sustainable Design Submittals shall comply with the additional requirement of Section 01 8113, Sustainable Design Requirements.
3. Closeout Submittals shall be submitted in accordance with Section 01 7700, Closeout Procedures.

B. Pre-Installation Meeting: Conduct at Project site.

1. Verify project requirements, substrate conditions, manufacturer's installation instructions, and manufacturer's warranty requirements.

C. Coordination:

1. Coordinate storefront framing with electrical switching shown on Electrical and Mechanical Drawings.

1.6 ACTION SUBMITTALS

A. Shop Drawings: For aluminum-framed systems. Include plans, elevations, sections, details, and attachments to other work.

1. Include details of provisions for system expansion and contraction and for drainage of moisture in the system to the exterior.
2. For entrance doors, include hardware schedule and indicate operating hardware types, functions, quantities, and locations.
3. Show connection to and continuity with adjacent thermal, weather, air, and vapor barriers.
4. Include project specific integrations to surrounding cladding and waterproofing components.
5. Provide installation instructions and isometric details indicating how system components will be installed and sealed watertight, showing the following:
    a. Joinery, including concealed welds.
    b. Anchorage.
    c. Expansion provisions.
    d. Glazing.
    e. Flashing and drainage.
    f. How components will be installed and sealed watertight.

B. Product Data: For each type of product indicated, demonstrate compliance with specified attributes.

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for aluminum-framed systems.

C. Entrance Door Hardware Submittals:

1. Entrance Door Hardware Schedule: Prepared by or under the supervision of supplier, detailing fabrication and assembly of entrance door hardware, as well as procedures and diagrams. Coordinate final entrance door hardware schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of entrance door hardware.
2. Submit in accordance with requirements of Section 08 7100.

D. Samples: For each type of exposed finish required, in manufacturer's standard sizes.

E. Delegated-Design Submittal: For aluminum-framed systems indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer, registered within the State the Work is in and responsible for their preparation.

1. Detail fabrication and assembly of aluminum-framed systems.
2. Include design calculations.
3. Professional Engineer Qualifications: Demonstrate compliance with specified requirements.

1.7 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Manufacturer and Installer.

B. Seismic Qualification Certificates: For aluminum-framed systems, accessories, and components, from manufacturer.

1. Basis for Certification: Indicate whether withstand certification is based on actual test of assembled components or on calculation.

C. Energy Performance Certificates: For glazed aluminum storefronts **[and entrances]**, accessories, and components from manufacturer.

1. Basis for Certification: NFRC-certified energy performance values for each glazed aluminum component.

D. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for aluminum-framed systems, indicating compliance with performance requirements. For each system provide test reports with Shop Drawings.

E. Sample of manufacturers' warranty.

F. Record of Pre-installation Meeting.

1.8 CLOSEOUT SUBMITTALS

A. Warranty: Submit executed warranty.

1.9 QUALITY ASSURANCE

A. Installer Qualifications: Installer experienced (as determined by contractor) to perform work of this section who has specialized in the installation of work similar to that required for this project and who is acceptable to product manufacturer.

B. Manufacturer Qualifications: Manufacturer capable of providing field service representation during construction, approving acceptable installer and approving application method.

C. Use only new materials and products, unless existing materials or products are specifically shown otherwise on the Drawings to be salvaged and re-used.

D. Single-Source Responsibility: Use materials and products of one manufacturer whenever possible.

1. Source Limitations: Provide storefront **and entrance** systems by the same manufacturer as Glazed Aluminum Curtain Walls when specified in related Section.

E. Materials, components, assemblies, workmanship and installation are to be observed by the Project Inspector. Work not so inspected is subject to uncovering and replacement.

1.10 DELIVERY, STORAGE AND HANDLING

A. Deliver materials to project site in original factory wrappings, labeled with identification of manufacturer and brand name.

1.11 FIELD CONDITIONS

A. Field Measurements: Verify dimensions by field measurements before fabrication and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

1.12 WARRANTY

A. Manufacturer: In addition to the Contractor's Standard Guarantee, furnish Owner with manufacturer's fully executed written warranty for a period of 2 years, for the following:

1. Special Assembly Warranty: Manufacturer agrees to repair or replace components of aluminum-framed systems that do not comply with requirements or that fail in materials or workmanship within specified warranty period.
    a. Failures include, but are not limited to, the following:
        1) Structural failures including, but not limited to, excessive deflection.
        2) Noise or vibration caused by thermal movements.
        3) Adhesive or cohesive sealant failures.
        4) Water penetration.
        5) Failure of operating components to function normally.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Storefront System Basis of Design: Trifab™ VersaGlaze™ (VG) 451T Framing System manufactured by Kawneer Company, Inc., Norcross, GA; tel: (877) 505-3785; web: www.kawneer.com. Local Representative: Craig Gauger; tel: (916) 716-7396.

1. Entrances: Kawneer Aluminum Entrances, **350 Medium Stile (3-1/2 inches**.
   a. Provide 12 inch bottom rail.

B. Subject to compliance with requirements, provide named products or equivalent products by one of the following:

1. EFCO; web: www.efcocorp.com.
2. Wausau Window and Wall Systems; web: www.wausauwindow.com.

C. Substitutions: Per Division 01.

2.2 DESIGN AND PERFORMANCE CRITERIA

A. Sustainable Design:

1. VOC Limits for field-applied adhesives, sealants, fillers, coatings and primers shall comply with limits specified in Section 01 6116.

B. Accessible Entrances: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines and ICC / ANSI A117.1.

C. Dead Loads: Provide storefront **and entrance** system members that do not deflect an amount which will reduce glazing bite below 75 percent of design dimension when carrying full dead load.

1. Provide a minimum 1/8 inch clearance between members and top of glazing or other fixed part immediately below.
2. Provide a minimum 1/16 inch clearance between members and operable windows and doors.

D. Live Loads: Provide storefront **and entrance** systems, including anchorage, that accommodate the supporting structures' deflection from uniformly distributed and concentrated live loads indicated without failure of materials or permanent deformation.

E. Uniform Loads: No deflection in excess of L/175 of the span of any framing member at a static air design load of 35 psf applied in the positive and negative direction when tested in accordance with ASTM E 330.

1. No glass breakage or permanent set in the framing members in excess of 0.2 percent of their clear spans at a structural test load equal to 1.5 times the specified design load.

F. Wind Loads: Provide storefront **and entrance** systems, including anchorage, capable of withstanding wind-load design pressures calculated according to requirements of CBC or the ASCE 7, 6.4.2, "Analytical Procedure," whichever are more stringent.

1. Exposure Category: Refer to Structural Drawings.

G. Air Infiltration: Air infiltration rate not exceeding 0.06 cfm/ft^2 at a static air pressure differential of 6.24 psf when tested in accordance with ASTM E 283.

H. Water Resistance: No leakage at a minimum static air pressure differential of 8 psf as defined in AAMA 501 when tested in accordance with ASTM E 331.

2.3 PRODUCT DESCRIPTION

A. System Description: Thermally broken aluminum storefront system with **center** glass application.

1. Framing Member Profile: 2 inches x 4-1/2 inches nominal dimension.
2. Fabrication: Screw Spline, Shear Block, or Stick.

2.4 MATERIALS

A. Aluminum Framing and Components: ASTM B 221; 6063-T6 alloy and temper.

1. Member Wall Thickness: Provide structural strength to meet specified performance requirements.
2. Tolerances: Reference to tolerances for wall thickness and other cross-sectional dimensions of storefront members are nominal and in compliance with AA Aluminum Standards and Data.

2.5 AUXILIARY MATERIALS

A. Fasteners: Where exposed, provide stainless steel fasteners.

1. Use self-locking devices where fasteners are subject to loosening or turning out from thermal and structural movements, wind loads, or vibration.
2. Reinforce members as required to receive fastener threads.

B. Perimeter Anchors: Aluminum unless otherwise noted.

1. Concrete and Masonry Inserts: Hot-dip galvanized cast-iron, malleable-iron, or steel inserts complying with ASTM A 123 or ASTM A 153 requirements.
2. When steel anchors are used, provide insulation between steel material and aluminum material to prevent galvanic action.

C. Thermal Separator: Extruded component of a silicone-compatible elastomer that provides for silicone adhesion.

D. Concealed Flashing: Dead-soft, 0.018 inch thick stainless steel, ASTM A 240 of type recommended by manufacturer.

E. Bituminous Paint: Cold-applied asphalt-mastic paint complying with SSPC-Paint 12 requirements except containing no asbestos, formulated for 30-mil thickness per coat.

F. Framing Sealants: Manufacturer's standard sealants.

G. Cleaning Agent and Cloth: As recommended by structural-sealant manufacturer.

2.6 ENTRANCE DOOR HARDWARE

A. Refer to Section 08 7100, Door Hardware.

2.7 GLAZING

A. Glazing: As specified in Section 08 8000, Glazing.

B. Glazing Gaskets: Extruded of a silicone compatible EPDM rubber that provides for silicone adhesion, complying with ASTM C 864.

C. Glazing Sealants: As recommended by manufacturer for joint type, compliant with VOC limits specified in Section 01 6116.

D. Spacers and Setting Blocks: Manufacturer's standard elastomeric type.

2.8 FABRICATION

A. General:

1. Fabricate components per manufacturer's installation instructions and with minimum clearances and shim spacing around perimeter of assembly, yet enabling installation and dynamic movement of perimeter seal.
2. Form or extrude aluminum shapes before finishing.
3. Accurately fit and secure joints and corners. Make joints flush, hairline and weatherproof.
4. Weld in concealed locations to greatest extent possible to minimize distortion or discoloration of finish. Remove weld spatter and welding oxides from exposed surfaces by descaling or grinding.
5. Prepare components to receive anchor devices. Fabricate anchors.
6. Arrange fasteners and attachments to conceal from view.

B. Fabricate components to resist water penetration as follows:

1. Internal guttering system or other means to drain water passing joints, condensation occurring within framing members, and moisture migrating within glazed aluminum curtain wall to exterior.

C. Factory-Assembled Frame Units:

1. Rigidly secure non-movement joints.
2. Prepare surfaces that will contact sealant according to sealant manufacturer's written instructions to ensure compatibility and adhesion.

3. Preparation includes, but is not limited to, cleaning and priming surfaces.
4. Seal joints watertight unless otherwise indicated.
5. Install glazing to comply with requirements in referenced related Section.

D. After fabrication, clearly mark components to identify their locations in project according to Shop Drawings.

2.9 ALUMINUM FINISHES

A. General: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

1. Finish designations prefixed by AA comply with the system established by the Aluminum Association for designating aluminum finishes.
2. Exposed surfaces shall be free of scratches and other serious blemishes.

B. Shop Finishing:

1. Color Anodic Finish: AAMA 611, AA-M10C22A43, Class I.
   a. Color and Gloss: As selected by Architect from manufacturer’s full range.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine conditions with installer present and verify that field conditions are acceptable and are ready to receive work. Correct conditions detrimental to the proper and timely performance of this work before proceeding with installation. Commencement of work indicates acceptance of substrates and surrounding conditions.

3.2 INSTALLATION

A. General:

1. Comply with manufacturer's written instructions.
2. Do not install damaged components.
3. Fit joints to produce hairline joints free of burrs and distortion.
4. Rigidly secure non-movement joints.
5. Install anchors with separators and isolators to prevent metal corrosion and electrolytic deterioration.
6. Seal perimeter and other joints watertight unless otherwise indicated.

B. Metal Protection:

1. Where aluminum will contact dissimilar metals, protect against galvanic action by painting contact surfaces with primer or applying sealant or tape, or by installing nonconductive spacers as recommended by manufacturer for this purpose.

2. Where aluminum will contact concrete or masonry, protect against corrosion by painting contact surfaces with bituminous paint.

C. Install components to drain water passing joints, condensation occurring within framing members, and moisture migrating within the system to exterior.

D. Set continuous sill members and flashing in full sealant bed as specified in Section 07 9200, Joint Sealants to produce weathertight installation. Consult manufacturer for special conditions and detailing.

E. Install components plumb and true in alignment with established lines and grades, and without warp or rack.

F. Install glazing as specified in Section 08 8000, Glazing.

G. Entrance Door Installation:

1. Install entrance doors level and plumb, securely anchored, and without distortion. Adjust weather-stripping contact and hardware movement to produce proper operation, weathertight enclosure and tight fit at weather stripping.
2. Field-Installed Entrance Door Hardware: Install surface-mounted entrance door hardware according to entrance door hardware manufacturers' written instructions using concealed fasteners to greatest extent possible.

3.3 ERECTION TOLERANCES

A. Erection Tolerances: Install aluminum-framed systems **and entrances** to comply with the following maximum tolerances:

1. Plumb: 1/8 inch in 10 feet; 1/4 inch in 40 feet.
2. Level: 1/8 inch in 20 feet; 1/4 inch in 40 feet.
3. Alignment:
    a. Where surfaces abut in line or are separated by reveal or protruding element up to 1/2 inch wide, limit offset from true alignment to 1/16 inch.
    b. Where surfaces are separated by reveal or protruding element from 1/2 to 1 inch wide, limit offset from true alignment to 1/8 inch.
    c. Where surfaces are separated by reveal or protruding element of 1 inch wide or more, limit offset from true alignment to 1/4 inch.
    d. Diagonal Measurements: Limit difference between diagonal measurements to 1/8 inch.
4. Location: Limit variation from plane to 1/8 inch in 12 feet; 1/2 inch over total length.

3.4 DEFECTIVE WORK

A. Repair damaged and defective work and eliminate functional and visual defects. Where repair is not possible replace work. Adjust joints for uniform appearance.

3.5 ADJUSTING AND CLEANING

A. Adjust operable units, doors and hardware to provide tight fit at contact points and weather stripping, smooth operation, and weathertight closure.

B. Remove excess sealant and glazing compounds and dirt from surfaces.

C. For doors accessible to people with disabilities, adjust closers to provide a 3-second closer sweep period for doors to move from a 70-degree open position to 3 inches from the latch measured to the leading door edge.

3.6 PROTECTION

A. Provide final protection and maintain conditions in a manner acceptable to manufacturer and Installer that ensure storefront **and entrance** systems are without damage or deterioration at the time of Substantial Completion.

3.7 ENTRANCE MAINTENANCE

A. Entrance Door Hardware:

1. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, removal and replacement of entrance door hardware.

END OF SECTION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes: Glass and glazing for the following:

1. Exterior enclosure.
2. Interior applications.
3. Fire-protection glazing at locations indicated and as required by prevailing codes.

1.2 RELATED REQUIREMENTS

A. Pertinent Division 08 Sections specifying doors, windows, curtainwalls and storefront requiring glazing.

1.3 REFERENCES AND STANDARDS

A. California Building Code (CBC), edition as noted on Drawings, as adopted by the California Division of the State Architect (DSA).

B. California Green Building Standards Code, edition as noted on Drawings, as adopted by the California Division of the State Architect (DSA).

C. American Architectural Manufacturers Association (AAMA) Publications:

1. AAMA 800-16, Voluntary Specifications and Test Methods for Sealants.

D. American National Standards Institute (ANSI) Publications:

1. ANSI/AAMA 101, Voluntary Specifications for Aluminum, Vinyl (PVC) and Wood Windows and Glass Doors.
2. ANSI Z97.1, American National Standard for Safety Glazing Materials Used in Buildings - Safety Performance Specifications and Methods of Test.

E. American Society of Civil Engineers (ASCE):

1. ASCE 7, Standard Test Method for Determining Compatibility of Liquid-Applied Sealants with Accessories Used in Structural Glazing Systems.

F. ASTM International:

1. ASTM C 920: Standard Specification for Elastomeric Joint Sealants.
2. ASTM C 1021: Standard Practice for Laboratories Engaged in Testing of Building Sealants.
3. ASTM C 1036: Standard Specification for Flat Glass.
4. ASTM C 1048: Standard Specification for Heat-Treated Flat Glass—Kind HS, Kind FT Coated and Uncoated Glass.

5. ASTM C 1087: Standard Test Method for Determining Compatibility of Liquid-Applied Sealants with Accessories Used in Structural Glazing Systems.
6. ASTM C 1172: Standard Specification for Laminated Architectural Flat Glass.
7. ASTM C 1376: Standard Specification for Pyrolytic and Vacuum Deposition Coatings on Glass.
8. ASTM C 1503: Standard Specification for Silvered Flat Glass Mirror.
9. ASTM E 90: Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
10. ASTM E 774: Standard Specification for Sealed Insulating Glass Units.
11. ASTM E 1300: Standard Practice for Determining Load Resistance of Glass in Buildings.

G. Consumer Product Safety Commission (CPSC) Publications:

1. 16 CFR 1201, Safety Standard for Architectural Glazing Materials.

H. Glass Association of North America (GANA)

1. GANA Glazing Manual.
2. GANA Laminated Glass Design Guide.
3. FGMA Sealant Manual.

I. Insulating Glass Manufacturers Alliance (IGMA) Publications:

1. SIGMA TM-3000, Glazing Guidelines for Sealed Insulating Glass Units.

J. National Fenestration Rating Council (NFRC):

1. NFRC 100, Procedure for Determining Fenestration Product U-Factors.
2. NFRC 200, Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence.
3. NFRC 300, Procedure for Determining Solar Optical Properties for Simple Fenestration Products.

K. National Fire Protection Association (NFPA):

1. NFPA 252, Standard Methods of Fire Tests of Door Assemblies.
2. NFPA 257, Standard on Fire Test for Window and Glass Block Assemblies.

L. National Glass Association (NGA):

1. Glazier Certification Program

M. Underwriter's Laboratories, Inc. (UL) Standards:

1. UL 9, Standard for Fire Tests of Window Assemblies.
2. UL 10B, Standard for Fire Tests of Door Assemblies.
3. UL 10C, Standard for Positive Pressure Fire Tests of Door Assemblies.

1.4 DEFINITIONS

A. Glass Manufacturers: Firms that produce primary glass, fabricated glass, or both, as defined in referenced glazing publications.

B. Glass Thicknesses: Indicated by thickness designations in millimeters according to ASTM C 1036.

C. Interspace: Space between lites of an insulating-glass unit that contains dehydrated air or a specified gas.

D. Safety Glazing: Safety glazing material, usually tempered glass or laminated glass, is manufactured to reduce the risk of human injury due to jagged sharp pieces during breakage. In tempered glass this is accomplished by the characteristic break pattern of many smaller pieces, and in laminated glass by the adhesion of the glass pieces to an inner plastic layer.

E. Deterioration of Coated Glass: Defects developed from normal use that are attributed to the manufacturing process and not to causes other than glass breakage and practices for maintaining and cleaning coated glass contrary to manufacturer's written instructions. Defects include peeling, cracking, and other indications of deterioration in metallic coating.

F. Deterioration of Insulating Glass: Failure of hermetic seal under normal use that is attributed to the manufacturing process and not to causes other than glass breakage and practices for maintaining and cleaning insulating glass contrary to manufacturer's written instructions. Evidence of failure is the obstruction of vision by dust, moisture, or film on interior surfaces of glass.

G. Deterioration of Laminated Glass: Defects developed from normal use that are attributed to the manufacturing process and not to causes other than glass breakage and practices for maintaining and cleaning laminated glass contrary to manufacturer's written instructions. Defects include edge separation, delamination materially obstructing vision through glass, and blemishes exceeding those allowed by referenced laminated-glass standard.

H. Defective Fire Protection Glass: Defects that are attributed to the manufacturing process and not to causes contrary to normal conditions of use. Defects include crazing, delaminating or peeling.

I. Glazing Units Surfaces:

1. Insulated Units:
    a. Side 1: Exterior surface of outer lite.
    b. Side 2: Interior surface of outer lite.
    c. Side 3: Interior surface of inner lite.
    d. Side 4: Exterior surface of inner lite
2. Laminated Units:
    a. Side 1: Top surface of top outer pane in horizontal orientation.

b. Interlayer: Laminating material between two pieces of monolithic glass.
c. Side 2: Underside of bottom outer pane in horizontal orientation.

1.5 ADMINISTRATIVE REQUIREMENTS

A. Submittal Procedures:

1. Action Submittals and Informational Submittals shall be submitted in accordance with Section 01 3300, Submittal Procedures.
2. Sustainable Design Submittals shall comply with the additional requirement of Section 01 8113, Sustainable Design Requirements.
3. Closeout Submittals shall be submitted in accordance with Section 01 7700, Closeout Procedures.

B. Pre-Installation Meetings: Conduct at Project site.

1. Review temporary protection requirements for glazing during and after installation.
2. In addition, attendance is required at preconstruction meetings specified in related Sections.

C. Coordinate glazing channel dimensions to provide necessary bite on glass, minimum edge and face clearances, and adequate sealant thicknesses, with reasonable tolerances.

1.6 ACTION SUBMITTALS

A. Glazing Schedule: List glass types and thicknesses for each size opening and location. Use same designations indicated on Drawings.

B. Product Data: For each type of product indicated, demonstrate compliance with specified attributes.

1. Submit manufacturer's technical data for each glazing material and fabricated glass product required, including installation and maintenance instructions.

C. Samples:

1. Glass:
   a. 12 -inch square samples of each type of glass indicated except for clear single pane units.
   b. Thickness of tinted-glass samples shall be representative of thickness intended for installation.
   c. Samples of insulating glass shall be constructed from same material and by method as to be installed in Project.
2. Sealants and Gaskets:
   a. 12 -inch samples of each color required (except black) for each type of sealant or gasket exposed to view.
   b. Install sealant or gasket sample between two strips of material representative of adjoining framing system in color.

c. Sample requirement may be waived by the Architect at their discretion.

1.7 INFORMATIONAL SUBMITTALS

A. Product Certificates: Signed by manufacturers of glass and glazing products certifying that products furnished comply with requirements.

1. For solar-control low-e-coated glass, provide documentation demonstrating that manufacturer of coated glass is certified by coating manufacturer.
2. For fire-protection-rated glazing, provide Certificates of Compliance from glass and glazing materials manufacturers attesting that glass and glazing materials furnished for project comply with specified requirements. Include a list of special or proprietary accessories necessary to meet these requirements.

B. Product Test Reports: Tests performed by a qualified testing agency for each of the following types of glazing products if not included as part of the Product Data submittal:

1. [Tinted float glass.]
2. [Coated float glass.]
3. [Insulating glass.]
4. [Glazing sealants.]
5. [Glazing gaskets.]
6. [Laminated glass.]
7. [Safety glazing.]
8. [Door lite glazing.]
9. [Fire-protection rated glazing.]

C. Qualification Data: Submit for the following.

1. Installer.
2. Manufacturers of insulating-glass units with sputter-coated, low-E coatings if other than one of the listed manufacturers.
3. Glass testing agency.
4. Sealant testing agency.

D. Sample of manufacturers' warranty.

E. Record of Pre-installation meeting.

1.8 CLOSEOUT SUBMITTALS

A. Warranty: Submit executed warranties.

B. Maintenance Data: For glass, to include in maintenance manuals.

1.9 QUALITY ASSURANCE

A. All materials, components, assemblies, workmanship and installation are to be observed by the Owner's Project Inspector. Work not so inspected is subject to uncovering and replacement.

B. Qualifications:

1. Manufacturer Qualifications for Insulating-Glass Units with Sputter-Coated, Low-E Coatings: A qualified insulating-glass manufacturer who is approved and certified by coated-glass manufacturer.
2. Glass Installer: An experienced installer who has completed glazing similar in material, design, and extent to that indicated for this Project; whose work has resulted in glass installations with a record of successful in-service performance; and who employs glass installers for this Project who are certified under the National Glass Association Glazier Certification Program as Level 2 (Senior Glaziers) or Level 3 (Master Glaziers).

C. Glass Product Testing: Obtain glass test results for product test reports in "Submittals" Article from a qualified testing agency based on testing glass products.

1. Glass Testing Agency Qualifications: An independent testing agency with the experience and capability to conduct the testing indicated.

D. Elastomeric Glazing Sealant Product Testing: Obtain sealant test results for product test reports in "Submittals" Article from a qualified testing agency based on testing current sealant formulations within a 36-month period.

1. Sealant Testing Agency Qualifications: An independent testing agency qualified according to ASTM C 1021 to conduct the testing indicated.
2. Test elastomeric glazing sealants for compliance with requirements specified by reference to ASTM C 920, and where applicable, to other standard test methods.

E. Safety Glazing Products: Comply with testing requirements in 16 CFR 1201.

F. Glazing Publications: Comply with published recommendations of glass product manufacturers and organizations below, unless more stringent requirements are indicated. Refer to these publications for glazing terms not otherwise defined in this Section or in referenced standards.

1. GANA Publications: GANA Laminated Division's "Laminated Glass Design Guide" and GANA's "Glazing Manual."
2. IGMA Publication for Insulating Glass: SIGMA TM-3000, "Glazing Guidelines for Sealed Insulating Glass Units."

G. Certifications:

1. Insulating-Glass Certification Program: Permanently marked either on spacers or on at least one component lite of units with appropriate certification label of one of the following testing and inspecting agencies:

a. Insulating Glass Certification Council.

b. Associated Laboratories, Inc.

2. Fire-Rated Glazing Certification: Glazing materials bearing manufacturer's permanent label representing a quality control program involving a recognized certification agency or independent testing laboratory acceptable to Authority Having Jurisdiction, and designating type and thickness of glass.

1.10 DELIVERY, STORAGE AND HANDLING

A. Deliver glass with manufacturer's label indicating type, quality, and thickness on each piece.

B. Protect glass and glazing materials during delivery, storage and handling to comply with manufacturer's directions and as required to prevent edge damage to glass, and damage to glass and glazing materials from effects of moisture including condensation, of temperature changes, of direct exposure to sun, and from other causes.

C. Comply with insulating-glass manufacturer's written instructions for venting and sealing units to avoid hermetic seal ruptures due to altitude change.

1.11 FIELD CONDITIONS

A. Do not proceed with glazing when ambient and substrate temperature conditions are outside the limits permitted by glazing material manufacturer or when joint substrates are wet due to rain, frost, condensation or other causes.

1. Do not install liquid glazing sealants when ambient and substrate temperature conditions are outside limits permitted by glazing sealant manufacturer or below 40 degrees F.

1.12 WARRANTY

A. General:

1. Manufacturer: In addition to the Contractor’s Standard Guarantee, furnish Owner with manufacturer’s fully executed written warranty for each type of glazing.
2. Warranties shall be in addition to, and not a limitation of, other rights the Owner may have under the Contract Documents.
3. Material shall be free from manufacturer defects and installation workmanship. Any material or workmanship judged to be defective shall be replaced at no cost to the Owner.

B. Coated-Glass Products: Manufacturer's standard form, made out to Owner and signed by coated-glass manufacturer, agreeing to replace coated-glass units that deteriorate as defined in Article "Definitions," f.o.b. the nearest shipping point to Project site, within specified warranty period indicated below.

1. Warranty Period: 10 years.

C. Laminated Glass: Manufacturer's standard form, made out to Owner and signed by laminated glass manufacturer, agreeing to replace laminated glass units that deteriorate

as defined in Article "Definitions," f.o.b. the nearest shipping point to Project site, within specified warranty period indicated below.

1. Warranty Period: 5 years.

D. Insulating Glass: Manufacturer's standard form, made out to Owner and signed by insulating glass manufacturer, agreeing to replace insulating glass units that deteriorate as defined in Article "Definitions," f.o.b. the nearest shipping point to Project site, within specified warranty period indicated below.

1. Warranty Periods:
   a. Vertical Glazing: 10 years.
   b. Sloped Glazing: 5 years.

E. Fire Protection Rated Glass: Manufacturer's standard form, made out to Owner and signed by fire protection glass manufacturer, agreeing to replace fire protection glass units that are defective as defined in "Definitions" Article, f.o.b. the nearest shipping point to Project site, within specified warranty period indicated below.

1. Warranty Period: 5 years.

PART 2 - PRODUCTS

2.1 DESIGN AND PERFORMANCE CRITERIA

A. General: Provide glazing systems capable of withstanding normal thermal movement and wind and impact loads (where applicable) without failure, including loss or glass breakage attributable to the following: Defective manufacture, fabrication, and installation; failure of sealants or gaskets to remain watertight and airtight; deterioration of glazing materials; or other defects in construction.

B. Glass Design: Glass thickness designations indicated are minimums and are for detailing only. Confirm glass thicknesses by analyzing Project loads and in-service conditions. Provide glass lites in the thickness designations indicated for various size openings, but not less than thicknesses and in strengths (annealed or heat treated) required to meet or exceed the following criteria:

1. Glass Thicknesses: Select minimum glass thicknesses to comply with ASTM E 1300, according to the following requirements:
   a. Specified Design Wind Loads: As indicated on structural drawings, but not less than wind loads applicable to Project as required by ASCE 7, Minimum Design Loads for Buildings and Other Structures: Section 6.0, Wind Loads.
   b. Probability of Breakage for Vertical Glazing: 8 lites per 1000 for lites set vertically or not more than 15 degrees off vertical and under wind action.
      1) Load Duration: 3 seconds.
   c. Probability of Breakage for Sloped Glazing: 1 break per 1000 for glass installed 15 degrees or more from the vertical plane and under action of wind and/or snow.

d. Maximum Lateral Deflection: For the following types of glass supported on all 4 edges, provide thickness required that limits center deflection at design wind pressure to 1/50 times the short side length or 1 inch, whichever is less.
   1) For monolithic-glass lites heat treated to resist wind loads.
   2) For insulating glass.
   3) For laminated-glass lites.

e. Minimum Glass Thickness for Exterior Lites:
   1) Typical: Not less than 6.0 mm.
   2) Laminated Glass: In accordance with design as indicated.

f. Thickness of Tinted and Heat-Absorbing Glass: Provide the same thickness for each tint color indicated throughout Project.

C. Thermal Movements: Provide glazing that allows for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures acting on glass framing members and glazing components. Base engineering calculation on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.

1. Temperature Change (Range): 120 degrees F, ambient; 180 degrees F, material surfaces.

D. Thermal and Optical Performance Properties: Provide glass with performance properties specified based on manufacturer's published test data, as determined according to procedures indicated below:

1. For monolithic-glass lites, properties are based on units with lites 6.0 mm thick.
2. For laminated-glass lites, properties are based on products of construction indicated.
3. For insulating-glass units, properties are based on units of thickness indicated for overall unit and for each lite.
4. Center-of-Glass Values: Based on using LBL-44789 WINDOW 5.0 computer program for the following methodologies:
   a. U-Factors: NFRC 100 expressed as Btu/ sq. ft. x h x degrees F.
   b. Solar Heat Gain Coefficient: NFRC 200.
   c. Solar Optical Properties: NFRC 300.

E. Safety Glazing: Where safety glazing is indicated, provide glazing that complies with 16 CFR 1201, Category II.

1. Exterior Wall Glazing: Use laminated glass units for exterior safety glazing where shown. Increase glass thickness as necessary in assemblies to meet other required performance criteria.
2. Provide safety glazing products permanently marked with certification label of the Safety Glazing Certification Council (SGCC) or another certification agency acceptable to authorities having jurisdiction.

F. Source Limitations: Obtain glass, glazing materials and accessories from one source for each product indicated. Coatings and finished assemblies, such as insulating units and laminated units, to be manufactured by the same fabricator with a common source of warranty.

G. Sustainable Design:

1. VOC Limits for field-applied adhesives, sealants, fillers, coatings and primers shall comply with limits specified in Section 01 6116.

2.2 ACCEPTABLE GLASS MANUFACTURERS AND FABRICATORS

A. Acceptable Glass Manufacturers: The following, or equal.

1. Vitro Architectural Glass, 412.820.8500, www.vitroglazings.com.
2. Pilkington North America, 800-221-0444, www.pilkington.com.
3. AGC Flat Glass North America, 800-251-0441, www.us.agc.com.
4. Guardian Industries, 248-340-1800, www.guardianglass.com.

B. Acceptable Glass Fabricators: Manufacturers listed above, the following, or equal.

1. Northwestern Industries, 800-426-2771, www.nwiglass.com.
2. Oldcastle BuildingEnvelope, 866-653-2278, www.obe.com.

2.3 GLASS MATERIALS

A. Annealed Float Glass: ASTM C 1036, Type I (transparent glass, flat), Class 1 (clear), Quality q3 (glazing select) or better.

B. Heat-Treated Float Glass: ASTM C 1048; Type I (transparent flat glass); Quality-Q3; of class, kind, and condition indicated.

1. Provide Kind HS (heat-strengthened) float glass in place of annealed float glass where required to resist thermal stresses induced by differential shading of individual glass lites and to comply with glass design requirements specified in Article "Design and Performance Criteria."
2. Provide Kind FT (fully tempered) float glass in place of annealed or Kind HS (heat-strengthened) float glass to comply with glass design requirements specified in Article "Design and Performance Criteria," such as increased strength, or as safety glazing where laminated glass does not meet other performance criteria.

C. Spectrally Selective Glass: ASTM C 1376, float glass with metallic-oxide or -nitride coating deposited by magnetically sputtered vacuum deposition (MSVD) process after manufacture and heat treatment (if any), and complying with other requirements specified.

1. Edge Deletion:
   a. When Low-e coatings are used within an insulating unit, delete coating at edge to completely seal the coating within the unit.

b. Edge deletion to be uniform in appearance (visually straight) and remove 95 percent of the coating.

D. Laminated Glass: ASTM C 1172, complying with testing requirements in 16 CFR 1201 for Category II materials, and with other requirements specified. Use materials that have a proven record of no tendency to bubble, discolor, or lose physical and mechanical properties after fabrication and installation and with the following:

1. Construction: Comply with interlayer manufacturer's written recommendations and assembly design.
2. Interlayer: Polyvinyl butyral interlayer with a proven record of no tendency to bubble, discolor, or lose physical and mechanical properties after laminating glass lites and installation.
   a. Laminate lites in autoclave with heat plus pressure.
   b. Interlayer Thickness: Provide thickness not less than that scheduled and as needed to comply with requirements and assembly design.
   c. Interlayer Color: As scheduled.
3. Laminating Process: Fabricate laminated glass to produce glass free of foreign substances and air or glass pockets.
4. Provide laminated architectural safety glass conforming to labeling requirements of ANSI Z97.1 and CPSC 16 CFR 1201.
5. At acoustically-rated glazing, provide laminated glass tested in accordance with ASTM E 90 for determination of STC value.

E. Insulating-Glass: Factory-assembled units consisting of sealed lites of glass separated by a dehydrated interspace, certified under IGMA-approved program, and meeting Test Class CBA requirements when tested in accordance with ASTM E774.

1. Sealing System: Dual seal, with primary and secondary sealants, using manufacturer’s standard sealants.
2. Desiccant: Manufacturer's standard; molecular sieve, silica gel or blend of both.
3. Spacer: Manufacturer's Standard Metal Warm Edge.
   a. Aluminum, finish as scheduled.
   b. Stainless steel if required based on size of unit.

F. Fire-Protective Glass:

1. General:
   a. Glass shall be classified and rated by Underwriters Laboratories, Inc. or Intertek/Warnock-Hersey, Inc. in accordance with NFPA 252 or UL 10B or UL 10C as applicable to the specified label marking.
   b. Glass shall be labeled for fire protection rating in accordance with CBC Section 716.3 requirements for identification.
   c. Glass shall meet specified safety glazing requirements.
   d. Required CBC Marking: D (no hose stream test).
   e. Rating: 20 minutes.
2. Manufacturer and Product: One of the following, or equal.

a. "SuperLite I" by SAFTI*First*, a Division of O'Keeffe's Inc., 888-653-3333.
   1) Thickness: 1/4 inch (6mm).
b. "Fireglass 20" by Technical Glass Products (TGP), 800-426-0729.
   1) Thickness: 1/4 inch (6mm).

2.4 ELASTOMERIC GLAZING SEALANTS AND PREFORMED GLAZING TAPES

A. General: Provide products of type indicated and complying with the following requirements:

1. Compatibility: Select glazing sealants and tapes of proven compatibility with other materials with which they will come into contact, including glass products, seals of insulating glass units, and glazing channel substrates, under conditions of installation and service, as demonstrated by testing and field experience.
2. Suitability: Comply with recommendations of sealant and glass manufacturers for selection of glazing sealants and tapes which have performance characteristics suitable for applications indicated and conditions at time of installation.
3. Elastomeric Sealant Standard: Manufacturer's standard chemically curing, elastomeric sealant of base polymer indicated which complies with ASTM C 920 requirements, including those for Type, Grade, Class and Uses.
4. Colors: Provide color of exposed sealants indicated or, if not otherwise indicated, as selected by Architect from manufacturer's standard colors.

B. Preformed Butyl-Polyisobutylene Glazing Tape: Manufacturer's standard solvent-free formulation with a solids content of 100 percent; complying with AAMA 800-16; in extruded tape form; non-staining and non-migrating in contact with nonporous surfaces; packaged on rolls with a release paper on one side; with or without continuous spacer rod as recommended by manufacturers of tape and glass for application indicated.

C. Elastomeric Glazing Sealants: Comply with ASTM C 920 and other requirements indicated for each liquid-applied chemically curing sealant specified, including those referencing ASTM C 920 classifications for type, grade, class, and uses related to exposure and joint substrates.

1. Neutral-Curing Silicone Glazing Sealants: "SilPruf SCS2000" by GE Construction Sealants, "864" or "890" by Pecora Corporation, or equal.
   a. Type and Grade: S (single component) and NS (nonsag).
   b. Class: 50.
   c. Use Related to Exposure: NT (nontraffic).
   d. Uses Related to Glazing Substrates: M, G, A, and, as applicable to glazing substrates, Use O.
   e. Applications: Vertical glazing applications as recommended by manufacturer where wet seal is preferred over gaskets.

2.5 ADDITIONAL GLAZING MATERIALS

A. General: Provide products of material, size, and shape complying with referenced glazing standard, requirements of manufacturers of glass and other glazing materials for

application indicated, and with a proven record of compatibility with surfaces contacted in installation.

B. Cleaners, Primers and Sealers: Type recommended by sealant or gasket manufacturer, meeting requirements of VOC limits specified in related Sections.

C. Spacers, Edge Blocks and Setting Blocks: 100 percent silicone blocks, 80 to 90 Shore A durometer hardness, limit lateral movement (side-walking) of glass.

D. Compressible Filler Rods: Closed-cell or waterproof-jacketed rod stock of synthetic rubber or plastic foam, flexible and resilient, with 5-10 psi compression strength for 25 percent deflection.

2.6 FABRICATION

A. Tempered Glass:

1. Fabrication Process: By horizontal (roller-hearth) process with roll-wave distortion parallel to bottom edge of glass as installed.
2. Roll-Wave Distortion: Maximum peak-to-valley roll-wave 0.003 inch in the central area and 0.008 inch within 10.5 inches of the leading and trailing edge.
3. For clear or low-iron glass 1/4 inch to 3/8 inch thick without ceramic frit or ink, maximum + or – 100 mD (millidiopter) over 95 percent of the glass surface.
4. Maximum bow and warp 1/32 inch per lineal foot.
5. For uncoated glass, comply with requirements for Condition A.
6. For coated vision glass, comply with requirements for Condition C (other uncoated glass).
7. All tempered glass shall conform to ANSI Z97.1, and Federal Standard CPSC 16 CFR 1201. Tempered glass shall bear permanent monogram indicating tempered quality. Fabrication marks on tempered glass shall be located to be concealed in completed installation.

B. Fabricate glazing units in sizes required to glaze openings indicated for Project, with edge and face clearances, edge and surface conditions, and bite complying with written instructions of product manufacturer and referenced glazing publications, to comply with system performance requirements.

C. Factory-label each pane of glass. Do not remove labels until final acceptance is obtained.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine framing for glazing, with Installer present, for compliance with the following:

1. Manufacturing and installation tolerances, including those for size, squareness, and offsets at corners.
2. Presence and functioning of weep system.

3. Minimum required face or edge clearances.
4. Effective sealing between joints of glass-framing members.

B. Obtain installers written report listing conditions detrimental to performance of glazing work. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Clean glazing channels and other framing members to receive glass, immediately before glazing. Remove coatings which are not firmly bonded to substrates. Remove lacquer from metal surfaces where elastomeric sealants are indicated for use.

3.3 GLAZING INSTALLATION

A. Comply with combined printed recommendations of glass manufacturers, of manufacturers of sealants, gaskets and other glazing materials, except where more stringent requirements are indicated, including those of referenced glazing standards.

B. Glazing channel dimensions, as indicated on Drawings, provide necessary bite on glass, minimum edge and face clearances, and adequate sealant thicknesses, with reasonable tolerances. Adjust as required by Project conditions during installation.

C. Protect glass from edge damage during handling and installation:

1. Use a rolling block in rotating glass units to prevent damage to glass corners.
2. Do not impact glass with metal framing.
3. Use suction cups to shift glass units within openings; do not raise or drift glass with a pry bar.
4. Rotate glass with flares or bevels along one horizontal edge which would occur in vicinity of setting blocks so that these are located at top of opening.
5. Discard glass units with edge damage or other imperfections of kind that, when installed, weakens glass and impairs performance and appearance.

D. Apply primers to joint surfaces where required for adhesion of sealants, as determined by preconstruction sealant-substrate testing.

E. Anchor components securely in place in the manner indicated. Shim and allow for movement resulting from changes in thermal conditions. Provide separators and isolators to prevent corrosion, electrolytic deterioration, and "freeze-up" of moving joints.

F. Install setting blocks in sill rabbets, sized and located to comply with referenced glazing publications, unless otherwise required by glass manufacturer. Set blocks in thin course of compatible sealant suitable for heel bead.

G. Do not exceed edge pressures stipulated by glass manufacturers for installing glass lites.

H. Provide spacers for glass lites where length plus width is larger than 50 inches as follows:

1. Locate spacers directly opposite each other on both inside and outside faces of glass. Install correct size and spacing to preserve required face clearances, unless

gaskets and glazing tapes are used that have demonstrated ability to maintain required face clearances and to comply with system performance requirements.

2. Provide 1/8 inch minimum bite of spacers on glass and use thickness equal to sealant width. With glazing tape, use thickness slightly less than final compressed thickness of tape.

I. Provide edge blocking where indicated or needed to prevent glass lites from moving sideways in glazing channel, as recommended in writing by glass manufacturer and according to requirements in referenced glazing publications.

J. Set glass lites in each series with uniform pattern, draw, bow, and similar characteristics.

1. Avoid point loading of glass.
2. Do not field-cut glass.

K. Field-Glazed Structural Silicone:

1. Clean frames and glass surfaces with an approved solvent.
2. Prime surfaces and apply structural sealant in accordance with manufacturer's recommendations.
3. Clean excess structural sealant before curing.
4. Mechanically hold glass firmly in place until sealant is sufficiently cured.
5. Install compressible backer rods in joint before applying weatherseal sealant.

3.4 SEALANT GLAZING

A. Provide compressible filler rods or equivalent back-up material, as recommended by sealant and glass manufacturers, to prevent sealant from extruding into glass channel weep systems and from adhering to joints back surface as well as to control depth of sealant for optimum performance, unless otherwise indicated.

B. Force sealants into glazing channels to eliminate voids and to ensure complete "wetting" or bond of sealant to glass and channel surfaces.

C. Tool exposed surfaces of sealants to provide a substantial wash away from glass.

3.5 DEFECTIVE WORK

A. Repair damaged and defective work and eliminate functional and visual defects. Where repair is not possible replace work.

3.6 CLEANING AND PROTECTION

A. Protect exterior glass from damage immediately upon installation by use of crossed streamers attached to framing and held away from glass. Do not apply markers to surfaces of glass. Remove nonpermanent labels and clean surfaces.

B. Protect glass from contact with contaminating substances resulting from construction operations. If, despite such protection, contaminating substances do come into contact with glass, remove immediately by method recommended by glass manufacturer.

C. Examine glass surfaces adjacent to or below exterior concrete and other masonry surfaces at frequent intervals during construction, but not less often than once a month, for build-up of dirt, scum, alkali deposits or staining. When examination reveals presence of these forms of residue, remove by method recommended by glass manufacturer.

D. Remove and replace glass which is broken, chipped, cracked, abraded or damaged in other ways during construction period, including natural causes, accidents and vandalism.

E. Wash glass on both faces not more than 4 days prior to date scheduled for inspections intended to establish date of substantial completion.

3.7 GLAZING SCHEDULE

A. General: Provide safety glazing (fully tempered Type FT or laminated glazing) at locations where required by code or design criteria. Locations as indicated on Drawings.

A. GL-1: Clear monolithic glass; specified annealed float.

a. Thickness: **[1/2 inch (12 mm)]**.
b. Provide tempered glass where indicated and required by CBC.

B. GL-1a: Low-iron Acuity monolithic glass; specified annealed float. NOT USED

C. GL-2: Clear insulating vision glass at vertical surfaces.

1. Outdoor Lite: Class 1 clear float glass, 1/4 inch (6 mm) thick, heat strengthened, with Low E coating on the #2 surface**;** "Solarban 70XL" by Vitro Architectural Glass, or equal.
2. Gap: 1/2 inch (13.2mm), **[air]** filled.
3. Spacer Frame: Warm edge type in mill finish aluminum.
4. Indoor Lite: Clear float, 1/4 inch (6 mm) thick, heat strengthened.
5. Provide tempered glass for both lites where indicated and required by CBC.
6. Overall Unit Thickness: 1 inch.
7. Thermal Performance:
   a. Shading Coefficient: 0.32.
   b. Solar Heat Gain Coefficient: 0.27.
   c. Winter U-Value: 0.28.
   d. Summer U-Value: 0.26.
   e. Light to Solar Gain (LSG): 2.37.
8. Optical Performance:
   a. Ultra-Violet Transmittance: 6 percent.
   b. Visible Light Transmittance: 64 percent.
   c. Total Solar Energy Transmittance: 25 percent.
   d. Visible Light Reflectance: 12 percent.
   e. Total Solar Energy Reflectance: 52 percent.

D. GL-2a: Low-iron insulating vision glass at vertical surfaces. NOT USED

E. GL-2b: Clear Laminated insulating vision glass at vertical surfaces. NOT USED

F. GL-3: Tinted insulating vision glass at vertical surfaces.

1. Outdoor Lite: Class 2 tinted float glass, 1/4 inch (6 mm) thick, heat strengthened, with Low E coating on the #2 surface**; ["Solargray" gray tint]** with "Solarban 70XL" coating by Vitro Architectural Glass, or equal.
2. Gap: 1/2 inch (13.2mm), **[air]** filled.
3. Spacer Frame: Warm edge type in mill finish aluminum.
4. Indoor Lite: Clear float, 1/4 inch (6 mm) thick, heat strengthened.
5. Overall Unit Thickness: 1 inch.
6. Provide tempered glass for both lites where indicated and required by CBC.
7. Thermal Performance:
   a. Shading Coefficient: 0.23.
   b. Solar Heat Gain Coefficient: 0.20.
   c. Winter U-Value: 0.28.
   d. Summer U-Value: 0.26.
   e. Light to Solar Gain (LSG): 1.70.
8. Optical Performance:
   a. Ultra-Violet Transmittance: 3 percent.
   b. Visible Light Transmittance: 34 percent.
   c. Total Solar Energy Transmittance: 13 percent.
   d. Visible Light Reflectance: 6 percent.
   e. Total Solar Energy Reflectance: 15 percent.

G. GL-3a: Tinted laminated insulating vision glass at vertical surfaces.

1. Outdoor Lite: Class 2 tinted float glass, 1/4 inch (6 mm) thick, heat strengthened, with Low E coating on the #2 surface**; ["Solargray" gray tint]** with "Solarban 70XL" coating by Vitro Architectural Glass, or equal.
2. Gap: 1/2 inch (13.2mm), **[air]** filled.
3. Spacer Frame: Warm edge type in mill finish aluminum.
4. Indoor Lite:
   a. Clear float, 3/16 inch (6 mm) thick, heat strengthened.
   b. Interlayer: 0.060 inch (1.52mm) PVB
   c. Clear float, 3/16 inch (5 mm) thick, heat strengthened.
5. Overall Unit Thickness: 1 1/8 inch.
6. Provide tempered glass for outdoor lite where indicated and required by CBC.
7. Thermal Performance:
   a. Shading Coefficient: 0.22.
   b. Solar Heat Gain Coefficient: 0.20.
   c. Winter U-Value: 0.28.

d. Summer U-Value: 0.26.
e. Light to Solar Gain (LSG): 1.65.

8. Optical Performance:
   a. Ultra-Violet Transmittance: 0 percent.
   b. Visible Light Transmittance: 33 percent.
   c. Total Solar Energy Transmittance: 13 percent.
   d. Visible Light Reflectance: 6 percent.

H. GL-4: Patterned insulating vision glass at vertical surfaces. NOT USED

I. GL-5: Laminated glass:

1. Inner Pane: Specified annealed float glass, Class 1 clear, **[1/8 inch (3 mm)]** thick.
2. Interlayer: 0.060-inch, clear. PVB.
3. Outer Pane: Specified annealed float glass, Class 1 clear, **[1/8 inch (3 mm)]** thick.
4. Nominal Overall Unit Thickness: **[1/4 inch (6.0mm)]**.

J. GL-6: Laminated Glass at exterior locations.

1. Inner Pane: Specified annealed float glass, **Class 2 tinted, heat strengthened,** 3/16 inch (4.5 mm) thick.
2. Interlayer: 0.060-inch thick PVB **as selected by Architect**.
3. Inner Pane: Specified annealed float glass, **Class 2 tinted, heat strengthened,** 3/16 inch (4.5 mm) thick.
4. Nominal Overall Unit Thickness: 3/8 inch (9.5mm).

K. GL-7: Laminated acoustic glass: NOT USED

L. GL-8: Fire protective glass; as specified.

M. GL-9: Fire protective glass with fire resistive properties; as specified.

N. G-10: Specified mirror glass.

END OF SECTION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Porcelain tile
2. Ceramic tile.
3. Glass tile.
4. Cementitious backing panels.
5. Setting and grout materials.
6. Cementitious underlayment.
7. Waterproof / crack isolation membranes.
8. Elastic sealants.
9. Metal edge strips.
10. Miscellaneous materials.

1.2 RELATED REQUIREMENTS

A. Section 08 7100, Door Hardware, for metal thresholds.

B. Section Division 22, Plumbing Work, for floor drains and plumbing fixtures.

1.3 REFERENCES AND STANDARDS

A. California Building Code (CBC), edition as noted on Drawings, as adopted by the California Division of the State Architect (DSA).

B. California Green Building Standards Code, edition as noted on Drawings, as adopted by the California Division of the State Architect (DSA).

C. 36 CFR 1191 - Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities; Final Rule; Federal Register, July 26, 1991; updated 2010.

D. American National Standards Institute, Inc. (ANSI):

1. American National Standard Specifications for the Installation of Ceramic Tile.

E. ASTM International:

1. A 153, Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
2. A 666, Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.
3. A 1064, Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete.

4. C 627, Standard Test Method for Evaluating Ceramic Floor Tile Installation Systems Using the Robinson-Type Floor Tester.
5. C 1325, Standard Specification for Non-Asbestos Fiber-Mat Reinforced Cementitious Backer Units.
6. D 4068, Standard Specification for Chlorinated Polyethylene (CPE) Sheeting for Concealed Water-Containment Membrane.
7. E 90, Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
8. E 96, Standard Test Methods for Water Vapor Transmission of Materials.
9. E 413, Classification for Rating Sound Insulation.
10. E 492, Standard Test Method for Laboratory Measurement of Impact Sound Transmission Through Floor-Ceiling Assemblies Using the Tapping Machine.
11. E 989, Standard Classification for Determination of Impact Insulation Class (IIC).
12. E1007, Standard Test Method for Field Measurement of Tapping Machine Impact Sound Transmission Through Floor-Ceiling Assemblies and Associated Support Structures.
13. E 2179, Standard Test Method for Laboratory Measurement of the Effectiveness of Floor Coverings in Reducing Impact Sound Transmission Through Concrete Floors.

F. Tile Council of North America (TCNA):

1. Handbook for Ceramic, Glass and Stone Tile Installation, current edition.

1.4 DEFINITIONS

A. General: Definitions in the ANSI A108 series of tile installation standards and in ANSI A137.1 apply to Work of this Section unless otherwise specified.

B. Module Size: Actual tile size plus joint width indicated.

C. Face Size: Actual tile size, excluding spacer lugs.

D. Large Format Tile: Tile that is greater than 15 inches (381 mm) in width or length.

E. Wet Area: Includes tile surfaces that are either soaked, saturated, or regularly and frequently subjected to moisture such as tub enclosures, showers, swimming pools, commercial kitchens and exterior areas.

1.5 ADMINISTRATIVE REQUIREMENTS

A. Submittal Procedures:

1. Action Submittals and Informational Submittals shall be submitted in accordance with Section 01 3300, Submittal Procedures.
2. Sustainable Design Submittals shall comply with the additional requirement of Section 01 8113, Sustainable Design Requirements.
3. Closeout Submittals shall be submitted in accordance with Section 01 7700, Closeout Procedures.

B. Pre-Installation Conference: Conduct at Project site.

1. Review requirements in ANSI A108.01 for substrates and for preparation by other trades including, but not limited to;
   a. General Contractor.
   b. Architect.
   c. Setting Material representative.
   d. Tile Installer.

1.6 ACTION SUBMITTALS

A. Shop Drawings: Show locations of each type of tile and tile pattern. Show widths, details, and locations of expansion, contraction, control, and isolation joints in tile substrates and finished tile surfaces.

B. Product Data: For each type of product indicated, demonstrate compliance with specified attributes.

C. Samples: The following samples are required.

1. Sample for each type of tile and grout indicated.
2. Manufacturer's full range of colors for Architect's selection. No additional cost allowance will be permitted for premium colors within Manufacturer's full range.
3. Samples of accessories involving color selection.
4. Samples of crack isolation membranes, waterproof membranes and backer boards.

1.7 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer.

B. Sample of manufacturers' warranty.

C. Record of Pre-Installation Meeting.

1.8 CLOSEOUT SUBMITTALS

A. Warranty: Submit executed warranty.

B. Maintenance Data: For tile, to include in maintenance manuals.

1.9 MAINTENANCE MATERIALS

A. Furnish extra materials, including tile, trim shapes and grout, which match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Quantity: 3 percent of quantity installed.

1.10 QUALITY ASSURANCE

A. Installer Qualifications: Use only thoroughly trained and experienced journeyman tile setters completely familiar with the requirements of this work and the recommendations contained in the referenced standards. No allowance will be made for lack of skill on the part of tile setters in acceptance or rejection of installed tile and related products.

B. Use only new materials and products, unless existing materials or products are specifically shown otherwise on the Drawings to be salvaged and re-used.

C. Single-Source Responsibility: Use materials and products of one manufacturer whenever possible.

1. Source Limitations for Tile: Obtain tile of each type from one source or producer.
    a. Obtain tile of each type and color or finish from same production run and of consistent quality in appearance and physical properties for each contiguous area.
2. Source Limitations for Other Products: Obtain each of the following products specified in this Section from a single manufacturer for each product:
    a. Waterproof membrane.
    b. Crack isolation membrane.
    c. Joint sealants.
    d. Grout.
    e. Metal edge strips.

D. Materials, components, assemblies, workmanship and installation are to be observed by the Project Inspector. Work not so inspected is subject to uncovering and replacement.

1.11 DELIVERY, STORAGE AND HANDLING

A. Deliver undamaged products to job in manufacturer's sealed containers and/or original bundles with tags and labels intact.

1. Comply with requirements in ANSI A137.1 for labeling tile packages.

B. Store materials in protected, dry conditions off of ground and in areas so as to not interfere with the progress of the work. Tile installation materials are to be stored and handled in accordance with ANSI A108.02, Section 2.0.

C. Transport, store and handle in strict accordance with the manufacturer's written recommendations.

1.12 FIELD CONDITIONS

A. Environmental conditions for tile installation are to be in accordance with ANSI A108.02, Section 2.2.

B. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

C. Illuminate the work area during installation providing the same level and angle of illumination as will be available for final inspection.

1.13 WARRANTY

A. Manufacturer: In addition to the Contractor's Standard Guarantee, furnish Owner with manufacturer's fully executed written warranty against defects and workmanship for the following:

1. Tile: Manufacturer's available warranty.
2. Assemblies: Single source warranty by setting mortar, grout, underlayment, primer, liquid applied waterproof / crack isolation membrane, and sealant manufacturer for a period of 25 years.
3. Waterproof / crack isolation membrane sheet.
   a. Lifetime warranty.

PART 2 - PRODUCTS

2.1 DESIGN AND PERFORMANCE CRITERIA

A. Slip Resistance: For tile installed on walkway surfaces, stair treads and landings, provide products with the following values as determined by testing identical products per ANSI A137.1-2012, Section 9.6.

1. Method: Dynamic Coefficient of Friction DCOF AcuTest method, wet test using 0.05 percent sodium lauryl sulfate solution.
2. Application: Level interior flooring surface.
3. Tested Value: 0.42 or greater.

B. Expansion Joints: In accordance with EJ171 of the TCNA Handbook for Ceramic, Glass and Stone Tile Installation. Provide at expansion joints in the backing materials, cold joints in concrete substrate or where backing materials change.

1. Exterior Work and Interior Wet Locations: Provide on all surfaces maximum 12-feet on center in both axes.
2. Interior Work, Not Otherwise Specified: Provide on continuous floor areas at intervals of 24 feet.

2.2 MATERIALS, GENERAL

A. ANSI Ceramic Tile Standard: Provide tile that complies with ANSI A137.1 for types, compositions, and other characteristics indicated.

1. Provide tile complying with Standard grade requirements unless otherwise indicated.

B. ANSI Standards for Tile Installation Materials: Provide materials complying with ANSI A108.02, ANSI standards referenced in other Part 2 articles, ANSI standards referenced

by TCNA installation methods specified in tile installation schedules, and other requirements specified.

C. Factory Blending: For tile exhibiting color variations within ranges, blend tile in factory and package so tile units taken from one package show same range in colors as those taken from other packages and match approved Samples.

D. Mounting: For factory-mounted tile, provide back- or edge-mounted tile assemblies as standard with manufacturer unless otherwise indicated.

2.3 MANUFACTURERS - TILE

A. Acceptable Manufacturers:

1. Daltile®; www.daltile.com
2. Crossville®, Inc.; www.crossvilleinc.com
3. American Olean; www.americanolean.com

B. Substitutions: Per Division 01.

2.4 MATERIALS - TILE

A. Glass Wall Tile: Brilliante Glass manufactured by Crossville.

1. Shape and Size: Flat, size as indicated on drawings.
2. Colors: As selected by Architect from manufacturer’s standard colors.
3. Trim Units: Coordinated with sizes and coursing of adjoining flat tile where applicable and matching characteristics of adjoining flat tile. Provide shapes selected from manufacturer's standard shapes.
4. Grout Color: As selected by Architect from manufacturer's standard colors.

B. Large Format Porcelain Wall Tile: Argent Porcelain Stone manufactured by Crossville.

1. Shape and Size: Flat, **12 inches x 24 inches x 3/8 inch thick**.
2. Pattern: As shown on Drawings.
3. Colors:
    a. Field: Price Groups 1 and 2.
    b. Accent: Price Groups 1, 2 and 3.
        1) Two accent colors will be selected.
4. Trim Units: Coordinated with sizes and coursing of adjoining flat tile where applicable and matching characteristics of adjoining flat tile.
    a. Coved base or bullnose as required.
5. Grout Color: As selected by Architect from manufacturer's standard colors.

2.5 MATERIALS – CEMENTITIOUS BACKING PANELS

A. Cementitious Backer Units (CBU): ANSI A118.9 or ASTM C 1325, Type A, in maximum lengths available to minimize end-to-end butt joints.

B. Basis of Design: USG Durock® Brand Cement Board manufactured by United States Gypsum; tel: (800) 950-3839; web: www.usg.com.

1. Thickness: 5/8 inch.

C. Substitutions: Per Division 01.

D. Joint Tape: 2 inch wide alkali-resistant glass fiber mesh tape.

E. Fasteners: Hot dipped galvanized fasteners per ASTM A 153.

2.6 MANUFACTURERS – INSTALLATION MATERIALS

A. Basis-of-Design Manufacturer: The design is based on "single source" products by MAPEI Corporation, www.mapei.com, as specified.

1. Alternate Manufacturers: Subject to compliance with requirements including "System Warranty", manufacturers offering 'single source' products that may be incorporated into the Work are:
   a. Laticrete International, www.laticrete.com.
   b. Ardex Americas, www.ardexamericas.com
   c. Custom Building Products, www.custombuildingproducts.com.

B. Source Limitations for Setting Materials, Waterproof / Crack Isolation Liquid Applied Membrane, Grouts and Sealant:

1. Obtain ingredients of uniform quality for each component from single manufacturer.

2.7 SETTING MATERIALS

A. Medium-Bed Mortar: Polymer fortified portland cement mortar complying with ANSI A118.4, ANSI A118.11 and ASTM C 627.

1. Provide product that is approved by manufacturer for application thickness up to 3/4 inch.
2. Basis of Design: Ultraflex™ LFT™ Mortar manufactured by MAPEI Corporation.
   a. VOC Content: 0 g/L.
3. Subject to compliance with requirements, provide named product or equivalent product by one of the following:
   a. Laticrete International, Inc., 255 MULTIMAX™.
   b. Ardex X 77™ Microtec®, Fiber Reinforced Tile and Stone Mortar.
   c. Custom Building Products, Natural Stone & Large Tile Mortar.

B. Thin-Bed Mortar (Thin-Set): Polymer fortified portland cement mortar complying with ANSI A118.4, ANSI A118.11 and ASTM C 627.

1. For wall applications, provide mortar that complies with requirements for non-sagging mortar in addition to the other requirements in ANSI A118.4.

2. Basis of Design: MAPEI Corporation, Kerabond/Keralastic™ System manufactured by MAPEI Corporation.
   a. Thin-Set Mortar gauged with Keralastic™ Latex Additive.
3. Subject to compliance with requirements, provide named product or equivalent product by one of the following:
   a. Laticrete International, Inc., 254 Platinum.
   b. Ardex X 77™ Microtec®, Fiber Reinforced Tile and Stone Mortar.
   c. Custom Building Products, ProLite® Premium Large Format Tile Mortar.

C. Epoxy Mortar / Adhesive: Thin and medium-bed, chemical resistant epoxy adhesive complying with ANSI A118.3. Use for epoxy mortar applications and water-sensitive stone tile subject to staining, darkening or warping (green, blue, and rose colored marbles, resin-backed and agglomerate).

1. Basis of Design: Kerapoxy® Premium Epoxy Mortar manufactured by MAPEI Corpoaration.
2. Subject to compliance with requirements, provide named product or equivalent product by one of the following:
   a. Laticrete International, Inc., LATAPOXY® 300 Adhesive.
   b. Ardex WA™, Epoxy Grout and Adhesive.
   c. Custom Building Products, EBM-Lite™ Premium Epoxy Bonding Mortar – 100% Solids.

D. Glass Tile Mortar: Polymer-fortified non-sag adhesive mortar specifically formulated for glass tile applications, complying with ANSI A118.4, ANSI A118.11 and ASTM C 627. Consistent ultra-white color with minimal shrinkage, single-component, no admixture, anti-microbial.

1. Basis of Design: Adesilex™ P10 Premium Glass Tile Mortar with Polymer manufactured by MAPEI Corporation.
   a. VOC Content: 0 g/L.
   b. Color: White.
2. Subject to compliance with requirements, provide named product or equivalent product by one of the following:
   a. Laticrete International, Inc., Glass Tile Adhesive.
   b. Ardex X 77™ Microtec®, Fiber Reinforced Tile and Stone Mortar.
   c. Ardex WA™, Epoxy Grout and Adhesive.
   d. Custom Building Products, Glass Tile Premium Thin-Set Mortar.

2.8 GROUT MATERIALS

A. Epoxy Grout Materials: Water-cleanable grout complying with ANSI A118.3 for conditions in which chemical and/or bacterial resistance is required.

1. Basis of Design: Kerapoxy® Premium Epoxy Grout manufactured by MAPEI Corporation.
   a. VOC Content: 7 g/L.

2. Subject to compliance with requirements, provide named product or equivalent product by one of the following:
   a. Laticrete International, Inc., SPECTRALOCK® PRO Premium Grout.
   b. Ardex WA™, Epoxy Grout and Adhesive.
   c. Custom Building Products, CEG-Lite™ 100% Solids Commercial Epoxy Grout.

2.9 WATERPROOF / CRACK ISOLATION MEMBRANE – LIQUID APPLIED

A. General: Manufacturer's standard product complying with ANSI A118.10 and ANSI A118.12 for thin-bed, medium-bed and thick-bed bonded mortar tile applications at walls, floors and ceilings.

B. Basis of Design: Mapelastic® AquaDefense manufactured by MAPEI Corporation.

1. VOC Content: 0 g/L.

C. Subject to compliance with requirements, provide named product or an equivalent product by one of the following:

1. Laticrete International, Inc., HYDRO BAN®.
2. Ardex 8+9™, Waterproofing and Crack Isolation Compound.
3. Custom Building Products, RedGard® Waterproofing and Crack Prevention Membrane.

D. Substitutions: Per Division 01.

2.10 SEALANTS

A. General: Provide manufacturer's standard sealants with characteristics indicated below that comply with applicable requirements in Section 07 9200, Joint Sealants.

1. Single-component, mildew-resistant, neutral-curing silicone sealant.
2. Single-component, nonsag urethane sealant.
3. Acrylic sealants not allowed.

B. Basis of Design: Mapesil AC manufactured by MAPEI Corporation.

1. VOC Content: 18.5 g/L.

C. Subject to compliance with requirements, provide named products or equivalent products by one of the following:

1. Laticrete International, Inc., LATISIL™.
2. Ardex SX™, 100% Silicone sealant for Tile and Stone.
3. Custom Building Products, Commercial 100% Silicone Sealant.

D. Primer: Provide manufacturer’s primer for use with porous stone, submerged and permanent wet areas.

E. Colors: Provide colors of exposed sealants to match colors of grout in tile adjoining sealed joints unless otherwise indicated.

F. Refer also to Section 07 9200 for installation and preparation requirements.

G. Substitutions: Per Division 01.

2.11 MISCELLANEOUS MATERIALS

A. Metal Edge Strips: L, T and bullnose shapes as shown on Drawings, height to match tile and setting-bed thickness, metallic or combination of metal and PVC or neoprene base, designed specifically for flooring applications.

1. Profiles, materials and finish as indicated. If none are indicated, provide stainless-steel, ASTM A 666, Type 302 exposed-edge material.
2. Basis of Design Manufacturer: Schluter Systems, Plattsburg, NY; tel: (8888) 472-4588; web: www.schluter.com.
3. Substitutions: Per Division 01.

B. Patching Compounds: Latex-modified, portland cement-based formulation provided or approved by manufacturer of tile-setting materials for installations indicated.

C. Tile Protective Coating: Liquid grout-release coating that is formulated to protect exposed surfaces of stone tile and textured tile against adherence of mortar and grout.

1. Compatible with mortar and grout products; easily removable after grouting is completed without damaging grout, stone tile or textured tile; and recommended for use as temporary protective coating for tile product.
2. Floor sealer, complying with floor sealer specified in this Section, may be used provided it is recommended by manufacturer for use as a grout release.

D. Tile Cleaner: A neutral cleaner capable of removing soil and residue without harming tile and grout surfaces, specifically approved for materials and installations indicated by tile and grout manufacturers.

E. Floor Sealer: Manufacturer's standard product for sealing grout joints and that does not change color or appearance of grout. Colorless, no-sheen, water-based penetrating slip and stain-resistant sealer, not affecting color or physical properties of surfaces as recommended by tile manufacturers.

1. VOC Content: Maximum 100 g/L.
2. Products: Subject to compliance with requirements, products that may be incorporated into the Work are:
    a. Ultracare™ line of products manufactured by MAPEI Corporation; www.mapei.com.
    b. STONETECH® Heavy Duty Grout Sealer Low Solids Coating manufactured by Laticrete International, Inc.; www.laticrete.com.
    c. Aqua Mix® Sealer’s Choice® Gold manufactured by Custom Building Products; www.custombuildingproducts.com.

3. Substitutions: Per Division 01.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions where tile will be installed, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

1. Verify that substrates for setting tile are firm; dry; clean; free of coatings that are incompatible with tile-setting materials, including curing compounds and other substances that contain soap, wax, oil, or silicone; and comply with flatness tolerances required by ANSI A108.01 for installations indicated.
2. Verify that concrete substrates for tile floors comply with surface finish requirements in ANSI A108.01 for installations indicated.
    a. Verify that surfaces that received a steel trowel finish have been mechanically scarified.
    b. Verify that protrusions, bumps, and ridges have been removed by sanding or grinding.
3. Verify that installation of grounds, anchors, recessed frames, electrical and mechanical units of work, and similar items located in or behind tile has been completed.
4. Verify that joints and cracks in tile substrates are coordinated with tile joint locations; if not coordinated, adjust joint locations in consultation with Architect.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Fill cracks, holes, and depressions in concrete substrates for tile floors installed with adhesives or thin-set mortar with trowelable leveling and patching compound specifically recommended by tile-setting material manufacturer. Correct conditions that do not comply with flatness tolerances specified in referenced ANSI A108 Series of tile installation standards.

1. Remove protrusions, bumps, and ridges by sanding or grinding.

B. Remove coatings that are incompatible with tile-setting materials from substrates, including curing compounds and other substances that contain soap, wax, oil, or silicone.

C. Where indicated, prepare substrates to receive waterproofing by applying a reinforced mortar bed that complies with ANSI A108.1A and is sloped 1/4 inch per foot (1:50) toward drains.

D. Blending: For tile exhibiting color variations, verify that tile has been factory blended and packaged so tile units taken from one package show same range of colors as those taken from other packages and match approved Samples. If not factory blended, either return to manufacturer or blend tiles at Project site before installing.

E. Field-Applied Temporary Protective Coating: If indicated under tile type or needed to prevent grout from staining or adhering to exposed tile surfaces, pre-coat them with continuous film of temporary protective coating, taking care not to coat unexposed tile surfaces.

3.3 TILE BACKING PANEL INSTALLATION

A. Install panels and treat joints according to manufacturer's written instructions for type of application indicated.

3.4 PLYWOOD UNDERLAYMENT INSTALLATION

A. Plywood Underlayment: Install where indicated on Drawings.

1. Install with 1/4 inch gap between sheets.

3.5 WATERPROOF / CRACK ISOLATION MEMBRANE INSTALLATION

A. Install waterproof / crack isolation membrane to comply with ANSI A108.13, ANSI A108.17, and manufacturer's written instructions to produce membrane of uniform thickness that is bonded securely, or unbonded, to substrate.

3.6 TILE INSTALLATION

A. Comply with the TCNA Handbook for Ceramic, Glass, and Stone Tile Installation for TCNA installation methods specified in tile installation schedules. Comply with parts of the ANSI A108 series specifications for installation of tile that are referenced in TCNA installation methods, specified in tile installation schedules, and apply to types of setting and grouting materials used.

B. For the following installations, follow procedures in the ANSI A108 series of tile installation standards for providing 95 percent mortar coverage:

1. Tile floors in wet areas.
2. Tile floors composed of tiles 8 inches x 8 inches or larger.
3. Tile floors consisting of rib-backed tiles.

C. Large Format Tile Installation:

1. Use notched trowel of size recommended by tile manufacturer to achieve 100 percent mortar coverage on back of tile.
2. The use of “glass handling” suction cups is recommended for flat-setting heavy large format tile into fresh mortar.
    a. These “glass handlers/suction cups” can assist in working large format tiles into the mortar for maximum coverage, but are most effective with smooth, glazed or polished surfaces.
3. If tiles are installed in a condition where one edge of the tile is higher than adjacent tile, giving the finished surface an uneven appearance (lippage), the use of a high speed orbital sander (remove all abrasive / sanding paper before applying vibrating pressure to the tile) applied along the edge of the elevated tile can be effective in

vibrating excess mortar out for removal, and lowering the tile into alignment with the adjoining tiles.

4. Where excessive lippage may occur due to excess mortar behind the tile, obtain written direction from tile manufacturer for corrective procedures which not affect appearance of finished surfaces or damage adjacent work.

D. Wipe backs of tiles with a damp cloth to remove dirt and dust before units are installed.

E. Mix tiles to achieve a uniformly random distribution of color shadings and patterns.

F. Pattern Orientation: For tile varieties with directional pattern, orient pattern as indicated on Drawings. If no pattern is shown, request direction from Architect.

G. Extend tile work into recesses and under or behind equipment and fixtures to form complete covering without interruptions unless otherwise indicated. Terminate work neatly at obstructions, edges, and corners without disrupting pattern or joint alignments.

H. Accurately form intersections and returns. Perform cutting and drilling of tile without marring visible surfaces. Carefully grind cut edges of tile abutting trim, finish, or built-in items for straight aligned joints. Fit tile closely to electrical outlets, piping, fixtures, and other penetrations so plates, collars, or covers overlap tile.

I. Provide manufacturer's standard trim shapes where necessary to eliminate exposed tile edges.

J. Where accent tile differs in thickness from field tile, vary setting-bed thickness so that tiles are flush.

K. Jointing Pattern: Lay tile in grid pattern unless otherwise indicated. Lay out tile work and center tile fields in both directions in each space or on each wall area. Lay out tile work to minimize the use of pieces that are less than half of a tile. Provide uniform joint widths unless otherwise indicated.

1. For tile mounted in sheets, make joints between tile sheets same width as joints within tile sheets so joints between sheets are not apparent in finished work.
2. Where adjoining tiles on floor, base, walls, or trim are specified or indicated to be same size, align joints.
3. Where tiles are specified or indicated to be whole integer multiples of adjoining tiles on floor, base, walls, or trim, align joints unless otherwise indicated.
4. Large format tile set in a running bond/ brick joint pattern utilizing tiles with any side greater than 15 -inches, offset tiles shall be maximum of 1/3 of the tiles longest edge length.

L. Joint Widths: Unless otherwise indicated, install tile with the following joint widths:

1. Glazed Wall Tile: 1/16 inch.

M. Lay out tile wainscots to next full tile beyond dimensions indicated.

N. Expansion Joints: Locate expansion joints and other sealant-filled joints, including control, contraction, and isolation joints, where indicated or according to the approved shop drawings, during installation of setting materials, mortar beds, and tile.

1. Do not saw-cut joints after installing tiles.
2. Where joints occur in concrete substrates, locate joints in tile surfaces directly above them.
3. Prepare joints and apply sealants to comply with requirements in Section 07 9200, Joint Sealants.

O. Thresholds: At locations where mortar bed (thick-set) would otherwise be exposed above adjacent floor finishes, set thresholds in latex-portland cement mortar (thin-set).

1. Do not extend cleavage membrane waterproofing or crack isolation membrane under thresholds set in latex-portland cement mortar. Fill joints between such thresholds and adjoining tile set on cleavage membrane waterproofing or crack isolation membrane with specified sealant.

P. Metal Edge Strips: Install at locations indicated and where exposed edge of tile flooring meets carpet, wood, or other flooring that finishes flush with or below top of tile and no threshold is indicated. Provide sizes required for transition.

1. Where tile terminates at door openings, center strips under doors.

Q. Grout Sealer: Apply grout sealer to cementitious grout joints according to grout-sealer manufacturer's written instructions. As soon as grout sealer has penetrated grout joints, remove excess sealer and sealer from tile faces by wiping with soft cloth.

R. Floor Sealer: Apply floor sealer to cementitious grout joints in tile floors according to floor-sealer manufacturer's written instructions. As soon as floor sealer has penetrated grout joints, remove excess sealer and sealer from tile faces by wiping with soft cloth.

3.7 GROUT INSTALLATION

A. Joints shall be packed full and free of all voids or pits, joints shall not be raked. Clean excess grout and mortar from tile surface with water as work progresses. Clean while mortar is fresh and before it hardens on the surface.

B. Epoxy Grout: Install in accordance with ANSI A108.3 and A108.6 for epoxy grout and the manufacturer’s recommended procedures and precautions during application and cleaning.

3.8 INSTALLATION TOLERANCES

A. Variation from Plumb for Wall Tile: For vertical joints, external corners, and other conspicuous lines, do not exceed 1/8 inch in 10 feet.

B. Variation in Level for Wall Tile: For horizontal joints and other conspicuous lines, do not exceed 1/4 inch in 20 feet, or 1/2 inch maximum.

C. Variation in Surface Plane of Floor Tile: Do not exceed 1/8 inch in 10 feet from level or slope indicated when tested with a 10 foot straightedge.

D. Variation in Plane Between Adjacent Units (Lipping): Do not exceed the following differences between faces of adjacent units as measured from a straightedge parallel to stone tiled surface:

1. Units with Polished Faces: 1/64 inch.
2. Units with Honed Faces: 1/32 inch.
3. Units with Sand-Rubbed Faces: 1/32 inch.
4. Units with Thermal-Finished Faces: Depth of thermal finish or 3/16 inch, whichever is less.
5. Units with Natural-Cleft Faces: Depth of natural-cleft finish or 3/16 inch, whichever is less.

E. Variation in Joint Width: Do not vary joint thickness more than 1/16 inch or one-fourth of nominal joint width, whichever is less.

3.9 DEFECTIVE WORK

A. Remove and replace tile that is damaged or that does not match adjoining tile. Provide new matching units, installed as specified and in a manner to eliminate evidence of replacement.

3.10 CLEANING AND PROTECTION

A. Cleaning: On completion of placement and grouting, clean all ceramic tile surfaces so they are free of foreign matter.

1. Remove grout residue from tile as soon as possible.
2. Clean grout smears and haze from tile according to tile and grout manufacturer's written instructions but no sooner than 10 days after installation.
    a. Use only cleaners recommended by tile and grout manufacturers and only after determining that cleaners are safe to use by testing on samples of tile and other surfaces to be cleaned.
3. Protect metal surfaces and plumbing fixtures from effects of cleaning. Flush surfaces with clean water before and after cleaning.

B. Protect installed tile work with kraft paper or other heavy covering during construction period to prevent staining, damage, and wear. If recommended by tile manufacturer, apply coat of neutral protective cleaner to completed tile walls and floors.

C. Prohibit foot and wheel traffic from tiled floors for at least seven days after grouting is completed.

D. Before final inspection, remove protective coverings and rinse neutral protective cleaner from tile surfaces.

3.11 INTERIOR WALL TILE INSTALLATION SCHEDULE

A. Interior Wall Installations: Large format tile, non-wet and wet areas except showers.

1. Tile Installation TCNA W244C: Medium-bed mortar **[with liquid-applied waterproof / crack isolation membrane]** on cementitious backer units.
   a. Wall Type: Wood or metal studs.
   b. Backer Board: ANSI A108.11, cement backer board.
   c. Tile: ANSI A108.5, porcelain or ceramic.
   d. Grout: **[ANSI A108.6, epoxy]**.

END OF SECTION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Resilient base

1.2 REFERENCES AND STANDARDS

A. California Building Code (CBC), edition as noted on Drawings, as adopted by the California Division of the State Architect (DSA).

B. California Green Building Standards Code, edition as noted on Drawings, as adopted by the California Division of the State Architect (DSA).

C. ASTM International:

1. D 2047, Standard Test method for Static Coefficient of Friction of Polish-Coated Flooring Surfaces as Measured by the James Machine.
2. F 710, Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring.
3. F 2170, Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes.

1.3 ADMINISTRATIVE REQUIREMENTS

A. Submittal Procedures:

1. Action Submittals and Informational Submittals shall be submitted in accordance with Section 01 3300, Submittal Procedures.
2. Sustainable Design Submittals shall comply with the additional requirement of Section 01 8113, Sustainable Design Requirements.
3. Closeout Submittals shall be submitted in accordance with Section 01 7700, Closeout Procedures.

B. Pre-Installation Conference: Conduct at Project site.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product indicated, demonstrate compliance with specified attributes.

B. Samples for Initial Selection: For each type of product indicated.

C. Samples for Verification: For each type of product indicated and for each color, texture, and pattern required in manufacturer's standard-size samples, but not less than 12 inches (300 mm) long.

D. Product Schedule: For resilient base and accessory products. Use same designations indicated on Drawings.

1.5 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer.

B. Sample of manufacturers' warranty.

C. Record of Pre-Installation Meeting.

1.6 CLOSEOUT SUBMITTALS

A. Warranty: Submit executed warranty.

B. Maintenance Data: To include in maintenance manuals.

1.7 MAINTENANCE MATERIALS

A. Resilient Base: Furnish 1 percent additional rolled rubber base from same lot of each color utilized, **200 linear feet minimum**. Mark boxes with manufacturer's name and color pattern.

1.8 QUALITY ASSURANCE

A. Installer Qualifications: An entity that employs installers and supervisors who are competent in techniques required by manufacturer for resilient product installation indicated.

B. Use only new materials and products, unless existing materials or products are specifically shown otherwise on the Drawings to be salvaged and re-used.

C. Single-Source Responsibility: Use materials and products of one manufacturer whenever possible.

D. Materials, components, assemblies, workmanship and installation are to be observed by the Project Inspector. Work not so inspected is subject to uncovering and replacement.

E. Mockups: Build mockups to verify selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.

1. Coordinate mockups in this Section with mockups specified in other Sections.

1.9 DELIVERY, STORAGE AND HANDLING

A. Deliver materials to project site in original factory wrappings and containers, labeled with identification of manufacturer, brand name, and lot number.

B. Transport and handle in strict accord with the manufacturer's written recommendations.

C. Store resilient products and installation materials off of ground in dry spaces protected from the weather, with ambient temperatures maintained within range recommended by manufacturer.

1.10 FIELD CONDITIONS

A. Maintain ambient temperatures within range recommended by manufacturer, but not less than 70 deg F (21 deg C) more than 95 deg F (35 deg C), in spaces to receive resilient products during the following time periods:

1. 48 hours before installation.
2. During installation.
3. 48 hours after installation.

B. After installation and until Substantial Completion, maintain ambient temperatures within range recommended by manufacturer, but not less than 55 deg F (13 deg C) or more than 95 deg F (35 deg C).

C. Do not apply materials on wet or damp surfaces.

D. Install resilient products after other finishing operations, including painting, have been completed.

E. Close spaces to traffic during resilient flooring installation and for 48 hours afterwards.

1.11 WARRANTY

A. Manufacturer: In addition to the Contractor's Standard Guarantee, furnish Owner with manufacturer's fully executed written warranty for each type of resilient base against defects in material and workmanship, including the following:

1. Provide unconditional guarantee against loss of bond between resilient base and wall.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Subject to compliance with requirements, provide products manufactured by one of the following:

1. Burke Flooring; www.burkeflooring.com
2. Flexco Corporation; www.flexcofloors.com
3. Johnsonite; www.johnsonite.com
4. Roppe Corporation; www.roppe.com
5. Substitutions: Per Division 01

2.2 DESIGN AND PERFORMANCE CRITERIA

A. Fire Resistance:

1. Critical Radiant Flux: Class 1 (minimum 0.45 watt per square centimeter) per ASTM E 648 and NFPA 253.
2. Smoke Density: 450 or less per ASTM E 662 and NFPA 258.

2.3 RESILIENT BASE

A. Vulcanized Thermoset Rubber Base: Product Standard ASTM F 1861, Type TS, Group 1.

1. Basis of Design Product: Pinnacle Rubber Wall Base manufactured by Roppe Corporation.

B. Physical Properties / Design Criteria:

1. Profile: Standard Cove
2. Gauge: 1/8 inch
3. Height: 4 inches
4. Length: 120 foot coils
5. Colors: As selected by Architect from manufacturer's full range.
6. Surface Burning Characteristics: Class B per ASTM E 84, NFPA 255

C. Corners: Job-formed, cope inside corners and wrap outside corners.

1. Factory pre-formed corners are not acceptable.

2.4 AUXILIARY MATERIALS

A. Trowelable Leveling and Patching Compounds: Latex-modified, portland cement based or blended hydraulic-cement-based formulation provided or approved by resilient-product manufacturer for applications indicated.

B. Adhesives: Water-resistant type recommended by resilient-product manufacturer for resilient products and substrate conditions indicated.

1. Comply with Section 01 6116.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, with Installer present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.

B. Verify that finishes of substrates comply with tolerances and other requirements specified in other Sections and that substrates are free of cracks, ridges, depressions, scale, and foreign deposits that might interfere with adhesion of resilient products.

C. In the event of discrepancy, immediately notify the Architect. Do not proceed with installation of flooring in areas of discrepancy until all such discrepancies have been resolved and all unsatisfactory conditions have been corrected.

D. Start of installation indicates Installer's acceptance of substrate surfaces and conditions.

3.2 PREPARATION

A. Sweep and vacuum clean substrates to be covered by floor coverings immediately before installation.

3.3 INSTALLATION, GENERAL

A. Do not install resilient products until they are the same temperature as the space where they are to be installed.

1. At least 48 hours in advance of installation, move resilient products and installation materials into spaces where they will be installed.

3.4 RESILIENT BASE INSTALLATION

A. Comply with manufacturer's written instructions for installing resilient base.

B. Apply resilient base to walls, columns, pilasters, casework and cabinets in toe spaces, and other permanent fixtures in rooms and areas where base is required.

C. Install resilient base in lengths as long as practical without gaps at seams and with tops of adjacent pieces aligned.

1. Minimum piece length 24 inches.

D. Tightly adhere resilient base to substrate throughout length of each piece, with base in continuous contact with horizontal and vertical substrates.

E. Do not stretch resilient base during installation.

F. On masonry surfaces or other similar irregular substrates, fill voids along top edge of resilient base with manufacturer's recommended adhesive filler material.

G. At gypsum board and fiberboard walls, fill voids at wall/floor intersection fully before installing base to provide complete backing of base. Do not install base with gap; this will result in deformation by furniture and will require removal and replacement of base.

H. Coped Inside Corners: Cut first piece square to the corner. Undercut and scribe the adjacent piece to the corner, attach per manufacturer's instructions.

I. Wrapped Outside Corners: With top set gauge, remove portion of back side of base to the bend. Make two relief cuts, one on each side of the bend at the bottom of the base. Remove a tapered piece from the bottom of the toe. Attach per manufacturer's instructions.

3.5 CLEANING AND PROTECTION

A. Comply with manufacturer's written instructions for cleaning and protecting resilient products.

B. Perform the following operations immediately after completing resilient-product installation:

1. Remove adhesive and other blemishes from exposed surfaces.

C. Protect resilient products from mars, marks, indentations, and other damage from construction operations and placement of equipment and fixtures during remainder of construction period.

1. Apply number of coats recommended by manufacturer.

D. In the event of damage, make all repairs and replacements necessary to the approval of the Architect at no additional cost to the Owner.

E. Cover resilient products subject to wear and foot traffic until Substantial Completion.

1. Provide a temporary non-staining paper pathway in all traffic areas.

END OF SECTION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Tufted carpet tiles, adhered.
2. Walk-off mats, adhered.

1.2 RELATED REQUIREMENTS

A. Section 09 0561, Moisture Vapor Control System, for vapor barrier coatings beneath finish flooring.

B. Section 09 6513, Resilient Base and Accessories, for rubber wall base.

1.3 REFERENCES AND STANDARDS

A. California Building Code (CBC), edition as noted on Drawings, as adopted by the California Division of the State Architect (DSA).

B. California Green Building Standards Code, edition as noted on Drawings, as adopted by the California Division of the State Architect (DSA).

C. 36 CFR 1191 - Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities; Final Rule; Federal Register, July 26, 1991; updated 2010.

D. NSF International/American National Standards Institute:

1. NSF/ANSI 140, Sustainability Assessment for Carpet.

E. ASTM International:

1. D 4258, Standard Practice for Surface Cleaning Concrete for Coating.
2. D 4259, Standard Practice for Abrading Concrete.
3. E 648, Standard Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source.
4. E 662, Standard Test Method for Specific Optical Density of Smoke Generated by Solid Materials.
5. E 2471, Standard Test Method for Using Seeded-Agar for the Screening Assessment of Antimicrobial Activity in Carpets.

F. American Association of Textile Chemists and Colorists (AATCC):

1. AATCC 16E, Colorfastness to Light: Water-Cooled Xenon-Arc Lamp, Continuous Light.
2. AATCC 134, Electrostatic Propensity of Carpets.

G. Carpet and Rug Institute (CRI): Carpet Installation Standard, current edition.

H. National Fire Protection Association (NFPA):

1. NFPA 253, Standard Method of Test for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source.

I. US Consumer Product Safety Commission (CPSC):

1. CPSC FF 1-70 Test Method (Methenamine Pill Test).

1.4 ADMINISTRATIVE REQUIREMENTS

A. Submittal Procedures:

1. Action Submittals and Informational Submittals shall be submitted in accordance with Section 01 3300, Submittal Procedures.
2. Sustainable Design Submittals shall comply with the additional requirement of Section 01 8113, Sustainable Design Requirements.
3. Closeout Submittals shall be submitted in accordance with Section 01 7700, Closeout Procedures.

B. Pre-Installation Meeting: Conduct at Project site.

1.5 ACTION SUBMITTALS

A. Shop Drawings: For carpet installation, plans showing the following:

1. Columns, doorways, enclosing walls or partitions, built-in cabinets, and locations where cutouts are required in carpet.
2. Locations where dye lot changes occur.
3. Seam locations, types, and methods.
4. Pattern type, repeat size, location, direction, and starting point.

B. Product Data: For each type of product indicated, demonstrate compliance with specified attributes.

C. Samples: The following samples are required.

1. Submit sample for each type of carpet (approximately 18 inches x 18 inches) and edge strip (minimum 6 inch length) to Architect for review.
2. Manufacturer's full range of colors for Architect's selection. Architect may select more than one color.

1.6 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Manufacturer and Installer.

B. Product Test Reports: Tests performed by a qualified testing agency for carpet.

C. Sample Warranty: As specified.

D. Record of Pre-installation Meeting.

1.7 CLOSEOUT SUBMITTALS

A. Warranty: Submit executed warranty.

B. Maintenance Data: For carpet, to include in maintenance manuals.

1.8 MAINTENANCE MATERIALS

A. Furnish extra materials, from the same product run, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

B. Tag with manufacturer's name and color pattern.

1. Carpet Tile: Provide 5 percent of quantity installed for extra stock.

1.9 QUALITY ASSURANCE

A. Manufacturer Qualifications: An entity manufacturing commercial/contract carpeting continuously for a period of 25 years minimum.

B. Installer Qualifications: An entity that employs installers and supervisors with a minimum of 5 years of experience in techniques required by manufacturer for carpet installation and seaming method indicated.

C. Use only new materials and products, unless existing materials or products are specifically shown otherwise on the Drawings to be salvaged and re-used.

D. Single-Source Responsibility: Use materials and products of one manufacturer whenever possible.

E. Materials, components, assemblies, workmanship and installation are to be observed by the Project Inspector. Work not so inspected is subject to uncovering and replacement.

1.10 DELIVERY, STORAGE AND HANDLING

A. Deliver materials to Project site in original factory wrappings and containers, labeled with identification of manufacturer, brand name, and lot number.

B. Transport and handle in strict accord with the manufacturer's written recommendations.

C. Store carpet products and installation materials off of ground in dry spaces protected from the weather, with ambient temperatures maintained within range recommended by manufacturer.

1.11 FIELD CONDITIONS

A. Do not install materials unless ambient temperature of 65 degrees F and 65 percent relative humidity is maintained 72 hours prior to and during laying and until all materials have been stored at site for 48 hours between 60 degrees F and 80 degrees F and a relative humidity below 65 percent.

1. Do not apply materials on wet or damp surfaces.

1.12 WARRANTY

A. Manufacturer: In addition to the Contractor's Standard Guarantee, furnish Owner with the following manufacturer warranties:

1. Special Carpet Warranty: Written warranty, signed by carpet manufacturer and Contractor agreeing to replace carpet that does not comply with requirements or that fails within specified warranty period. Warranty does not include deterioration or failure of carpet due to unusual traffic, failure of substrate, vandalism, or abuse. Failures include, but are not limited to, more than 15 percent loss of face fiber, edge raveling, snags, zippering, runs, delamination, and backing resiliency loss in normal use.
   a. Warranty Period: Limited Lifetime Warranty.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Tandus Centiva, a Tarkett Company; tel: (800) 248-2878; web: www.tandus-centiva.com.

1. Substitutions: Per Division 01.
2. Substitutions: Not permitted.

OMIT PARAGRAPH BELOW IF SHAW CARPET IS NOT IN PROJECT.

B. Shaw Contract®, tel: (800) 257-7429; web: www.shawcontract.com.

1. Substitutions: Per Division 01.

2.2 DESIGN AND PERFORMANCE CRITERIA

A. Sustainable Design:

1. VOC Limits for field-applied adhesives, sealants, fillers, coatings and primers shall comply with limits specified in Section 01 6116.

B. Carpet: Comply with Title 24, Part 11, 5.504.4.4; meet testing and product requirements of one of the following:

1. Carpet & Rug Institute "Green Label Plus".
2. California Department of Public Health Standard Practice for testing of VOC's.
3. NSF/ANSI 140 at Gold Level minimum.
4. Scientific Certification Systems Sustainable Choice.
5. All carpet cushion installed shall meet requirements of Carpet & Rug Institute "Green Label Program".

6. All carpet cushion installed shall meet requirements of Title 24, Part 11, Table 5.504.4.1.

C. ADA Compliance:

1. Comply with guidelines set forth in the American with Disabilities Act for minimum static coefficient of friction of 0.6 for accessible routes.
2. Pile Height: 1/2 inch maximum.

D. Fire Resistance:

1. Surface Flammability: Pass CPSC FF 1-70 testing for carpet and large rugs.
2. Smoke Generation: Less than 450 per ASTM E 662.

2.3 CARPET TILES

A. Carpet Tiles: Infinity ER3® Modular RS Tile manufactured by Tandus Centiva.

1. Physical Properties / Design Criteria:
   a. Color: To be selected from manufacturer's full range of colors (12 minimum).
   b. Tile Size: 24 inches x 24 inches.
   c. Construction: Level Loop.
   d. Gauge: 1/13.
   e. Stitch Rate: 9.5 per inch.
   f. Pile Height Average: 0.117 inch.
   g. Total Product Thickness: 0.222 inch.
   h. Face Weight: 20 ounces per square yard.
   i. Primary Backing: Non-woven synthetic fiber.
   j. Fiber System: 100 percent Antron BCF Nylon 6,6.
   k. Dye Method: 60 percent solution dyed and 40 percent yarn dyed.
   l. Electrostatic Propensity: 2.0 kV per AATCC 134 test method; Permanent Conductive Fiber.
   m. Colorfastness to Light: >4 after 60 hours per AATCC 16E test method.
   n. Soil / Stain Protection: Ensure (proprietary).
   o. Critical Radiant Flux: Class 1 (minimum 0.45 watt per square centimeter) per ASTM E 648 and NFPA 253.
2. Environmental Requirements:
   a. Backing to be impermeable to moisture and airflow.
   b. Recycled content claims to be certified by independent third party (ie: SCS).
   c. Total Recycled Content: 53.5 percent (37.3 percent pre-consumer, 16.2 percent post-consumer).
   d. Material Composition: Non PVC.
   e. NSF/ANSI 140 Rating: Platinum.
   f. Antimicrobial Chemicals: None per ASTM E 2471 testing.
   g. CRI Green Label Plus Certified.

2.4 WALK-OFF MATS

A. Walk-Off Mats: Abrasive Action II ER3® Modular RS Tile manufactured by Tandus Centiva.

1. Physical Properties / Design Criteria:
    a. Color: To be selected from manufacturer's full range of colors.
    b. Tile Size: 24 inches x 24 inches.
    c. Construction: Accuweave® Patterned Loop.
    d. Total Product Thickness: 0.315 inches.
    e. Gauge: 1/12.
    f. Stitch Rate: 8.0 per inch.
    g. Pile Height Average: 0.187 inch.
    h. Face Weight: 24 ounces per square yard.
    i. Primary Backing: Non-woven synthetic fiber.
    j. Fiber System: TDX® Nylon.
    k. Dye Method: 100 Percent Solution Dyed.
    l. Electrostatic Propensity: 1.5 kV per AATCC 134 test method; Permanent Conductive Fiber.
    m. Colorfastness to Light: >4 after 60 hours per AATCC 16E test method.
    n. Soil / Stain Protection: Ensure (proprietary).
    o. Critical Radiant Flux: Class 1 (minimum 0.45 watt per square centimeter) per ASTM E 648 and NFPA 253.
2. Environmental Requirements:
    a. Backing to be Impermeable to moisture and airflow.
    b. Recycled content claims to be certified by independent third party (ie: SCS).
    c. Total Recycled Content: 51.9 percent (36.2 percent pre-consumer, 15.7 percent post-consumer).
    d. Material Composition: Non PVC.
    e. NSF/ANSI 140 Rating: Platinum.

2.5 AUXILIARY MATERIALS

A. Adhesives: Provide adhesive system as recommended by product manufacturer and complying with Section 01 6116.

B. Trowelable Leveling and Patching Compounds: Latex-modified, Portland cement based or blended hydraulic-cement-based formulation provided or approved by carpet manufacturer for applications indicated.

C. Wall Base, Carpet Edge, and Transition Strips: Per Section 09 6513, Resilient Base and Accessories.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, with Installer present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.

B. Verify that finishes of substrates comply with tolerances and other requirements specified in other Sections and that substrates are free of cracks, ridges, depressions, scale, and foreign deposits that might interfere with adhesion of floor coverings.

1. Verify that surfaces are smooth and level with no more than 1/8 inch in 10 feet variation from level.

C. In the event of discrepancy, immediately notify the Architect. Do not proceed with installation of carpet in areas of discrepancy until all such discrepancies have been resolved and all unsatisfactory conditions have been corrected.

D. Concrete Subfloors: Carpet installer to obtain Moisture Content/pH Testing results and acknowledge, in writing, that the report has been received and approved. Installation of carpet may not begin without this review and approval.

E. Start of installation indicates Installer's acceptance of substrate surfaces and conditions.

3.2 PREPARATION

A. New Concrete Subfloors: Remove subfloor ridges and bumps. Fill minor low spots, cracks, joints, holes, and other defects with trowelable leveling and patching compound to achieve smooth, flat, hard substrate surface.

1. At transitions between different flooring materials, use trowelable underlayment where necessary to raise edge of carpet to align with top of adjacent flooring material.
2. Use leveling and patching compound compatible with carpet adhesive system. Do not use gypsum based compounds.

B. Verify that substrates are dry and free of curing compounds, sealers, and hardeners.

1. Concrete floors with curing, hardening and breaking compounds shall be abraded with mechanical methods to remove compounds.

C. Sweep and vacuum clean substrates to be covered by carpet immediately before installation.

3.3 INSTALLATION

A. General:

1. Extend carpet installation under open-bottomed obstructions, and under removable flanges, or obstructions.

2. Extend carpet into closets and alcoves of rooms, unless another floor finish is indicated for such spaces.
3. Extend carpet under all moveable furniture, disabled accessible cabinets and equipment unless otherwise indicated.
4. Extend carpet below or within trim rings for electrical floor outlet boxes.
5. Cut and fit carpet to butt tightly to vertical surfaces, permanent fixtures, and built-in furniture including cabinets, pipes, outlets, edgings, thresholds, and nosings. Bind or seal cut edges as recommended by carpet manufacturer.
6. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on carpet as marked on subfloor. Use nonpermanent, nonstaining marking device.
7. Completed carpet is to be smooth and free of bubbles, puckers and other defects.
8. Transition Strips or Reducers: Provide wherever carpeting abuts other types of floors or floor covering. Install straight and true. Fasten to floor using adhesive or mechanical fasteners in accordance with manufacturer's directions. Where carpet terminates at door openings, center strips under doors.

B. Adhesive Application:

1. Install flooring adhesive using manufacturer’s approved materials and installation methods.
2. Follow adhesive manufacturer’s directions for mixing and applying. Cover surface evenly. Do not exceed working area or time limits recommended by manufacturer.

C. Carpet Tile Installation:

1. Comply with CRI's "CRI Carpet Installation Standard," Section 18, "Modular Carpet" and with carpet tile manufacturer's written installation instructions.
2. Installation Method: **[Install carpet tiles with self-adhering pressure-sensitive adhesive]**.
3. Maintain dye-lot integrity. Do not mix dye lots in same area.
4. Install carpet tiles in quarter-turned pattern per manufacturer’s recommendations.

3.4 DEFECTIVE WORK

A. Repair damaged and defective work and eliminate functional and visual defects. Where repair is not possible replace work. Adjust joints for uniform appearance.

3.5 CLEANING AND PROTECTION

A. General:

1. Remove excess adhesive from walls and floors.
2. Clean up debris and remove from site.

B. Perform the following operations immediately after completing carpet installation:

1. Remove excess adhesive and other surface blemishes using cleaner recommended by carpet manufacturer.

2. Remove yarns that protrude from carpet surface.
3. Vacuum carpet using commercial machine with face-beater element.

C. Protect installed carpet to comply with CRI's "Carpet Installation Standard".

D. Protect carpet against damage from construction operations and placement of equipment and fixtures during the remainder of construction period. Use protection methods indicated or recommended in writing by carpet tile manufacturer.

1. Provide a temporary non-staining paper pathway in all traffic areas.

END OF SECTION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Fabric-baked vinyl wall coverings.
2. Adhesives and cleaning of adjacent surfaces.
3. Installation accessories.

1.2 RELATED REQUIREMENTS

A. Section 09 9100, Painting.

1.3 REFERENCES AND STANDARDS

A. California Building Code (CBC), edition as note on the Drawings, as adopted by the California Division of the State Architect (DSA).

B. California Green Building Standards Code, edition as noted on the Drawings, as adopted by the California Division of the State Architect (DSA).

C. ASTM International (ASTM):

1. D 1308, Test Method for Effect of Household Chemicals on Clear and Pigmented Organic Finishes.
2. E 84: Test Method for Surface Burning Characteristics of Building Materials.
3. E 603: Guide for Room Fire Experiments.
4. G 21: Recommended Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi.

D. Chemicals Fabrics and Film Association (CFFA):

1. CFFA-W-101-A, Quality Standard for Vinyl Coated Fabric Wall Covering.

E. Federal Specifications (FS):

1. CCC-T-191B.

F. National Institute of Standards and Technology Test Methods (NIST):

1. IR-82-2532.
2. IR-82-2634.

G. Wallcoverings Association (WA):

1. W-101: WA Quality Standard for Polymer Coated Fabric Wallcovering.

1.4 ADMINISTRATIVE REQUIREMENTS

A. Submittal Procedures:

1. Action Submittals and Informational Submittals shall be submitted in accordance with Section 01 3300, Submittal Procedures.
2. Sustainable Design Submittals shall comply with the additional requirement of Section 01 8113, Sustainable Design Requirements.
3. Closeout Submittals shall be submitted in accordance with Section 01 7700, Closeout Procedures.

1.5 ACTION SUBMITTALS

A. Product: Submit list and complete descriptive data of all products proposed for use. Include manufacturer's specifications, published warranty or guarantee reports of tests specified, installation instructions, and maintenance instructions.

B. Samples:

1. Manufacturer's full range of colors for Architect's selection

1.6 INFORMATIONAL SUBMITTALS

A. Sample of manufacturers' warranty.

1.7 CLOSEOUT SUBMITTALS

A. Maintenance data including methods for maintaining wall covering as well as precautions for use of cleaning materials and methods that could be detrimental to finishes and performance.

B. Warranty: Submit executed warranty.

1.8 MAINTENANCE MATERIALS

A. Extra Material: Furnish in quantity equal to one percent or one bolt whichever is more, of material installed for each type, pattern and color used on the work and taken from the same run as that used for the project. Furnish full width material in one roll increments but not less than one full roll of each type, pattern and color.

1.9 QUALITY ASSURANCE

A. Use only new materials and products, unless existing materials or products are specifically shown otherwise on the Drawings to be salvaged and re-used.

B. Use materials and products of one manufacturer whenever possible.

C. All materials, components, assemblies, workmanship and installation are to be observed by the Owner's Project Inspector. Work not so inspected is subject to uncovering and replacement.

D. Applicators Qualifications: Work of this Section shall be performed by a firm regularly engaged in the installation of commercial wall coverings of the types and qualities specified and acceptable to the Architect. Foreman and workers be thoroughly experienced in performing the work equal to that required.

E. Single Source Responsibility: Provide adhesives and primers produced by the same manufacturer.

F. Submittals other than those specified shall match the appearance and color of the specified material, and shall equal or exceed the quality, total weight, fabric backing, tensile and tear strength, UL fire ratings and mildew resistance of the specified product.

G. Imperfections such as engraving roller die marks, roller repeat marks, glossy surface appearance or other features deemed not in conformance with the specified materials, will be cause for rejection by the Architect, if evidenced in either the submitted samples or the manufactured material delivered to the job.

1.10 DELIVERY, STORAGE AND HANDLING

A. Deliver undamaged products to job in manufacturer's sealed containers and/or original bundles with tags and labels intact.

B. Store materials in protected, dry conditions off of ground and in areas so as to not interfere with the progress of the work.

C. Transport, store and handle in strict accord with the manufacturer's written recommendations.

1.11 FIELD CONDITIONS

A. Ambient Conditions:

1. Provide continuous ventilation and heating facilities to maintain substrate and ambient temperatures above 65 degrees F, unless required otherwise by manufacturer's instructions.
2. Do not apply adhesive when substrate surface temperature or ambient temperature is below 65 degrees F, or relative humidity is above 40%.
3. Maintain these conditions 72 hours before, during and after installation of vinyl wall covering.

B. Lighting: Do not install wall covering until a lighting level of not less than 15 foot-candles (160 lux) is provided on the surfaces to receive wall covering.

C. Do not apply under conditions which jeopardize quality of appearance of finished product.

D. Ensure maximum surface moisture conforms to wall covering manufacturer's requirements and surface exhibits negative alkalinity.

1.12 FIELD MEASUREMENTS

A. Make and be responsible for all field dimensions necessary for proper fitting and completion of work. Report discrepancies to Architect before proceeding.

1.13 WARRANTY

A. Manufacturer: In addition to the Contractor's Standard Guarantee, furnish Owner with the following fully executed manufacturer warranty.

1. Wall covering materials when adhered to a sound surface with the manufacturer's recommended procedures and adhesive, shall be warranted free of manufacturing defects for a period of five (5) years.
2. Assuming no deterioration in the subsurface, wall covering materials shall be further warranted against permanent surface staining attributed to mildew and/or bleed-through of foreign impurities embedded in the fabric backing, as well as separation of the vinyl from its backing.

PART 2 - PRODUCTS

2.1 DESIGN AND PERFORMANCE CRITERIA

A. Provide materials bearing the UL label and marking, indicating the fire hazard classification of the wall covering as determined by ASTM E84.

B. Sustainable Design:

1. VOC Limits for field-applied adhesives, sealants, fillers, coatings and primers shall comply with limits specified in Section 01 6116.

2.2 GENERAL

A. Materials shall be ordered not less than 45 days prior to the scheduled installation date.

B. Substitutions: Any substitution to be considered equal must be similar in texture and pattern, provide similar color options, meet physical characteristics of specified material, and be submitted for approval in accordance with Section 01 3300, Submittal Procedures.

2.3 WALL COVERING MATERIALS

A. Flexible Vinyl Wall Coverings: "Spellbound" by Koroseal Interior Products, or equal complying with WA-101, Type II.

1. Total Weight: Minimum 21 ounces per linear yard.
2. Roll Width: 54 inches.
3. Gauge: 27 mils.
4. Fabric Backing: Coarsely woven cotton; "Osnaburg."
5. Mildew/Mold Inhibitor: Integral with wallcovering.

6. Flammability:
   a. NFPA 255 (UL723): Class A.
   b. NFPA 286: Meets requirements for flame spread, smoke developed, and flashover.
7. Color and Pattern: As selected by Architect from manufacturer's standard range.

B. Microvented Flexible Vinyl Wall Covering: "Spellbound" by Koroseal Interior Products, or equal complying with WA-101, Type II.

1. Total Weight: Minimum 21 ounces per linear yard.
2. Roll Width: 54 inches.
3. Gauge: 27 mils.
4. Fabric Backing: Coarsely woven cotton; “Osnaburg.”
5. Mildew/Mold Inhibitor: Integral with wallcovering.
6. Flammability:
   a. NFPA 255 (UL723): Class A.
   b. NFPA 286: Meets requirements for flame spread, smoke developed, and flashover.
7. Color and Pattern: As selected by Architect from manufacturer's standard range.
8. Microvent Frequency Rate: 150 holes per square inch.
9. Location of Use: All exterior walls unless specifically noted otherwise.

C. Accent Wall Covering: Allow for 15 percent accent color of same material to be located as approved by Architect.

2.4 WALL COVERING PRIMERS AND ADHESIVES

A. General:

1. Provide manufacturer's recommended mildew-resistant, non-staining, adhesive, primer, and sealer manufactured expressly for use with the scheduled wall coverings.
2. Provide materials that contain mildew inhibitors that are non-staining to the wall-covering.

B. Manufacturer: Roman Decorating Products as specified to establish required level of performance, or equal.

C. Primer: “Pro-909.” Do not begin installation of wall covering until surfaces to receive wall covering have been correctly prepared and primed.

D. Adhesive: VOC compliant, mildew resistant; “Pro-880” or strippable “Pro-870,” or equal as recommended by wall covering manufacturer and containing mildew inhibitors.

2.5 ACCESSORIES

A. Masking Tape: 3M "General Purpose Type," or equal.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Prior to installation of the work of this Section, carefully examine and verify that installed work of all other trades is complete to the point where this installation may properly commence.

1. Verify that gypsum board surfaces have been finished to Level 4 in accordance with GA-214 and as specified in Section 09 2900, Gypsum Board.
2. Ensure wall surface flatness tolerances do not vary more than 1/8 inch in 10 feet, nor vary at a rate greater than 1/16 inch per running foot.
3. Unacceptable surfaces will be made acceptable before any material is applied. Beginning of wall application will constitute acceptance of surface.

B. Verify that specified items may be installed in accordance with the approved design. In event of discrepancy, immediately notify Architect. Do not proceed in discrepant areas until discrepancies have been fully resolved.

3.2 PREPARATION

A. Comply with manufacturers written instructions for surface preparation.

B. Test surfaces to receive wall covering with a moisture meter. Do not install wall covering on surfaces with a moisture content exceeding 4 percent.

C. Clean substrates of substances that could impair wall covering's bond, including mold, mildew, oil, grease, incompatible primers, and dirt.

D. Prepare substrates to achieve a smooth, dry, clean surface free of flaking, unsound coatings, cracks, and defects.

E. Acclimatize wall-covering materials by removing them from packaging in the installation areas not less than 24 hours before installation.

3.3 INSTALLATION

A. General:

1. Comply with wall-coverings manufacturers' written installation instructions applicable to products and applications indicated, except where more stringent requirements apply.
2. Install wall-covering prior to installation of all wall mounted plumbing, cabinets, molding and electrical fixtures.
3. Notify the Architect immediately of variations in color or pattern match. Do not continue with work until approved by the Architect.
4. Microvented wall coverings shall be used on all exterior walls unless specifically noted otherwise.
5. Final product shall be secure and clean with all air bubbles eliminated and in good contact with under surface and without gaps or overlaps.

6. Fill all pin holes, cracks and other surface imperfections with spackle and sand smooth. Scrape off all pimples to leave surface smooth and free of imperfections, defects and debris prior to application of wall covering.
7. Before cutting, examine pattern and color and determine that they are the correct pattern and color as specified.

B. Primer: Surfaces to receive wall covering materials shall be primed with specified primer prior to installation. Coordinate with Section 09 9100, Painting.

C. Application of Wall Covering:

1. Materials shall be cut using straight edge so that all seams will butt without gaps and will form straight plumb lines.
2. Closely and neatly butt all seams; do not overlap.
3. Hang wall covering with length of roll or sheet vertical, and with each width in a single piece; horizontal seams will not be accepted.
4. Make vertical seams at least 6 inches from inside and outside corners. Seams shall be straight and truly vertical.
5. Outside corners receiving corner guards should be used as a location to adjust wall-covering needing realignment due to “out of–plumb” walls.
6. Patterns shall be matched and aligned with adjacent material.
7. Install each roll in sequence starting from the highest to the lowest number and each strip in the same sequence as cut from the roll.
8. Install non-match panels on the hanging surface, reversing every other panel unless otherwise recommended by the manufacturer. Match side joints for continuity.
9. If pattern is not random, examine the repeat design to assure pattern alignment. If necessary trim salvage deep enough to assure color uniformity.

D. If defective material is discovered, stop work and immediately notify the Architect.

3.4 FIELD QUALITY CONTROL

A. After the application of three strips, request inspection by the Architect, and if there are variations in color or pattern which are considered to be excessive, the wall covering distributor or manufacturer's representative shall be notified for their inspection before any further wall covering is installed.

B. Wall covering is not required behind fixed cabinets or chalkboards and tackboards larger than 4 feet x 4 feet.

3.5 CLEANING

A. Excessive paste shall be immediately cleaned from surfaces as work progresses. Scrape material to remove all air pockets and wrinkles and to insure positive contact with wall surfaces.

B. Upon completion of installation, remove manufacturer's temporary label, marks of identification. Thoroughly wash surfaces and remove foreign material. Leave entire

work in neat, orderly, clean and acceptable condition. Replace damaged parts and surfaces which are not free from imperfections.

3.6 PROTECTION

A. Protect work and materials of this Section prior to and during installation, and protect the installed work and materials of other trades.

B. In the event of damage, make all repairs and replacements necessary to the approval of the Architect at no additional cost to the Owner.

C. Exposed finishes shall be free from scratches, dents, permanent discolorations and other defects in workmanship or material.

END OF SECTION

PART 1 - GENERAL

1.1 INCLUSION OF OTHER CONTRACT DOCUMENTS

A. The General Conditions, Supplementary Conditions and Division 1 are fully applicable to this Section, as if repeated herein.

1.2 QUALITY ASSURANCE

A. Use only new materials and products, unless existing materials or products are specifically shown otherwise on the Drawings to be salvaged and re-used.

B. Use materials and products of one manufacturer whenever possible.

C. All materials, components, assemblies, workmanship and installation are to be observed by the Owner's Inspector of Record. Work not so inspected is subject to uncovering and replacement.

D. The adhesion of inlaid letters and symbols will be tested. See article 1.06 below.

1.3 SUBMITTALS

A. Refer to Section 01 3300.

B. Manufacturer's Data: Submit list and complete descriptive data of all products proposed for use. Include manufacturer's specifications, published warranty or guarantee, installation instructions, and maintenance instructions.

C. Samples: The following samples are required. Submit per Section 01 3300.

1. Submit sample for each type of material and letter font to Architect for review in full-size sample sign as described below.
2. Manufacturer's full range of colors for Architect's selection.
3. Submit full size sample of room identification signs.
4. Submit full-size sample of other signs when requested by Architect

D. Shop Drawings: Show all parts, connections and anchorages, adjacent materials, fully dimensioned and noted. Include dimensioned layout and installation details for field installation.

E. Guarantee of Contractor/Subcontractor per Article 1.5.

1.4 GUARANTEE

A. Refer to General Conditions and Section 01 3300.

B. Submit fully executed Guarantee with submittal package required by Article 1.4.

C. Provide manufacturer's guarantee against manufacturing defects. Text or symbols that can be removed from the sign face utilizing a sharp object or other conventional methods will be considered a manufacturing defect.

1.5 REFERENCES AND STANDARDS

A. California Building Code, edition as noted on the drawings, as adopted by the California Division of the State Architect (DSA).

B. California Green Building Standards Code, edition as noted on drawings, as adopted by the California Division of the State Architect (DSA).

C. Title 19, CCR, Article 33.01(i).

1.6 DELIVERY, STORAGE AND HANDLING

A. Deliver undamaged products to job in manufacturer's sealed containers and/or original bundles with tags and labels intact.

B. Store materials in protected, dry conditions off of ground and in areas so as to not interfere with the progress of the work.

C. Transport, store and handle in strict accord with the manufacturer's written recommendations.

D. Make delivery to job when notified by Contractor verifying that the job is ready to receive the work of this Section and that arrangements have been made to properly store, handle and protect such materials and work.

1.7 FIELD MEASUREMENTS

A. Make and be responsible for all field dimensions necessary for proper fitting and completion of work. Report discrepancies to Architect before proceeding.

PART 2 - PRODUCTS

2.1 PLASTIC SIGNS – TACTILE

A. Product, Manufacturers, Materials & Fabrication:

1. Product/Manufacturer: “Inlaid Tactile Sign” as manufactured by Accent Signage Systems, Inc. of Minneapolis, Minnesota (800) 215-9437, Ellis & Ellis Sign Systems of Sacramento (916) 924-1936, ASI-Modulex of Los Altos, CA, (650) 940-1354, Weidner Architectural Signage of Sacramento , CA, or approved equal. Substitutions utilizing other materials or manufacturing processes or methods will not be accepted.
2. Sign Face: Gravo-Tac™ Exterior, 2-ply, 1/8-inch (1/4-inch total thickness). Painted signs will not be accepted.

3. Tactile Text: Provide tactile text and Raster™ Braille at all plastic tactile signage. Tactile text shall be inlaid into sign face 1/32-inch and raised 1/32- inch minimum above sign face surface. Inlaid text shall be Gravo-Tac™ Exterior, 1-ply, 1/16-inch thick material. Painted signs will not be accepted
    a. Provide lettering and graphics precisely formed, uniformly opaque to comply with relevant ADA regulations and requirements indicated for size, style, spacing, content, position and colors. Tactile signs shall comply with CBC, Section 11B-703.
    b. Symbols where specified shall be International Style.
    c. Braille shall be California Contracted (Grade 2) Braille. Dots shall be 0.10-inch on centers in each cell and 0.30-inch on center between corresponding dots in adjacent cells. Dots shall be raised a minimum of 0.025-inch and a maximum of 0.035-inch above the background.
4. Colors: High contrast, non-glare, integral colors for graphics. All integral materials shall be U.V. stabilized. Letters and symbols shall be in high contrast (light color) with background (dark) color and must conform to the CBC and the 2010 ADA Standards.
5. Fabrication:
    a. Sign Face Depth: 0.25-inch thickness.
    b. Panel appearance: Manufacturer's standard, high contrast, semi-matte colors.
    c. Surface Texture: Matte Non-Glare.
    d. Letter style, size and layout position: Lettering shall be minimum 1-inch high, unless otherwise indicated. The stroke of the uppercase letter “I” shall be 15% maximum of the height of the character. The width of the uppercase letter “O” shall be 60% minimum and 110% maximum of the height of the uppercase letter “I”. Letter style to be Sans Serif, uppercase, accompanied by California Contracted (Grade 2) Braille directly below text at all locations where raised text is required.
    e. Text Schedule: Confirm text, symbols and numbering with the Architect and Owner.
    f. Sign Size: As indicated on drawings or if not shown, as required to accommodate text, symbols and Braille. Where signs are installed on window glazing, fabricate a blank sign back to match in size and shape to sign. Sign backs will cover back side of sign from view through window on opposite side of sign. Signs that are mounted back-to-back on glazing are to be matching in size; the smaller sign is to be increased in size as required to match the larger sign.
    g. Sign Shape: As indicated on drawings. Radiused corners, typical.
    h. Inlaid Letter Adhesion Process: Inlaid material shall be adhered into 1/32-inch deep routed sign face utilizing the heat and pressure bonded/chemically welded process as developed by Accent Signage Systems for the specified “Inlaid Tactile Sign”. Sign manufacturers for the specified “Inlaid Tactile Sign” shall be familiar with and utilize the exact same manufacturing process developed by Accent Signage Systems. Manufacturer must utilize the same and required equipment, products and techniques as required to produce

authentic “Inlaid Tactile Signs” as developed by Accent Signage Systems. Other adhesive products and methods, including applied adhesive tapes will not be accepted. The “Inlaid Tactile Sign” manufacturing process must include the following steps, equipment and products:

1) Use “Weld-On 16” adhesive as manufactured by IPS Corporation, no substitutions allowed. Other adhesives including adhesive tapes will not be accepted. Apply adhesive to recessed, routed areas utilizing an EFD manufactured dispensing machine for a uniform bead of adhesive without causing excess adhesive to squeeze out from edges.

2) Immediately following the adhesive application, utilize a hot-stamping machine with a silicone pad at 90 derometer with a pressure of 50 pounds per square inch at 120 degrees for 10 seconds to press the inlaid letters into the sign face. This process will assure that the letters are uniformly adhered to the sign face. Please note that the adhesion of inlaid letters will be tested and that any text or symbols that can be removed from the sign face utilizing a utility knife, sharp object or other conventional methods will be considered a manufacturing defect.

B. Sign Types:

1. Room Identification Sign: Provide as shown on drawings.
   a. Provide name and room number at each door indicated. Names and numbers to be reviewed and approved by Architect and Owner prior to fabrication. Allow an average of 4-numbers and 14-letters for each sign.
   b. Sign to be as detailed on drawings and installed as directed on, or adjacent to, doors.
2. Toilet Room Identification Sign: In addition to the Door Symbol listed below, provide a Toilet Room Identification Sign at the strike side of every toilet room door. Sign shall have a 6-inch high International Symbol of Accessibility; 1-inch tall raised lettering, specifying the room name to the left of the international symbol of accessibility with Grade #2 Braille translation below. Size and layout as shown on drawings.
3. Tactile Exit Sign: 6 inches wide by 3-1/2 inches high with raised text word "EXIT" and CA Braille below. See drawings for additional information and locations.
4. Tactile Exit Route Sign: To read: “EXIT ROUTE”. Locate as shown in drawings.
5. Tactile Stair Sign: To read: “EXIT STAIR DOWN”. Provide per CBC Section 1013.4 at exit door for stairways leading directly to grade. Locate as shown in drawings.
6. Tactile This is Not an Exit Sign: To read: “THIS IS NOT AN EXIT”. Locate as shown in drawings.

2.2 PLASTIC SIGNS - NON-TACTILE

A. Materials (typical unless otherwise noted):

1. Acceptable Product: Acrylic panel sign as manufactured and distributed by Ellis & Ellis Sign Systems, (916) 924-1936.

2. Sign Face: 1/4-inch, matt finish, non-glare acrylic with subsurface vinyl and paint. Painted faces will not be accepted.
3. Colors: Colors shall match Tactile Signs as specified herein and will be those as selected by Architect and Owner. All integral materials shall be U.V. stabilized. Graphics and text shall be in high contrast (light color) with background (dark) color.
4. Fabrication:
    a. Letter style, size and layout position: Lettering shall be a minimum of 1-inch high, unless otherwise indicated. The stroke thickness of the uppercase letter "I" shall be 15% maximum of the height of the character. The width of the uppercase letter "O" shall be 60% minimum and 110% maximum of the height of the uppercase letter "I". Letter style to be Sans Serif, uppercase. Non-Tactile Signs shall comply with CBC, Section 11B-703.5.
    b. Text Schedule: Confirm text, symbols and numbering Architect and Owner using the shop drawing/submittal process.
    c. Sign Size: As indicated on drawings or if not shown, as required to accommodate text and symbols. Where signs are installed on window glazing, fabricate a blank sign back to match in size and shape to sign. Sign backs will cover back side of sign from view through window on opposite side of sign.
    d. Sign Shape: As indicated on drawings or as required to accommodate appropriate size lettering based on viewing distance. Increase size of sign as necessary to accommodate the specified text and size at lettering. Radius corners, typical.

B. Sign Types:

1. Toilet Room Door Symbol: Provide one of the following symbols as appropriate to the toilet room type. Toilet Room Door Symbols shall have a color contrast that is distinctly different from the color of the door. Characters, as shown, to be flush with face of symbol. The entire background color must contrast with door. It is not allowed to have a thin contrasting border around the symbol, with remainder of sign background in a non-contrasting color:
    a. Girls: 12-inch diameter circle; 1/4-inch thick with eased edges.
    b. Boys: Equilateral triangle with sides 12-inches long; 1/4-inch thick with eased edges.
    c. Women: 12-inch diameter circle; 1/4-inch thick with eased edges.
    d. Men: Equilateral triangle with sides 12-inches long; 1/4-inch thick with eased edges.
    e. Unisex: ¼-inch thick, equilateral triangle of contrasting color and adhered to the face of 12-inch diameter circle, which is a contrasting color to the door, with the corners of the triangle reaching the edge of the circle. Both the circle and triangle to have eased edges.
2. Occupancy Signs (capacity sign): Sign text to be 1 1/2-inches tall. Quantity of occupants shall be as indicated on plans or as provided by Architect. Signs to read as follows:

a. Maximum Number - General: To read: "The number of people permitted in this room shall not exceed by order of the Division of the State Architect"

b. At Rooms Used for Assembly and Dining: To read: "The number of people permitted in this room shall not exceed for Assembly and for Dining by order of the Division of the State Architect"

3. Assistive Listening System Sign: 7 inches high x 14 inches wide International Symbol of Access for Hearing Loss to read: "ASSISTIVE LISTENING SYSTEM AVAILABLE." Provide as indicated in drawings.
4. Floor Live Load Capacity Sign: To read "125 PSF MAXIMUM LIVE LOAD DESIGN FOR STAGE FLOOR". Height of letters to be 1-1/2". Locate as shown in drawings.
5. Roof Access Sign: To read "ROOF ACCESS". Provide at all doors leading to a roof access ladder or stair.

2.3 PAINTED SIGNAGE

A. Fire Barrier Sign: At Fire Barrier walls within concealed attic or floor-ceiling spaces, provide painted lettering:

1. Lettering to be 3" in height, with a minimum stroke of ½", in a contrasting color to the wall surface. Letter style to be Helvetica in all caps.
2. The text is to read "FIRE BARRIER, PROTECT ALL OPENINGS & PENETRATIONS".
3. Locate sign, on both sides of Fire Barrier, within 15 feet of the end of each wall and at intervals not exceeding 30 feet measured horizontally along the wall

2.4 BUILDING SIGNS

A. "Cast Aluminum", Helvetica regular, as manufactured by Gemini Incorporated of Cannon Falls, MN or approved equal. Provide in 8-inch tall x 1-1/2-inch stroke & 1 7/8-inch stroke x ¾-inch deep letters minimum or as indicated below. Provide with standard stud mounting. Finish shall be baked enamel. Color as selected by Architect. Text and location as specified herein and indicated on Drawings.

B. Provide one each (unless indicated otherwise in drawings) building signs. Verify exact text prior to fabrication and installation. As a minimum, text shall read as follows:

1. MultiPurpose: "MultiPurpose".
2. Classrooms: "XX" (actual text to be determined).

PART 3 - EXECUTION

3.1 INSPECTION

A. Prior to installation, carefully inspect and verify that the installed work of other trades is complete to the point where this installation may properly commence.

B. Verify that specified items may be installed in accordance with the approved design.

C. In the event of discrepancy, immediately notify Architect. Do not proceed in discrepant areas until discrepancies have been fully resolved.

3.2 INSTALLATION OF SIGNS

A. Plastic Signs:

1. Use minimum 4-recessed flush head tamper-proof screws per sign in addition to either adhesive or 2-sided adhesive tape as recommended by manufacturer for given mounting substrate.
2. Wood & Metal Framed Walls: Use vinyl tape and mounting holes for countersunk, vandal-proof mechanical fasteners (use both). Mechanical fasteners shall be of adequate length to penetrate exterior finishes and provide secure embedment into wall structure or sheathing.
3. Glass: Utilize mounting adhesive and silicone where signs are mounted to glass. Provide vinyl window sign backer to match sign face size, mounted on opposite side of glass. Signs mounted back-to-back are to be matching in size. Do not pre-drill signs for mechanical fastening where sign is to be mounted to glass.

B. Building Signs: Install using concealed anchors appropriate to substrate material and construction conditions at each location as indicated in shop drawings and as approved by the Architect. Individual letters shall be held off finishes 3/4 inch with spacers or as otherwise shown in drawings or approved shop drawings.

C. Locations of all signs must be per plans and approved Shop Drawings.

D. Other Signs: Install at location as directed by the Architect. Use mounting method that is permanent, vandal resistant and has been approved by the Architect.

3.3 PROTECTION

A. Protect work and materials of this Section and other Sections prior to and during installation, and protect the installed work and materials of all other trades.

B. In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect and at no additional cost to the Owner.

3.4 ADJUSTING AND CLEANING

A. Remove all dust, dirt, finger marks, etc. from signs and letters using cleaning methods as recommended by manufacturer

- END OF SECTION -

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Manually-operated window shades, single light filtering shadecloth.

1.2 REFERENCES AND STANDARDS

A. California Building Code (CBC), edition as note on the Drawings, as adopted by the California Division of the State Architect (DSA).

B. California Green Building Standards Code, edition as noted on the Drawings, as adopted by the California Division of the State Architect (DSA).

C. ASTM International (ASTM):

1. G 21: Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi.

D. National Fire Protection Association (NFPA):

1. NFPA 70: National Electric Code.
2. NFPA 701: Fire Tests for Flame-Resistant Textiles and Films.

1.3 ADMINISTRATIVE REQUIREMENTS

A. Submittal Procedures:

1. Action Submittals and Informational Submittals shall be submitted in accordance with Section 01 3300, Submittal Procedures.
2. Sustainable Design Submittals shall comply with the additional requirement of Section 01 8113, Sustainable Design Requirements.
3. Closeout Submittals shall be submitted in accordance with Section 01 7700, Closeout Procedures.

1.4 ACTION SUBMITTALS

A. Shop Drawings:

1. Submit for each mounting condition and each location, showing brackets, anchorage to substrate, and relationship to adjacent materials.
2. Show seams, and multi-shade lengths.
3. Show field-measured dimensions of openings scheduled to receive shades.

B. Product Data: Manufacturer's descriptive literature of controls, accessories, attachment brackets, and installation instructions. Include test reports from a qualified testing agency for each shade cloth verifying compliance with specified performance criteria.

C. Samples: Submit the following listed samples for review prior to fabrication of work.

1. Shadecoths: One set of color swatches; 6 inch x 6 inch, from manufacturer's full range of colors.
   a. Submit for each shadecoth Type specified.
   b. Mark face of material to indicate interior faces.
2. Fascia Finish Colors: One set of aluminum finish color samples from manufacturer's full range of colors.

D. Roller Shade Schedule:

1. Use same room designations as indicated on the Drawings and include opening sizes and key to typical mounting details.
2. Show field-measured dimensions of openings scheduled to receive shades.
3. **Indicate chain location for manual shades.**

1.5 INFORMATIONAL SUBMITTALS

A. Installer qualifications.

B. Certification of required flame resistance as specified.

1.6 CLOSEOUT SUBMITTALS

A. Warranty: Submit executed warranty.

B. Manufacturers’ recommended maintenance procedures for each type of shade, control, and two sets of any special tools that are required for inclusion in the Operations and Maintenance Manual.

1.7 QUALITY ASSURANCE

A. All materials, components, assemblies, workmanship and installation are to be observed by the Owner's Project Inspector. Work not so inspected is subject to uncovering and replacement.

B. Manufacturer Qualifications: Obtain roller shades through one source from a single manufacturer with a minimum of twenty years’ experience in manufacturing products comparable to those specified in this section.

C. Installer Qualifications: Installer trained and certified by the manufacturer with a minimum of ten years’ experience in installing products comparable to those specified in this section.

D. Fire-Test-Response Characteristics: Passes NFPA 701 small and large-scale vertical burn. Materials tested shall be identical to products proposed for use.

E. Anti-Microbial Characteristics: 'No Growth' per ASTM G 21 results for fungi ATCC9642, ATCC 9644, ATCC9645

F. Mockup: Provide a mockup of one roller shade assembly for evaluation of mounting, appearance and accessories.

1. Locate mock-up in window designated by Architect.
2. Do not proceed with remaining work until, mock-up is accepted by Architect.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Work shall be fabricated in ample time so as to not delay construction progress.

B. Materials shall be delivered to the site at such time as required for proper coordination of the work. Materials are to be received in the manufacturer's original, unopened packages and shall bear the manufacturer's label and fire-test response characteristics.

C. Do not deliver window shades until building in enclosed and construction within spaces where shades will be installed is substantially complete.

D. Store all materials in a dry and well ventilated place adequately protected from damage and exposure to the elements.

1.9 FIELD CONDITIONS

A. Environmental Limitations: Ambient temperature shall be 60 and 85 degrees F and relative humidity between 20 and 50 percent for a period of 24 hours before installation and until final acceptance by Owner.

B. Install roller shades after finish work, including painting, is complete and dry.

1.10 WARRANTY

A. Manufacturer: In addition to the Contractor’s Standard Guarantee, furnish Owner with the following manufacturer’s fully executed written Limited warranties for roller window shades against defects in materials and workmanship.

1. Shadecloths: 25 years.
2. Roller Shade Hardware: 25-years.

PART 2 - PRODUCTS

2.1 MANUFACTURER

A. Roller Shades: MechoSystems as specified, or equal.

1. Contact: Lyndsey Harper, lyndsey.harper@mechosystems.com.
   a. Mobile: 925-557-6675

2.2 DESIGN AND PERFORMANCE CRITERIA

A. General:

1. Provide shade hardware allowing for the removal of shade roller tube from brackets without removing hardware from opening and without requiring end or center supports to be removed.
2. Provide shade hardware that allows for removal and re-mounting of the shade bands without having to remove the shade tube, drive or operating support brackets.
3. Use only Delrin engineered plastics by DuPont, or accepted equal, for all plastic components of shade hardware. Styrene based plastics, and /or polyester, or reinforced polyester will not be acceptable.

2.3 MATERIALS AND COMPONENTS

A. Manual Operated Chain Drive Hardware and Brackets:

1. Hardware: Capable for installation of a removable fascia, for both regular and/or reverse roll, including fascias mounted continuously across two or more shade bands, which shall be installed without exposed fastening devices of any kind, universal, regular and offset drive capacity, allowing drive chain to fall at front, rear or non-offset for all shade drive end brackets; constructed of minimum 1/8-inch thick plated steel or heavier as required to support 150 percent of the full weight of each shade. Universal offset shall be adjustable for future change.
2. Operator: Single chain capable of operation of multiple shade bands, subject to manufacturer's design criteria, providing smooth operation when the axis is offset a maximum of 6 degrees on each side of the plane perpendicular to the radial line of the curve, for a 12 degrees total offset. Connectors shall be offset to assure alignment from the first to the last shade band.
3. Drive Mechanism: Positive mechanical engagement to shade roller tube. Friction fit connectors for drive mechanism connection to shade roller tube are not acceptable.
4. Drive Bracket / Brake Assembly: Model M5.
    a. Fully integrated with all accessories, including, but not limited to: fascia, room darkening side / sill channels, center supports and connectors for multi-banded shades.
    b. Drive sprocket and brake assembly shall rotate and be supported on a welded 3/8 inch steel pin.
    c. The brake shall be an over-running clutch design which disengages to 90 percent during the raising and lowering of a shade. The brake shall withstand a pull force of 50 pounds in the stopped position.
    d. The braking mechanism shall be applied to an oil-impregnated hub on to which the brake system is mounted. The oil impregnated hub design includes an articulated brake assembly, which assures a smooth, non-jerky operation in raising and lowering the shades. The assembly shall be permanently lubricated. Products that require externally applied lubrication and or not permanently lubricated are not acceptable.

e. The assembly shall be fully mounted on the steel support bracket, and fully independent of the shade tube assembly, which may be removed and reinstalled without effecting the roller shade limit adjustments.

5. Drive Chain: #10 qualified stainless steel chain rated to 90 pounds minimum breaking strength, with spring-loaded tension chain retainer. Nickel plate chain will not be accepted.

B. Manual Operated Chain Drive Hardware and Brackets at Door-Mount Conditions:

1. Hardware: Capable for installation of a removable fascia, including fascias mounted continuously across two or more shade bands, which shall be installed without exposed fastening devices of any kind constructed of minimum 1/8-inch thick plated steel or heavier as required to support 150 percent of the full weight of each shade.
2. Mounting Bracket: Dimensions shall not exceed 2-3/4" x 2-3/4".
3. Drive mechanism: Positive mechanical engagement to shade roller tube. Friction fit connectors for drive mechanism connection to shade roller tube are not acceptable
4. Drive Bracket / Brake Assembly: Model "Urbanshade."
   a. Fully integrated with all accessories, including, but not limited to: fascia, room darkening side / sill channels, center supports and connectors for multi-banded shades.
   b. Drive sprocket and brake assembly shall rotate and be supported on a welded 3/8 inch steel pin.
   c. The brake shall be an over-running clutch design which disengages to 90 percent during the raising and lowering of a shade.
   d. The braking mechanism shall be applied to an oil-impregnated hub on to which the brake system is mounted. The oil impregnated hub design includes an articulated brake assembly, which assures a smooth, non-jerky operation in raising and lowering the shades. The assembly shall be permanently lubricated. Products that require externally applied lubrication and or not permanently lubricated are not acceptable.
   e. The entire Urbanshade assembly shall be fully mounted on the steel support bracket, and fully independent of the shade tube assembly, which may be removed and reinstalled without effecting the roller shade limit adjustments.
5. Drive Chain: Stainless steel chain with a spring-loaded tension chain retainer.
   a. Chain shall have a minimum 90 pound test.
   b. Nickel plate chain will not be accepted.

2.4 SHADECLOTHS

A. Visually Transparent: "ThermoVeil" group; single thickness non-raveling 0.030 inch thick vinyl fabric, woven from 0.018 inch diameter opaque, extruded vinyl yarn comprised of 21 percent polyester and 79 percent reinforced vinyl, and in accordance with Title 19 CCR Division 1, Chapter 1, Section 3.08 and NFPA 701.

1. Type 1: 0900 Series, 1 percent open, very dense linear weave pattern, 17.6 ounces per square yard.
2. Type 2: 1000 Series, 2-3 percent open, dense linear weave pattern, 16 ounces per square yard.
3. Colors: As selected by Architect from manufacturer's full range of standard colors.

B. Room Darkening: "Midnite" Series 0200, PVC-free blackout, comprised of 27 percent polyester and 72 percent acrylic, in unseamed widths up to 126 inches.

1. Colors: As selected by Architect from manufacturer's full range of standard colors.

2.5 ACCESSORIES

A. Provide guide tracks, idle rollers, wheel carriers where recommended by manufacturer.

B. Fascia:

1. Continuous removable extruded aluminum fascia that attaches to shade mounting brackets without the use of adhesives, magnetic strips, or exposed fasteners.
2. Fascia shall be able to be installed across two or more shade bands in one piece.
3. Fascia shall fully conceal brackets, shade roller and shadecoth on the tube.
4. Provide bracket / fascia end caps where mounting conditions expose outside of roller shade brackets.
5. Notching of fascia for manual chain will not be acceptable.

C. Room Darkening Side and / or Sill Channels: Extruded aluminum with polybond edge seals and "SnapLoc" mounting brackets and with concealed fastening.

1. Exposed fasting is not acceptable.
2. Channels shall accept one-piece exposed blackout hembar with vinyl seal to assure side light control and sill light control.

2.6 FABRICATION

A. Fabricate units to completely fill openings from head to sill and jamb to jamb.

B. Shadecloth: Fabricate to hang flat without buckling or distortion; heat seal trimmed edges to hang straight without curling or raveling; shadecloth to roll true and straight without shifting sideways more than 1/8 inch in either direction per 8 feet of shade height.

C. Provide manufacturer's standard battens as required to assure proper tracking and uniform rolling of shade bands; maintain width-to-height ratios to assure proper tracking and rolling.

D. Metal Finishes: Finishes shall be factory-applied.

1. Aluminum: Baked enamel, color as selected by Architect from manufacturer's standard colors.

2. Steel: Bonderized baked enamel, color as selected by Architect from manufacturer's standard colors.

PART 3 - EXECUTION

3.1 PREPARATION

A. Job Measurements: Take field measurements for this work and be responsible for same. Report any major discrepancy between plan and field dimensions to the Architect.

B. Coordinate requirements for blocking and structural supports to ensure adequate means for installation of window shades.

3.2 INSTALLATION

A. Installation shall be in accordance with the referenced standards, manufacturer's written instructions, and as specified.

B. Wall Mount Brackets: Secure to studs or solid backing with two #8 x 1-1/2 inch round head wood screws.

C. Install fascias, closure panels and endcaps to conceal roller and operating mechanism. Do not use exposed fasteners.

D. Tolerances: Install units plumb and true with the following tolerances:

1. Maximum variation of gap at window opening perimeter: 1/4 inch per 8 feet of shade height.
2. Maximum offset from level: 1/8 inch.
3. Follow manufacturer's edge clearance specifications for shades where the width : to height ratio (W:H) exceed 1:3.

3.3 ADJUSTING

A. Adjust units for smooth operation.

B. Adjust shade and shadecloth to hang flat without buckling or distortion.

C. Replace units or components which do not hand properly or operate smoothly.

3.4 CLEANING

A. Touch up damaged finished and repair minor damage in order to eliminate evidence of repair; remove work that cannot be satisfactorily repaired and replace with new.

B. Clean exposed surfaces, including metal and shadecloth, using materials and methods recommended by manufacturer; remove work which cannot be satisfactorily cleaned and replace with new.

3.5 DEMONSTRATION

A. Demonstrate operating and instruct Owner's personnel in proper operation and maintenance of systems.

END OF SECTION

PART 1 - GENERAL

1.1 INCLUSION OF OTHER CONTRACT DOCUMENTS

A. The General Conditions, Supplementary Conditions and Division 1 are fully applicable to this Section, as if repeated herein.

1.2 WORK INCLUDED

A. Work to be done under this Contract includes all labor, materials, equipment, appliances, services, supervision and transportation necessary to design, furnish, deliver, and install relocatable buildings where and as shown on the drawings and/or specified herein, complete and ready for occupancy and use by Owner.

B. The relocatable/modular buildings shall be located at areas designated on the Drawings at **Needham Elementary** School(s), **Lodi Unified** School District, **San Joaquin** County, California.

C. Buildings shall be complete in all respects, on site, as indicated on drawings and in these specifications. Each building shall be built of modules fitted with exterior walls at sides, as shown on plans, and with exterior walls filling in the ends of each module. Wall joints and roof joints between modules shall be made weathertight.

1.3 WORK BY OTHERS

A. Work on the Project which will be executed prior to start of work of this Contract, and which is excluded from this Contract, is as follows:

1. General Sitework.

B. Work on the Project which will be executed after completion of work of this Contract, and which is excluded from this Contract, is as follows:

1. Planting Work.
2. Sprinkler Irrigation.
3. Concrete Sidewalks.
4. Electrical Connection to Building Panel.
5. Installation of Fire Alarms and Intrusion Alarm Systems.

1.4 CHAPTER 1113 OF STATUTES OF 1982

A. Contractor's attention is called to the following sections extracted from Assembly Bill 166 (effective January 1, 1982):

1. SEC.6. Section 39144 of the Education Code is amended to read: 39144. Except as provided in Section 39144.5, before letting any contract for any construction or alteration of any such school building, the written approval of plans, as to safety of

design and construction, by the Department of General Services, shall be first had and obtained.

2. SEC.7. Section 39144.5 is added to the Education Code, to read: 39144.5. Before the commencement of any fabrication, construction, or alteration of a relocatable school building of a type previously approved by the Department of General Services, the written approval of plans, as to the safety and design of construction, by the Department of General Services, shall be first had and obtained.

B. The above provisions of A.B. 166 will permit the Owner and Contractor to enter into a valid agreement for construction prior to obtaining written D.S.A. approval of the modular manufacturer's detailed structural drawings and calculations. Work, however, on the site or in the plant of manufacture may not commence until such written approval of D.S.A. is secured.

1.5 WORK SEQUENCE:

A. Work of this Section shall be performed in three phases as follows:

B. PHASE I:

1. Contractor's preparation of his building drawings and calculations and coordination of same with bid plans and specifications,
2. Presentation of the above Contractor documents for Architect's review and comment,
3. Revisions of Contractor's drawings and calculations, as required by Architect and/or Structural Engineer of record, to conform with bid documents,
4. Delivery to Architect of Contractor's original drawings,
5. Architect's filing with D.S.A.,
6. Processing of submittals and shop drawings, ordering of materials (no construction on-site or in-factory can begin until Phase III).

C. PHASE II

1. D.S.A. (Structural Safety Section, Access Compliance Section and Fire & Life Safety) plans checking (over-the-counter for pre-approved buildings). Manufacturer shall be responsible for obtaining approval of building plans and specifications; Architect shall concurrently obtain approval of low voltage plans.
2. Contractor corrects drawings and Architect revises specifications subsequent to D.S.A. comments,
3. D.S.A. approval of drawings and specifications,
4. Continuous processing of submittals and shop drawings.

D. PHASE III

1. Factory and on-site construction of the buildings,
2. Sitework shall begin after signing of agreements as scheduled by owner. Payments for sitework only will be made prior to D.S.A. approval.

1.6 SUBMITTALS

A. Refer to Division 01.

B. Manufacturer's Data: Submit list and complete descriptive data of all products proposed for use. Include manufacturer's specifications, published warranty or guarantee, installation instructions, and maintenance instructions.

1.7 REFERENCES AND STANDARDS

A. California Building Code (CBC), edition as noted on the drawings, as adopted by the California Division of the State Architect (DSA).

1.8 PROJECT SCHEDULE

A. See Division 01 documents for project schedule.

1.9 PRODUCT QUALIFICATION

A. See Division 01 documents for qualification requirements.

1.10 OBSERVATION, INSPECTION AND TESTING

A. Observation, Inspection and Testing requirements shall be in accord with Title 24, Part 1, D.S.A., and as further described below.

B. Observation of all work shall be by District Architect and their engineers.

C. Plant inspection of manufacturing of building units, as required, shall be specified in complete documents to be submitted to District Architect for review before filing with D.S.A. (T & I List). Materials testing is not required for steel stressed to less than 25,000 psi; for steel stressed over 25,000 psi comply with Section 2712, Part 2 Title 24, C.B.C.

D. All costs of inspection and observation of work done in manufacturer's plant and of delivery of materials and assemblies to site shall be included in Contract price. Order for such inspection will be issued by Owner and paid for by Owner. Retesting costs for failed tests will be the Contractor’s responsibility and will be back-charged against the contract.

E. All work done at school site and plant shall be subject to inspection by Inspector of School District, as required under Title 21, Section 29. All on-site inspection costs will be paid for by School District.

1.11 COMPLETION

A. Contractor must commence work on project within 10 days after being notified in writing to do so by Architect or Owner and must diligently pursue work, providing adequate workers in crafts involved, in order to assure completion of project within time specified.

1.12 CONTRACTORS' USE OF PREMISES

A. Specific areas will be designated for this work, for storage of materials on site, for traffic lanes to and from building site(s). Contractor's activities shall be limited to these areas.

B. Work shall proceed in such manner as to not interfere with Owner's activities in and about existing facilities. Exceptions will be made only after previous agreement between Owner, Architect and Contractor.

C. There shall be no smoking or consumption of any alcoholic beverages on any school grounds.

1.13 BUILDING LOCATION

A. It shall be the responsibility of the Contractor to properly locate building. He shall furnish all engineering required for such work, including location and identification of markers and lines, as well as setting of building in plan and elevation. All modules shall be set so floor shall be at one elevation.

1.14 TEMPORARY WATER AND ELECTRICITY

A. Owner will furnish water and electricity for construction purposes. Contractor shall make and pay for temporary connection from source to construction area.

1.15 PROTECTION

A. Protect existing installations from damage. Take measures to prevent damage to existing turf, trees, paving, streets, curbs, walks, lawn sprinkler heads, and existing buildings during construction. Restore and repair any damage caused by work under this Contract to existing facilities without expense to Owner.

1.16 FASTENINGS

A. All movable and fixed items of work in building(s) shall be provided with sufficient nails, screws, bolts, anchors, hangers, fastenings and supports of type acceptable under requirements of applicable regulations, and as required by best construction practice.

1.17 GRADING AND DRAINAGE

A. Any grades disturbed by Contractor shall be re-graded, at no additional cost to Owner, to assure proper drainage away from buildings and paved walks and drives and so as not to disturb existing drainage patterns.

1.18 EXISTING UTILITIES

A. It is recognized by the District and the Contractor that the location of existing utility facilities as shown on contract drawings and specifications are approximate; their exact location is unknown.

B. Recognition is given to the fact that there may be additional utilities existing on the property unknown to either party to the Contract. Location of utilities as shown on

drawings and specifications represent the best information obtainable from utility maps and other information furnished by the various agencies involved. The District warrants neither the accuracy nor the extent of actual installations, as shown on the drawings and specifications.

C. Because of this uncertainty, it may become necessary for the Architect to make adjustments in the line or grade of sewers or storm drains. Installation of such adjusted lines shall be made at the regular unit price bid for the work, if any, otherwise as provided in these specifications for change orders, and no additional compensation will be paid therefore, unless the scope and character of the work has been changed.

D. The Contractor agrees and is required to coordinate and fully cooperate with the District and utility owners for the location, relocation, and protection of utilities. The Contractor's attention is directed to the existence of utilities, underground and overhead, necessary for all buildings within the area of work.

E. In accordance with Section 4215 of the Government Code of the State of California, the District shall make provisions to compensate the Contractor for the costs of locating, repairing damage not due to the failure of the Contractor to exercise reasonable care, and removing or relocating such main and trunk line utility facilities not indicated in the plans and specifications with reasonable accuracy, and for equipment on the project necessarily idled during such work. Compensation will be in accordance with the provisions of these specifications providing for change orders. Nor shall the Contractor be assessed liquidated damages for delay in completion of the project when such delay was caused by the failure of the District or the owner of the utility to provide for removal or relocation of such utility facilities.

F. Nothing herein shall be deemed to require compensation to the Contractor or to relieve him from being assessed liquidated damages for such delay whenever the presence of service laterals or appurtenances on the site can be inferred from the presence of other visible facilities, such as buildings, meter and junction boxes, on or adjacent to the site of construction, and the delay was caused in whole or in part by a failure of the District to indicate the presence of such service laterals or appurtenances.

G. In the event the Contractor discovers utilities not identified in the contract plans or specifications, the Contractor shall immediately notify the Architect and the utility owner by the most expeditious means available and later confirm in writing.

1.19 MODULE SERIAL NUMBER IDENTIFICATION PLATE (FOR RELOCATABLE BUILDINGS)

A. An engraved or die-stamped metal identification plate shall be provided for each module. Plate shall identify the manufacturer, manufacturer's module serial number and the D.S.A. application number for this project.

B. Plate shall be located on a roof member under the rear overhang (or below soffit) in an area visible after completion of project. Attachment shall be by screws only (no nails).

1.20 SAFETY & SECURITY OF CONSTRUCTION AREAS

A. Contractor will be required to provide a security/safety barrier at all sites to protect passers by. This shall be a 6' chain link fence surrounding the work area of this project.

PART 2 - PRODUCTS

2.1 BUILDING TYPE

A. Relocatable buildings shall consist of all new prefabricated modules, including roof, walls, floors, doors, windows, and electrical and mechanical services. Each module shall be designed as a clear span, steel rigid frame in both directions.

B. Arrange modules as shown on drawings. Manufacturer's standard component parts may be used, providing components, accessories and complete buildings conform to architectural design appearance shown and requirements specified hereinafter.

C. Each module shall conform to the following requirements.

1. Be capable of being shipped in knockdown or standup position; equipped with castings or other interconnecting pieces for accurate and easy field assembly, if the knockdown option is used.
2. Be designed to connect to adjacent module with minimum amount of connections to form an integral building unit.
3. Be designed with either a slab-on-grade or raised concrete on metal deck floor system.
4. Be capable of being conveniently transported as a unit on State or National Highways on stock equipment, or by attachment of trailer hitch and wheels to structural frame, without special permit.

2.2 BUILDING DESIGN REQUIREMENTS

A. Manufacturer shall have detailed drawings and calculations prepared for buildings to be furnished under this Section. These documents shall be prepared by a California registered Structural Engineer, hereinafter called "Building Design Engineer". Drawings called for herein shall be in addition to shop drawings required under individual sections of the Specifications. Drawings shall indicate the module serial number for each module and the location of the Module Serial Number Identification Plate called for in Paragraph 1.19.

B. Basic design criteria shall be in accord with provisions of Title 24, Part 1, and Chapter 21 of Title 24, Part 2, and Interpretation of Regulations 23-6 issued by Structural Safety Section of DSA. Title 19 and other portions of Title 24 regarding fire safety, energy standards and accessibility for the disabled shall also apply.

C. Approval: Successful bidder shall submit to District Architect electronic Drawings and Calculations, and other supporting documents prepared under Paragraph A above prior to doing any other work related to this project. These documents will be reviewed by District Architect and required corrections, if any, shall be made by successful bidder

before any filing with D.S.A., Department of General Services, State of California. Filing fee will be paid by District. Successful bidder shall make all changes or corrections required by D.S.A. Drawings become property of District. Bidder's representative shall accompany Architect to DSA appointments if requested.

D. Manufacturer shall be responsible for providing and submitting complete energy compliance documentation and calculations as required by California State Building Code as established by the Energy Efficiency Standards for Buildings as prescribed by the California Energy Commission.

E. Fabrication or erection shall not begin prior to approval of detail drawings and specifications by District Architect and D.S.A. However, submittals and shop drawing processing may begin upon receipt of "start" letter. Approval of submittals subject to D.S.A. review (e.g. roofing, suspended ceiling systems, finish materials) will be done subject to conditions of D.S.A. approval of final plans and specifications. D.S.A. approval procedures may require re-submittals of D.S.A.-rejected materials.

F. Exterior walls shall be designed to withstand windloads perpendicular to wall plane equivalent to "exposure C, 80 mph wind". This requirement applies to all exterior walls of building section even though present configuration of building may be such that some of these walls are not exposed to wind. All buildings are required to meet all current requirements of Title 24, Parts 1 & 2 and D.S.A. Interpretations of Regulations.

G. Floors: Design live load 50 psf. All raised floors shall be designed as diaphragms, as required for resisting applied horizontal loads.

H. Roofs: Design live load of 20 psf (no area reduction). All roofs shall be designed as diaphragms as required for resisting applied horizontal loads. Roof shall be sloped to drain as shown on bid drawings. Roof shall be designed to comply with “solar ready” requirements for gravity and uplift forces.

I. Modules shall be so detailed that positive anchorages to foundations will not be necessary to tie finished building down against uplift forces.

J. Place buildings on concrete foundations.

K. Building units, where on raised concrete floor system, shall be installed using manufacturer's standard minimum clearance between underside of frame and grade, plus size of foundation beams, unless shown otherwise on the Drawings.

L. For purposes of proper design of foundations, total soil load bearing pressure shall not be in excess of 1,000 psf.

M. Fabrication criteria shall be such that building shall be weather-tight with modules easily assembled into a building.

N. District Architect will select all colors for materials inside and outside (4 exterior colors) of new building(s). Submit samples of all materials immediately after award of the Contract to assure adequate time for color selection.

O. Provide for the free flow of air under the supported floor of building where building utilizes a raised concrete floor system. Provide vents equivalent to one (1) square foot of the vent per 150 square feet of under floor area. Provide equal ventilation on two opposite sides of the building.

P. Closure Panels: Use full height closure panels between relocatable buildings, as shown on the bid drawings.

2.3 FOUNDATIONS

A. The building shall be set on concrete foundations. Foundations shall be designed to meet code requirements and additional loading requirements as described in the contract documents. See the Soils Report in the Appendix for soil bearing capacity.

B. Provide 18 gauge expanded galvanized metal fresh air vents or approved vandal resistant equal to comprise a minimum net area of 7.5 square feet per 960 square feet.

2.4 STRUCTURAL & MISCELLANEOUS METALS

A. Steel: (Structural Shapes) ASTM A36

B. Sheet Steel: ASTM A-570 (Grade 33 or 40) See plans.

C. Sheet Tubes: ASTM A-500 (Grade B)

D. Bolts: ASTM A-307 or A-325

E. For structural steel members, comply with AISC "Specifications for the Design, Fabrication and Erection of Structural Steel for Buildings".

F. For light gauge steel members, comply with AISI "Specifications for the Design of Cold-Formed Steel Structural Members", and Section 2-2701 (a) 2, Title 24.

G. For welded connections, comply with AWS D1.1 "Structural Welding Code-Steel" and Title 24.2708. (For Structural Steel) and AWS D1.3 "Structural Welding Code-Sheet Steel" (For Light Gauge Steel) Welding Inspection shall comply with the requirements of Section T24-2712.

2.5 FRAMING

A. Steel frame building shall meet the design requirements of the Invitation for Bid and stud spacing, etc., listed below. Wood frame construction shall meet the following minimum design details or the design requirements of the Invitation for Bid, whichever are more stringent.

B. All framing lumber shall be marked MC-15 or surface dry (S-dry):

1. Roof Framing:
   a. Joists — Douglas Fir/Larch No. 2 or better.
   b. Blocking — Douglas Fir/Larch No. 3 or better, or

			Hemlock Fir No. 3 or better.
		c. Plywood Sheathing:	APA or comparable rating sheathing Exp. 1 Complying with PS1-83, 3/4" T & G fastened with self tapping screws
	2.	Wall Framing:	
		a. Studs	Douglas Fir/Larch No. 2 or better. Minimum 2 x 4 at 16" O.C.
		b. Sill (Sole Plate)	Douglas Fir/Larch No. 2 or better.
		c. Top Plates	Douglas Fir/Larch No. 2 or better.
		d. Double Headers	Douglas Fir/Larch No. 2 or better, minimum 2-2x4 on edge with 1/2" APA or comparable rated plywood, Exp. 1 filler.
		e. Door and Window Openings	Double Stud/cripples, Douglas Fir/LarchNo. 2 or better.
		f. Blocking	Douglas Fir/Larch No. 3 or better.
	3.	Floor Framing:	
		a. Joists	Douglas Fir/Larch No. 2 or better. (Joists hangers shall be used in the design).
		b. Rim Joists	Double Douglas Fir/Larch No. 2 or better, min. 8' lap.
		c. Blocking	Douglas Fir/Larch No. 3 or better, or Hem/Fir No. 3 or better.
		d. Subfloor	Plywood sheathing, APA or comparable rated STURD-1-Floor, 48" O.C., 1-1/8" thick, T & G, Exp. 1 or series C-101, C plugged D, 48" O.C., 1-3/32" thick, T & G Exp. 1. Plywood fastened with self tapping screws. Panel adhesive to be applied to all framing members in contact with sub-floor.
	4.	Fire Stops:	Fire stops shall be provided as required by Section 718 California Building Code.

C. All structural members below the subfloor, i.e., girders, joists, headers, blocking, shall be either steel or wood. If wood, it shall be pressure treated with an approved process and preservative to the maximum possible retention by full-cell process. Markings shall be legible on each pressure treated structural member and certification of treatment must be supplied for each charge. Shims may be redwood or cedar.

2.6 MOISTURE BARRIER

A. All weather-exposed surfaces shall have a weather-resistive barrier to protect the interior wall covering. Such barrier shall be equal to that provided for in U.B.C. Standard No. 17-1 for kraft waterproof building paper or U.B.C. Standard No. 32-1 for asphalt-

saturated rag felt. Barrier shall be free from holes and breaks other than those created by fasteners and construction system due to attaching of the building paper, and shall be applied over studs or sheathing of all exterior walls. Such barrier shall be applied weather-board fashion, lapped not less than 2 inches at horizontal joints and not less than 6 inches at vertical joints, including corners.

2.7 EXTERIOR FINISH

A. Exterior finish shall be a 3-coat portland cement plaster system with integral colors installed to industry standards with overall thickness of 7/8” minimum. Plaster expansion and control joints shall be as indicated on the drawings. Plaster system shall be installed over waterproofing system and minimum 5/8” plywood sheathing.

2.8 ROOFING

A. The roofing system shall be fire retardant per U.B.C. Standards. Test results showing the roofing system will withstand the uplift of a 75 mph wind shall be submitted with the plans and specifications.

B. Roof construction shall be pre-finished, unpenetrated interlocking roof panels mechanically crimped, standing seam or ribbed type, 26 gauge over 30 pound saturated felt underlayment and 1/2" plywood deck (CDX grade) or as required to obtain manufacturer’s warranty.

C. Design and installation of the deck and/or roof substrate shall result in the roof draining freely. Roof shall have a minimum pitch of 1/4" per foot. Areas where water ponds for more than 24 hours are unacceptable and shall be corrected by the manufacturer. Slopes shall be as indicated on drawings.

D. All roofing shall be guaranteed watertight (labor and materials) for a period of 2 years following substantial completion, and shall be Class A fire retardant

2.9 ROOF OVERHANG

A. All overhangs shall present a pleasing and finished appearance. Soffits shall be enclosed with no visible framing members. Soffit material shall be perforated metal panels, metals sales or equal, minimum 24 ga. Soffit shall be neatly and closely fitted and trimmed to cover gaps. All enclosed soffit areas shall be ventilated per the C.B.C.

2.10 SHEET METAL ACCESSORIES

A. General: Unless otherwise indicated, provide minimum 26 ga. galvanized Redi-Cote or approved equal. No aluminum will be allowed.

B. Gutters: Formed in sections not less than 30 feet in length, complete with elbows and offsets. Join sections with minimum 1-1/2" telescoping joints. Downspouts to be 3" diameter steel pipe, schedule 40. Provide fasteners for top, bottom and 5' o.c. intermediately between, designed to securely hold downspouts not less than 1" away from walls. Downspouts to be placed as required and connect to storm drain system (by site contractor).

C. Foundation Flashing: Provide continuous gsm flashing from 4" above finish floor to 6" below bottom of floor framing where finish grade is in contact with building frame.

2.11 JOINT SEALANTS

A. See Section 07 9200 for joint sealant requirements.

2.12 DOORS AND FRAMES

A. See Section 08 1113 for door and frame requirements.

2.13 WINDOWS AND STOREFRONTS

A. See Section 08 4113 for window and storefront requirements.

B. See Section 08 8000 for glazing requirements.

2.14 INTERIOR WALLS

A. Tackboard wall finish: See Section 09 7200 for wall coverings.

B. Plywood paneling: Douglas Fir, plywood, APA grade marked; 5/8" x 4' x 10' A/C grade T & G plywood, exterior glue. Install with all joints bearing on studs or solid backing. Finish nail all around perimeter and at studs.

C. Fiber reinforced panels: Pre-finish panels .090" minimum thick textured plastic panels. Provide vinyl concealed fastening moldings (color to match panels) color and pattern as selected by Architect from manufacturer's standard. Flame spread rating of 25 or less, and a smoke developed rating of 370.

D. Gypsum wallboard: Conform to ASTM C36, fire-resistant "Type X", 5/8" inch thick with UL label. Joint system materials to conform to ASTM C475. Galvanized corner beads and casings. Where fire rated construction is indicated install wallboard assembly to provide fire-resistive rating required.

E. Interior wood trim shall be Vertical Grain Clear Douglas Fir or Pine. No plywood paneling or film trim will be allowed.

2.15 SUSPENDED ACOUSTICAL CEILING AND ACOUSTICAL PANELS

A. Ceilings that support light fixtures or grills shall have a minimum classification of Heavy Duty per ASTM C635. Grid shall be direct hung in strict accordance with Title 21 C.C.R., Title 24 C.C.R. and I.R. #47-4 issued by DSA.

B. Acoustical panels shall be 5/8" minimum thick, mineral fiberboard, or vinyl-faced fiberglass lay-in panels, square edge, ASTM flame spread index Class I (0-25), 24" x 48" modular size, light reflection 75% minimum, noise reduction coefficient of 0.65 minimum. Flamespread 0-25. Maximum smoke density rating of 400.

C. Contractor shall inspect after installation and replace exposed members showing dents or defects.

2.16 PAINTING

A. All exposed surfaces (including conduits, electrical boxes, etc.) shall be painted except prefinished aluminum window frames and thresholds. Material shall be of the grade specified or equal.

B. Exterior - Wood siding, trim and skirting semi-gloss latex - apply one coat of primer and at least two finish coats. Prime coat shall be brushed on or sprayed and back brushed into all grooves in the siding. If necessary, in the opinion of the inspector, an extra coat shall be applied to all grooves so that the finish coat will have a uniform appearance. Allow prime coat to dry according to manufacturer's recommendation. Prime and finish coats shall be compatible and manufactured by the same company.

C. Interior - All trim not pre-coated shall be painted with two coats of semi-gloss latex over primer.

D. Metal - All metal surfaces other than OEM finishes on installed equipment shall be painted with two coats of alkyd finish coat over red "lead", zinc chromate, or comparable rust inhibiting primer.

E. Paints used by the contractor of the type indicated shall be listed on the State of California Qualified Products List for Maintenance Paints 8010-XXX-98A.

F. Gypsum Wallboard at toilets and storage/janitor: Primer and 3 coats stipple gloss enamel.

G. Paint Schedule:

1.

Surface	Finish	Specification
Ext. Plywood Walls	Flat	2 coats Ext. House Paint
Ext. Wood Trim	Flat	2 coats Ext. House Paint
Ext. Metal (Galv.) Redi-coat	Semi-glass	2 coats Glid-Guard Iron Lifemaster Gloss Enamel
Int. Ferrous Metal	Semi-glass Pre-primed	1 coats Metal Primer 2 coats Lifemaster Gloss Enamel
Int. Drywall	Semi-Gloss	1 coat Primer, 1 coat Glidden 4600 Spread Lustre

2. Note: Paint all exposed conduits, mechanical units and electrical boxes on the exterior of the building.

2.17 TILING

A. See Section 09 3000 for tiling requirements.

2.18 FLOOR COVERING AND BASE

A. Carpet and Walk-off Mats: As specified in Section 09 6800.

B. Resilient Base: As specified in Section 09 6513.

C. Epoxy Floor Covering: Shall be Dur-A-Quartz as manufactured by Dur-A-Flex, Inc.

D. Resilient Sheet Flooring: Shall be Real as manufactured by Forbo Marmoleum.

E. Resilient Tile Flooring: shall be Grain 0364V as manufactured by Shaw contract.

F. Adhesives: Shall be water base, solvent base not acceptable. Furnish and apply per manufacturer's written instructions.

2.19 INSULATION

A. Insulation shall be rated as required by code for DSA approval. Floor insulation shall be secured with a permeable material in a manner approved by the Architect. Minimum flamespread classification of 25 or less, and a smoke developed rating of 50 or less. Provide more insulation where required by energy calculations.

B. The insulation support material shall prevent movement of the insulation during transportation. The insulation and support material shall be intact upon delivery to the side and shall completely cover the floor cavity.

2.20 FIRE EXTINGUISHER

A. Fire Extinguishers shall be the pressure type fire extinguisher(s) with 2A10BC UL rating, to be mounted on the interior wall of the building near the doorway(s) at a height of 4 feet in a semi-recessed wall cabinet with breakglass door. Fire extinguisher(s) shall be totally charged and have a dial indicating the state of charge.

2.21 WALL COVERINGS

A. See Section 09 7200 for wall covering requirements.

2.22 DRY MARKER BOARDS

A. Dry marker boards shall be Claridge LCS3. The panels shall have extruded aluminum molding and rail with a minimum of 2-15/16" projection from the face of the panel. A full length map rail shall be provided with cork insert and end stops. The map rail and chalkrail are to incorporate a channel to wrap around the panel. Three (3) map hooks, with clips, per panel shall be provided. One flag holder, 1/2" size, shall be provided for each classroom.

2.23 PLASTIC TOILET PARTITIONS

A. Factory manufactured and finished, floor-mounted overhead braced type; poly-mar HD solid plastic product by ASI Global Partitions or approved equal. Flame spread 50. Floor to ceiling pilasters with heavy duty head rail.

2.24 PREFINISHED PLASTIC LAMINATE CASEWORK

A. W.I.C. Deluxe grade plastic covered modular casework complying with specification of Manual of Millwork Woodwork Institute of California (W/CMM) latest edition and bearing W.I.C. certified compliance grade stamp, will be acceptable. Submit complete drawings showing plans, sections, elevations, ends, cross-sections, etc. Exposed vertical surfaces and edge bandings: 1/32" thick laminated plastic conforming to or exceeding NEMA Standard LD-3-75. Exterior exposed horizontal surfaces shall be 1/16" thick laminated plastic conforming to or exceeding NEMA Standard LD-3-75. Colors to be selected by Architect. All cabinets shall have locks.

2.25 ENERGY CONSERVATION

A. The bidders attention is directed to Title 24 C.C.R., Building Standards, Part 2, Chapter 2-53, on Energy Conservation Regulations and Required Certification. Contractor is to provide complete energy compliance calculations with drawings required by Article 1.08. Contractor shall take measures necessary to comply with energy regulations at no additional cost to the Owner.

2.26 GROUNDING OF BUILDING COMPONENTS

A. Contractor shall be responsible for providing necessary connectors to ground the metal portions of the building (i.e., frame, ramp, etc.). Grounding rod, wires, and testing shall be provided by others and meet the requirements of I.R. #8-1 issued by DSA.

2.27 TOILET ACCESSORIES

A. Fastenings: All toilet accessories shall be completed with all required fastenings. All fastenings shall either harmonize with the item being fastened, or be of the concealed type. All to be theft and vandal-proof.

B. Products:

1. General: Sizes and types of equipment shall be as indicated and/or specified.
2. Soap dispensers: Recessed, liquid soap, Bobrick B-306, or approved equal.
3. Toilet tissue holders: Recessed, multi-roll, Bobrick B-388, and B-386 per plan location or approved equal.
4. Mirrors: 3/4" 304 stainless steel frame, welded corners; 1/4" plate mirror; shock absorbing backing; Bobrick B-290 or approved equal.
5. Paper towel dispenser: Surface mounted, roll paper; stainless steel; Crown #920.
6. Grab bars (at wheelchair stalls): Stainless steel tubing 1-1/4" round x 18 gauge wall thickness with welded stainless steel flanges, Bobrick B-490, or approved equal.

7. Mop and broom holder: Bobrick B-239, or approved equal in standard lengths as called for on the drawings.
8. Feminine napkin dispenser: Recessed type; Bobrick B-3500x2 or approved equal.
9. Electronic hand dryer: SLIMdri in brushed chrome by World Dryer.

2.28 WINDOW COVERINGS

A. Shall be as specified in Section 12 2413.

2.29 SIGNAGE

A. Shall be as specified in Section 10 1400.

2.30 FINISH HARDWARE

A. Submittals

1. Hardware Schedule: Submit completely detailed finish hardware schedule, in either horizontal or vertical format. Reference hardware headings to groups specified and clearly indicate door type or mark location, hand, size, material and fire rating if applicable.
2. List Manufacturer's names and numbers for items used in schedule facilitate checking for compliance. Submit schedules within 35 days of award of contract.
3. Samples: Submit physical sample of each item of hardware substituted for specified item or its listed acceptable alternate. Clearly mark each sample to indicate name of item, brand name, manufacturer's catalog number and item for which it is substituted. Submit with finish hardware schedule. Approved samples may be used in work. Rejected samples will be returned and specified item or its acceptable alternate shall be provided

B. Templates

1. Hardware applied to aluminum or metal door and frames and factory prepared wood doors and frames shall be made to template. Furnish two copies of each template to those Manufacturers who are not listed as current registered template book holders. Furnish 2 copies of each template for items whose Manufacturers do not provide registered template book. Furnish 2 copies of approved finish hardware schedule for use by these Door and Frame suppliers.

C. Door Clearances

1. Unless detailed otherwise on Drawings, provide following door clearances:
   a. Floor Clearance:
      1) Labeled doors — 3/8" max. over floor or threshold
      2) No threshold — 3/4" max. for metal doors; 5/8" max. for wood doors
      3) Threshold — 1/8" typical
      4) Carpet — 1/8" over top of nap

2. Head and jamb clearance 1/8 inch max

D. Hardware Placement

1. Unless detailed otherwise, place hardware at following height above finish floor:

a.	Strike (centerline for locks and latches)	40-5/16 inches
b.	Hinges	Manufacturer's Standard
c.	Door Pull (centerline)	42 inches
d.	Pushplate (centerline)	44 inches

E. Keying

1. Key as shown on Door Schedule on Drawings or as directed by Architect. Supplier shall be prepared to meet with Architect, if required, to assist in creating detailed keying schedule. Provide following:
   a. Grand Master Key system (existing) with six cut GMK and 6 cut Master Keys.
   b. Three standard bow change keys per cylinder.
2. Label and deliver all keys by registered mail or personal messenger direct to Architect. Submit bitting list with shipment of permanent keys.

F. Closures

1. Key valve type. Furnish one key for each 5 closures. Fasten with 2 sex bolts per closer. Provide 180 degree opening where indicated. Provide parallel arms with jamb attachment for all out-swinging doors. Provide correct brackets at flush transom panel doors

G. Screws, Bolts, and Fastening Device

1. Exposed heads oval Phillips type in countersunk holes, unless otherwise specified or required. Use screws, bolts, washers, grommets, nuts, and other fastening devices of appropriate length, type, head, metal and finish, as necessary for proper match and application of hardware.

H. Handling and Marking

1. Furnish hardware in proper "hand" for doors. Package and mark hardware for door number, hardware type and location.

I. Exit Door Latching Devices

1. All exit door latching devices shall be self-releasing type operable from inside at all times by simply turning knob or by pressure on panic device

J. Fire Rated Doors

1. Equip fire rated doors with UL listed hardware meeting requirements of handbooks number 80 and 101 of National Fire Protection Association and Fire Protection

Equipment list of Underwriters Laboratories, Inc. Treat and equip twenty minute rated openings same as 45 minute rated doors

K. Finishes

1. In general, provide finishes as follows, unless otherwise indicated:

a.	Hinges	626
b.	Locks	626
c.	Exit Devices	626
d.	Closures	Sprayed Aluminum
e.	Trim	630
f.	Stops	626
g.	Floor Closures	N/A
h.	Thresholds/Weatherstripping	Mill Finish
i.	Special Items	As Noted
j.	Key Cabinet	N/A

L. Installation

1. Install hardware in precise manner, in accord with manufacturer's instruction; door clearance and hardware placement as specified. Predrill pilot holes in wood for screws. Drill and tap for surface mounted hardware on metal. Set hinge leaves snug and flat in mortises; turn screws to flat seat (do not drive).
2. Mount door closures for maximum swing of door before setting stops. Silencers in place before adjusting strikes. Drive hinge pins down and tighten set screws.
3. Install locks with keyways in proper position, and knobs, roses and escutcheons firmly affixed.
4. Set thresholds in waterproof sealant and secure with lead shields and countersunk screws of same finish as threshold.
5. Except for hinges, do not install hardware until completion of painting and finishing work.
6. Adjust hardware so that moving parts operate freely without bind or excessive play. Installed hardware shall be free from paint, corrosion or damage.
7. Adjust door and floor closures for closing speed, latching speed, back checking, and adjust hold-open devices for full control of door, Maximum effort to operate doors shall not exceed 8.5 lbs. for exterior doors, 5.0 lbs. for interior doors, and 15 lbs. for fire doors.

M. Hardware Types List

1. Catalog numbers used herein are those of following manufacturers:

a.	Hinges	Ives
b.	Locks and Cylinders	Schlage
c.	Exit Devices	Von Duprin

d.	Closures	LCN
e.	Trim	Trimco
f.	Floor/Wall Stops	Ives
g.	Overhead Stops	LCN
h.	Thresholds/Weatherstripping/Astragals	Zero
i.	Silencers	Ives
j.	Special Items	As noted
k.	Cylinder	Best

2. Acceptable Alternate Manufacturers: Item produced by manufacturers, equal to those specified in material, weight, size, function, design and finish will require submittal of physical sample or request for substitution. Architect's decision regarding any item submitted for approval as equal to that specified shall be final.

3. Hardware Types: See District standard hardware included at the end of this section.

2.31 MECHANICAL

A. Plumbing:
   1. Extend water and sanitary sewer and connect plumbing fixtures where shown on plans.
   2. Wall-mounted water closets: Kohler Kingston 1.28 gpf No. K-4325 with manual Sloan flush valve.
   3. Wall-mounted urinals: Kohler Bardon 1/8 gpf No. K-4904-ET with manual Sloan flush valve.
   4. Lavatories: Kohler Kingston No. K-2005 with Chicago 116.12.AB.1 or Sloan E+F-600 sensor faucets.
   5. Sinks: Just Mfg. Model DRKADQ3119-65-BP
      a. Faucet: Chicago ECAST Model 350 Gooseneck.
      b. Bubbler: Haws 5054LF.
   6. Service sinks: Kohler TNC-24-SH-SSC.
   7. Drinking fountains: Haws 11176 Dual Height, wall mount, with awter chiller. Elkay equal product also acceptable.
   8. Bottle filling station: Elkay recessed filtered water dispenser with chilled water.

B. Heating, Ventilating and Air Conditioning:

   1. Location: Roof-top
      a. Type: All electric package unit; one per classroom.
      b. Manufacturer:
         1) Lennox or approved equal.
   2. Air to be ducted above ceiling to minimum four ceiling supply registers per classroom, move as appropriate for other rooms. Ducts shall be 26 ga. galvanized sheet metal, insulated with Fiberglass Blankets of 1" thick on the inside of duct, or

fiberglass construction of Contractor's option. Ductwork to be Class "I" or "0" per Section 4-1004 (b) T-24 CCR. Insulation to have flamespread rating of 25 or less and smoke density of 50 or less. Factory-made Air Ducts shall be approved for the use intended or shall conform to the requirements of U.M.C. Standard No. 10-1 and its class designation. These ducts shall be listed and shall be installed in accordance with the terms of their listing.

3. Air conditioning units to provide heating and cooling to each classroom space in accordance with the requirements of Title 24 for non-residential building and equipment design. Each bidder shall furnish complete specification details as in manufacturer's model number, and capacity to the items which are furnished.
4. All units supplied with baked enamel prime coat and shop applied finish coats (2).
5. Provide thermostats for heating and cooling and day and night operation. Thermostat to be compatible with mechanical unit.
6. Installation of HVAC Equipment.
   a. Complete all wiring to load center.
   b. Install units and thermostats complete with all accessories, all required exhaust and registers as per manufacturer's written instructions.
   c. Disconnect switch shall be located within the unit.
   d. Condensate line shall spill at grade line on exterior of building.
   e. The completed job shall be demonstrated by the Heating and Ventilating Contractor to the District's maintenance representative so as to function in accordance with the manufacturer's design, and to the complete satisfaction of the School District.
   f. Balance system and provide report.
   g. The contractor shall replenish all refrigerant oil lost for a period of one (1) year without charge to the Owner.

2.32 ELECTRICAL

A. Furnish and install all Electrical conduit, outlets, wire, switches, panelboard, fixtures, lamps, and appurtenances, including wiring and electrical connections to heating and ventilating equipment. All wiring shall be in conduit.

B. Panelboards: Panelboards in the building shall be plug-in "QO" circuit breaker type loadcenter, flush-mount with hinge door and lock and automatic main circuit breaker. Size with circuit breakers as required by C.E.C. to serve lighting, receptacle, A/C, and other load circuits. Provide 25% spaces with provisions for future breakers.

C. Conductors: Shall all be insulated copper. For #12 and #10 use solid copper. For #8 and larger use stranded copper. All wires to be type THHN / THWN.

D. Interior Lighting: Fixtures - recessed lay-in type fluorescent fixtures, dieformed of 22-gauge steel, minimum 4" deep housing and finished with baked-on 80% reflective white enamel. Fixtures shall be equipped with high efficiency electronic ballasts, 10% THD, and four (4) T8 “ECO” friendly (low mercury) lamps, 3500° K, and acrylic A12 diffuser mounted within hinged and latch door, as selected by Architect. Lamps and ballasts

shall be compatible and shall be Sylvania, GE or equal. Lighting system shall be designed for 50' candles maintained at desk level with even two-level switching. When occupant load is such to require exit and emergency lighting, provide the following:

1. Provide LED exit sign above each exit door. Exit light shall have white or black thermoplastic housing, green stencil text, and battery backup to provide 90 minutes of power in event of power failure. Each exit light shall be equipped with an LED pilot light and a push-to-test button. Connect to unswitched leg of interior lighting circuit.
2. Provide emergency egress lighting to produce a minimum of 1 footcandle at floor level. Provide selected lay-in fixtures with an emergency battery backup ballast which will provide 90 minutes of emergency illumination. Backup ballast shall have a red LED pilot light and a push-to-test button and shall have circuitry for self-testing in compliance with UL 924. Connect to switched lighting circuit and unswitched leg such that selected fixtures switch with other fixtures in room and automatically switch on in event of power failure.
3. 2’x4’ recessed troffer: Lithonia 2FSL4-48L-EZ1-LP835-N100.
4. 2’x2’ recessed troffer: Lithonia 2FSL2-33L-EZ1-LP835-N100.
5. Suspended linear fixture: Fluxerx VUI-S-A-D-35-A-LNEGTH-S-D-M-3.
6. Surface-mounted fixture: Philips Fluxstream line.
7. Exterior wall sconce: WAC WP-LED127-30-GH.

E. Toggle Switches/Receptacles: Shall be 20 amp, Hubbell #HBL1221 / HBL5362 series specification grade or equal. Color as selected by Architect. Cover plates shall be stainless steel, satin finish.

F. Outside Light: Shall be Luminaire LBL58-BLK-WET, or equal, with vandal-resistant prismatic diffuser and (1) 26 watt quad compact fluorescent lamp.

1. When occupant load is such to require interior emergency lighting and exit lights, provide exterior emergency lighting at each exit door. Equip outside light with an emergency battery backup ballast with backbox which will provide 90 minutes of emergency illumination. Equip emergency ballast with red pilot light and push-to-test button.

G. Fire Alarm, Clock, TV, Cable and Intercom: Raceway, back-boxes, junction boxes and other provisions shall be coordinated with electrical design. The Fire Alarm System shall be approved by the State Fire Marshal prior to installation.

H. Electrical Outlets: Shall be as shown on the Electrical and/or Architectural drawings, but no less than 8'-0" on center at every wall.

I. Data Outlets: As shown on plans or in locations directed by Architect, minimum 4 boxes with cover plates per classroom with conduit stubbed above ceiling.

J. Intrusion Alarm: Provide flush door contacts and wiring to attic space at all exterior doors. Provide matching door magnet.

PART 3 - EXECUTION - NOT USED

- END OF SECTION -

LODI USD DESIGN SPECIFICATION GUIDELINES

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SECTION	ITEM	MANUFACTURER	MODEL	NOTES
DIVISION 3				
Concrete Floor Leveling, Patching & Grouting	Resurface Coating - Horizontal	US Mix Products Co.	Thinpatch	
	Patching / Resurface Coating - Vertical	US SPEC	VTU Resurfacer	
	Leveling Compound	L & M Constr. Chemicals, Inc.	Levelex / Levelex Primer	
	Patching / Resurface Coating - Vertical	US SPEC	Permasil	
	Non-shrink Grout	US SPEC	Premium Grout	
Concrete Maintenance	Concrete Cleaner	ProSoCo	Consolideck	
	Concrete Cleaner	ProSoCo	Sure Klean	
Concrete Reinforcing	Vapor Barrier Stakes	Vaporstake	Vapor Stake	
Concrete Forming	Expansion Joint Filler	Celotex Corporation	1/2" Thick Flexcell	
	Extruded Polystyrene Foam	Dow Chemical Corp	Styrofoam	
Cast In Place Concrete	Workability and Water Reducing Admixture	BASF	POZZOLIGHT 322N	
	Vapor Barrier - Loose Laid	Reef Industries	Sheet Membrane: VAPORguard	
	Anchoring Cement	US Mix Products Co.	Anchoring Cement	
	Structural Bonding Adhesive	US Mix Products Co.	Maxi-Bond 2500	
	Bonding Materials	US Mix Products Co.	Acrylcoat	
	Bonding Materials	US Mix Products Co.	Bond Coat	
	Bond Breaking Compound	L & M Constr. Chemicals, Inc.	Debond Form Coating	
	Curing Compound	W.R. Meadows	1100 Clear	
DIVISION 4				
Masonry, Stone and Tile Maintenance	Custom Masonry Acidic Cleaner	ProSoCo	Sure Klean, Custom Masonry Cleaner	
	Burnished Custom Masonry Acidic Cleaner	ProSoCo	Sure Klean, Burnished Custom Masonry Cleaner	
	General Purpose Non-Acidic Cleaner	ProSoCo	Enviro Klean Safety Klean	
	Heavy Duty Concrete Cleaner	ProSoCo	Sure Klean	
	Asphalt and Tar Remover	ProSoCo	Sure Klean Asphalt & Tar Remover	
	Oil and Grease Stain Remover	ProSoCo	Stand Off	
Unit Masonry	Concrete Masonry Units	Basalite	Precision	
DIVISION 5				
Structural Steel Framing	Direct Tension Indicator Washers	J & M Turner	ASTM F959, Type 325	
	Tension Control Fastener System	Lohr		
	Powder Driven Fasteners	Hilti Fastening Systems		
	Expansion Bolts	Hilti Fastening Systems	Kwik-Bolt Concrete Expansion Anchors	
	Shop Primer	Tnemec Company, Inc.	FD88	
	Shop Primer	Tnemec Company, Inc.	90-97 Tneme-Zinc	
	Hole filler for steel columns and beams	JB Industries	Industro Weld	
Steel Decking	Metal Roof Deck (Non Acoustical)	Verco	PLB-36, PLN3	
	Metal Roof Deck (Cellular)	Verco	PLB-CD, PLN-CD	
	Metal Roof Deck (Acoustical)	EPIC	ER2RA	

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SECTION	ITEM	MANUFACTURER	MODEL	NOTES
Metal Ladders	Access Ladder Components: Rungs	McNichols	Traction Tread	Exterior condition hot dipped galvanized, schedule 40
Metal Fabrications	Escutcheons	Plumbing Supply Co.	Heavy Gauge Escutcheons with Springs	
	Boots - Pipe Penetrations	Pipetite	Pipetite Standard	
Metal Railings	Exterior guardrails and handrails			Hot dipped galvanized, schedule 40
DIVISION 6				
Rough Carpentry	Accessories	Simpson Strong Tie		
	Plywood Sheathing Backing Boards	Panel Source International	Purekor Retardant Plywood, 5-ply, Western Hemlock/Fir	
Laminated Veneer Lumber	Laminated Veneer Lumber (LVL)	Weyerhaeuser, iLevel	Microllam, Western Species	
Parallel Strand Lumber	Paralell Strand Lumber (PSL)	Weyerhaeuser, iLevel	Parallam, Western Species	
Wood I-Joists	Flanges	Weyerhaeuser, iLevel	Micro-Lam	
Glue-Laminated Construction	Glue Laminated Beams	Willamette Industries, Inc. / Weyerhaeuser		
Fiberglass Reinforced Panels (FRP)	Standard FRP Panels	Nudo	Standard, Class I/A: Peblled Texture	Marlite
	Standard FRP Panels: Trim	Nudo	Extruded PVC Trim	Marlite
	Standard FRP Panels: Sealant	Nudo	Clear Silicone	
	Standard FRP Panels: Adhesives	Nudo	Water Resistant, Non-Flammable	
	Outside Corner Guards	Korogard	Stainless Steel Corner Guard, 2"x2", #4 Satin Finish	
Plastic Laminate	Veneer	Formica		Wilsonart
Architectural Casework	Substrates for Laminate Veneer	Roseburg Forest Products	Sky Blend	
	Adjustable Shelving Substrates for Laminate Veneer	Roseburg Forest Products	HyBrid	
	Casework Hardware: Hinges	Blum	Clip Top Series	
	Casework Hardware: Door & Drawer Pulls	Hafele	Stainless Steel "U" Shaped Wire Pull	
	Casework Hardware: Drawer Slides	Knape & Vogt	Full Extension and 1.5" Extension, Ball Bearing Captured Slides	
	Casework Hardware: Drawer & Cabinet Door Locks	Sugatsune	Million Locks, 6830-30MK, Mortised	
	Casework Hardware: Adjsutable Casework/Cabinet Shelving (Recessed)	Knape & Vogt	Recessed, No. 255	
	Casework Hardware: Adjsutable Casework/Cabinet Shelving (Support Clips)	Knape & Vogt	Horizontal Slot, No. 256R	

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SECTION	ITEM	MANUFACTURER	MODEL	NOTES
DIVISION 7				
Cold Applied Self-Adhering Membranes	Underlayment: Roofs	W.R. Grace	Vycor Ultra	
	Flexible Flashing: Roofs	W.R. Grace	Vycor Ultra	
	Flexible Flashing: Walls	W.R. Grace	Vycor Plus	
	Flexible Flashing: Door and Window Openings	W.R. Grace	Vycor Plus	
	Flexible Flashing: Copings	W.R. Grace	Vycor Ultra	
Concrete Slab Vapor Emission Control Treatment	Remedial Treatment	Synthetics, Intl.	Synthetic 30 - Factory Mixed	
Water Repellant / Anti-Graffiti Coatings	Water Repellant / Anti-Graffiti Coating	This Stuff Works (TSW), Inc.		
Building Insulation	Thermal and Acoustical Insulation	Owens/Corning	Unfaced - Sound Attenuation Fire Batt Insulation	CertainTeed, Johns Manville
	Thermal and Acoustical Insulation	Owens/Corning	Unfaced - Thermal Batt Insulation	CertainTeed, Johns Manville
	Rigid Insulation - Roofs	RMAX	Multi Max FA-3	
Metal Roof Panels	Roof Panel	AEP	Design Span	Metal Sales, Centria, MBCI, Garland
	Standing Seam Mounting Clips	S-5	S-5 Series	
Spray Applied Air Barrier Membrane	Spray Applied Air Barrier	Henry Company	Air Bloc 33 MR	
Wall Cladding Rain Screen Assembly	Rain Screen Panels	Trespa	Solid Phenolic, Meteon	
Metal Siding Assembly	Wall Panel Assembly	AEP	Flex Series	Metal Sales, Centria, MBCI, Garland
Thermoplastic Membrane Roofing	Roofing Membrane	GAF, Sarnafill, Firestone	Everguard	60 mils minimum
	Roof Walkway Pads	GAF, Sarnafill, Firestone	Walkway Pad	
	Membrane Coated Sheet Metal Flashing	GAF, Sarnafill, Firestone	Membrane Coated Sheet Metal	
	Slip Sheet - Separation Roll Goods	Atlas Roofing Corporation	FR-50	
Firestopping	Through-Penetration Firestop Systems	3M	CP 25WB+	Hilti
	Through-Penetration Firestop Systems	3M	FS - 195+, PPDs	Hilti
Sheet Metal Flashing & Trim	Pre-manufactured Copings, Flashings, Etc.	Fry Reglet		
Isolation Membrane	Slip Sheet	Atlas	FR-50	
Roof Hatches & Safety Railings	Roof Hatch at Fixed Wall Mounted Ladders	Bilco	S-50	
	Roof Hatch Safety Railing	Kee Industrial Products, Inc.	KeeHatch	
Sealants and Caulking	Exterior	Dow Corning	795, Type 4	
		Sika	2c	
		Tremco	Vulken	
		Pecora Corporation	Dynatred	
	Interior	Dow Corning	999A Type 11	
		Pecora Corporation	Dynapoxy	
	Mastic / Sealant (Door Thresholds)	Tremco	Vulkem 116	Sika, Pecora
	Tape	3M	Closed Cell Acrylic Foam	
Expansion Control	Exterior Wall Expansion Joint	Balco	9WC	MM systems
	Roof to Wall Expansion Cover	Balco	FRE	MM systems

LODI USD DESIGN SPECIFICATION GUIDELINES

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SECTION	ITEM	MANUFACTURER	MODEL	NOTES
DIVISION 8				
Steel Doors and Frames	Doors, Door Frames, and Window Frames	Ceco Doors		Curries, Total Door, Door Components, Timely
	Door Louvers	Anemostat		
	Door Lite Assembly Frame and Glazing Compound	Anemostat	LoPro	
	Sound Attenuation Fill - Door Frames	Owens Corning	Mineral Wool (Rated Conditions)	
	Sound Attenuation Fill, Spray In Foam	Fomospray	Spray Insulation (Non-rated)	
	Sound Attenuation Fill, Sealant	Macklanburg-Duncan	Insulating Foam Sealant	
	Fire Rated Glazing Tape	Anemostat	GT - Fire Rated Glazing Tape	
Steel Frames	Fixed Frames	Timely	Standard Profile, Series C	Curries, Total Door, Door Components, Ceco
	Pocket Door Frames	Timely	Pocket Door Trim - Series P	
	Casing Trim	Timely	TA-28 Casing	
Access Doors and Panels	Access Door and Panels - Walls	Acudor	UF-5000 (Non-rated) FW-5050 (Rated)	
	Cement Plaster - Flush	Acudor	PS-5030 (Non-rated) FW-5050 With Flange (Rated)	
	Ceilings and Soffits	Acudor	UF-5000 (Non-rated) SD-6000 (Security)	
	Valve Boxes	Acudor	ARVE	
	Non-rated Ceiling Access Hatch/Door	KARP Associates, Inc.	KSTE (acoustical tile ceiling) KSTDW (drywall finish ceiling)	
Wood Doors	Flush Panel - Solid Core Wood Door	Oregon Door	Standard Profile, PC-5	
	Vision Glass Lite and Frame In Doors	Anemostat	LoPro	
	Fire Rated Glazing Tape	Anemostat	Fire Rated Glazing Tape	
Door Hardware	Refer to District's Hardware Specification Guidelines			Refer to District's Hardware Specification Guidelines
Overhead Insulated Coiling Doors	Smokeshield Insulated Rolling Fire Door	Cornell Iron Works, Inc.	ERD21	Cookson Co., Alpine Overhead Doors
Glazing	Steel Framed Windows: Non Rated	PPG Glass	Clear Single Glazing	
	Fire Rated Glazing - Door and/or Window Locations	Techincal Glass Products	FireLite - NT	Non-wired glazing
	Storefront Windows and Doors	PPG Glass	SolarBan 70XL	1" min. Insulated units
	Framed Door Vision Lite	PPG Glass	Clear Laminated Glazing	
	Glazing Fire Tape	Pemko	FG300S90	
Overhead Doors	Vertical Rise Door Assembly	SGCA Doors	Rise	Cookson Co., Overhead Door
Entrances, Window Walls, Storefronts and Curtain Walls	Storefront System	Oldcastle Glass (Vistawall Products)	Series 3000 Thermal Multiplane	Arcadia, Kawneer
	Operable Windows: Horizontal Slider	Building Envelope	Signature Series, 4" Horizontal Slider	
	Aluminum Storefront Doors	Oldcastle Building Envelope	#500 Wide Style Doors	Arcadia, Kawneer
	Aluminum Flush Panel Doors	Special - Lite, Inc.	SL-16	
Translucent Wall and Roof Assemblies	Translucent Wall and Roof Assemblies	Kalwall Corporation		
Skylights	Fixed Skylights	Velux	Model No. Skylight FCM	Sunoptics, CPI Daylighting

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SECTION	ITEM	MANUFACTURER	MODEL	NOTES
DIVISION 9				
Metal Framing (Non-structural)	Stud	Dietrich Metal Framing		
	Header Assembly	Brandy	Pro X Header	
	Galvanized Repair Paint	ZRC Worldwide	ZRC Zero VOC Water Based Galvanizing Compound	
Gypsum Board and Sheathing Substrates	Interior Walls	Georgia Pacific	ToughRock Fireguard Type X	USG, National Gypsum
	Interior Face of Exterior Walls	Georgia Pacific	Dens Armour Plus Fireguard Type X, High Performance Interior Panel	USG, National Gypsum
	Damp Locations (Non-tile Veneer Conditions)	Georgia Pacific	Dens Armour Plus Fireguard Type X, High Performance Interior Panel	USG, National Gypsum
	Thin Veneer Wall and Ceiling Sheathing (Non-shower Locations)	Georgia Pacific	Dens Shield Fireguard Type X Tile Backer	USG, National Gypsum
	Roof Underlayment	Georgia Pacific	Dens Deck Prime Type X Exterior Sheathing	
	Accessories	USG	DUR-A-BEAD Corner Bead	
	Accessories	USG	Sheetrock Brand (Tape On Trim)	
	Accessories	USG	Sheetrock Brand	
	Accessories	USG	Sheetrock Brand (No. 200)	
	Accessories	USG	Sheetrock Brand (No. 093)	
	Joint Treatment	USG	Sheetrock - Plus Three Compound Joint Tape - Heavy	
	Joint Treatment	Georgia Pacific	Dens Armour Plus ToughRock Fiberglass Mesh Tape	
	Joint Treatment Compound	USG	Setting Compound (as recommended) - Level 5 Finish	
	Joint Treatment	Georgia Pacific	Dens Shield Tile Backer Board ToughRock Fiberglass Mesh Tape	
	Joint Treatment Compound	USG	Setting Compound	
	Joint Treatment Substrate and Tape Product - Exterior Walls	Georgia Pacific	Dens Glass/Dens Deck Prime Tough Rock Fiberglass Mesh Tape	
	Joint Treatment Compound - Exterior Walls	Pecora Corporation	AC-20 Acrylix Latex Sealant	
	Textured Walls - Sealer/Primer	USG	First Coat, Sheetrock Brand	
	Textured Walls - Texture	USG	Red Bag Wall Texture	
	Smooth Wall/Level 5 - Skim Coat	USG	Plus Three	
	Smooth Wall/Level 5 - Sealer/Primer Coat	USG	First Coat, Sheetrock Brand	
Portland Cement Plaster Assembly	Metal Lath	Structa Wire Corporation	17 Ga. X 1-1/2" SF CR TT (Twin Track)	
	Corner Bead	Amico	X-2 (Outside corner)	
	Soffit Drop	Stockton Products	#5 Drip, NFD	
	Control Joints	Amico	Griplock "J"	
	Casing Bead	Amico	X-66	
	Expansion Joints	Amico	2-Piece Expansion Joint (#40 Type)	
	Window/Door Head Drip	Stockton Products	WTP - 1" (x Dim) - 4" Flange (y Dim)	
	Base of Wall Drip	Stockton Products	J-Bead w/ 1/4" Dia. Weep Holes	

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SECTION	ITEM	MANUFACTURER	MODEL	NOTES
	Cement Plaster Mix - Lime Substitute	Gibco	RPF	
	Admixtures - Enhancing Emulsion	BASF	ACRYL 60	
	Wall Penetration Boot/Collar Flashing	Quickflash Weatherproofing Products, Inc.	P Series (Pipe and conduit penetration) E Series (Electrical boxes)	
Tile	Waterproof Membrane & Crack Protection Assembly	Laticrete	9235 Liquid, 9235 Fabric	
	Mortar: Thin Set	Laticrete	254 Platinum	
	Grout: Cementitious	Laticrete	PermaColor Select	
	Sealer: Wall Grout Sealer	Miracle Sealants & Abrasives Co.	511 Impregnator	
	Cleaner: Surface	Miracle Sealants & Abrasives Co.	Mira Clean #1	
	Trim	Schluter	Jolly	
Acoustical Ceiling Tile and Suspension System	Acoustical Tiles	Armstrong	Dune - 1775HRC	
	Acoustical Tiles	Armstrong	Kitchen Zone - 673	
	Suspension Grid Systems - Main TEE	Armstrong	7501HRC	
	Suspension Grid Systems - Cross TEE	Armstrong	XL7520HRC XL7540HRC XL7580HRC	
	Suspension Grid System Wall Angle	Armstrong	7880HRC	
	Suspension Grid System Seismic Joint Clips	Armstrong	Berc2 SJMBR09	
	Suspension Grid Systems - Main TEE	Armstrong	7301HRC	
	Suspension Grid Systems - Cross TEE	Armstrong	XL8320HRC XL8340HRC XL8380HRC	
	Lag Screws "l"	l-Lag	750 SD 150 SD	
Resilient Base and Accessories	Resilient Base	Burke Flooring	Burke Base Rubber Wall Base, Type TS	
	Flooring Transition	Burke Flooring		
	Adhesives and Fillers	Burke Flooring		
	Sealant	Burke Flooring	Colored	
	Vinyl Track Extenders	Burke Flooring	975	
Resilient Athletic Flooring	Resilient Flooring	Tarkette Sports	Omnisports	
Epoxy Floor Coating	Epoxy Based Seamless Flooring System	Dur-A-Flex, Inc.	Dur-A-Quartz	
Polyurethane Flooring System	Cementitious Urethane Concrete Coating	Dur-A-Flex, Inc.	Poly-Crete MDB	
Carpet Tile	Carpet Tile	Tandus	Centiva	
		Patcraft	Don’t Run	
Resilient Sheet Flooring	Resilient Sheet Flooring	Forbo Marmoleum	Real	
Resilient Tile Flooring	Luxury Vinyl Tile	Shaw Contract	Grain 0364V	
Vinyl Wall Covering	Vinyl Wall Covering	DesignTex	Vincent	Koroseal
		DesignTex	Custom Mural	Koroseal
Tackable Wall Covering	Tackable Composite Wall Covering	Forbo	Bulletin Board	

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SECTION	ITEM	MANUFACTURER	MODEL	NOTES
Acoustic Wall Panels	Acoustic Wall Panels	Kirei	EchoPanel	
Painting and Coatings	Polyurethane System Primer - Aluminum	Sherwin Williams	Procryl Acrylic Universal Primer B66W00-310	Benjamin Moore, PPG
	Polyurethane System Finish	Sherwin Williams	High Solids Polyurethane B65 - 100 Series, B65-625	Benjamin Moore, PPG
	Polyurethane System Hardener	Sherwin Williams	B65-V625	Benjamin Moore, PPG
	Polyurethane System Primer - Galvanized Steel/Ferrous	Sherwin Williams	Procryl Univesral Primer B66W00-310	Benjamin Moore, PPG
	Polyurthean System Primer - Ferrous	Sherwin Williams	Water Based Macropoxy 646 Primer	Benjamin Moore, PPG
	Exterior Wood Stain	Sherwin Williams	Woodscapes Poly S/T A15T15	Benjamin Moore, PPG
	Exterior Wood Solid Color Paint - Latex Satin Finish - Primer	Sherwin Williams	Exterior Latexwood Primer B42W8041	Benjamin Moore, PPG
	Exterior Wood Solid Color Paint - Latex Satin Finish - Finish	Sherwin Williams	A-100 Latex Satin A82 Series	Benjamin Moore, PPG
	Polyurthen System Primer - Galvanized Steel/Ferrous	Sherwin Williams	Pro Industrial Pro-Cryl Universal Primer B66W00-310	Benjamin Moore, PPG
	Polyurthen System Finish - Galvanized Steel/Ferrous	Sherwin Williams	High Solids Polyurethane 100 Series B65W00625	Benjamin Moore, PPG
	Polyurthen System Hardener - Galvanized Steel/Ferrous	Sherwin Williams	Primer: B58v620 Finish: B65v625	Benjamin Moore, PPG
	Polyurethan System Primer - Ferrous	Sherwin Williams	Macropoxy 646 - 100 Fast Cure Epoxy Primer B58W00620	Benjamin Moore, PPG
	Interior Wood - Painted Flame Retardant	Flame Control Coatings, LLC	10-10A	
	Interior Wood Paint - Primer	Sherwin Williams	Premium Wall and Wood Primer B28W8111	Benjamin Moore, PPG
	Interior Wood Paint - Semi-Gloss	Sherwin Williams	Promar 200 S/G Zero B31-2600	Benjamin Moore, PPG
	Interior Wood Paint - Egg-Shell	Sherwin Williams	Promar 200 Egg Shell Zero B20-2600	Benjamin Moore, PPG
	Interior Wood Clear Finish	Sherwin Williams	Wood Classic Ploy A67F1	Benjamin Moore, PPG
	Interior Wood Stained Urethane System	Sherwin Williams	Miniwax 250 Stain	Benjamin Moore, PPG
	Interior Wood Stained Urethane System	Sherwin Williams	Wood Classic Poly A67F1	Benjamin Moore, PPG
	Interior Drywall Primer	Sherwin Williams	Promar 200 Interior Latex Primer B28W08200	Benjamin Moore, PPG
	Interior Drywall Paint - Egg-Shell/Flat	Sherwin Williams	Promar 200 Zero VOC B30W02651	Benjamin Moore, PPG
	Interior Drywall Paint - Gloss	Sherwin Williams	Promar 200 Gloss B21W00251	Benjamin Moore, PPG
	Interior Pipe Identification	Sherwin Williams	Hydro Gloss H20 Based Urethane B65W181	Benjamin Moore, PPG
	Interior Galvanized Repair Paint	ZRC Worldwide	ZRC Zero VOC Water Based Galvanizing Compound	
	Anti-Slip Paint/Coating	Wooster Products	Epoxy WP-70	
Elastomeric Coatings	Elastomeric Finish	Dryvit	Weatherlastic Adobe - DS 418	
	Metal Accessory Paint	Dryvit	Demandit	
	Roof Coatings	Western Colloid, Apoc		
	Building Coatings	Sherwin Williams	Sherlastic, Conflex	
	Wall Penetration Boot/Collar Flashing	Quickflash Weatherproofing Products, Inc.	P Series (Pipe and conduit penetration) E Series (Electrical boxes)	

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SECTION	ITEM	MANUFACTURER	MODEL	NOTES
DIVISION 10				
Visual Display Boards	Markerboard	Claridge	Writing Surface LCS[3]	
Signage	Signage	Advance Corporation, Braille Tac Division		
	Fire Extinguisher Signage	Seton	Model 39429	
Dimensional Letter Signage	Dimensional Letters	Western Sign Company, Inc.		
Toilet Accessories	Washroom/Shower Accessories	Bobrick		
	Grab Bars	Bobrick		
	Mirror	Bobrick	B-165	
	Electric Hand Dryer	Workd Dryer	SLIMdri. Aluminum, brushed chrome	
Solid Plastic Toilet and Shower Compartments	Solid Plastic Toilet and Shower Compartments	ASI Global Partitions	Solid Plastic (HDPE)	
Metal Lockers	Metal Lockers	Penco	Guardian Defiant	Lyon, Republic Storage
Emergency Access Cabinets	Rapid Entry Access Vaults Key Switches	Knox Company Knox Company	Knox-Vault 3275 Model 3502	
Fire Extinguisher and Fire Extuingisher Cabinets	Fire Extinguisher (Cabinet)	Potter - Roemer	3006 x 5" Diameter x 16" Tall	
	Fire Extinguisher (Wall Bracket)	Potter - Roemer	3410 x 7" Diameter x 24" Tall	
	Fire Extinguisher (Wall Bracket)	Potter - Roemer	Model 3352	
	Fire Extinguisher Cabinet	Potter - Roemer	Alta 7062-DV	
	Fire Extinguisher Wall Bracket	Potter - Roemer	Model 3904	
Flagpoles	Flagpoles	Pole-Tech	PT306B Commercial Groundset Flagpole	
DIVISION 11				
Audio Visual Equipment	Automatic Projection Screen	Da-Lite	Tensioned Contour Electrol	
	Speakers	Electra-Voice	ZX3	
	Mobile Equipment Rack Cart	Da-Lite	21U	
Recreational Play Structures	Kindergarten Play Structure	Game Time	PowerScape Plus PowerScape	All About Play, Little Tykes
	Grade School Play Structure	Game Time	IONiX PowerScape	All About Play, Little Tykes
Athletic Equipment	Basketball Assembly	Porter Athletic Company	Backboard: 00267-698 Goal & Net: 00202-H00 Upright Padding: 00069-000	
			Center-strut Ceiling Hung Side Folding Front Braced (90955000)	
	Volleyball	Porter Athletic Company	01971 Powr-Rib II	
	Wall Protection Pads	Porter Athletic Company	OSB Board with Bonded Foam and Vinyl Covering	
	Tetherball Post & Ball Assembly	Porter Athletic Company	Posts: 00763-00 Ground Sleeve: 00402-000 Ball: 00763-100	
	Handball Wall Assembly	L.A. Steelcraft	Ball Wall	
	Maps	World Maps Online	UM-US	
	Maps	World Maps Online	UM-WORLD	

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	SECTION	ITEM	MANUFACTURER	MODEL	NOTES
		DIVISION 12			
	Window Shades	Windows	Lutron	Sivoia Manual	
		Light-Filtering Fabric	Sheer Shade	Fiberglass Basketweave II	
		Single Roller Shade Assembly	Lutron	Roller 100 LFF - Darkening	
		DIVISION 14			
	Conveying Equipment	Vertical Platform Wheelchair Lift	Garaventa	Genesis Opal	or equivalent
		DIVISION 21			
	Fire Sprinkler	Fire Sprinkler Materials			
		DIVISION 22			
	Plumbing	Gate Valves	Hammond	Hammond IB641	
		Gate Valves	Hammond	Hammond IR-1138	
		Gate Valves	Mueller	Mueller Series 2360	
		Ball Valves	Nibco	Nibco T585-70	
		Ball Valves	Nibco	Nibco F-515-CS-F-66-FS	
		Ball Valves	Nibco	Nibco T-595-Y	
		Swing Check Valves	Stockham	Stockham B-321	
		Silent Check Valves	Nibco	Nibco Model T-480	
		Calibrated Balance Valves	Bell & Gossett Circuit Setter Plus		
		Building Gas Shut-Off Valve	Jomar	Jomar 175-LWN	
		Building Gas Shut-Off Valve	ReSun	ReSun D-126	
		Gas Shut-Off Valve Above Grade	Milwaukee	Milwaukee BB2-100	
		Seismic Gas Shut-Off Valve	Little Firefighter Corporation	NAGV, VAGV, AGV	
		Strainers for Potable Water	Watts	Watts LF777SI	
		Strainers for Potable Water	Watts	Watts 77F-DI-125	
		Valve Boxes	Christy	Christy No. G5 Traffic Valve Box	
		Valve Boxes	Christy	Christy No. F22	
		Valve Boxes	Brooks	Brooks No. 3-TL	
		Gauges	Marsh	Marsh "Series J"	
		Gauges/Thermostats		Pete's Plug II	
		Thermometers	Marsh	5" Diameter Bimetal Dial	
		Access Doors	Milcor	Style K	
		Access Doors	Milcor	Style DW	
		Access Doors	Milcor	Style M	
		Access Doors	Milcor	Style "Fire Rated"	
		Expansion Loops	Metraflex Inc.		
		Flexible Joints/Pipe Guides	Metraflex Inc.	Metraflex Metrasphere	
		Flexible Joints	Barco	Barco Ductile Iron	

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SECTION	ITEM	MANUFACTURER	MODEL	NOTES
Plumbing Fixtures	Water Closet Wall Mounted	Kohler or American Standard	Kingston 1.28 No. K4325	With manual Sloan flush valves
	Flush Valve	Sloan or Zurn	Royal Optima 111-1.28 ES-S	
	Flush Valve	Sloan or Zurn	Royal 142-1.28	
	Urinal Wall Mounted	Kohler or American Standard	Bardon 1/8 GPF No. K-4904-ET	With manual Sloan flush valves
	Flush Valve	Sloan or Zurn	Royal 186 ES-S HEU 0.125 GPF	
	Lavatory	Kohler or American Standard	Kingston No. K-2005	
	Faucet/Valve	Chicago	116.121.AB.1 Sensor Faucet	
	Faucet/Valve	Chicago	897-ET2-665P SHABCP Model E2805	
	Faucet/Valve	Sloan	ETF-600 Sensor Faucet	
	Sink	Just Mfg. or Elkay	Model DRKADQ3119-65-BP	
	Faucet/Valve	Chicago	ECAST Model 350 Gooseneck	
	Faucet/Valve	Haws	5054LF Bubbler	
	Sink	Just Mfg or Elkay	Model LRADQ2219-65-BP	
	Faucet/Valve	Chicago	ECAST Model 50-317 Gooseneck	
	Sink	Just Mfg. or Elkay	Model LRADQ33-19-60	
	Faucet/Valve	Chicago	ECAST Model 1100-317	
	Solids Interceptor	Zurn	8715-2"	
	Service Sink	Kohler or American Standard	TNC-24-SH-SSC	
	Faucet/Valve	Chicago	Model 897-CP	
	Drinking Fountain	Haws or Elkay	1117L Dual Height, Wall Mount	Hi/Lo with bottle filler on chilled models
	Refrigerator Ice Maker	Guy Gray	Model SSIB2AB	
	Hose Bibb	Acorn or Woodford	Model 8121CR	
	Hose Bibb	Acorn or Woodford	Model 8126CR	
	Hose Bibb	Acorn or Woodford	5609QT	
	Hose Bibb	Acorn or Woodford	Model 8121CP	
	Wall Hydrant	Acorn or Woodford	M8104-E500	Freeze-less for exterior installations
	Wall Hydrant	Acorn or Woodford	Model 5509	Freeze-less for exterior installations
Plumbing Piping Systems	Drain and Waste Pipe Above Grade	AB & I		
	Joints Above Grade	ANACO-Husky		
	Drain and Waste Pipe Below Grade	AB & I		
	Joints Below Grade	ANACO-Husky	SD 4000	
	Joints Below Grade	Ty-Seal	Neoprene Gaskets	
	Grease Waste and Vent	AB&I		
	Gas Pipe Flexible Connection	Metraflex Inc.		
	Water Service Piping	J.M. Eagle		
	Gas Piping Underground	Performance Pipe	"DriscoPlex" 6500 PE 2708	
	Gas Piping Aboveground	Bonney	Bonney "Weldolet" Allied Pipe Fittings	
	Water Hammer Arrestors	PPP or MIFAB	Series 75000	
	Water Filters	Cuno Incorporated	Aqua Pure Model AP510	
	Hose Bibs	Acorn Engineering Co. or Woodford		Freezeless for exterior and roof installations
	Hose Station	Leonard	THS-25-VB-CW	
	Gas Pressure Regulating Valves	Elster	Model 1213B	

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SECTION	ITEM	MANUFACTURER	MODEL	NOTES
	Gas Pressure Regulating Valves	Elster	Model 1813C	
	Gas Pressure Regulating Valves	Elster	Models 1813, 1813B	
	Relieve Valves	Cash (A.W.) Valve Manufacturing Corporation		
	Trap Primer	MiFab, Inc. or PPP		
	Thermostatic Water Temperature Control Valve	Bradley Corporation		
	Cleanouts	Zurn	ZN-1400-KC	
	Cleanouts	Zurn	ZN-1400-X-DX	
	Cleanouts	Zurn	Z-1440A	
	Cleanouts	Zurn	Z-1441/Z-1443	
	Cleanouts	Zurn	Z-1449-BP	
	Cleanouts	Zurn	Z-1400-HD-KC	
	Floor Drains	Zurn		
	Floor Sinks	Zurn		
	Roof Drains and Overflow Drains	Zurn		
	Hopper Drains	Zurn		
Plumbing Equipment	Concrete Grease Interceptor	Jensen or Pro Cast		
	Commercial Electric Water Heaters	Bradford White Coproration		
	Instantaneous Electric Water Heaters	Eemax or Chronomite Laboratories, Inc.		
	Gas Fired Water Heaters	Bradford White Corporation		
	Expansion Tanks	Zurn/Wilkins or Amtrol, Inc.		
	In-Line Domestic Hot Water Recirculation Pumps	Grundfos Pumps Corporation		
	Deionizer	Culligan	Model SS-50 Mixed Bed Deionized Water System	
DIVISION 23				
HVAC	Motor Starters	Allen Bradley	Square D	
	Access Doors	Milcor	Style K Style DW Style M Style "Fire Rated"	
HVAC Equipment	Phase Protection	Sym Com	Model 201 A	
	Air Conditioning Unit	Lennox		
	Coil Guard	Micrometl		
	Modulating Power Exhaust Economizer	Micrometl		
	Split System AC Unit	Fujitsu or Lennox		
	Variable Refrigerant Flow	Fujitsu or Lennox		
	Variable Refrigerant Flow: Heat Pump Unit	Fujitsu or Lennox		
	Variable Refrigerant Flow: Branch Circuit Controls	Fujitsu or Lennox		
	Variable Refrigerant Flow: Energy Recovery Ventilator	Lossnay	LGH-F1200RX5	
	Exhaust Fan	Greenheck Fan Corporation		
	Transfer Fan	Greenheck Fan Corporation		
	Relief and Intake Vents	Lauren Cook Company		

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	SECTION	ITEM	MANUFACTURER	MODEL	NOTES
		Air Filters	Tridem		No exceptions
		Ceiling Fan	Big Ass Fans	Essence Series	
		Exhaust/Intake/Relief Hood	Greenheck Fan	WRH	
		Backdraft Dampers	Ruskin	CBD2	
		Single Damper Blades: Self-locking Regulators	Ventlock	Ventlock 641	
		Single Damper Blades: End Bearings	Ventlock	Ventlock 607	
		Multiple Blade Dampers	Ruskin	CD35	
		High Velocity Dampers	Ruskin	CD50	
		External Insulated Duct: Self-locking Regulators	Ventlock	Ventlock 644	
		Fire Dampers	Ruskin	DIBD20 DIBD230	
		Fire Dampers: High Pressure/Velocity	Ruskin	FD60	
		Fire Dampers: Ceiling Installation	Ruskin	CFD 2/3/4/5 CFD7	
		Fire Dampers: Round Combination Smoke Fire	Ruskin	FSDR25 FSD60	
		Fire Dampers: 3-Hour Cominbation Smoke Fire	Ruskin	FSD60-3	
		Fire Dampers: Wall Type Combination Smoke Fire	Ruskin	FSD35 FSD60FA	
		Fire Dampers: Ceiling Type Combination Smoke Fire	Ruskin	FSD36C	
		Fusible Links	Ruskin	Ruskin 165F/350F Ruskin EFL Ruskin MCP2	
		Actuators	Bolemo		
		Ductwork	Ductmate		
		Ductwork: Duct Sealing	Design Polymerics	DP1010	
		Ductwork: Duct Sealing	Foster	Foster 30-36 Adhesives	
		Ductwork: Rectangular Duct Turning Vanes	SMC Duct/E-Z	E-Z Rail II	
		Ductwork: Rectangular Internally Insulated Duct Fabrication	Johns Manville	Duct Liner PM	
		Ductwork: Round Internally Insulated Duct and Fittings	McGill AirFlow, LLC.	Acousti-k27	
		Duct Access Doors	NCA Manufacturing, Inc.	AD-RD-87	
		Flexible Air Ducts	C.A. Schroeder, Inc.	Cal Flex 2PMJ	
		DIVISION 25			
	Facility Controls	Automation Facility Controls	Pelican or Allerton DDC		

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SECTION	ITEM	MANUFACTURER	MODEL	NOTES
DIVISION 26				
Building Wire and Cable	Building Wire	America Insulated Wire Corp.		
	Metal-Clad Armored Cable	American Cable Systems		
	Flexible Cords and Cables	Carol Cable Company		
	Wiring Connectors and Terminations	Ideal		
Grounding and Bonding	Ground Rods	Weaver		
	Ground Wells	Oldcastle Precast		
	Ground Bushings	O-Z/Gedney		
Boxes	Outlet and Junction Boxes	Spring City Electrical Manufacturing Co.		
	Cast Boxes	Appleton Electric Co.		
	Floor Boxes	Legrand		
	Pull Boxes	Circle AW Products		
Cable Trays	Ladder-Type Cable Tray	Chatsworth Products, Inc.		
Hangers and Supports	Concrete Fasteners	Hilti	Kwik Bolt	
	Concrete Inserts and Construction Channel	Unistrut Corp.		
	Conduit Straps	O-Z/Gedney		
Conduit	Metal Conduit	Allied Tube and Conduit Co.		
	Fittings	Appleton Electric Co.		
Underground Ducts and Structures	Underground Precast Concrete Utility Structures	Christy Concrete Products		
	Conduit, Ducts and Fittings	Prime Conduit		
Signal Systems Raceway	"J" Hook Hanger	Unistrut Corp.		
Electrical Identification	Conduit and Wire Markers	Thomas and Betts Corp.		
	Inscription Tape	Kroy		
Network Lighting Control System	Network Lighting Control System	nLight/SensorSwitch		
Dry Type Transformers	Dry Type Transformers	Square D		
Switchboards	Switchboards	Square D		
Panelboards	Panelboards	Square D		
Cabinets and Enclosures	Hoffman Engineering Co.			
Wiring Devices	Switches, Receptacles and Coverplates	Pass & Seymour	#20AC Series #5362 Series #2091-S Series	
	Occupancy Sensor Switches	WattStopper		
	Floor Mounted Service Boxes	Legrand	#880C Series	
Overcurrent Protective Devices	Fuses	Bussmann Division, Cooper Industries		
	Circuit Breakers	Square D		
Disconnect Switches	Disconnect Switches	Square D		
Motor Controls	Manual Motor Starters	Square D		
Surge Protective Devices	Surge Protective Devices	Current Technology		
Exterior Lighting	LED Area Light	Gardco	P21-A1-1-5W-80LA-WW-UNIV	
	LED Area Light - Backlight Controlled Optics	Gardco	P21-A1-1-BLC-80LA-WW-UNIV	
	Pedestrian Scale LED Area Light	Gardco	SFP-T3-5W-55LA-WW-UNIV-AR	

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SECTION	ITEM	MANUFACTURER	MODEL	NOTES
	4' Linear, Adjustable High Intensity LED Grazing Fixture	Color Kinetics	eW Graze Mix Powercore 523-000080-45	
	Solar Powered Rechargable LED Light - Motion Sensor Activated	Cooper Lighting	MSLED	
Interior Lighting	LEDs	General Electric		
	LED Drivers	Osram Sylvania		
	Emergency Batter Pack	Bodine		
	2'x4' Architectural Recessed LED Troffer	Lithonia	2FSL4-48L-EZ1-LP835-N100	
	2'x2' Architectural Recessed LED Troffer	Lithonia	2FSL2-33L-EZ1-LP835-N100	
	Suspended Indirect/Direct Linear LED Fixture	Fluxerx	VU1-S-A-D-35-A-LNEGTH-S-D-M-3-(A ***)	
	Recessed Linear LED Fixture	Finelite	HP4-WW-R-K-8'-SO-3500K-277V-SC-SF	
	Nominal 4' Long Surface Mounted Compact Linear LED Fixture	Philips	Fluxstream LF-4-FR-31-35-U-LAG + SVCC60-UNV	
	Nominal 4' Long Surface Mounted Compact Linear LED Fixture - with Batter Pack	Philips	Fluxstream LF-4-FR-31-35-U-LAG-EM + SVCC60-UNV	
	Nominal 4' Long Surface Mounted Compact Linear LED Fixture - Increased Lumen Output and 0-10V Dimming	Philips	Fluxstream LF-4-10-41-35-U-DZT	
	Nominal 6" Square Slim Surface moutned LED Fixture	Philips	Slim Surface S6S830K10	
	2'x4' Recessed LED Troffer	Metalux	2GRLD1-6400-A125-UNV-L835-CD-1	
	Suspended LED Area Light	Cree	CXBW16-CL16 + CXB-A-JP-H-40K-8-UL-10V + SC-5	
	LED Exit Sign	Eventlite	TLP-G-2U-W	
	LED Downlight	Gotham	EVO-SQ-35-15-6AR-LSS-MVOLT-EZ1	
	Exterior LED Wall Sconce	WAC	WP-LED127-30-GH	
DIVISION 27				
Telecomunication Cabling Systems	Equipment Racks and Cable Runways	Middle Atlantic		
	Bonding Strap	Panduit		
	Bonding Connectors and lugs	Panduit		
	Backbone Fiber Optic Cable	General Cable		
	Backbone Twisted Pair Cable	General Cable		
	Backbone Twister Pair Terminations	General Cable		
	Horizontal Twisted Pair and Modular Patch Cord Cable	Panduit		
	Horizontal Twisted Pair and Modular Patch Cord Terminations	Panduit		
Audio Visual System	Projectors	Epson		
	Interactive Flat Screen TV	Promethean Boards		
Assistive Listening System	Assistive Listening System	Williams Sound		
Campus Communication System	Bogen or Rauland			
Clock Systems	Clock System	Rauland		

LODI USD DESIGN SPECIFICATION GUIDELINES

Edit Date: 12-14-2017

SECTION	ITEM	MANUFACTURER	MODEL	NOTES
DIVISION 28				
Access Control	Accugardian			Entry Management Pelican/Novar
Security Camera System	Milestone Software			
Security Alarm Monitoring System	Security Alarm Monitoring System	Alamo Intrusion Alarm		Confirm with District's Facilities Dept. on each site
Fire Alarm System	Manual Pull Stations	Gamewell-FCI		
	Heat Detectors	Gamewell-FCI		
	Photoelectric Smoke Detectors	Gamewell-FCI		
	Duct Smoke Detectors	Gamewell-FCI		
	Notification Device: Speaker	Gamewell-FCI		
	Notification Device: Strobe, Strobe/Speaker	Gamewell-FCI		
	Notification Devices: Remot Power Supply for Strobe Circuits	Gamewell-FCI		
DIVISION 31				
Earthwork	Decomposed Granite Solidifier	PolyPavement		
Termite Control	Termiticides	BASF or Wilco	Termidor SC	
Vegetation Control	Soil Herbicide	Roundup Promax		
DIVISION 32				
Asphalt Concrete Paving	Soil Sterilizer	Ciba Ceigy	Pramatol 25-E	
	Seal Coat Select Fillers and Fibers	Western Colloid Products	Park-Top No. 302	
	Pavement Epoxy	K-Lite	Ktepx-590	
	Crack Filler	QPR	CAR08	
	Crack Filler	Conoco, Inc.	Docal 1100 Viscolastic	
	Crack Filler	Topeka	Hot Mix	
Concrete Paving	Anchoring Cement	Por-Rok		
	Integral Color	Davis Color	Mix Ready (Pre-bagged)	
Tactile Warning Surfacing	Modular Paver Tiles (Cast-in-place)	Access Tile	Cast In Place Replaceable	
	Fasteners (Surface mount)	Access Tile		
Synthetic Resilient Surfacing	Synthetic Resilient Surfacing	Robertson Recreational Surfaces	TotTurf Aliphatic	
Unit Masonry Retaining Walls	Modular Concrete Retaining Wall	Basalite	Keystone, Standard	
	Construction Adhesive	Basalite	Keystone Kapseal	
Site Furnishings	Bicycle Lockers - Class 1	Creative Pipe, Inc.	CS1-C Common Wall	
	Bicycle Racks - Class III	Ribbon Rack, Inc.	RB 09 and RB 07	
	Skateboard - Vertical Dock	Park a Bike	Skatedock, SM-10	
	Wheel Stops	West Coast Rubber, Ground Rubber Solutions	Ground Rubber Wheel Stop	
	Skate Deterrents	Barret Robinson	Skate Stoppers, FA-FR FA 135	
Chain Link Fences	Swinging Gates	BFC		Door King accessories
	Single Man Gate: Exit Device	Von Duprin	Series 22 Exit Device (22NL)	
	Single Man Gate: Closer	Lockey	TB600 Hydraluic Gate Closer	
	Electric Gate Operators and Controls	LiftMaster	Elite CSW24VDC	

LODI USD DESIGN SPECIFICATION GUIDELINES

Edit Date: 12-14-2017

	SECTION	ITEM	MANUFACTURER	MODEL	NOTES
	Decorative Metal Fences	General Fence	Monumental Iron Works	Imperieal Fence - Style B	Door King accessories
		Double/Single Man Gate: Exit Device	Von Duprin	Series 22 Exit Device (22NL)	
		Double/Single Man Gate: Closer	Lockey	TB600 Hydraluic Gate Closer	
		Gate Operators	Lift Master	Elite CSW24VDC	
	Landscape Irrigation	Irrigation	Rainbird or Hunter		
	Landscape Planting	Tree Staking Material	Arthur Enterprises	Tie-It Super Tree Ties	
		Filter Fabric	Fabriscape Inc.	Landscape Filter/drain Fabric	
		Mulch	Weyerhaeuser Company	Siva-Fiber	
		Root Barrier	NDS	EP series	
		Weed Control	Ubjohn	Enide	
		Fungicide	Cibe-Geigy	Subdue	
		Binders	AZ-TAC Products, Inc.	AM-TAC	

1305 E. Vine Street

Lodi, California 94513

(209) 953-8111

Door Hardware Specification Guidelines

December 14, 2017

SPECIFICATION GUIDELINE
Manufacturers and Products

DOOR HARDWARE
SPECIFICATION GUIDELINES

The purpose of this booklet is to support the school districts building guidelines for door hardware. The school district maintains the following hardware and is currently stocking replacement parts. The products listed in this booklet are pursuant to Public Contract Code Section 3400. The following products are designated by brand name in order to match other products in use on a particular improvement, either completed or in the course of completion. **Products shown are Basis of Design, substitutions subject to District's approval.**

It is the intent of this booklet to provide guidelines for the architect's specification section 087100, for product groups and the hardware schedule. It remains the architect's responsibility to coordinate these products to meet the applicable building codes, life safety codes, and Accessible requirements.

Section 087100 Door Hardware preamble must specify the following:

Door and Frame Prep

Before hardware installation, verify that all doors and frames are properly prepared to receive the specified hardware. Hollow metal frames shall be prepared for ANSI strike plates per A115.1-2 (4-7/8" high), hinge preps will be mortised and reinforced with a minimum of 8-gauge reinforcement material for closer installation. Hollow metal doors shall be properly prepared and reinforced with a minimum or 16-gauge material for either mortised or cylindrical locks as specified. It is preferred that all hollow metal doors receiving door closers have 12-gauge reinforcement. If this is not possible, the use of sex bolts is mandatory. Wood doors shall be factory prepared to receive the scheduled hardware.

Hardware installation

The manufacturer's representative for the locking devices and closing devices must inspect and approve, in writing, the installation of their products. Hardware installed incorrectly must be reported to the architect prior to the architect's final punch list.

SPECIFICATION GUIDELINE
Manufacturers and Products

DOOR HARDWARE

Description	Manufacturer	Model Series	Finish
Hanging Device			
Continuous Hinge	Ives	224HD (At All Locations)	CL
Securing Devices		**Cylindrical Locks**	
Lock Set	Schlage	ND Series x Rhodes: ND10S Passage Lock ND40S Privacy Lock L9485x06AxL283-722 Faculty Restroom Lock (Faculty – single compartment toilet) ND91PD Office Lock **ND50PD Classroom Security Lock: At Elementary Schools** **ND95PD Classroom Security Lock: At Middle and High Schools**	626
Exit Device	Von Duprin	CD-AX-99NLx910NL Ives "Vandal Resistant Trim Pull" CD-AX-99NLx910NL Ives "Trim Pull" x AX-99DTx910DT "Pull" x SNB x KR4954 Mullion x 154 (at pairs) AX-99L-2-F-996L (F-rated single doors) AX-99L-2-F-996L x AX99EO-F x KR9954 Mullion x 154 (F pairs) • **All mullions to have a set of #154 stabilizers**	US26D US26D US26D US26D
Padlock	Schlage	KS43D2200 (Padlock)	Brass
Key System	Schlage	**LUSD to verify Schlage Primus Patented Keyway**	
Coordinator	Ives	COR x FL x MB (Storage & Utility rooms) • **Use coordinator only where required by fire code**	USP
Flush Bolts	Ives	FB31P (Automatic) (metal doors) (Storage & Utility rooms) FB41P (Automatic) (wood doors) (Storage & Utility rooms) FB51P (Manual) (metal doors) (Storage & Utility rooms) FB61P (Manual) (wood doors) (Storage rooms)	US26D US26D US26D US26D
Closing Device			
Closer	LCN	4040 "Super Smoothie RW/PA/TB • **Furnished and installed all door closers with thru bolts** • **All door frames to be reinforced for soffit shoe**	689
Stop and Holders			
Stop Holders	Ives	WS45 (Automatic Holders & Stops) FS43 (Automatic Door Stops & Holders) FS436/R435 (Interior Floor Stop) FS18S (Security Floor Stops) WS401/WS402 (Wall Stops)	US26D US26D US26D Black US26D

SPECIFICATION GUIDELINE
Manufacturers and Products

DOOR HARDWARE

Description	Manufacturer	Model Series	Finish
Protective Plates and Trim			
Kick Plate	Ives	8400 Series	US26D
Mop Plate	Ives	8400 Series	US26D
Push/Pull Plates	Ives	8200/8300 Series	US26D
Latch Protector	Ives	LG12	US32D
Door Silencer	Ives	SR64	Gray
Accessories			
Threshold	ZERO	654A	Alum
		655A	Alum
		623A	Alum

• **Threshold Notes** - Architect to coordinate with project conditions. Set thresholds in a full bed of butyl-rubber or polyisobutylene mastic sealant complying with requirements in Division 7 “Thermal and Moisture Protection”. Use 1/4-inch fasteners, red-head flat-head sleeve anchors (SS/FHSL).

Auto Door Bot.	ZERO	360AA	Clear
Door Sweep	ZERO	328AA	Clear
Weather stripping	ZERO	488S-Bk	Black
		8780N	
Meeting Stiles	ZERO	328AA	Clear
		44STST	Alum
Head & Jamb	ZERO	328AA	Clear
		326AA	Clear
		429A	Alum
		142A	Alum

Pemco is an acceptable alternate for Thresholds and Weather Stripping Products

End of Specification

224HD Full Mortise Aluminum Geared Continuous Hinge

- Handing required when modified
- Door Edge Protector
- 48" Maximum Door Width
- 1/16" Door Inset
- Beveled or Square Edge Doors

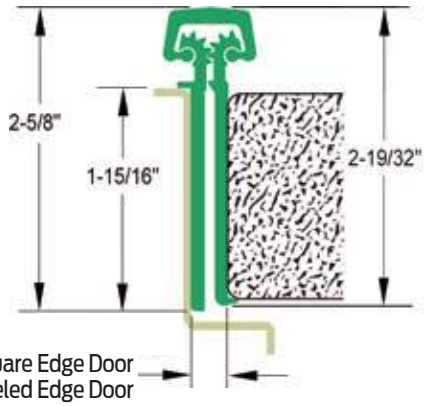
For Doors Weighing up to 450 pounds without reinforcing, 600 pounds with reinforcing

Standard lengths 83", 85", 95", 120"
Standard Mounting Hardware
12-24 X 3/4" Steel Self Drilling, Self Tapping Screws
Optional WD - Wood Screws or SEC - Security Fasteners Available

Finishes

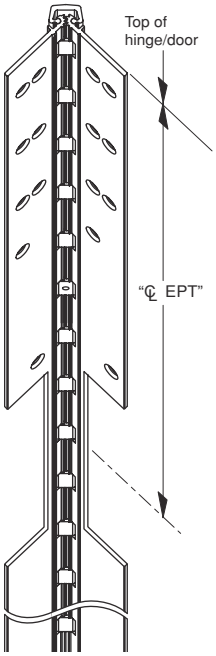
Clear (CL), Dark Bronze (DB)

Custom Anodizing and Painting are available, consult factory.

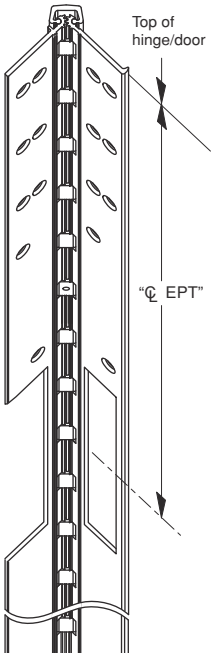


5/16" Clearance for Square Edge Door
1/32" Clearance For Beveled Edge Door

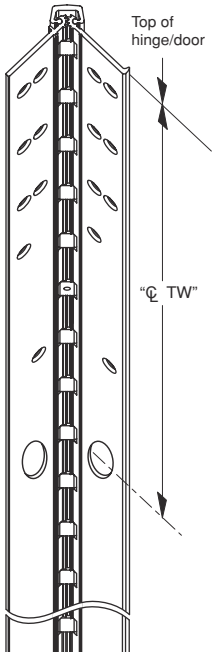
EPT 112HD



EPT 224HD



TW 112HD 224HD



Note: See ordering guide in price book for proper placement.

Electrical Cutouts

Ives Aluminum Geared Continuous Hinges are available with factory modified cutouts to accommodate most electrical frame to door requirements. Special templates are required.

When ordering indicate the following:
1. Opening size.
2. Handing. LH, RH, RHR or LHR.
3. Manufacturer and model number of the electrical product being used. Example; Von Duprin EPT2

Because clearances may vary between door and frame manufacturer, and locations can be influenced by the door hardware it is always recommend contacting Ives Customer Technical for specific template information.

For your general information below are standard locations for Von Duprin EPT2 or EPT10, and monitor switch.

From Top Edge of Door to Center Line of Cut-Out

Standard Length	112HD EPT	224HD EPT	112HD/224HD TW
83"	30"	30"	41-1/2"
85"	32"	32"	42-1/2"
95"	42"	42"	57-3/4"
120"	67"	67"	81-25/32"

TWP option centered in hinge.

112HD Full Mortise Aluminum Geared Continuous Hinge

- Non Handed
- Flush Mounted, No Inset
- 48" Maximum Door Width
- Beveled or Square Edge Doors

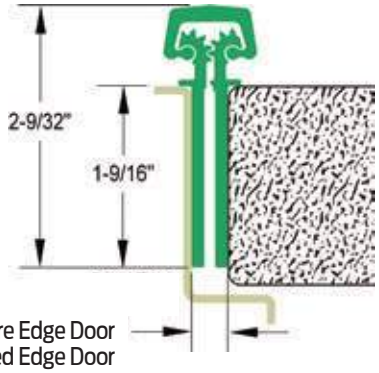
For Doors Weighing up to 450 pounds without reinforcing, 600 pounds with reinforcing

Standard lengths 83", 85", 95", 120"
Standard Mounting Hardware
12-24 X 3/4" Steel Self Drilling, Self Tapping Screws
Optional WD - Wood Screws or SEC - Security Fasteners Available

Finishes

Clear (CL), Dark Bronze (DB)

Custom Anodizing and Painting are available, consult factory.



5/16" Clearance for Square Edge Door
1/32" Clearance For Beveled Edge Door

157XY Full Surface, Center Pivot Aluminum Geared Continuous Hinge

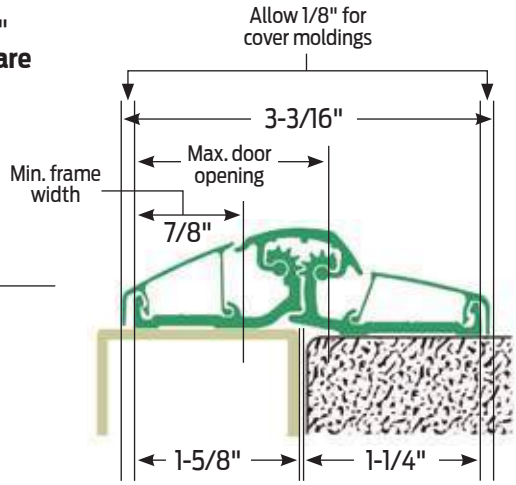
- Non Handed
- Narrow Frame
- 1/16" Door Inset
- 48" Maximum Door Width
- Beveled or Square Edge Doors
- A patented easy-to-install, heavy duty, full surface continuous hinge
- Lateral and vertical adjustability while the door is still hanging

For Doors Weighing up to 550 pounds

Standard lengths 83", 95", 119"
Standard Mounting Hardware
12-24 X 1/2" Steel Self Drilling and Tapping Screws,
Optional Wood Screws and Security Fasteners Available
Custom Paint Finish Available

Finishes

Clear (CL), Dark Bronze (DB)



Meets ANSI/BHMA A156.1
A8111 – Steel
A5111 – Stainless Steel
A2111 – Brass

5BB1HW 5 Knuckle, Ball Bearing, Heavy Weight Full Mortise Hinge

- For heavy weight doors
- High frequency usage
- 4 ball bearing
- Packed with wood and metal screws

Options

- NRP, Non-Removable Pin
- SH, Security Stud
- HT, Hospital Tip
- RC, Round Corners - 1/4" or 5/8" Radius
- SEC, Security Fastners - Pin-in-Socket

Dimensions

Size (Inches)	Size (mm)	Gauge	Size (Inches)	Size (mm)	Gauge
4.5 x 4	114 x 102	0.180	5 x 4.5	127 x 114	0.190
4.5 x 4.5	114 x 114	0.180	5 x 5	127 x 127	0.190

Meets ANSI/BHMA A156.1
A8111 – Steel

5BB1WT 5 Knuckle, Ball Bearing, Wide Throw Full Mortise Hinge

- For medium weight doors
- Medium frequency usage
- 2 ball bearing
- Packed with wood and metal screws

Options

- NRP, Non-Removable Pin
- SH, Security Stud
- HT, Hospital Tip
- RC, Round Corners - 1/4" or 5/8" Radius
- SEC, Security Fastners - Pin-in-Socket

Dimensions

Size (Inches)	Size (mm)	Gauge
4.5 x 5	114 x 127	0.134
4.5 x 6	114 x 152	0.134
5 x 6	127 x 152	0.146
5 x 7	127 x 178	0.146
5 x 8	127 x 203	0.146

Finishes *brass*

Ives Finish	US3	US4	US10	US10B	US10A	US11	US15	US26	US26D
BHMA	605	606	612	613	614	616	619	625	626

Finishes *steel*

Ives Finish	USP	US3	US4	US10	US10B	US10A	US11	US15	US26	US26D
BHMA	600	632	633	639	640	641	643	646	651	652

Finishes *stainless steel*

Ives Finish	US32	US32D
BHMA	629	630

Meets ANSI/BHMA A156.1
A8133 – Steel
A5133 – Stainless Steel
A2133 – Brass

5PB1 5 Knuckle, Plain Bearing Full Mortise Hinge

- For standard weight doors
- Low frequency usage
- Packed with wood and metal screws

Not for use with a door closer.

Options

- NRP, Non-Removable Pin
- SH, Security Stud
- HT, Hospital Tip
- RC, Round Corners - 1/4" or 5/8" Radius
- SEC, Security Fastners - Pin-in-Socket

Dimensions

Size (Inches)	Size (mm)	Gauge
3.5 x 3.5	89 x 89	0.123
4 x 4	102 x 102	0.134
4.5 x 4	114 x 102	0.134
4.5 x 4.5	114 x 114	0.134
5 x 4.5	127 x 114	0.134

Meets ANSI/BHMA A156.1
A8112 – Steel
A5112 – Stainless Steel
A2112 – Brass

5BB1 5 Knuckle, Ball Bearing Full Mortise Hinge

- For standard weight doors
- Medium frequency usage
- 2 ball bearing
- Packed with wood and metal screws

Options

- NRP, Non-Removable Pin
- SH, Security Stud
- HT, Hospital Tip
- RC, Round Corners - 1/4" or 5/8" Radius
- SEC, Security Fastners - Pin-in-Socket

Dimensions

Size (Inches)	Size (mm)	Gauge	Size (Inches)	Size (mm)	Gauge
3.5 x 3.5	80 x 102	0.130	5 x 4.5	127 x 114	0.146
4 x 4	102 x 102	0.130	5 x 5	127 x 127	0.146
4.5 x 4	114 x 102	0.134			
4.5 x 4.5	114 x 114	0.134			

Finishes *brass*

Ives Finish	US3	US4	US10	US10B	US10A	US11	US15	US26	US26D
BHMA	605	606	612	613	614	616	619	625	626

Finishes *steel*

Ives Finish	USP	US3	US4	US10	US10B	US10A	US11	US15	US26	US26D
BHMA	600	632	633	639	640	641	643	646	651	652

Finishes *stainless steel*

Ives Finish	US32	US32D
BHMA	629	630

ALLEGION

SCHLAGE

ND Series

Grade 1 cylindrical lock

Overview

The ND Series has long been one of Schlage's best selling mechanical locks for good reason - it's tough, durable and fits a wide variety of applications.

Now we've made our trusted ND Series lock even better by making it easier to install. We've added these enhancements because we know that a lock installed correctly the first time will last longer and perform better. And the longer the lock lasts, the lower the cost of ownership over the life of the lock.

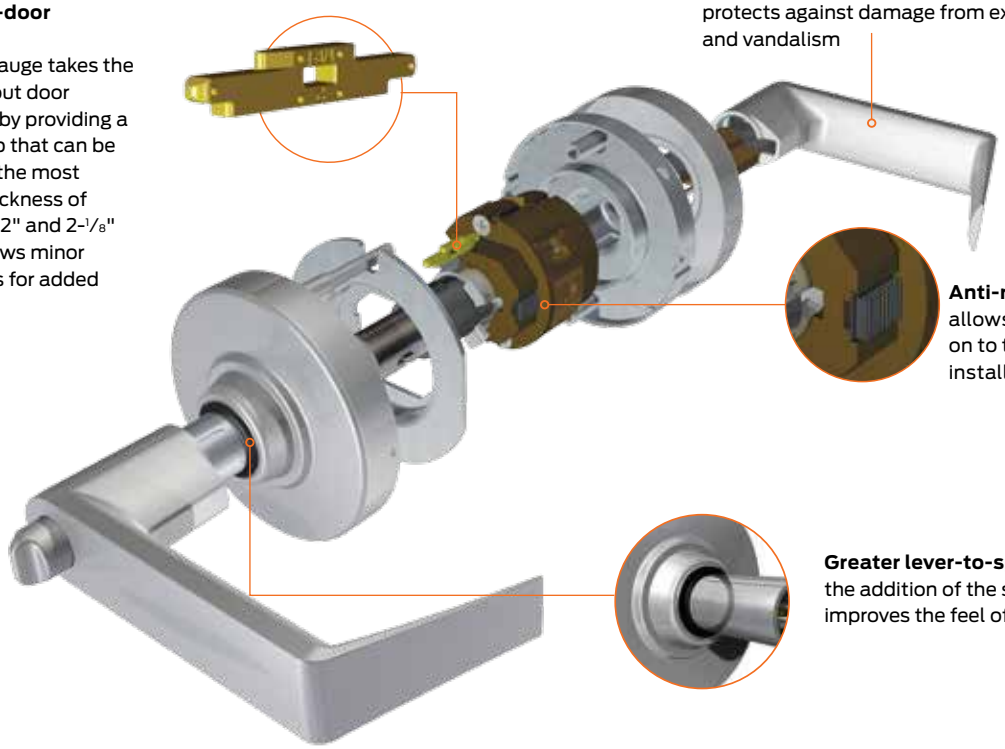
We've also beefed up our warranty to provide 10 years of coverage. The result: greater peace of mind that every door is safe and secured with a lock built to last.

A simpler, smarter ND Series lock

Built-in durability exceeds ANSI/BHMA grade 1 cycle test requirements

Chassis-to-door alignment
the yellow gauge takes the guesswork out door adjustment by providing a positive stop that can be adjusted to the most common thickness of 1-5/8", 1-3/4", 2" and 2-1/8" and still allows minor adjustments for added equipment

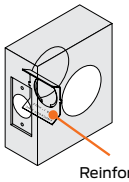
Optional Vandlgard® lever
protects against damage from excessive force and vandalism



Anti-rotation plate retention
allows the plate to be "snapped" on to the chassis making installation easier

Greater lever-to-spindle engagement
the addition of the soft durometer spacer improves the feel of the lever during actuation

ND Series continuous improvements



Door reinforcement
Prevents the collapse of hollow metal doors when locksets are tightly mounted. The unit works with 1 3/8" and 1 3/4" thick doors.

New lever removal tool
The ergonomic design is bigger, stronger and works for both the ND and L series locks. Sold separately.

Chassis slide
In 2010, we redesigned the slide in order to increase the locks overall durability and improve component alignment.

Locking lug and key cam
In 2009 we improved the locking lug and keycam by making them stronger and more resistant to damage.

About Allegion

Allegion (NYSE: ALLE) creates peace of mind by pioneering safety and security. As a $2 billion provider of security solutions for homes and businesses, Allegion employs more than 8,000 people and sells products in more than 120 countries across the world. Allegion comprises 27 global brands, including strategic brands CISA®, Interflex®,LCN®, Schlage® and Von Duprin®. For more, visit **www.allegion.com**

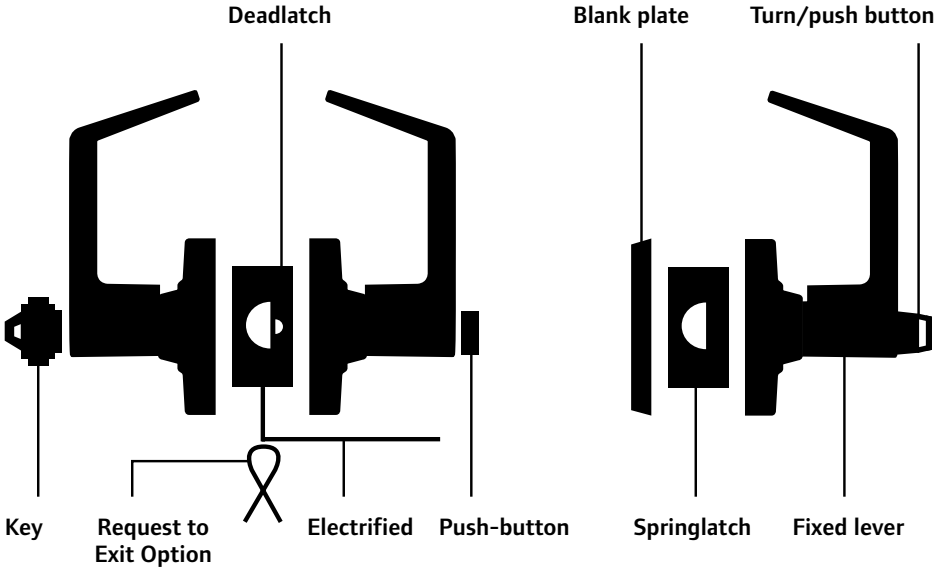
aptiQ ■ LCN ■ SCHLAGE ■ STEELCRAFT ■ VON DUPRIN

ALLEGION

006486, Rev.08/14
allegion.com

Lock Functions | ANSI A156.2 Series 4000 Grade 1

Non-Keyed Locks

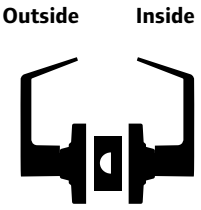


SCHLAGE ANSI

ND10S **F75**

Passage Latch

- Both levers always unlocked.

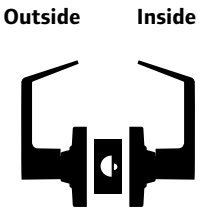


SCHLAGE ANSI

ND12D **F89**

Exit Lock

- Outside lever always fixed.
- Inside lever always unlocked.

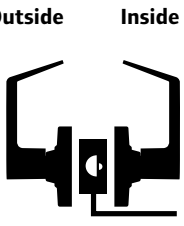


SCHLAGE ANSI

ND12DEL -

Electrically Locked (Fail Safe)

- Outside lever continuously locked electrically.
- Unlocked by switch or power failure.
- Auxiliary latch deadlocks latchbolt when door is closed.
- Inside lever always free for immediate exit.

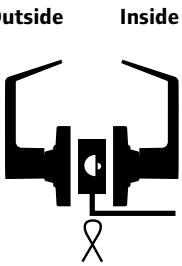


SCHLAGE ANSI

ND12DEU -

Electrically Unlocked (Fail Secure)

- Outside lever continuously locked until unlocked by electric current.
- Auxiliary latch deadlocks latchbolt when door is closed.
- Inside lever is always free for immediate exit.

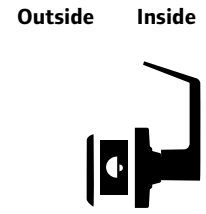


SCHLAGE ANSI

ND25D -

Exit Lock

- Blank plate outside.
- Inside lever always unlocked.



Standard cylinder.

Safe School Locks.

FSIC - full size interchangeable core option.

SFIC - small format interchangeable core option.

† **Caution:**
Double cylinder locks are a life safety hazard in times of emergency and their use is not recommended. Installation should be in accordance with existing codes only.

Keyed Locks

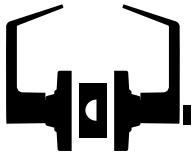
SCHLAGE ANSI

ND40S **F76**

Bath/Bedroom Privacy Lock

- Push-button locking.
- Can be opened from outside with a small screwdriver.
- Turn inside lever or close door to release button.

Outside **Inside**



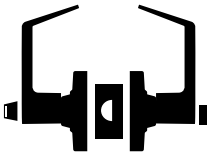
SCHLAGE ANSI

ND44S **-**

Hospital Privacy Lock

- Push-button locking.
- Unlocked from outside by turning emergency turn-button.
- Turn inside lever or close door to release button.

Outside **Inside**



SCHLAGE ANSI

ND170

Single Dummy Trim

- Dummy trim for one side of door.
- Used for door pull or as matching inactive trim.

Outside/Inside

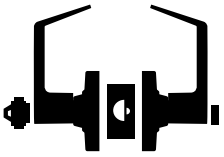
SCHLAGE ANSI

ND50PD **F82**

Entrance/Office Lock

- Push-button locking.
- Push-button locks outside lever until it is unlocked with key or by turning inside lever.

Outside **Inside**



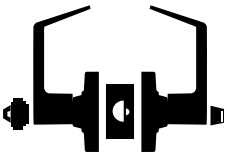
SCHLAGE ANSI

ND53PD **F109**

Entrance Lock

- Turn/push-button locking: Pushing and turning the button locks the outside lever, requiring use of a key until the button is manually unlocked.
- Push-button locking: Pushing button locks outside lever until unlocked by key or by turning the inside lever.

Outside **Inside**



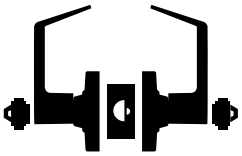
SCHLAGE ANSI

ND60PD **F88**

Vestibule Lock

- Latch retracted by key from outside when the outside lever is unlocked by key in inside lever.
- Inside lever is always unlocked.

Outside **Inside**



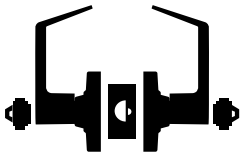
SCHLAGE ANSI

ND66PD **F91**

Store Lock†

- Key in either lever locks or unlocks both levers.

Outside **Inside**



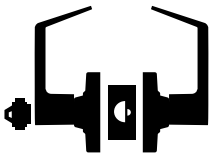
SCHLAGE ANSI

ND70PD **F84**

Classroom Lock

- Outside lever locked and unlocked by key.
- Inside lever always unlocked.

Outside **Inside**



Lock Functions | ANSI A156.2 Series 4000 Grade 1

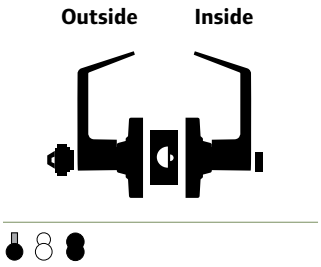
Keyed Locks (continued)

SCHLAGE ANSI

ND73PD **F90**

Corridor Lock

- Locked or unlocked by key from outside.
- Push-button locking from inside.
- Turn inside lever or close door to release button.
- When outside lever is locked by key it can only be unlocked by key.
- Inside lever is always unlocked.

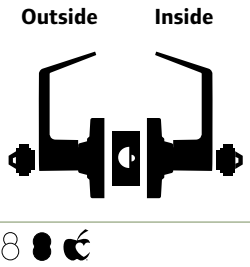


SCHLAGE ANSI

ND75PD **-**

Classroom Security Lock

- Key in either lever locks or unlocks outside lever.
- Inside lever is always unlocked.

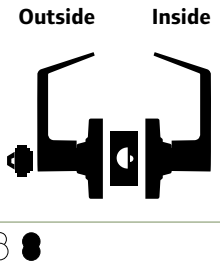


SCHLAGE ANSI

ND80PD **F86**

Storeroom Lock

- Outside lever is fixed.
- Entrance by key only.
- Inside lever always unlocked.

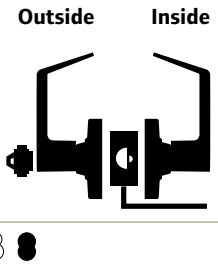


SCHLAGE ANSI

ND80PDEL **-**

Electrically Locked (Fail Safe)

- Outside lever continuously locked electrically.
- Unlocked by key outside or by switch or power failure.
- Auxiliary latch deadlocks latchbolt when door is closed.
- Inside lever always free for immediate exit.

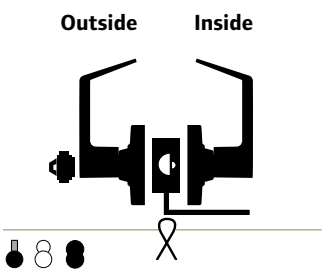


SCHLAGE ANSI

ND80PDEU **-**

Electrically Unlocked (Fail Secure)

- Outside lever continuously locked until unlocked by key or electric current.
- Auxiliary latch deadlocks latchbolt when door is closed.
- Inside lever always free for immediate exit.

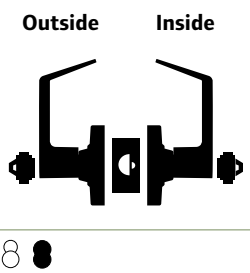


SCHLAGE ANSI

ND82PD **F87**

Institution Lock†

- Both levers are fixed.
- Entrance by key in either lever.

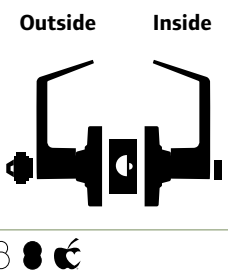


SCHLAGE ANSI

ND85PD **-**

Faculty Restroom Lock

- Outside lever is fixed.
- Entrance by key only.
- Push-button in inside lever activates visual occupancy indicator, allowing only emergency master key to operate.
- Turn inside lever or close door to release visual occupancy indicator.
- Rotation of inside spinner-button provides lock-out feature by keeping indicator thrown.



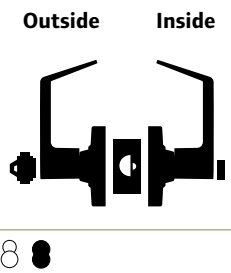
Vandlgard Functions

SCHLAGE ANSI

ND91PD **F82**

Entrance/Office Lock

- Push-button locking.
- Push-button disengages outside lever until locked with key or by turning inside lever.
- Vandlgard is designed to disengage outside spindle from latch when locked.



Standard cylinder.

Safe School Locks.

FSIC - full size interchangeable core option.

SFIC - small format interchangeable core option.

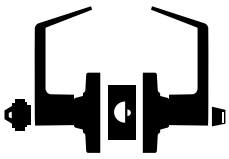
† **Caution:**
Double cylinder locks are a life safety hazard in times of emergency and their use is not recommended. Installation should be in accordance with existing codes only.

SCHLAGE **ND92PD** ANSI **F109**

Entrance Lock

- Turn/push-button locking: Pushing and turning button disengages outside lever, requiring using of key until button is manually unlocked.
- Push-button locking: Pushing button disengages outside lever until unlocked by key or by turning inside lever.
- Vandlgard is designed to disengage outside spindle from latch when locked.

Outside **Inside**

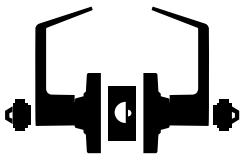


SCHLAGE **ND93PD** ANSI **F88**

Vestibule Lock

- Latch retracted by key from outside when outside lever is disengaged by key in inside lever.
- Inside lever is always unlocked.
- Vandlgard is designed to disengage outside spindle from latch when locked.

Outside **Inside**

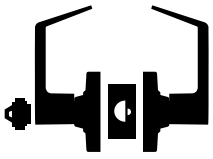


SCHLAGE **ND94PD** ANSI **F84**

Classroom Lock

- Outside lever disengaged and unlocked by key.
- Inside lever always unlocked.
- Vandlgard is designed to disengage outside spindle from latch when locked.

Outside **Inside**

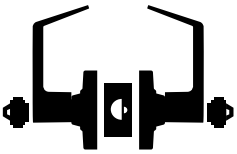


SCHLAGE **ND95PD** ANSI **-**

Classroom Security Lock

- Key in either lever locks or unlocks outside lever.
- Inside lever is always unlocked.

Outside **Inside**

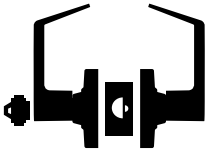


SCHLAGE **ND96PD** ANSI **F86**

Storeroom Lock

- Outside lever always disengaged.
- Entrance by key only.
- Inside lever is always unlocked.
- Vandlgard is designed to disengage outside spindle from latch when locked.

Outside **Inside**

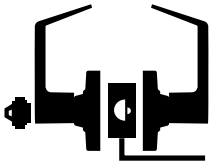


SCHLAGE **ND96PDEL** ANSI **-**

Electrically Locked (Fail Safe)

- Outside lever continuously disengaged electrically.
- Unlocked by key outside or by switch or power failure.
- Auxiliary latch deadlocks latchbolt when door is closed.
- Inside lever always free for immediate exit.
- Vandlgard is designed to disengage outside spindle from latch when locked.

Outside **Inside**

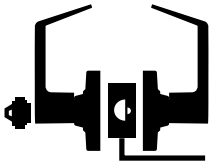


SCHLAGE **ND96PDEU** ANSI **-**

Electrically Unlocked (Fail Secure)

- Outside lever continuously disengaged until unlocked by key or electric current.
- Auxiliary latch deadlocks latchbolt when door is closed.
- Inside lever always free for immediate exit.
- Vandlgard is designed to disengage outside spindle from latch when locked.

Outside **Inside**

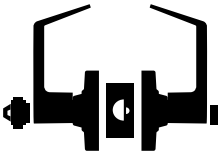


SCHLAGE **ND97PD** ANSI **F90**

Corridor Lock

- Locked or unlocked by key from outside.
- Push-button locking from inside.
- Turning inside lever or closing door releases button.
- When outside lever is locked by key it can only be unlocked by key.
- Inside lever is always unlocked.
- Vandlgard is designed to disengage outside spindle from latch when locked.

Outside **Inside**



Specifications

Handing:
All ND-Series lever locksets are non-handed.

Door Thickness:
1 5/8″ to 2 1/8″ (41mm–54mm) standard including Vandlgard® functions. 1 3/4″ - 2″ for function D85. See accessories (Page 21) for spacers required for 1 3/8″ doors.

Backset:
2 3/4″ (70 mm) standard. 2 3/8″, 3 3/4″ and 5″ (60 mm, 95 mm, 127 mm) optional.

Faceplate:
Brass, bronze or stainless steel. 1 1/8″ x 2 1/4″ (29 mm x 57mm) square corner, beveled.

Lock Chassis:
Zinc plated for corrosion resistance.

Latch Bolt:
Steel, 1/2″ (12mm) throw, deadlocking on keyed and exterior functions. 3/4″ (19 mm) throw anti-friction latch available for pairs of fire doors.

Exposed Trim:
Levers: Pressure cast zinc, plated to match finish symbols.
Roses: Brass, bronze or zinc.

Strike:
ANSI curved lip strike 1 1/4″ x 4 7/8″ x 1 3/16″lip to center standard. Optional strikes, lip lengths and ANSI strike box available. See page 21.

Cylinder & Keys:
6-pin Everest C123 keyway standard with two patented nickel silver keys per lock.

Keying Options:
Interchangeable core and Primus high security cylinders. Master keying, grand master keying and construction keying.

Warranty:
Seven-year limited for all functions including Vandlgard.

Certifications

ANSI:
Meets or exceeds A156.2 Series 4000, Grade 1 strength and operational requirements. Meets A117.1 Accessibility Code.

Federal:
Meets FF-H-106C Series 161.

California State Reference Code:
(Formerly Title 19, California State Fire Marshal Standard) All levers with less than 1/2″ (64mm) returns comply; Schlage levers return to within 1/2″ of door face.

MEA Certification:
All electrified locking (fail-safe, unlocked by switch or power failures) functions accepted for use in New York City by the City of New York, Department of Buildings (MEA 24-04-E).

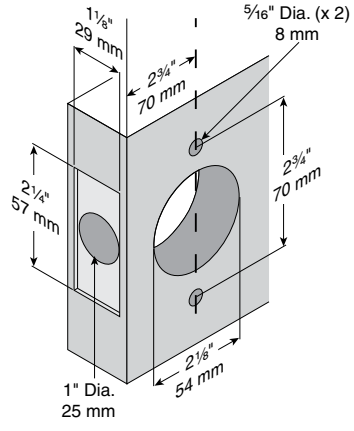
All levers with less than 1/2″ (64mm) returns comply with California Fire Safety Codes.

Florida Building Commission:
3/4″ and 1/2″ throw latch approved for Hurricane Resistance with Miami-Dade County, Florida.

UL / cUL:
All locks listed for A label single doors, 4′ x 8′.
Letter F and UL symbol.

ADA Compliant:
Schlage Lock Company offers a wide selection of locks designed to meet the Americans With Disabilities Act.

Door Preparation



ALLEGION

SCHLAGE

L Series

Commercial mortise locks

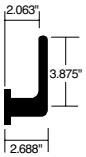
The Standard Collection

Built on our tradition of raising industry standards.

Like the M Collection, these lever designs suite with exit devices and locks from our trusted Schlage and Von Duprin brands. And, they are built to the same exacting standards.

Our Standard Collection levers offer a more traditional style that is appropriate for use in a number of commercial applications.

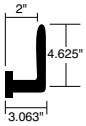
01



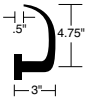
02

03

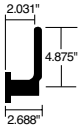
12



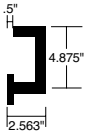
17



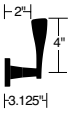
18



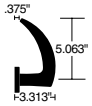
Longitude



Merano



Omega

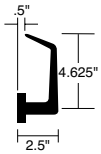


Finish options											
Color	Bright brass	Satin brass	Antique brass	Satin bronze	Oil rubbed Bronze	Satin nickel	Bright chrome	Satin chrome	Bright stainless steel	Satin stainless steel	Aged bronze
ANSI/BHMA number	605	606	609	612	613	619	625	626/626AM	629	630/630AM	643
US number	US3	US4	US5	US10	US10B	US15	US26	US26D	US32	US32D	US11

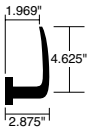
AM = Antimicrobial.
See pricebook for additional trim and finish availability. 33A, 95 & 99 devices not available in 619 & 630 finishes.

05

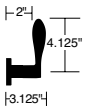
06



07

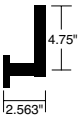


Accent

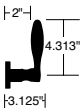


Asti

Latitude



St Annes



To learn more about suiting of Schlage and Von Duprin products with our decorative or standard levers contact your security consultant or visit **allegion.com/us**.

Escutcheons and roses

Choose from three types of escutcheon and two rose sizes to add tough, durable performance to your lockset.

Escutcheons

L Full face

Specify by adding 'L' after lever design.

Material: Cold-forged brass, bronze or stainless steel

Finishes: 605, 606, 609, 612, 613, 619, 625, 626, 629, 630, 643e

Size: 8" x 1 3/4" x 7/16"
(203 mm x 44 mm x 11 mm)

L Concealed

Specify by adding 'C' suffix to function and by adding 'L' after lever design.

Material: Cold-forged brass, bronze or stainless steel

Finishes: 605, 606, 609, 612, 613, 619, 625, 626, 629, 630, 643e

Size: 8" x 1 3/4" x 7/16"
(203 mm x 44 mm x 11 mm)

N Escutcheon

Specify by adding 'N' after lever design.

Material: Heavy wrought reinforced brass, bronze or stainless steel

Finishes: 605, 606, 609, 612, 613, 619, 625, 626, 629, 630, 643e

Size: 8" x 2 9/16" x 7/16"
(203 mm x 65 mm x 11 mm)

Roses

A Wrought rose

2 1/8" (54 mm) diameter
Available for use on L Series knob and lever designs. Specify by adding 'A' after lever design

Finishes: 605, 606, 609, 612, 613, 619, 625, 626, 629, 630, 643e

B Wrought rose

2 9/16" (65 mm) diameter
Available for use on L Series knob and lever designs. Specify by adding 'B' after lever design.

Finishes: 605, 606, 609, 612, 613, 619, 625, 626, 629, 630, 643e

C Wrought rose

2 5/8" (66 mm) diameter
Available for use on L Series knob and lever designs. Specify by adding 'C' after lever design.

Finishes: 605, 606, 609, 619, 625, 626, 629, 630, 643e

Thumbturns

Choose from three variations of thumbturn locks that help you meet the demands of specialized commercial projects.

Hotel occupancy indicator 09-611

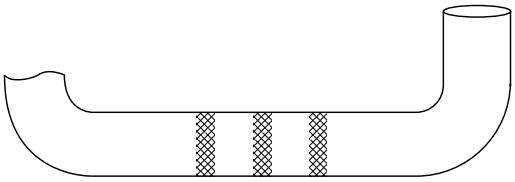
For lock function L9486P, this unit can be used with A or B roses. Requires a 1 3/8" (35 mm) cylinder for 1 3/4" (44 mm) doors. Specify finish when ordering separately.

Optional EZ turn L583-363

Available for rose and escutcheon trim. Disability turn (ADA) option to standard thumbturn. Can be used with thumbturn-function L Series lock except L9463 and L463. Specify lock per L583-363 when ordering.

Coin turn

For lock function L9044 and L9444 with rose trim. Specify 09-509 and finish per L283-124 when ordering.



03 Lever shown

Products featuring a knurled surface will be indicated by adding the prefix "8" to the lever number. For example, L9050P 803A/03A.

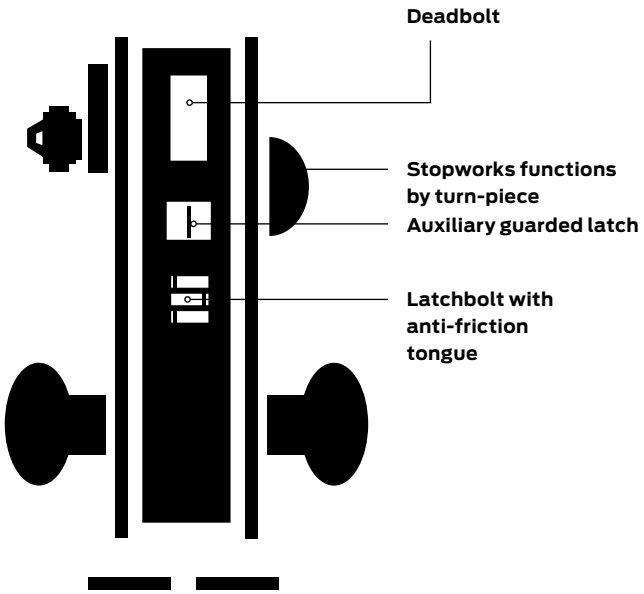
Tactile warning (knurling)

Schlage L Series commercial levers feature knurling only on the outside lever unless otherwise specified.

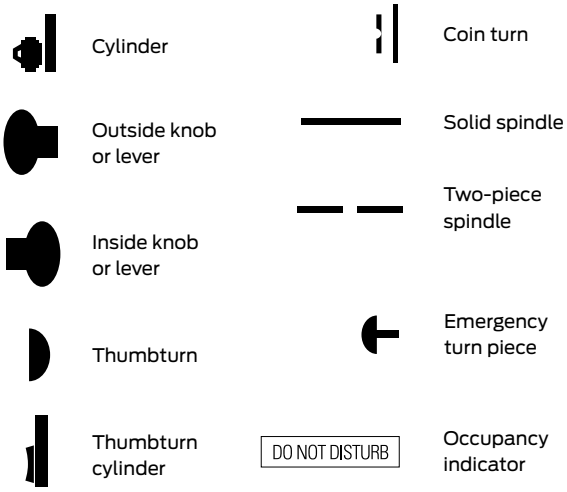
This feature is available on the following lever models: 01, 02, 03, 05, 06, 07, 12, 17, 18, 41, 42 and 93.

Lock functions

Lock components



Symbol key



Product identification guide

L/LV 9 4 5 3 P

Lock series
L = standard
LV = vandlgard

0 = dummy trim without lock case
9 = functions with lock case

0 = no deadbolt
1 = dummy trim
4 = with deadbolt

Function

Cylinder suffix

P = 6-pin full-face mortise cylinder with Schlage logo*
L = less full-face cylinder
C = concealed mortise cylinder
W = less concealed cylinder
R = full-size interchangeable core with Schlage logo
J = less full-size interchangeable core
F = full-size interchangeable core less Schlage logo
T = full-size construction core
BD = SFIC less core
BDC = disposable SFIC
GD = Everest patented SFIC
HD = construction SFIC

SFIC = Small Format (Best® style) Interchangeable Core
To order less Schlage logo, specify lock "with K510-612 faceplate."

LV = Vandlgard® function allows exterior lever to rotate freely down while remaining securely locked.

Lock functions
ANSI A156.13, Series 1000

Schlage ANSI
L9010 F01

Passage latch

Latchbolt retracted by knob/lever from either side at all times. Inside lever is always free for immediate egress.

L9040 F22
LV9040

Bath/bedroom privacy lock

Latchbolt retracted by knob/lever from either side unless outside is locked by inside thumbturn. Turning inside knob/lever or closing door unlocks outside knob/lever. To unlock from outside remove emergency button, insert emergency thumbturn (furnished) in access hole and rotate. Inside lever is always free for immediate egress.

L9044
LV9044

Privacy with coin turn outside

Latchbolt retracted by knob/lever from either side unless outside is locked by inside thumbturn or outside coin turn. Operating inside knob/lever, closing door, rotating inside thumbturn or rotating outside cointurn unlocks outside knob/lever. Specify per L283-056 for Torx® screws. Available with rose trim only. (Previously XL11-868)

L9440
LV9440 F19

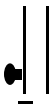
Privacy with deadbolt

Latchbolt retracted by knob/lever from either side. Deadbolt thrown or retracted by inside thumbturn. Throwing deadbolt locks outside knob/lever. Rotating inside knob/lever simultaneously retracts deadbolt and latchbolt, and unlocks outside knob/lever. To unlock from outside remove emergency button, insert emergency thumbturn in access hole and rotate. Inside liner is always free for immediate egress. (Previously XL11-761.)

Schlage ANSI
L9444
LV9444

Privacy with deadbolt and coin turn outside

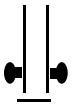
Latchbolt retracted by knob/lever from either side. Deadbolt thrown or retracted by inside thumbturn or outside coin turn. Throwing deadbolt locks outside knob/lever. Rotating inside knob/lever simultaneously retracts deadbolt and latchbolt, and unlocks outside knob/lever. Rotating outside coin turn retracts deadbolt and unlocks outside knob/lever. Specify per L283-056 for Torx screws. Available with rose trim only. Inside lever is always free for immediate egress. (Previously XL11-868)



L0170

Half dummy trim

Knob/lever on one side fixed by mounting bar.



L0172

Full dummy trim

Knob/lever on both sides fixed by mounting bar.

L9175

Half dummy trim with lock case

Fixed knob/lever on one side inoperable. Includes lock case and armored front. Options same as L9176 below.

L9176

Full dummy trim with lock case*

Fixed knob/lever on both sides. Includes lock case and blank armor front. May be ordered with optional XL11-743 armored front with cutout to receive deadbolt.

*In a double-door application where the dummy will be used as the strike order 10-091 Armored Front Strike separately.

Lock functions

Single cylinder non-deadbolt functions

Schlage ANSI

L9050 **F04**
LV9050

Office and inner entry lock

Latchbolt retracted by knob/lever from either side unless outside is made inoperative by key outside or by turning inside thumbturn. When outside is locked, latchbolt is retracted by key outside or by knob/lever inside. Outside knob/lever remains locked until thumbturn is returned to vertical or unlocked by key. Auxiliary latch deadlocks latchbolt when door is closed. Inside liner is always free for immediate egress.

L9056
LV9056

L9050 with automatic unlocking

Latchbolt retracted by knob/lever from either side unless outside is made inoperative by key outside or by rotating inside thumbturn. Outside knob/lever unlocked by key outside, thumbturn or closing door. Rotating inside knob/lever simultaneously retracts latchbolt and unlocks outside knob/lever. Auxiliary latch deadlocks latchbolt when door is closed. Inside lever is always free for immediate egress.

L9070 **F05**
LV9070

Classroom lock

Latchbolt retracted by knob/lever from either side unless outside is locked by key. Unlocked from outside by key. Inside knob/lever always free for immediate exit. Auxiliary latch deadlocks latchbolt when door is closed. Inside lever is always free for immediate egress.

L9076 **F06**
LV9076

Classroom holdback lock

Latchbolt retracted by knob/lever from either side unless outside is locked by key. When locked, latchbolt retracted by key outside or knob/lever inside. Auxiliary latch deadlocks latchbolt when door is closed. Depress inside knob/lever and turn key 360° for holdback feature. Inside lever is always free for immediate egress.

L9080 **F07**
LV9080

Storeroom lock

Latchbolt retracted by key outside or by knob/lever inside. Outside knob/lever is always inoperative. Auxiliary latch deadlocks latchbolt when door is closed. Inside lever is always free for immediate egress.

Schlage ANSI

L9080EL
LV9080EL

Electrically locked (fail safe)

Outside knob/lever continuously locked by 24V AC or DC. Latchbolt retracted by key outside or by knob/lever inside. Switch or power failure allows outside knob/lever to retract latchbolt. Auxiliary latch deadlocks latchbolt when door is closed. Inside knob/lever always free for immediate exit. Inside lever is always free for immediate egress.

L9080EU
LV9080EU

Electrically unlocked (fail secure)

Outside knob/lever unlocked by 24V AC or DC. Latchbolt retracted by key outside or knob/lever inside. Auxiliary latch deadlocks latchbolt when door is closed. Inside lever is always free for immediate egress.

L9080EL-RX / LV9080EL-RX
L9080EU-RX / LV9080EU-RX

Request to exit (RX) electrified lock

Same as L9080EL and L9080EU functions. In addition, a micro-switch positioned inside the lock case monitors the retractor crank, and is actuated when rotation of the inside or outside knob/levers rotates the retractor hub. The switch signals the use of that opening to security systems, allowing a non-disruptive means of immediate egress. Specify per L283-263 with L functions, specify L283-239 with LV functions. Inside lever is always free for immediate egress.

Lock functions

Single cylinder deadbolt functions

Schlage ANSI

L9453 **F20**
LV9453

Entrance lock

Latchbolt retracted by knob/lever from either side unless outside is locked by 20º rotation of thumbturn. Deadbolt thrown or retracted by 90º rotation of thumbturn. When locked, key outside or knob/lever inside retracts deadbolt and latchbolt simultaneously. Outside knob/lever remains locked until thumbturn is restored to vertical position. Throwing deadbolt automatically locks outside knob/lever. Auxiliary latch deadlocks latchbolt when door is closed. Inside lever is always free for immediate egress.

L9456 **F13**
LV9456

Corridor lock

Latchbolt retracted by knob/lever from either side. Deadbolt thrown or retracted by key outside or inside thumbturn. Throwing deadbolt locks outside knob/lever. Turning inside knob/lever simultaneously retracts deadbolt and latchbolt and unlocks outside knob/lever. Inside lever is always free for immediate egress.

L9465

Closet/storeroom lock

Latchbolt retracted by knob/lever from either side. Deadbolt thrown or retracted by key outside.

L9473 **F21**

Dormitory/bedroom lock

Latchbolt retracted by knob/lever from either side. Deadbolt thrown or retracted by key outside or thumbturn inside.

L9480
LV9480

Storeroom lock with deadbolt

Latchbolt retracted by key outside or by lever or knob inside. Outside knob/lever always fixed. Deadbolt thrown or retracted by key outside or thumbturn inside. Turning inside knob/lever simultaneously retracts both deadbolt and latchbolt. Auxiliary latch deadlocks latchbolt when door is closed. Inside lever is always free for immediate egress. (Previously XL11-591)

L9485 x XL11-557

Prison function lock

Latch retracted by key outside or knob inside. Outside knob always free spinning. Deadbolt only thrown or retracted by guard's key. Inside knob becomes fixed when deadbolt is thrown. Prisoner's key only retracts latchbolt. Furnished standard with tamper-resistant Torx screws. Specify per XL11-557.

Schlage ANSI

L9485
LV9485

Faculty/hotel/restroom lock

Latchbolt retracted by key outside or by knob/lever inside. Outside knob/lever always fixed. Deadbolt thrown or retracted by inside thumbturn. When deadbolt is thrown all keys become inoperative except emergency or display keys. Turning inside knob/lever retracts both deadbolt and latchbolt simultaneously. Auxiliary latch deadlocks latchbolt when door is closed. Inside lever is always free for immediate egress.

L9486 **F15**
LV9486

Faculty/hotel/restroom lock "do not disturb" indicator

Latchbolt retracted by key outside or by knob/lever inside. Outside knob/lever always fixed. Deadbolt thrown or retracted by inside thumbturn. When deadbolt is thrown "do not disturb" plate is displayed. All keys become inoperative except emergency or display keys. Turning inside knob/lever retracts both deadbolt and latchbolt simultaneously. Auxiliary latch deadlocks latchbolt when door is closed. Inside lever is always free for immediate egress.

L9486 x L583-375
LV9486 x L583-375

L9486 with "occupied" indicator

Latchbolt retracted by key outside or by knob/lever inside. Outside knob/lever always fixed. Deadbolt thrown or retracted by inside thumbturn. When deadbolt is thrown "Occupied" plate is displayed and all keys become inoperative except emergency keys. Turning inside knob/lever simultaneously retracts both deadbolt and latchbolt. Auxiliary latch deadlocks latchbolt when door is closed. Inside lever is always free for immediate egress. (Previously XL11-580)

L9496

Privacy with "occupied" indicator

Knob/lever retracts latchbolt from either side Deadbolt thrown or retracted by key outside (retraction by key required in the event of an emergency) or inside thumbturn. Throwing deadbolt locks outside knob/lever and displays "Occupied" plate. Rotating inside knob/lever simultaneously retracts both deadbolt and latchbolt, and unlocks outside knob/lever. Inside lever is always free for immediate egress. (Previously XL11-885)

* In a double-door application where the dummy will be used as the strike order 10-091 Armored front strike separately.

Lock functions
Double cylinder non-deadbolt functions

Schlage ANSI

L9060 F09
LV9060

Apartment entrance lock

Latchbolt retracted by knob/lever from either side unless outside is locked by key from inside. When locked, latchbolt retracted by key outside or knob/lever inside. Auxiliary latch deadlocks latchbolt when door is closed. Inside lever is always free for immediate egress.

L9071
LV9071

Classroom security lock

Latchbolt retracted by knob/lever from either side unless outside is locked by key from either side. When locked, latchbolt retracted by key outside or knob/lever inside. Auxiliary latch deadlocks latchbolt when door is locked. Inside lever is always free for immediate egress.

L9077
LV9077

Classroom security holdback lock

Latchbolt retracted by knob/lever from either side unless outside is locked by key from either side. When locked, latchbolt retracted by key outside or knob/lever inside. Auxiliary latch deadlocks latchbolt when door is locked. Depress inside knob/lever and turn key 360° for holdback feature. Inside lever is always free for immediate egress.

L9082 F30
LV9082

Institution lock

Latchbolt retracted by key from either side. Knob/lever on both sides always inoperative. Auxiliary latch deadlocks latchbolt when door is closed.

L9082EL
L9082EU

L9082 electrically locked or electrically unlocked both sides*

EL: Outside and inside knob or lever continually locked electrically. Latchbolt retracted by key either side. Switch or power failure allows outside and inside knob/lever to retract latchbolt. Auxiliary latch deadlocks latchbolt when door is closed. EU: Outside and inside knob/lever unlocked electrically. Latchbolt retracted by key either side. Switch or power failure keeps inside and outside knob/lever locked. Auxiliary latch deadlocks latchbolt when door is closed. (Previously XL11-452)

Lock functions
Double cylinder deadbolt functions

Schlage ANSI

L9457
LV9457

Classroom security lock with deadbolt

Latchbolt retracted by knob/lever from either side. Deadbolt thrown or retracted by key from either side. Throwing deadbolt locks outside knob/lever. Turning inside knob/lever simultaneously retracts deadbolt and latchbolt, and unlocks outside knob/lever. Inside lever is always free for immediate egress.

L9466 F14

Store/utility room lock with deadbolt*

Latchbolt retracted by knob/lever from either side. Deadbolt thrown or retracted by key from either side.

L9482 x XL11-943
LV9482 x XL11-943

Institution lock with deadbolt*

Latchbolt retracted by key from either side. Knob/lever on both sides always inoperative. Deadbolt thrown or retracted by key either side. Auxiliary latch deadlocks latchbolt when door is closed. Specify per XL11-543.

In a double-door application where the dummy will be used as the strike order 10-091 Armored front strike separately.

*Caution: Double cylinder locks on residences and any door in any structure which is used for egress are a life safety hazard in times of emergency and their use is not recommended. Installation should be in accordance with existing codes only.

Specifications

Handing:
L9000 Series lock bodies are field-reversible without disassembly. L400 Series locks are non-handed.

Door thickness:
1 3/4" (44 mm) standard. 1 3/8" (35 mm) to 2 1/2" (64 mm) optional. Over 2 1/2" (64 mm) door ranges vary by function. No escutcheon available for 1 3/4" (44 mm) doors standard. 2" to 2 3/8" (51 mm to 60 mm) optional. Specify door thickness if other than 1 3/4".

Backset:
2 3/4" (70 mm) only.

Armored front:
L9000 Series: 1 1/4" x 8" x 7/32" (32 mm x 203 mm x 6 mm) standard. 1 1/16" x 8" x 1 7/32" (27 mm x 203 mm x 6 mm) optional. L400 Series: 4 7/16" x 3 5/8" x 1" (113 mm x 92 mm x 25 mm)

Case size:
L9000 Series: 4 7/16" x 6 1/16" x 1" (113 mm x 154 mm x 25 mm)
L400 Series: 4 7/16" x 3 5/8" x 1" (113 mm x 92 mm x 25 mm)

Spacing:
Knob or lever to cylinder, 3 7/8" (98mm); knob or lever to thumbturn hub, 2 11/16" (68mm).

Bolts:
1" (25mm) throw stainless steel deadbolt and 3/4" (19mm) throw stainless steel latch with anti-friction tongue.

Exposed trim:
Knobs: #41 and #42 heavy-duty wrought brass, bronze or stainless steel knobs match D Series knobs.

Levers: Forged brass or bronze and cast stainless steel. Designs available to match D Series levers.

93 Lever design: Extruded brass, bronze or stainless steel.

Mediterranean designs: Forged-brass lever and rose.

Escutcheons: L escutcheons are cold-forged brass or bronze and stainless steel. N escutcheons are heavy wrought reinforced brass, bronze and stainless steel.

Trim combinations: Available with knob both sides, lever both sides, or knob and lever with rose or escutcheon both sides.

Strike:
L9000 Series: ANSI curved lip strike 1 1/4" x 4 7/8" (32 mm x 124 mm) x 1 3/16" (30 mm) lip to center with dust box standard. L400 Series: 1 1/8" x 3 5/8" (29 mm x 92 mm) with dust box.

Cylinder & keys:
6-pin Everest C123 keyway cylinder with two patented keys standard.

Keying options:
Interchangeable core and Primus high security cylinders. Master keying, grand master keying and construction keying.

Certifications

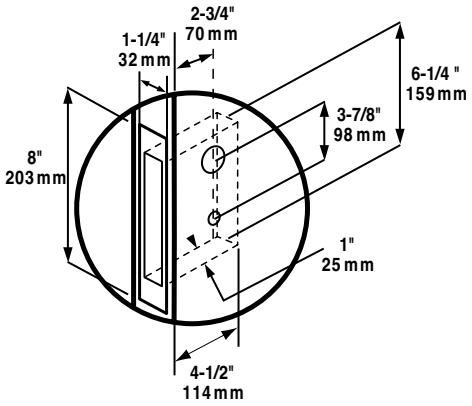
ANSI:
L9000: ANSI A156.13 Series 1000, Grade 1 Operational and Security, UL Listed for 3-hour fire door (except L9076 and L9007). With interchangeable core cylinders: Grade 2 Security.

With concealed shell cylinder: A156.13 Grade 1 Operational and Security. ANSI/ASTM F476-76 Grade 40, UL Listed. L400: ANSI A156.5 Grade 1.

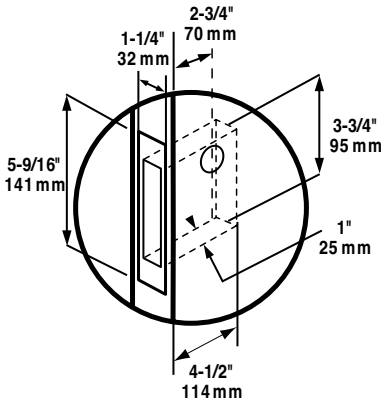
California State Reference Code:
(Formerly Title 19, California State Fire Marshal Standard) All levers with returns comply; levers return to within 1/2" of door face.

UL / cUL:
All locks listed for A label single doors, 4' by 10'. Letter F and UL symbol on latch front indicate listing. Electrified functions are UL19X Listed for single-point locking applications. UL437 Listed locking cylinder optional: specify Primus 20-500 Series cylinder.

Door preparation for L9000 Series



Door preparation for L400 Series



98/99 Rim exit device

The 299 Strike ships standard, optional strikes available

98 and 99 Rim exit devices for all types of single and double doors with mullion, UL listed for panic exit hardware. Devices are ANSI A156.3 – 2008 Grade 1. The 98 device has a smooth mechanism case and the 99 device has a grooved case. The rim device is non-handed except when the following device options are used: SD (special dogging), -2 (double cylinder) or SS (signal switch). See Opposite page for available outside trim and device functions. Covers stock hollow metal doors with 86 or 161 cutouts on single doors (may cover cutouts on pairs – consult template).

Finishes – US3, US3A, US4, US4A, US10, US26, US26D, US26D-AM Antimicrobial, US28, 313, 315 & 643E. US15 and US32D available with 98 Series only.

Hex key dogging comes standard on 98/99 Rim exit devices

Specifications

Device functions	Device ships EO/DT/NL. Field selectable. For TP, K or L remove NL drive screw from device.
Device lengths	3' 2'4" to 3' (711mm to 914 mm) Door size 4' 2'10" to 4' (864 mm to 1219 mm) Door size
Device centerline from finished floor	39 13/16" (1011 mm) 39 11/16" (1008 mm) with mullion
Center case dimensions	8" x 2 3/4" x2 3/8" (203mm x 70mm x 60mm)
Mechanism case dimensions	2 1/4" x 2 1/4" (57mm x 57mm)
Projection	Pushbar neutral – 3 13/16" (97 mm) Pushbar depressed – 3 1/16" (78 mm)
Latch bolt	Deadlocking, 3/4" (19mm) throw
Fasteners & sex bolts (SNB)	Includes screw pack for 1 3/4" (44mm) and 2 1/4" (57mm) thick metal or wood doors. Optional 425 SNB available, see page 9 for quantities.
Electric options	**LX** Latchbolt monitor switch **RX** Pushpad monitor switch **RX2** Double pushpad monitor switch **E** Electric locking & unlocking trim **EL** Electric latch retraction **QEL** Quiet electric latch retraction **SS** Signal switch **CX** Chexit delayed exit **ALK** Alarm exit kit **WP-RX** Waterproof request to exit **CON** Allegion Connect
Mechanical options	**-2** Double cylinder **AX** Accessible device **GBK** Glass bead kit **PN** Pneumatic latch retraction **XP** Extra protection **SNB** Sex bolts **SEC** Security screws
Dogging feature Dogging options	Hex key dogging standard **CD** Cylinder dogging **SD** Special center case dogging **LD** Less dogging **DI** Dogging indicator **CI** Cylinder dogging indicator
Strikes	**299** – Dull black

XP
Extra protection
- 90° latch-to-strike contact
- Force resistance of 2,000+ lbs.

CD
Cylinder dogging
- Replaces hex key dogging
- Requires 1 1/4" mortise cylinder with inverted cam

QEL
Quiet electric latch retraction
- Bolt retraction via switch
- Converts exit door to push-pull operation

RX
Pushpad monitor switch
- Signals use of an opening
- SPDT switch to monitor pushpad

CX
Chexit delayed exit
- Meets NFPA 101 requirements
- Self-contained controls, locking, alarm

AX
Accessible device
- UL certified to meet new 5 lb. maximum operating force requirement
- Exceeds ANSI/BHMA requirements

EL
Electric latch retraction
- Enables remote unlatching
- Alternative to manual dogging

ALK
Alarm exit kit
- Unauthorized opening triggers 85-decibel horn
- Set in armed or disarmed mode by key

PN
Pneumatic latch retraction
- For areas where electrical devices banned
- Special linkage for mechanical or pneumatic dogging

CON
Allegion Connectors
- Common connectors to connect various door hardware all the way to the power supply

Standard trim

	EO	DT	NL	NL-OP
	No outside trim Exit only	 **Dummy trim** Pull when dogged	 **Night latch** Key retracts latchbolt	 **Night latch** Key retracts latchbolt optional pull required
Product description	98EO 99EO	98DT 99DT	98NL 99NL	98NL-OP 99NL-OP
Trim description	—	990DT	990NL-R/V	110NL-MD 110NL-WD
Escutcheon plate size	—	3" x 14 13/16" x 3/32" (76x360x2mm)	3" x 14 13/16" x 3/32" (76x360x2mm)	—
Pull center to center	—	5 1/2" (140mm)	5 1/2" (140mm)	—
Projection	—	2" (51mm)	2" (51mm)	—
ANSI function	01	02	03	03
Cylinder type	—	—	Rim	Rim
Handing	—	—	—	—
Optional trim	x990EO x996EO	x996K-DT x996L-DT x696DT x697DT	x996K-NL x996L-NL x696NL x697NL	
Optional #425 SNB quantity for device	6	2	2	6

	L	L-NL	L-BE	L-DT
	 **Lever** Key locks & unlocks	 **Lever – night latch** Key retracts latchbolt	 **Lever – blank escutcheon** Always operable (no cylinder)	 **Lever dummy trim** pull when dogged
Product description	98L 99L	98L-NL 99L-NL	98L-BE 99L-BE	98L-DT 99L-DT
Trim description	996L-R/V*	996L-NL-R/V	996L-BE-R/V*	996L-DT
Escutcheon plate size	2 3/4" x 10 3/4" x 27/32" (70x273x21mm)	2 3/4" x 10 3/4" x 27/32" (70x273x21mm)	2 3/4" x 10 3/4" x 27/32" (70x273x21mm)	2 3/4" x 10 3/4" x 27/32" (70x273x21mm)
Pull center to center	—	—	—	—
Projection	2 7/8" (73mm)	2 7/8" (73mm)	2 7/8" (73mm)	2 7/8" (73mm)
ANSI function	08	03	14	02
Cylinder type	Rim	Rim	—	—
Handing	Handed/Reversible	Handed/Reversible	Handed/Reversible	Handed/Reversible
Optional #425 SNB quantity for device	2	2	2	2

* Electrified lever operation available

Notes

98-F/99-F Rim exit device

The 299F Strike ships standard, optional strikes available

499F Strike with 9854/9954 mullion

98-F and 99-F Rim fire exit devices for all types of single doors up to 4' x 10' (1219mm x 3048mm) or 8' x 10' (2438mm x 3048mm) double doors with 9954 or 9854 mullion, UL listed for fire exit hardware. See page 76 for detailed information on UL listed fire exit hardware label and door opening size information. Devices are ANSI A156.3 – 2008 Grade 1. The 98-F device has a smooth mechanism case and the 99-F device has a grooved case. The rim device is non-handed except when the following device options are used: -2 (double cylinder) or SS (signal switch). See opposite page for available outside trim and device functions.

Finishes – US3, US3A, US4, US4A, US10, US26, US26D, US26D-AM Antimicrobial, US28, 313, 315 & 643E. US15 and US32D available with 98 Series only.

Specifications

Device functions	Device ships EO/DT/NL. Field selectable. For TP, K or L remove NL drive screw from device.
Device lengths	3' 2'4" to 3' (711mm to 914 mm) Door size 4' 2'10" to 4' (864 mm to 1219 mm) Door size
Device centerline from finished floor	39 13/16" (1011 mm) 39 11/16" (1008 mm) with mullion
Center case dimensions	8" x 2 3/4" x2 3/8" (203mm x 70mm x 60mm)
Mechanism case dimensions	2 1/4" x 2 1/4" (57mm x 57mm)
Projection	Pushbar neutral – 3 13/16" (97 mm) Pushbar depressed – 3 1/16" (78 mm)
Latch bolt	Deadlocking, 3/4" (19mm) throw
Fasteners & sex bolts (SNB)	Includes screw pack for 1 3/4" (44mm) and 2 1/4" (57mm) thick metal or wood doors. Optional 425 SNB available for metal doors. 425 & 825 SNB required on wood doors without SLM blocking. See page 11 for quantities.
Electric options	**LX** Latchbolt monitor switch **RX** Pushpad monitor switch **RX2** Double pushpad monitor switch **E** Electric locking & unlocking trim **EL** Electric latch retraction **QEL** Quiet electric latch retraction **SS** Signal switch **CX** Chexit delayed exit **ALK** Alarm exit kit **WP-RX** Waterproof request to exit **CON** Allegion Connect
Mechanical options	**-2** Double cylinder **AX** Accessible device **GBK** Glass bead kit **PN** Pneumatic latch retraction **XP** Extra protection **SNB** Sex bolts **SEC** Security screws **SLM** Special Laminate Material Blocking
Dogging option	No mechanical dogging. EL and QEL option available
Strikes	**299F** – Dull black, 499F with mullions

XP
Extra protection
- 90° latch-to-strike contact
- Force resistance of 2,000+ lbs.

RX
Pushpad monitor switch
- Signals use of an opening
- SPDT switch to monitor pushpad

EL
Electric latch retraction
- Enables remote unlatching
- Alternative to manual dogging

ALK
Alarm exit kit
- Unauthorized opening triggers 85-decibel horn
- Set in armed or disarmed mode by key

QEL
Quiet electric latch retraction
- Bolt retraction via switch
- Converts exit door to push-pull operation

CX
Chexit delayed exit
- Meets NFPA 101 requirements
- Self-contained controls, locking, alarm

AX
Accessible device
- UL certified to meet new 5 lb. maximum operating force requirement
- Exceeds ANSI/BHMA requirements

SG
Safety glow
- Shows exit door location in darkness or smoke
- Developed to meet MEA standards

PN
Pneumatic latch retraction
- For areas where electrical devices banned
- Special linkage for mechanical or pneumatic dogging

CON
Allegion Connectors
- Common connectors to connect various door hardware all the way to the power supply

Standard trim

	EO	DT	NL	NL-OP
	No outside trim Exit only	 **Dummy trim** Pull when dogged (not recommended for fire device)	 **Night latch** Key retracts latchbolt	 **Night latch** Key retracts latchbolt optional pull required
Product description	98EO-F 99EO-F	98DT-F 99DT-F	98NL-F 99NL-F	98NL-OP-F 99NL-OP-F
Trim description	—	990DT	990NL-R/V	110NL-MD 110NL-WD
Escutcheon plate size	—	3" x 14 13/16" x 3/32" (76x360x2mm)	3" x 14 13/16" x 3/32" (76x360x2mm)	—
Pull center to center	—	5 1/2" (140mm)	5 1/2" (140mm)	—
Projection	—	2" (51mm)	2" (51mm)	—
ANSI function	01	02	03	03
Cylinder type	—	—	Rim	Rim
Handing	—	—	—	—
Optional trim	x990EO x996EO	x996K-DT x996L-DT x696DT x697DT	x996K-NL x996L-NL x696NL x697NL	
#425 SNB optional - HMD req. WD w/o SLM pkg.	2	2	2	2
#825 SNB req. WD w/o SLM pkg.	2 (if using trim)	2	2	2
#425 SNB req. w/ 499F	2	2	2	2

	L	L-NL	L-BE	L-DT
	 **Lever** Key locks & unlocks	 **Lever – night latch** Key retracts latchbolt	 **Lever – blank escutcheon** Always operable (no cylinder)	 **Lever dummy trim** pull when dogged (not recommended for fire device)
Product description	98L-F 99L-F	98L-NL-F 99L-NL-F	98L-BE-F 99L-BE-F	98L-DT-F 99L-DT-F
Trim description	996L-R/V*	996L-NL-R/V	996L-BE-R/V*	996L-DT
Escutcheon plate size	2 3/4" x 10 3/4" x 27/32" (70x273x21mm)	2 3/4" x 10 3/4" x 27/32" (70x273x21mm)	2 3/4" x 10 3/4" x 27/32" (70x273x21mm)	2 3/4" x 10 3/4" x 27/32" (70x273x21mm)
Pull center to center	—	—	—	—
Projection	2 7/8" (73mm)	2 7/8" (73mm)	2 7/8" (73mm)	2 7/8" (73mm)
ANSI function	08	03	14	02
Cylinder type	Rim	Rim	—	—
Handing	Handed/Reversible	Handed/Reversible	Handed/Reversible	Handed/Reversible
#425 SNB optional - HMD req. WD w/o SLM pkg.	2	2	2	2
#825 SNB req. WD w/o SLM pkg.	2 (if using trim)	2	2	2
#425 SNB req. w/ 499F	2	2	2	2

* Electrified lever operation available

98/99 Dogging options

CDSI/HDSI dogging indicators

Indicator provides an at-a-glance verification of the status of the door from inside of the room. Visible "LOCKED" and "UNLOCKED" indicators show whether the device is undogged or dogged. This feature can be used with Hex key (HDSI) or Cylinder dogging (CDSI) options on various device types – rim, mortise and vertical systems.

- Modular conversion kits allow you to quickly and easily upgrade your existing devices
- Available for 98/99 & 33A/35A Series panic devices

To order, specify:

- Use prefix, CDSI or HDSI, example CDSI99L

CD Cylinder dogging

Cylinder dogging is available on all 98/99™ Panic exit devices to replace the standard hex key dogging. Unit requires a standard 1 1/4" (32mm) mortise cylinder with an inverted straight cam (Schlage Cam B502-191 reference).

To order, specify:

- Use prefix, CD, example CD99L

CDK Cylinder dogging kit*

For field conversion, a cylinder dogging conversion kit is available.

To order, specify: 99CDK or 98CDK, specify finish.

*Cannot be added to fire exit hardware.

HDK Hex key dogging kit*

For field conversion, a hex key dogging conversion kit is available.

To order, specify: 99HDK or 98HDK, specify finish.

*Cannot be added to fire exit hardware.

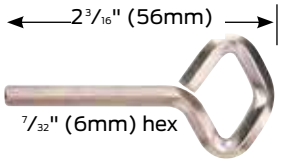
LD Less dogging

Less dogging is available in all 98/99™ Panic exit devices to remove the dogging option.

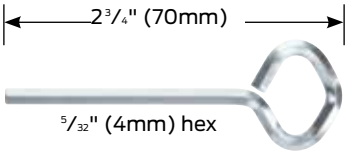
To order, specify: Use prefix LD, example LD99L

Dog keys

Dog key (old style)



Dog key (standard)



-2SI Double cylinder with security indicator

The Von Duprin Classroom Security Indicator provides an at-a-glance verification of the locked/unlocked status of the door from inside of the room. This option can be ordered as a new product or as a retrofit conversion kit to an existing 98/99 device. Indicator in Unlocked state presents a 1/2" x 1/2" metal flag (white background with black icon) at top of device head. Indicator in Locked state has no flag present.

To order, specify:

1. Suffix-2SI with device/trim number, example 99L-2SI.
2. Handing required, LHR or RHR.

SD Special center case dogging

Special cylinder dogging in the center case is available for Chexit, EL, QEL, ALK panic devices to allow for mechanical push/pull operation. With this option, the latchbolt is held retracted and pushbar is still operable. Specify handing—RHR or LHR.

SD requires 1 3/4" (32mm) mortise cylinder with an inverted straight cam. (Schlage cam reference B502-191.)

Note: Available on Rim and Vertical Rod Panic Exit Devices only.

To order, specify:

- Use prefix SD, example SD99L and Handing
- Not for 98/9975 Devices

Double cylinder

Double cylinder features an inside key cylinder which locks or unlocks the outside trim and an outside key cylinder which retracts the latch bolt only (Night latch function). Available on rim or mortise lock device.

Rim requires two rim type cylinders. Mortise device requires 1 rim cylinder and 1 mortise cylinder 1 1/4" with a straight cam. (Schlage cam reference B502-191.)

Available functions are thumbpiece, knob or lever.

To order, specify:

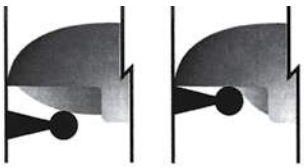
1. Suffix-2 with device/trim number, example 99TP-2.
2. Handing required, LHR or RHR.

98/99 Mechanical options

AX Accessible device

The AX device is a UL certified exit device designed to meet the progressive requirements of the California Building Code for accessible openings. This device meets the 5 lbs of operating force requirement called for in chapter 11B-309.4. The AX device also exceeds ANSI/BHMA requirements. Available devices include: AX98/99, AX98/99-F, AX98/9949LBL, AX98/9949-F LBL, AX98/9949-F LBLAFL. Additionally, all AX devices will be shipped with a new UL label clearly stating “Meets California building Code (2013) Sec. 11B-309.4” and an “AX” identifier label on device center case. See images below for reference.

XP Extra performance



For increased security the XP98/99 Rim exit device has a static load force resistance of more than 2,000 pounds, twice that of standard rim exit devices. The two-piece latch bolt forms a 90° latch-to-strike contact. The “smart” latch changes shape when subjected to external forces. This design enables the exit door to withstand an external attack and remain secure. Additionally, the patented latch bolt design provides a greater, longer-lasting latch bolt to strike contact which is not easily affected by the twisting motion of a weakened frame, resulting in an opening that will remain strong.

With a door loaded to 250 pounds, XP98/99 requires less than 40 pounds of pressure to open, 25% less than the safety code requires.

XP98/99 is available for panic or fire exit hardware applications. Dimensions, finishes and trim options are equal to the standard 98/99 series rim exit device.

Note: The 909 strike is to be used for all applications.
The exception occurs with the use of fire rated double door applications, in this instance the 954 strike is required.

WS Surface vertical rod one-point and three-point exit devices

WS Multi-point exit devices for tornado application devices WS98/9927 (one- point) and WS98/9957 (three-point) surface vertical rod exit devices are designed, tested and certified to comply with the Federal Emergency Management Agency's publication FEMA 361- Design and Construction Guidance for Community Safe Rooms.

UL Listing – panic hardware UL 305; and fire exit hardware UL 10C:
WS98/9927:

3 hour pairs of doors double egress, 90 minutes swinging same direction, 8'0" x 8'0" BHMA Grade 1, ANSI A156.3-2001

WS98/9957:

3 hours single doors, 4'0" x 8'0" BHMA Grade 1, ANSI A156.3-2001

Windstorm ratings:
WS98/9927:

Miami-Dade County/FBC compliance to TAS 201, TAS 202, TAS 203; design load rating +150/-150 PSF (245 MPH wind zone); Enhanced Hurricane Protection (EHPA) ASTM E1996, ANSI/ICC 500 (245 MPH wind zone).

UL-FEMA 361 certified 8'0" x 8'0" pairs, swinging same direction and 4'0" x 8'0" single non-fire rated flush hollow metal. UL-ANSI/ICC 500 certified for F5 tornado applications.

WS98/9957:

UL-FEMA 361 certified 4'0" x 8'0" single flush hollow metal (fire-rated and panic). UL-ANSI/ICC 500 certified for F5 tornado applications.

These devices are listed with Steelcraft Paladin™ PW-Series doors for tornados, and Steelcraft H-Series doors hurricane applications.

To order, specify: WS prefix, example WS9927-F

LBR Less bottom rod, panic and fire rated

LBR option is available, using a spring loaded auxiliary latch bolt installed in the lower door edge. When exposed to heat the auxiliary latch bolt releases, keeping the doors in alignment and closed during a fire. UL listed 3 hours on hollow metal doors double egress, 90 minute swinging same direction, and 20 minutes wood doors (consult wood door manufacturer). Fits door stiles as narrow as $3\frac{5}{8}$".

LBR devices must be ordered in pairs or must be used in conjunction with an approved automatic or constant latching flush bolt.

PL Pullman latch

When PL is specified the standard latches are replaced with pullman style latches. Pullman latches are always extended and are most commonly used in conjunction with electric strikes and LBR-less bottom rod application. Not available with Fire rated devices.

Not recommended where security is of the utmost importance since latches do not deadlock.

98/99 Device options & accessories

Mullions

Removable steel mullions provide single door performance in double door openings with rim devices. Mullions are easily removed by loosening bottom set screw and removing top fitting cover. The top mullion fitting is attached to the frame and is concealed by the fitting cover.

Steel mullions are 2" (51mm) wide and 3" (76mm) deep, with a wall thickness of 1/8" (3mm).

Mullions are shipped with mounting screws and prepared for strikes. Strikes are not included except where indicated.

Steel mullions are available in SP28 and SP313 finishes. Consult factory for other powder coat finish options.

KR – Keyed removable steel mullions make removal faster and easier by a single operation of the mortise cylinder. Once mullion is removed, large equipment or furniture can freely pass through the opening. The unit will self lock when re-installed, without the use of the cylinder key. Uses a 1 1/4" mortise cylinder with a straight cam (Schlage cam reference B502-191). Cylinders are sold separately. Prefix mullion model with "KR".

Removable aluminum mullions are 1 1/16" (27mm) wide on face closest to the door and 2 3/8" (60mm) at the widest point. The depth is 3 1/8" (79mm) with a wall thickness of 1/8" (3mm).

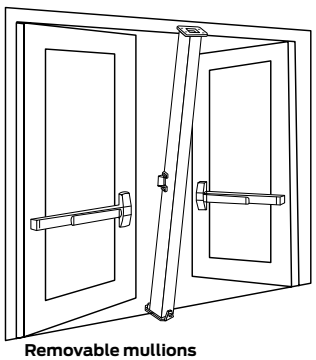
Aluminum mullions are available in US4, US10, US28, 313 and 315 finishes. Consult factory for other powder coat finish options. Aluminum mullion are not available keyed removable.

Stock hollow metal applications for devices mounted to cover ANSI 161 cutouts are higher than the standard mullion strike location. Consult the factory for special strike preparation or order a blank mullion. See below.

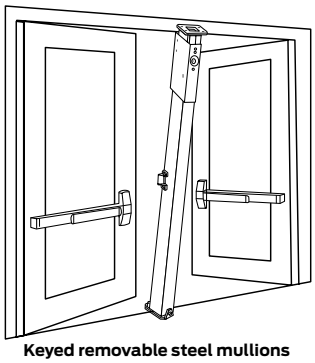
Blank mullions are furnished without strike preparation. They are used to mount devices at a strike height different from the standard mullion preparation.

To order, specify:

1. For keyed Removable option on steel mullions, prefix model number with "KR"
2. Model number
3. Height of opening
4. Finish
5. Handing if required
6. Centerline deviation (refer to device template for standard centerline)
7. Strikes, when required, should be ordered with device



Removable mullions



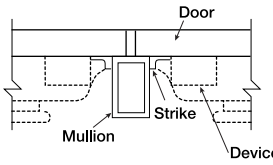
Keyed removable steel mullions

Steel mullions

1654 Prepared for two 1606 strikes. If 1606 strikes are not specified on the order, two per mullion will be added. Additional charges apply.

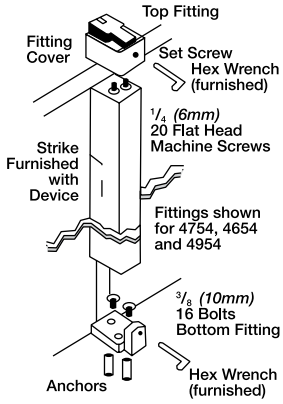
4954 Prepared for 264 or 299 strikes. For use with all Von Duprin Panic rim devices.

9954 Prepared for and must be used with two 268 strikes (88-F device), or two 499F (22-F, 98-F, 99F devices). UL fire labeled mullion for up to 3 hour opening using Von Duprin fire exit rim devices. This mullion is not easily removed due to special fittings.



98-F and 99-F devices are rated up to 10'0" (3048 mm).

Note: If 268 or 499F strikes are not specified on the order, two per mullion will be added. Additional charges apply.

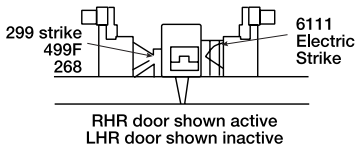


4754 Prepared for two 4263 monitor strikes.

4854 Prepared for one 299 and one 6111 electric strike. Indicate handing for electric strike.

9854 Prepared for one 268 or 499F strike and one 6111 electric strike. Indicate handing for electric strike. UL fire labelled mullion for up to 3 hour openings up to 8' x 8' (2438mm x 2438mm) using Von Duprin fire exit rim devices

4854/9854 – Using one electric strike



Cabinet lock functions

Conventional cylinder

Cabinet door lock - CL100PB

Rekeyable: Easily rekeyed via patented set-screw cylinder removal mechanism

Certifications: ANSI A156.11, Grade 2

Body: Die cast zinc

Bolt: Brass, 1 5/16" projection

Door thickness: 7/8" to 1 3/8"

Barrel diameter: 1 1/8"

Cylinder: Everest 29 S123 keyway standard, Available in Primus XP, Everest 29, Everest and Classic keyways

Keying: KD, KA or MK

Finishes: 605, 626

Not available without cylinder

Drawer lock - CL200PB

Rekeyable: Easily rekeyed via patented set-screw cylinder removal mechanism

Certifications: ANSI A156.11, Grade 2

Body: Die cast zinc

Bolt: Steel, 3/4" throw

Door thickness: 7/8" to 1 3/8"

Barrel diameter: 1 1/8"

Cylinder: Everest 29 S123 keyway standard, Available in Primus XP, Everest 29, Everest and Classic keyways

Stock keying: KD, KA or MK

Finishes: 605, 626

Not available without cylinder

Finishes

Bright brass 605

Satin chrome 626

Full size interchangeable core (FSIC)

Cabinet door lock - CL777R

Rekeyable: Easily rekeyed via patented set-screw cylinder mechanism

Certifications: ANSI A156.11, Grade 1

Body: Die cast zinc

Bolt: Brass, 1 5/16" projection

Barrel length: 1 7/16"

Barrel diameter: 1 1/8"

Cylinder: Everest 29 S123 keyway standard, Available in Primus XP, Everest 29, Everest and Classic keyways

Keying: KA, KD, MK or construction core

Finishes: 605, 626

Not available without cylinder

Drawer lock - CL888R

Rekeyable: Easily rekeyed via patented set-screw c ylinder mechanism

Certifications: ANSI 156.11, Grade 2

Body: Die cast zinc

Bolt: Brass, 7/8" projection

Door thickness: 7/8" to 1 3/8"

Barrel diameter: 1 1/8"

Cylinder: Everest 29 S123 keyway standard, Available in Primus XP, Everest 29, Everest and Classic keyways

Keying: KA, KD, MK or construction core

Finishes: 605, 626

Not available without cylinder

Cam lock - CL920R

Body: Die cast zinc

Body diameter: 1 1/8"

Mounting cutout: 1 5/32"

Max material thickness: 1 1/8"

Min material thickness: 0.08"

Across flats: 7/8"

Cylinder: Everest 29 S123 keyway standard, Available in Primus XP, Everest 29, Everest and Classic keyways

Keying: KA, KD, MK or construction core

Finishes: 605, 626

Not available without cylinder

Ratchet lock – CL929R

Body: Die cast zinc

Body diameter: 1 1/8"

Max door material thickness: 1/4"

Cylinder: Everest 29 S123 keyway standard, Available in Primus XP, Everest 29, Everest and Classic keyways

Keying: KA, KD, MK or construction core

Finishes: 626

Not available without cylinder

Brass padlocks

- Meet or exceed ASTM standards for standard steel shackle, shackle cutting and corrosion resistance
- Solid brass body resists corrosion for all-weather performance
- Molybdenum hardened steel shackle offers greater cut resistance
- Double deadbolt locking mechanism provides extra security
- Patented interchangeable shackle design allows for easy disassembly
- Standard cylinder features include:
  - Schlage conventional key-in-knob (KNK) cylinder
  - 6-pin solid brass cylinder (pinned 5) offers increased pick resistance
  - Two nickel silver cut Schlage keys

43 Series

23 Series

	Body size			Shackle dimension			Shackle dimension (metric)					
Part #	Width	Height	Depth	A	B	C	A	B	C	Cylinder type	Case pack	Master pack
Keyed different												
KS23D2300	1 25/32"	2 3/16"	7/8"	5/16"	1 1/2"	3/4"	8 mm	38 mm	19 mm	KNK	6	24
KS23F2300	1 25/32"	2 3/16"	7/8"	5/16"	2"	3/4"	8 mm	51 mm	19 mm	KNK	6	24
KS43D2300	1 15/16"	2 3/16"	7/8"	3/8"	1 1/2"	3/4"	9.5 mm	38 mm	19 mm	KNK	6	24
KS43F2300	1 15/16"	2 3/16"	7/8"	3/8"	2"	3/4"	9.5 mm	51 mm	19 mm	KNK	6	24
Less cylinder - KNK												
KS23D2200	1 25/32"	2 3/16"	7/8"	1/4"	2"	3/4"	6.4 mm	51 mm	19 mm	KNK	6	24
KS23F2200	1 25/32"	2 3/16"	7/8"	5/16"	3/4"	3/4"	8 mm	19 mm	19 mm	KNK	6	24
KS43D2200	1 25/32"	2 3/16"	7/8"	1/4"	2"	3/4"	6.4 mm	51 mm	19 mm	KNK	6	24
KS43F2200	1 25/32"	2 3/16"	7/8"	5/16"	3/4"	3/4"	8 mm	19 mm	19 mm	KNK	6	24
Less cylinder - FSIC[1]												
KS43D3200	1 15/16"	2 3/16"	7/8"	3/8"	1 1/2"	3/4"	9.5 mm	38 mm	19 mm	KNK	6	24
KS43F3200	1 15/16"	2 3/16"	7/8"	3/8"	2"	3/4"	9.5 mm	51 mm	19 mm	KNK	6	24

Note: 1) Less cylinder padlocks ship without a cylinder. Driver and all other internal padlock parts are included.

COR

Series Bar Coodinators

- The COR Series Coordinators are designed for use on pairs of doors when one door needs to close before the other.
- All COR units function easily. The active door lever, located nearest to the active stop, holds the active door open until the trigger mechanism is released by the closing of the inactive leaf.
- All COR units may not function correctly with swingclear hinges.
- All COR units are equipped with an adjustable override feature which allows the active door to close under extreme pressure.
- All COR units are compatible with Flush Bolts.
- The COR Series is available in five sizes for variable door opening widths.
- The COR Series does not cover the entire length of the stop, so a FL filler bar can be provided to maintain architecturally clean lines.
- COR Series Coordinator Channels and FL fillers are made of aluminum.
- Optional Filler Bars: FL20 - 20", FL32 - 32" and FL44 - 44", available to maintain clean line.
- Optional Mounting Brackets available: MB1, MB2, MB1F, MB2F, MB3F, MB1V, MB2V, and MB3V for other stop applied hardware.

Meets ANSI/BHMA A156.3, Type 21A.
UL Listed for installation on labeled frame.

For Openings Where Doors Are Same Size

Coordinator Number	Length of Channel	For Opening Widths	Common Applications
COR32	32"	34" - 52"	Pair of 2'0" Doors
COR42	42"	52" - 72"	Pair of 2'6" Doors
COR52	52"	62" - 92"	Pair of 3'0" Doors
COR60	60"	70" - 108"	Pair of 3'6" Doors
COR72	72"	84" - 132"	Pair of 4'0" Doors

For Openings Where Doors Are Unequal Size

The coordinator length should equal the active door width plus approximately 1/2 the inactive door width. The coordinator must be 6" longer than the active door width and shorter than the overall frame opening between stops.

Finishes

Ives Finish	US28	US26D	315AN
BHMA	628	713	711

FL

Series Filler Bars

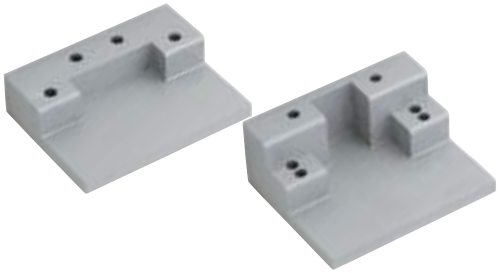
- The FL Filler Bars are available in three sizes for variable frame openings.
- FL Filler Bars are made of aluminum
- FL Filler Bars are field sized to frame opening.

Filler Bar Number	Length	Dimensions
FL20	20"	1-5/8" W x 5/8" D x 20" L
FL32	32"	1-5/8" W x 5/8" D x 32" L
FL44	44"	1-5/8" W x 5/8" D x 44" L

Finishes

Ives Finish	US28	US26D	315AN
BHMA	628	713	711

MB1and MB2



Mounting Brackets

- Allows stop mounted hardware to be properly installed without damaging the COR coordinator, such as a parallel arm closer or a non-fire-rated surface vertical rod strike.
- Stop mounted hardware will need to be lowered to compensate for the height of the coordinator and mounting bracket.
- MB mounting brackets are made of aluminum

Product	Jamb Depth	Stop Width	Dimensions
MB1	4-3/4" Min.	Over 2-1/2"	4" W x 3" D x 15/16" T
MB2	4-3/4" Min.	Up to 2-1/2"	4" W x 3-1/4" D x 1-5/8" T

Finishes

Ives Finish	USP	SP28	SPBLK
BHMA	600	689	622

MB1F, MB2F and MB3F
MB1V, MB2V and MB3V

MB1V

MB2V

MB3V

Fire Rated Mounting Brackets

- Allows for fire-rated stop mounted hardware to be properly installed without damaging the COR Coordinators, such as fire-rated surface vertical rod exit device strikes.
- Latch will need to be lowered to compensate for the height of the coordinator and mounting bracket.
- MB-V are designed for Von Duprin 8827-F soffit latch.
- Mounting brackets are made of steel.

Product	Jamb Depth	Stop Width	Dimensions
MB1F	5"	1-1/2" - 2-1/4"	4" W x 3" D x 1-5/8" T
MB1V	5"	1-1/2" - 2-1/4"	4" W x 3" D x 1-5/8" T
MB2F	5-7/8"	2-3/8" - 3-1/4"	4"W x 4" D x 1-5/8"T
MB2V	5-7/8"	2-3/8" - 3-1/4"	4"W x 4" D x 1-5/8"T
MB3F	6-7/8"	Over 3-3/8"	4"W x 3-1/2" D x 1"T
MB3V	6-7/8"	Over 3-3/8"	4"W x 3-1/2" D x 1"T

Finishes

Ives Finish	USP	SP28	SPBLK
BHMA	600	689	622

Meets ANSI A156.3 Type 25.
UL Listed 3 Hour Fire Doors 8'0" x 10'0"

FB31P Top and Bottom Bolts (Pair)

- Fully Automatic—inactive door is latched, bolts are extended when active door closes, door is unlatched, bolts retract when active door is opened.
- Low Actuation Forces—Top Bolt Has No Spring Tension.
- Fits standard ANSI A115.4 Door Frame Preparations.
- Non-handed.
- Bolt throw is 3/4" with a 7/8" vertical adjustment.
- Bolt backset is 3/4"
- Standard Rod Length is 12", which is measured from the center of the flush bolt body to the bolt tip. Optional rod lengths available for top bolt only on non-fire rated openings—18", 24", 36" and 48.

DP1 or DP2 optional dust proof strike available, see page C11.

FB31T Top Bolt Only
FB31B Bottom Bolt Only

Meets ANSI A156.3 Type 25.
UL Listed 3 Hour Fire Doors 8'0" x 8'0"

FB32 Top Bolt with Auxiliary Fire Latch

- FB32 Model with Auxiliary Fire Latch eliminates the bottom bolt and is UL Listed for Fire Doors.

FB33 Top Bolt with Auxiliary Fire Latch and Retrofit Plate

- FB33 Model with Auxiliary Fire Latch eliminates the bottom bolt and includes a retrofit plate to cover existing bottom bolt prep. UL Listed for Fire Doors.

Dimensions

Body Size: 1" Wide x 6-3/4" Long x 2" Deep
Guide Size: 1" Wide x 1-27/32" Long x 27/32" High x 3/32" Thick
Strike Size: 15/16" Wide x 2-1/4" Long x 1/16" Thick
Rub Plate Size: 1-1/4" Wide x 1-11/16" Long x 3/64" Thick
Auxiliary Fire Latch Size: 1" Wide x 1-3/4" Long x 3-1/4" Deep
Retrofit Plate Size: 1" Wide x 6-3/4" Long x 3/32" Thick

Finishes

Ives Number	US3	US4	US10	US10B	US32	US32D
BHMA	605	606	612	613	629	630

Meets ANSI A156.3 Type 25.
UL Listed 90 Minute Fire Doors 8'0" x 8'0"

FB41P Top and Bottom Bolts (Pair)

- Fully Automatic—inactive door is latched, bolts are extended when active door closes, door is unlatched bolts retract when active door is opened.
- Low Actuation Forces—Top Bolt Has No Spring Tension.
- Non-handed.
- Bolt throw is 3/4" with a 7/8" vertical adjustment.
- Bolt backset is 3/4"

DP1 or DP2 optional dust proof strike available, see page C11.

FB41T Top Bolt Only
FB41B Bottom Bolt Only

FB42 Top Bolt with Auxiliary Fire Latch

- FB42 Model with Auxiliary Fire Latch eliminates the bottom bolt and is UL Listed for Fire Doors.

Meets ANSI A156.3 Type 25.
UL Listed 20 Minute Fire Doors 8'0" x 8'0"

Dimensions

Body Size: 1" Wide x 8-1/2" Long x 2" Deep

Guide Size: 1" Wide x 6" Long x 1/8" Thick

Strike Size: 15/16" Wide x 2-1/4" Long x 1/16" Thick

Rub Plate Size: 1-1/4" Wide x 1-11/16" Long x 3/64" Thick

Auxiliary Fire Latch Size: 1" Wide x 1-3/4" Long x 3-1/4" Deep

Finishes

Ives Number	US3	US4	US10	US10B	US32	US32D
BHMA	605	606	612	613	629	630

Meets ANSI A156.3 Type 27.
UL Listed 3 Hour Fire Doors 8'0" x 10'0"

FB51P Top and Bottom Bolts (Pair)

- Constant Latching—inactive door remains latched until the active door is opened, releasing the automatic bottom bolt and then the top bolt can be manually released. Inactive door will relatch automatically when closed.
- Low Actuation Forces.
- Fits standard ANSI A115.4 Door and Frame Preparations.
- Non-handed.
- 3/4" bolt throw with a 7/8" vertical adjustment.
- 3/4" backset
- Standard Rod Length is 12", which is measured from the center of the flush bolt body to the bolt tip. Optional rod lengths available for top bolt only on non-fire rated openings—18", 24", 36" and 48".

DP1 or DP2 optional dust proof strike available, see page C11.

FB51T Top Bolt Only

Meets ANSI A156.3 Type 27.
UL Listed 3 Hour Fire Doors 8'0" x 10'0"

FB52 Top Bolt with Auxiliary Fire Latch

- FB52 Model with Auxiliary Fire Latch eliminates the bottom bolt and is UL Listed for Fire Doors.

FB53 Top Bolt with Auxiliary Fire Latch & Retrofit Plate

- FB53 Model with Auxiliary Fire Latch eliminates the bottom bolt and includes a retrofit plate to cover existing bottom bolt prep. UL Listed for Fire Doors.

Dimensions

Body Size: 1" Wide x 6-3/4" Long x 2" Deep

Guide Size: 1" Wide x 1-27/32" Long x 11/16" High x 3/32" Thick

Strike Size: 15/16" Wide x 2-1/4" Long x 1/16" Thick

Rub Plate Size: 1-1/4" Wide x 1-11/16" Long x 3/64" Thick

Auxiliary Fire Latch Size: 1" Wide x 1-3/4" Long x 3-1/4" Deep

Retrofit Plate Size: 1" Wide x 6-3/4" Long x 3/32" Thick

Finishes

Ives Number	US3	US4	US10	US10B	US32	US32D
BHMA	605	606	612	613	629	630

Meets ANSI A156.3 Type 27.
UL Listed 90 Minute Fire Doors 8'0" x 8'0"

FB61P Top and Bottom Bolts (Pair)

- Constant Latching—inactive door remains latched until the active door is opened, releasing the automatic bottom bolt and then the top bolt can be manually released. Inactive door will relatch automatically when door closes.
- Low Actuation Forces.
- Non-handed.
- Bolt throw is 3/4" with a 7/8" vertical adjustment.
- Bolt backset is 3/4"

DP1 or DP2 optional dust proof strike available, see page C11.

FB61T Top Bolt Only

FB62 Top Bolt with Auxiliary Fire Latch

- FB62 Model with Auxiliary Fire Latch eliminates the bottom bolt and is UL Listed for Fire Doors..

Meets ANSI A156.3 Type 27.
UL Listed 20 Minute Fire Doors 8'0" x 8'0"

Dimensions

Body Size: 1" Wide x 8-1/2" Long x 2" Deep

Guide Size: 1" Wide x 6" Long x 1/8" Thick

Strike Size: 15/16" Wide x 2-1/4" Long x 1/16" Thick

Rub Plate Size: 1-1/4" Wide x 1-11/16" Long x 3/64" Thick

Auxiliary Fire Latch Size: 1" Wide x 1-3/4" Long x 3-1/4" Deep

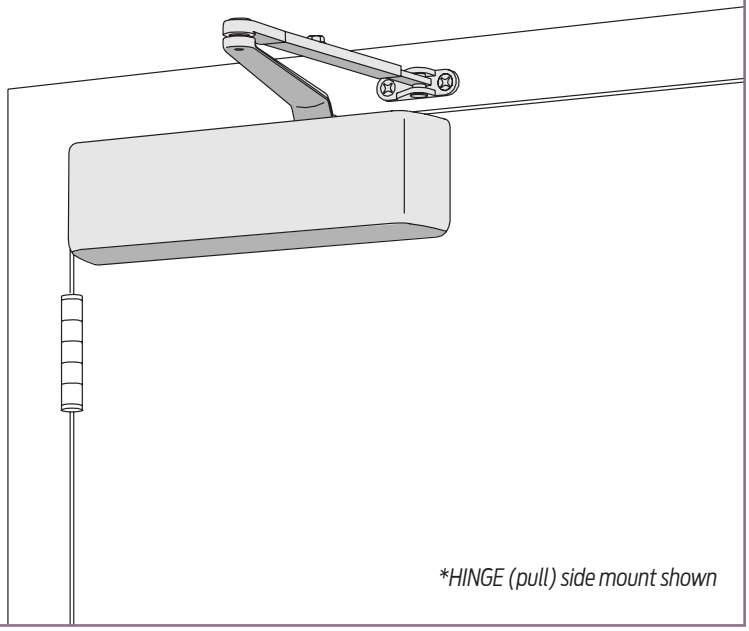
Finishes

Ives Number	US3	US4	US10	US10B	US32	US32D
BHMA	605	606	612	613	629	630

4040XP SERIES

FEATURES

CLOSER MOUNTS
***HINGE (PULL) SIDE**
TOP JAMB (PUSH SIDE)
PARALLEL ARM (PUSH SIDE)



**HINGE (pull) side mount shown*

The 4040XP is LCN's most durable and flexible heavy duty closer designed for institutional and other demanding high traffic applications.

- Cast Iron
- Forged Steel Arm
- Double Heat Treated Steel Pinion
- All Weather Fluid
- Non-Handed
- LCN Patented Green Dial
- Peel-n-Stick Templates for Fast and Accurate Installation
- UL & cUL Listed
- 3/4″ Journal Diameter Pinion
- Full Compliment Bearing

- Standard 4040XP Series closer shipped with regular arm, standard plastic cover, and self reaming and tapping screws.
- Non-sized cylinder is adjustable for interior doors to 5'0" and exterior doors to 4'0".
- Closer mounts hinge side, top jamb, and parallel arm on either right or left swinging doors.
- Closers to meet ADA requirements.
- Standard or optional custom powder coat finish.
- Optional plated finish on cover, arm, and fasteners.
- Optional SRI primer for installations in corrosive conditions. (Available with powder coat finishes only.)
- UL and cUL listed for self-closing doors without hold-open.
- Tested and certified under ANSI Standard A156.4, grade one.

The 4040XP Series includes the **LCN® "Green Dial" Spring Force Indicator**

MOUNTING					FINISH		COVER		CYLINDER				**ARM FUNCTION							
HINGE (PULL) SIDE	TOP JAMB (PULL)	TOP JAMB (PUSH)	PARALLEL ARM	STOP FACE	POWDER COAT	PLATED	PLASTIC	METAL	NON-HANDED	NON-SIZED	ACCESSIBILITY	DELAYED ACTION****	AVB***	REGULAR (DOUBLE)	STANDARD (SINGLE)	HOLD-OPEN	FUSIBLE LINK	EDA/HEDA	CUSH/HCUSH	SCUSH/SHCUSH	DOUBLE EGRESS
●	○	●	●	○	●	●	●	●	●	●	♿	●	○	120°	○	120°	○	180°	110°	110°	○

● AVAILABLE
○ NOT AVAILABLE

♿ *Closer available with less than 5.0 lbs. opening force on 36″ door.*
** *Maximum opening/hold-open point with standard template.*
*** *Advanced Variable Backcheck.*
**** *Delayed Action Closer incorporates standard 4041 Delay Cylinder.*

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4040XP SERIES

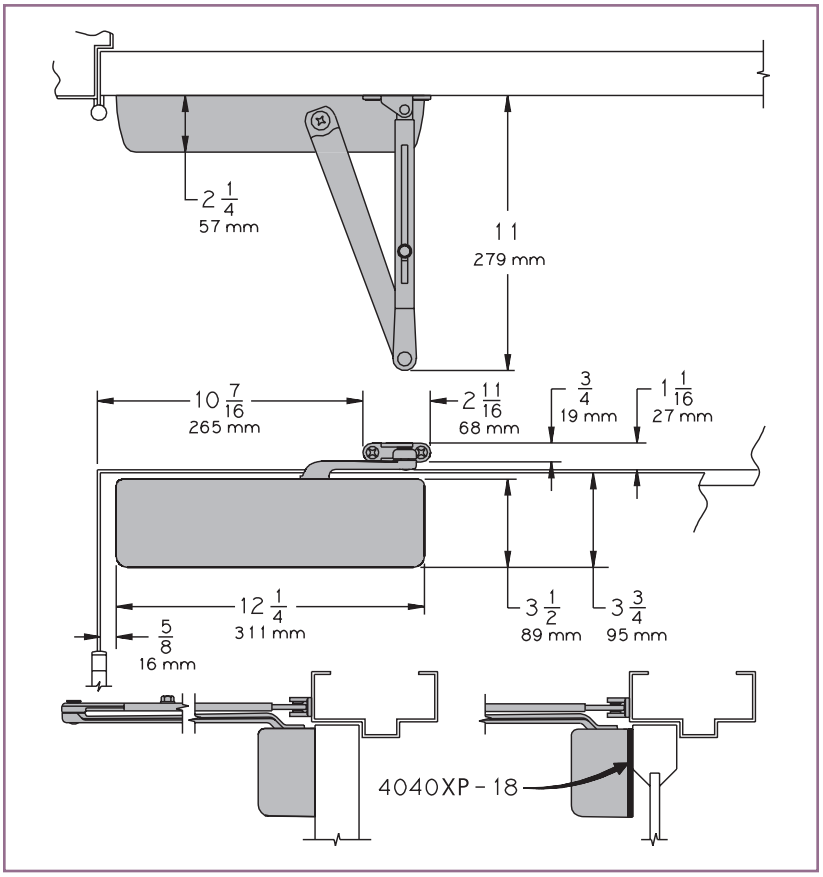
MOUNTING DETAILS

HINGE (PULL) SIDE MOUNTING

MAXIMUM OPENING

Templating allows up to 120º.

Hold-open points 90º up to 120º with hold-open arm.



- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Auxiliary Stop** is recommended at hold-open point or where a door cannot swing beyond 120º.
- **Reveal** should not exceed 3/4" (19 mm) for regular arm or hold-open arm.
- **Top Rail** less than 3-3/4" (95 mm) requires PLATE, 4040XP-18. Plate requires 2" (51 mm) minimum.
- **Clearance** of 2-3/8" (60 mm) behind door required for 90º installation.
- ***Delayed Action** Incorporates standard 4041 cylinder, without XP cylinder. Delays closing from 120º to 70º. Delay time adjustable up to approximately 1 minute.

Options

- 4041 Delayed action cylinder*.
- Hold-open arm.
- Metal cover.

Special Templates

Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.

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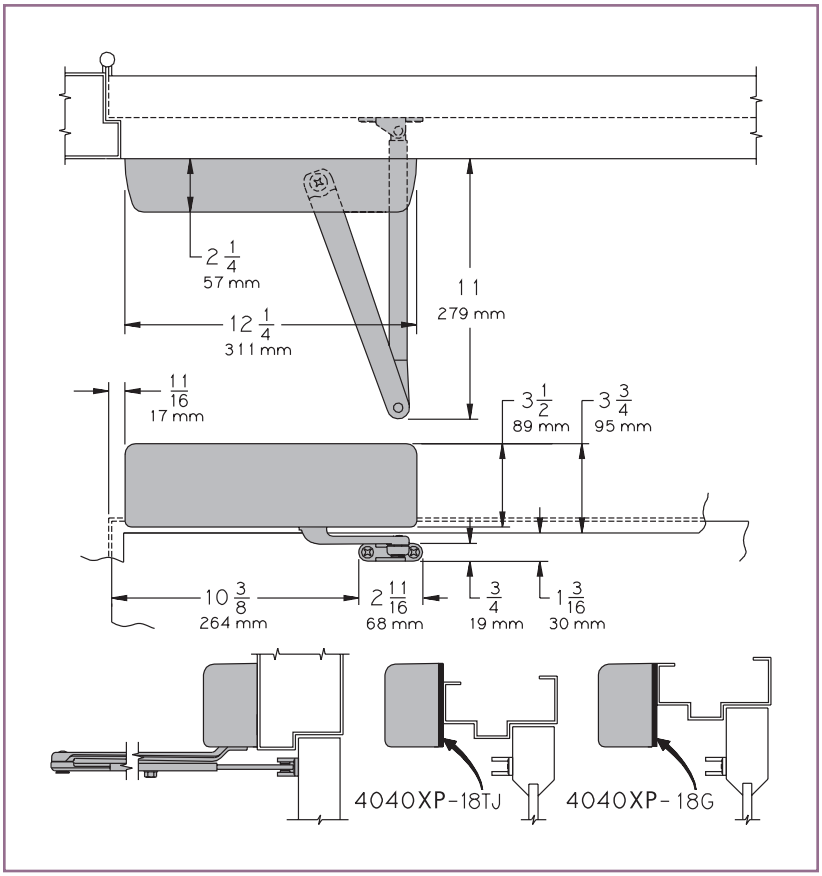
4040XP SERIES



TOP JAMB (PUSH SIDE) MOUNTING

MAXIMUM OPENING

Templating allows up to 120º.

Hold-open points 85º up to 120º with hold-open arm.

- **Butt Hinges** should not exceed 5″ (127 mm) in width.
- **Auxiliary Stop** is recommended at hold-open point or where a door cannot swing beyond 120º.
- **Reveal** of 2-9/16" (65 mm) allows 120º opening for REGULAR ARM or standard Hold-open ARM. 4-13/16" (122 mm) allows up to 120º opening with LONG ARM where standard rod and shoe is replaced with optional LONG ROD AND SHOE 4040XP-79LR. Use H-LONG ARM with LONG HEAD AND TUBE, 4040XP-78HL for hold-open. 8" (203 mm) allows up to 120º opening with EXTRA LONG ARM where standard rod and shoe is replaced with optional EXTRA LONG ROD AND SHOE, 4040XP-79ELR.
- **Top Rail** requires 1-1/4″ (32 mm) minimum.
  2-1/4″ (57 mm) minimum with closer on PLATE, 4040XP-18TJ.
  3″ (76 mm) minimum with closer on PLATE, 4040XP-18G.
- **Head Frame** less than 3-1/2" (89 mm) requires PLATE, 4040XP-18TJ. With flush ceiling, use PLATE, 4040XP-18G. Either plate requires 1-3/4" (44 mm) minimum.
- ***Delayed Action** Incorporates standard 4041 cylinder, without XP cylinder. Delays closing from 120º to 70º. Delay time adjustable up to approximately 1 minute.

Options

- 4041 Delayed action cylinder*.
- Hold-open arm.
- Metal cover.

Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.

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4040XP SERIES

MOUNTING DETAILS

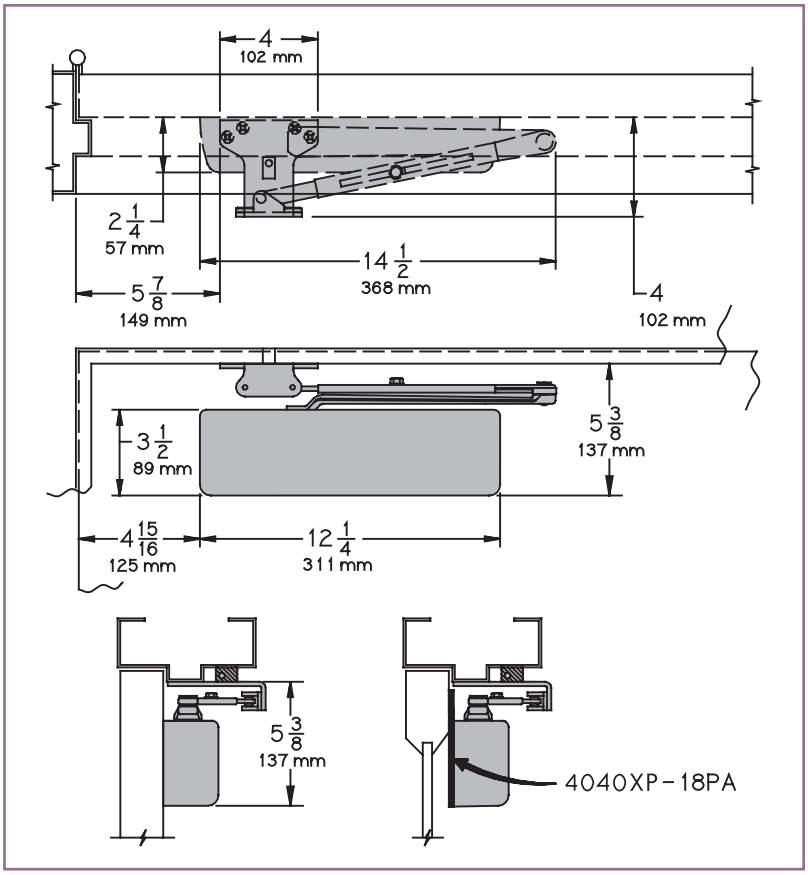
PARALLEL ARM (PUSH SIDE) MOUNTING

Optional mounting requires PA SHOE, 4040XP-62PA for regular or HOLD-OPEN arms. Add prefix "P" to closer description (eg. P4040XP). P4040XP closer includes 4040XP-201 FIFTH HOLE SPACER to support PA SHOE.

MAXIMUM OPENING

180º opening/hold-open points with all except CUSH arms.

110º opening/hold-open with CUSH arms.



- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Auxiliary Stop** is recommended at hold-open point, where the door cannot swing 180º, or where CUSH-N-STOP arm is not used.
- **Clearance** for 4040XP-62PA shoe is 4" (102 mm) from door face. EDA shoe projects 5-1/2" (140 mm) from door face. CUSH shoe projects 6" (152 mm) from door face.
- **Top Rail** less than 5-3/8" (137 mm) measured from the stop requires PLATE, 4040XP-18PA. Plate requires 2" (51 mm) minimum from the stop.
- **Head Frame** flush or rabetted requires PA SHOE ADAPTER, 4040XP-419.
- **Stop Width** minimum 1" (25 mm). CUSH arm requires minimum 1-1/2" (38 mm).
- **Blade Stop** clearance requires 1/2˝ (13mm) BLADE STOP SPACER, 4040XP-61.
- ***Delayed Action** Incorporates standard 4041 cylinder, without XP cylinder. Delays closing from 120º to 70º. Delay time adjustable up to approximately 1 minute.

Options

- 4041 Delayed action cylinder*.
- Hold-open, EDA, HEDA, CUSH, HCUSH, SPRING CUSH or SPRING HCUSH arm.
- Metal cover.

Special Templates

Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.

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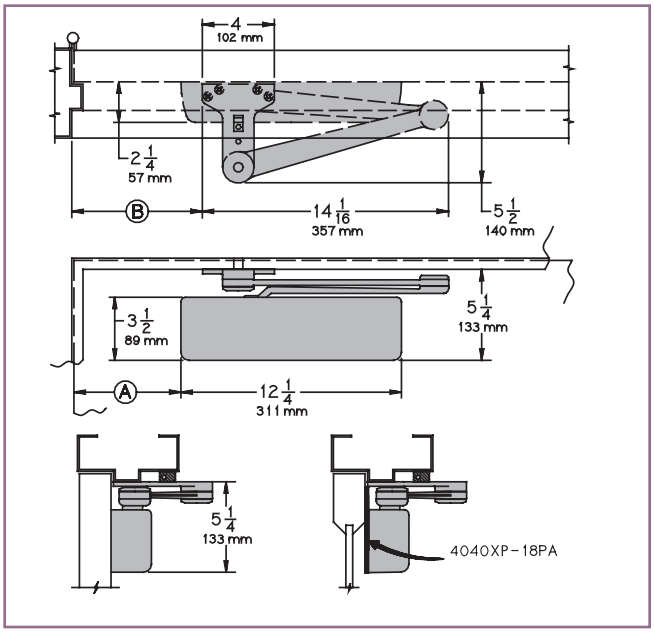
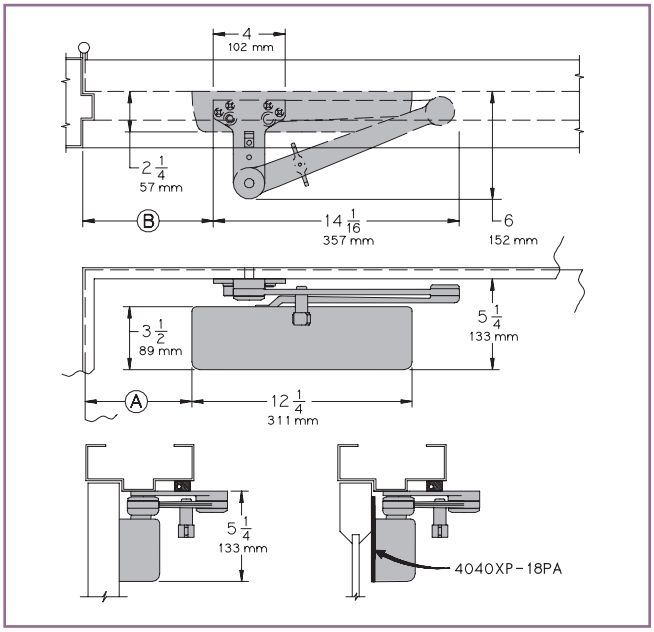
4040XP SERIES

4040XP SERIES EDA MOUNT



4040XP SERIES CUSH MOUNT



- **Clearance** for 4040XP-62EDA is 5-1/2" (140 mm) from door face. 6" (152 mm) for CUSH.
- **Head Frame** flush or rabetted requires CUSH FLUSH PANEL ADAPTER, 4040XP-419.
- **CUSH ARM** requires SHOE SUPPORT, 4040XP-30 for fifth screw anchorage for narrow frames.
- ***Delayed Action** Incorporates standard 4041 cylinder, without XP cylinder. Delays closing from maximum opening to ; 115˚ with 180˚ template, 95˚ with 110˚ template, 85˚ with 100˚ template, 75˚ with 90˚ template. Delay time adjustable up to approximately 1 minute.

Mounting details are the same as 4040XP Series REGULAR or HOLD-OPEN except as listed below. 4040XP Series closers ordered with EDA or CUSH arms include 4040XP-201 FIFTH HOLE SPACER to support the shoe.

MAXIMUM OPENING

EDA arm can be templated for points at: 110º,
- Ⓐ = 6-3/8" (162 mm)
- Ⓑ = 7-3/4" (197 mm)

or 180º.
- Ⓐ = 2-7/8" (73 mm)
- Ⓑ = 4-1/4" (108 mm)

Hold-open points up to maximum opening with HEDA arm.

CUSH arms can be templated for opening/hold-open point at:
85º,
- Ⓐ = 7-15/16" (202 mm)
- Ⓑ = 9-1/8" (232 mm)

90º,
- Ⓐ = 7-3/16" (183 mm)
- Ⓑ = 8-1/2" (216 mm)

100º,
- Ⓐ = 6-1/16" (154 mm)
- Ⓑ = 7-1/4" (184 mm)

or 110º.
- Ⓐ = 5-1/16" (129 mm)
- Ⓑ = 6-3/8" (162 mm)

Spring Cush dead stop points are approximately 5˚ more than templated stop point. Hold open at templated stop points.

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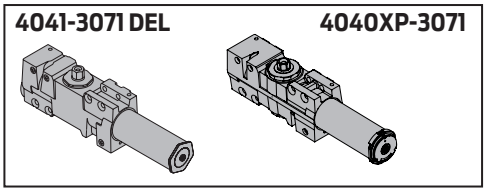
4040XP SERIES

ACCESSORIES

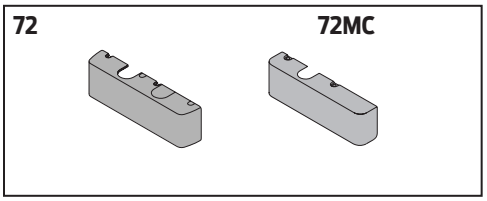
CYLINDERS

CYLINDER, 4040XP-3071
Heavy duty, non-handed cast iron cylinder assembly.
CYLINDER, 4041-3071 DEL
Cylinder used for delayed action options.



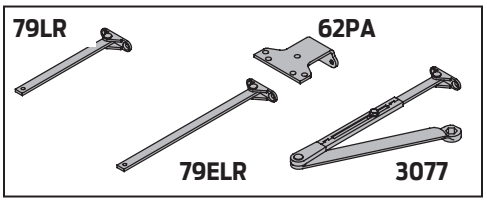
COVERS

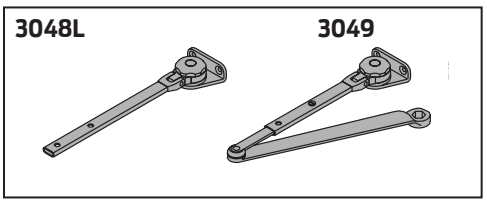
COVER, 4040XP-72
Standard, non-handed plastic cover.
METAL COVER, 4040XP-72MC
Optional, handed cover. Required for plated finishes and custom powder coat finishes.

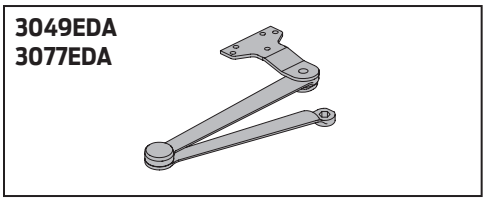


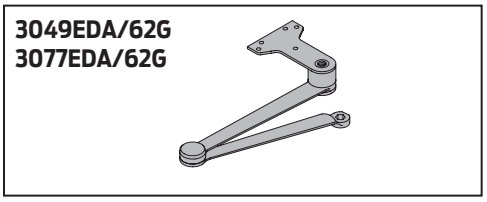
ARMS

REGULAR ARM, 4040XP-3077
Non-handed arm mounts pull side or top jamb with shallow reveal. P4041 closer includes PA SHOE, 4040XP-62PA required for parallel arm mounting.
PA SHOE, 4040XP-62PA
Required for parallel arm mounting.
LONG ARM, 4040XP-3077L
Optional non-handed arm includes LONG ROD AND SHOE, 4040XP-79LR for top jamb mount.
EXTRA LONG ARM, 4040XP-3077ELR
Optional non-handed arm includes EXTRA LONG ROD AND SHOE, 4040XP-79ELR for top jamb mount with deep reveal.
HOLD-OPEN ARM, 4040XP-3049
Optional, non-handed arm mounts pull side or top jamb with shallow reveal, hold-open adjustable shoe. 4040XP closer includes 4040XP-62PA shoe required for parallel arm mounting.
LONG HOLD-OPEN ARM, 4040XP-3049L
Optional non-handed arm includes LONG HEAD AND TUBE, 4040XP-3048L for top jamb mount.
EXTRA DUTY ARM, 4040XP-3077EDA
Non-handed parallel arm features forged, solid steel main and forearm for potentially abusive installations.
HOLD-OPEN EXTRA DUTY ARM, 4040XP-3049EDA
Handed parallel arm features forged, solid steel main and forearm for potentially abusive installations. Hold-open function is adjusted at the shoe.
EXTRA DUTY ARM WITH 62G, 4040XP-3077EDA/62G
Non-handed parallel arm features forged, solid steel main and forearm for potentially abusive installations. 62G shoe provides additional blade stop clearance.
HOLD-OPEN EXTRA DUTY ARM WITH 62G, 4040XP-3049EDA/62G
Handed parallel arm features forged, solid steel main and forearm for potentially abusive installations. 62G shoe provides additional blade stop clearance. Hold-open function is adjusted at the shoe.









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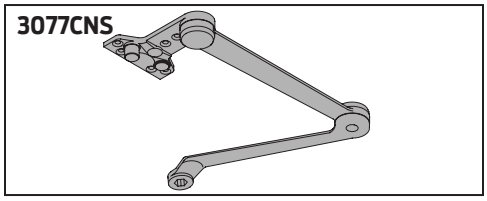
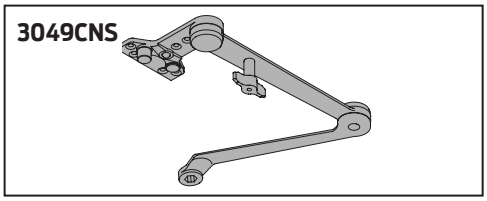
ARMS CONT.

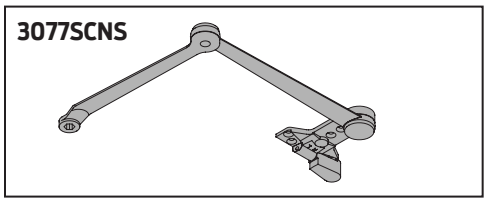
CUSH-N-STOP® ARM, 4040XP-3077CNS
Optional, non-handed parallel arm features solid forged steel main arm and forearm with stop in soffit shoe.



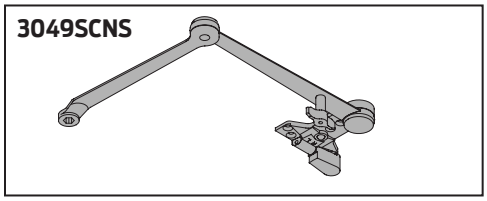
HCUSH ARM, 4040XP-3049CNS
Provides hold-open function with templated stop/hold-open points. Handle controls hold-open function.



SPRING CUSH ARM, 4040XP-3077SCNS
Optional, non-handed parallel arm for abusive applications features solid forged steel main arm and forearm with spring loaded stop in the soffit shoe.

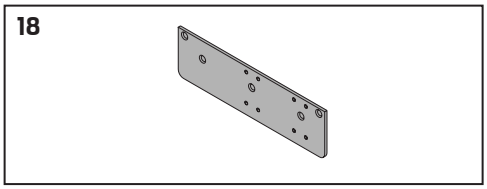


SPRING HCUSH ARM, 4040XP-3049SCNS
Optional, non-handed parallel arm for abusive applications features solid forged steel main arm and forearm with spring loaded stop in the soffit shoe. Handle controls hold-open function.



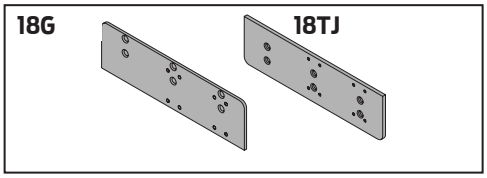
INSTALLATION ACCESSORIES

PLATE, 4040XP-18
Required for hinge side mount where top rail is less than 3-3/4" (95 mm). Plate requires minimum 2" (51 mm) minimum top rail.

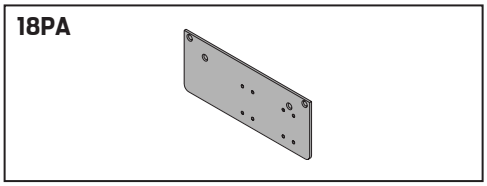


PLATE, 4040XP-18G
Locates top jamb mounted closer flush with top of head frame face in flush ceiling condition. Plate requires 1-3/4" (44 mm) minimum head frame.

PLATE, 4040XP-18TJ
Centers top jamb mounted closer vertically on head frame where face is less than 3-1/2" (89 mm). Plate requires 1-3/4" (44 mm) minimum head frame.



PLATE, 4040XP-18PA
Required for parallel arm mounting where top rail is less than 5-1/2" (140 mm), measured from the stop. Plate requires 2" (51 mm) minimum top rail.



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4040XP SERIES

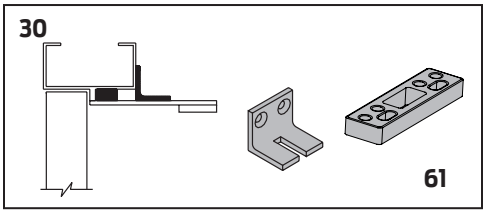
INSTALLATION ACCESSORIES CONT.

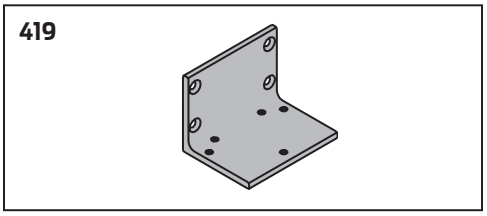
CUSH SHOE SUPPORT, 4040XP-30
Provides anchorage for fifth screw used with CUSH arms, where reveal is less than 3-1/16" (78 mm).

BLADE STOP SPACER, 4040XP-61
Required to lower parallel arm shoe to clear 1/2" (13 mm) blade stop.

PA FLUSH PANEL ADAPTER, 4040XP-419
Provides horizontal mounting surface for parallel arm shoe on single rabetted or flush frame.

AUXILIARY SHOE, 4040XP-62A
Requires a top rail of 7" (178 mm). Optional shoe replaces -62PA for parallel arm mounting of regular arm with overhead holder/stop.





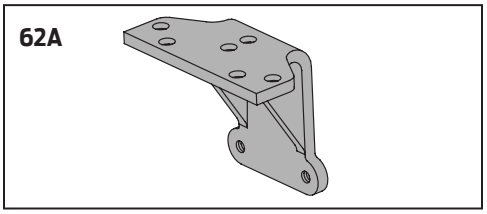


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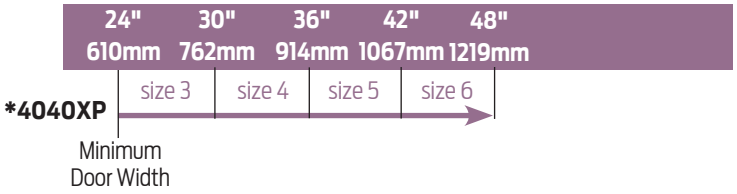
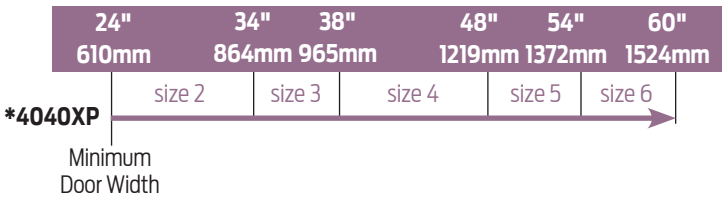
TABLE OF SIZES

4040XP cylinders are adjustable from size 1 through size 6 and is shipped set to size 3.
Closing power of 4040XP Series closers may be adjusted 50%.

EXTERIOR (and VESTIBULE) DOOR WIDTH



INTERIOR DOOR WIDTH



→ Indicates recommended range of door width for closer size.

** Adjustable Size 1 thru 6.*

REDUCED OPENING FORCE 4040XP SERIES CLOSERS

CAUTION ! Any manual door closer, including those certified by BHMA to conform to ANSI Standard A156.4, that is selected, installed and adjusted based on ADA or other reduced opening force requirements may not provide sufficient power to reliably close and latch a door.

Refer to POWER OPERATORS section for information on systems that meet reduced opening force requirements without effecting closing power.

	DOOR WIDTH	36"	42"	48"
♿	8.5* lbs.	4040XP	4040XP	4040XP
	5.0* lbs.	4040XP	4040XP	4040XP

** Maximum opening force.*

HOW-TO-ORDER 4040XP SERIES CLOSERS

1. SELECT FINISH

☐ Standard Powder Coat _____
Aluminum, Dark Bronze, Statuary, Light Bronze, Black, Brass.

Closer will be shipped with:
- STANDARD CLIP-ON COVER
- SPECIFY ARM WHEN ORDERING
- SELF-REAMING and TAPPING SCREWS, *unless options listed below are selected.*

CLOSER OPTIONS

CYLINDER
☐ Delayed Action (4041 DEL)

COVER
☐ Metal (specify right or left hand) (MC)

FINISH
☐ Custom Powder Coat (RAL) _____
(handed metal cover required)
☐ Plated Finish, US _____
(handed metal cover required)
☐ SRI primer (use with powder coat finishes only)

ARM
☐ Regular (REG)
☐ Regular w/62PA (Rw/PA)
☐ Regular w/62A (R/62A)
☐ Long (LONG)
☐ Extra Long (XLONG)
☐ Hold-Open (H)
☐ Hold-Open w/62PA (Hw/PA)
☐ Long Hold-Open (HLONG)
☐ Extra Duty Arm (EDA)
☐ Extra Duty Arm with 62G (EDA/62G)
☐ Hold Open Extra Duty Arm (HEDA) (Handed)
☐ Hold Open Extra Duty Arm with 62(HEDA/62G)(Handed)
☐ Cush-N-Stop (CUSH)
☐ HCush-N-Stop (HCUSH)
☐ Spring Cush (SCUSH)
☐ Spring HCush (SHCUSH)

OPTIONAL SCREW PACKS
☐ TB* w/Self-Reaming and Tapping (TBSRT)
☐ Wood & Machine Screw (WMS)
☐ TB*, Wood & Machine Screw (TBWMS)
☐ TORX Machine Screw (TORX)
☐ TB* & TORX Machine Screw (TBTRX)
** Specify door thickness if other than 1-3/4˝.*

INSTALLATION ACCESSORIES
☐ Plate, 4040XP-18
☐ Plate, 4040XP-18TJ
☐ Plate, 4040XP-18G
☐ Plate, 4040XP-18PA
☐ CUSH Shoe Support, 4040XP-30
☐ Blade Stop Spacer, 4040XP-61
☐ Auxiliary Shoe, 4040XP-62A
☐ PA Flush Panel Adapter, 4040XP-419

SPECIAL TEMPLATE
☐ ST-_____

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Digital Control Suite
Provides exceptionally precise control of a large range of built-in functions combined with superior durability and performance. Visual indications and digital readouts of all control function settings and activity make adjustments easy, fast and accurate.

Dual Independent Program Memories
Each unit is pre-programmed to factory default settings. The installer can adjust the unit to meet the job site requirements. These field settings are locked into the computer's memory. Any subsequent field adjustments replace the original field adjustments. The factory settings are always retained in memory and can be recalled to replace the field settings in just seconds, restoring the unit to its original programming.

On-Board Diagnostics
Sophisticated built-in diagnostics program monitors the system microprocessor, power supplies, drive systems, actuators and safety circuits. Reduces the time required to make sure the installation is complete and correct.

On-Board Power Supply
Provides 24V AC output or 24V DC output with rectifier to power card readers, manual actuators and other peripherals.

Plug and Play Sensors
Motion sensors and safety sensors feature a "plug and play" concept allowing fast and accurate wiring connections in only seconds.

Electronic Circuit Protection
High voltage (primary AC input) is protected by replaceable fuse. Low voltage (secondary AC output) is protected by self-resetting fuses.

Visual Function Indicators
LED Display allows direct observation of these inputs while in visual function indicator mode:

- Key switch- set to Auto, OFF or HOLD
- Activate
- DMSS approach
- DMSS safety
- Bodyguard
- Power Boost Disable

Programming Mode
Allows tailoring the following functions to meet specific site conditions

- Opening Speed
- Backcheck Speed
- Backcheck Position
- Hold Open Delay
- Latch Position
- Auto Reverse - Closing
- Electric Lock Delay
- Power Boost
- Push N' Go
- Alternate Action
- Safety Slow/Stop
- Slow Down Disable

Push 'N Go
Allows pedestrians to walk up to the door and push it open as if it were a manual door. After the door is manually opened approximately 5 degrees, the Push 'N Go feature takes over and continues to open the door – slowly and automatically to the full open position. With Push 'N Go, the door will stay fully open from one to 30 seconds, depending on the time delay chosen.

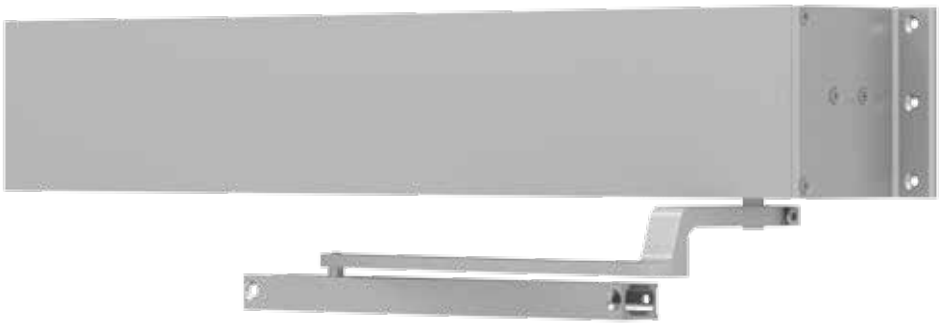
Auto Reverse
A safety feature that reverses the direction of the door when it comes into contact with an object during either opening or closing.

Safety Slow/Stops Function
Once the door starts opening, any person or object entering the swing area will cause the door to go into a safety slow speed. This function can be set to allow for a short stop once a person or object is sensed.

Power Boost
Adds an additional latching force to ensure secure latching in severe wind or stack conditions. Power Boost is also ideal for overcoming slowing obstacles such as electric strikes. Provides approximately 25 lbs. of total closing force.

Microprocessor
Control unit allows for quiet efficiency in operation. Combined with the all electromechanical unit, it eliminates unnecessary wear and prolongs the life of the unit.

Electric Lock Delay
Causes a 1 second delay between activate signal and door opening to allow time for most electric locks to disengage before operator opens door.

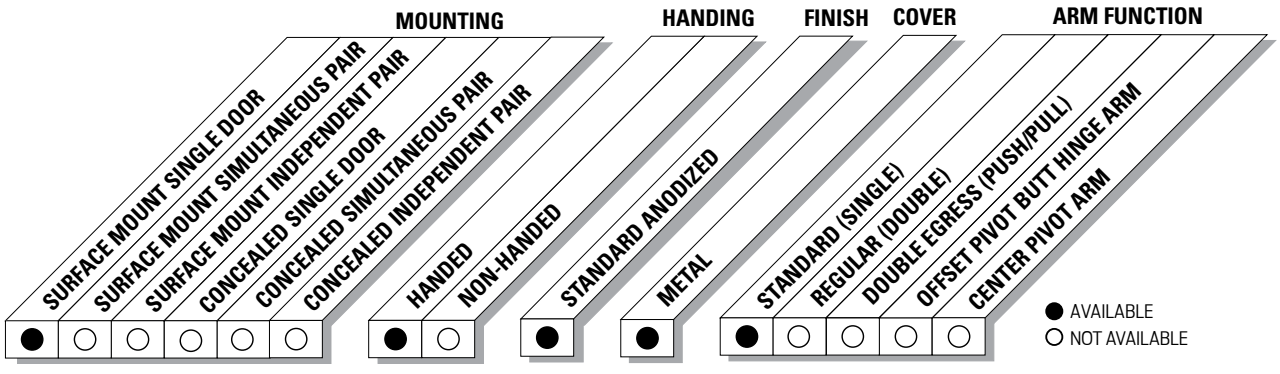


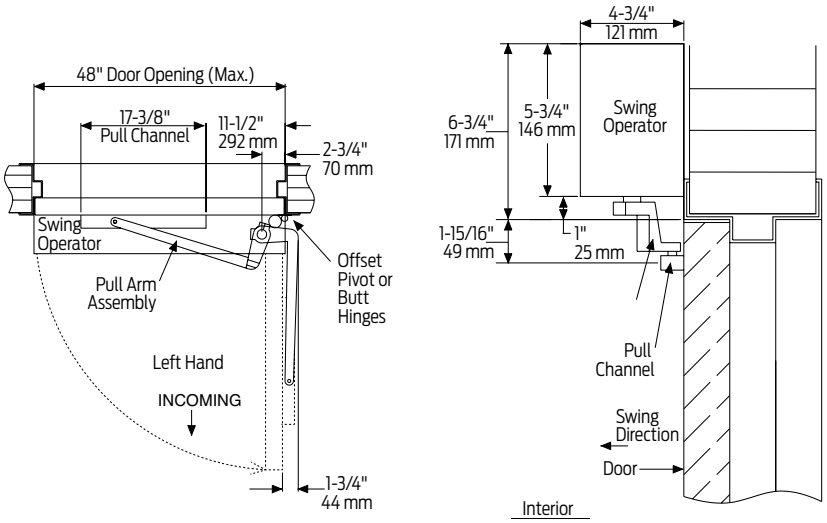
The 9530 SENIOR SWING by LCN is an ADA door operator that is a two-in-one swing door operator. SENIOR SWING operators when activated, opens doors automatically for wheelchair access, yet allows for manual operation for regular pedestrian traffic.

Certifications	Grade 1 - ANSI A156.19, UL325/228, UL1998, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act
Fluid	All Weather Fluid
Handing	Handed
Door Width	■ Minimum 33˝ - 48˝ ■ Single door - width per leaf 33˝ minimum, 48˝ maximum
Warranty	2 years

Fasteners	Machine screw pack
Mounting	Single door, surface mount, offset pivot. butt hinge, pull side
Arms	Standard arm (3077T)
Finishes/Colors/ Powder Coat	■ Anodized Aluminum ■ Anodized Dark Bronze

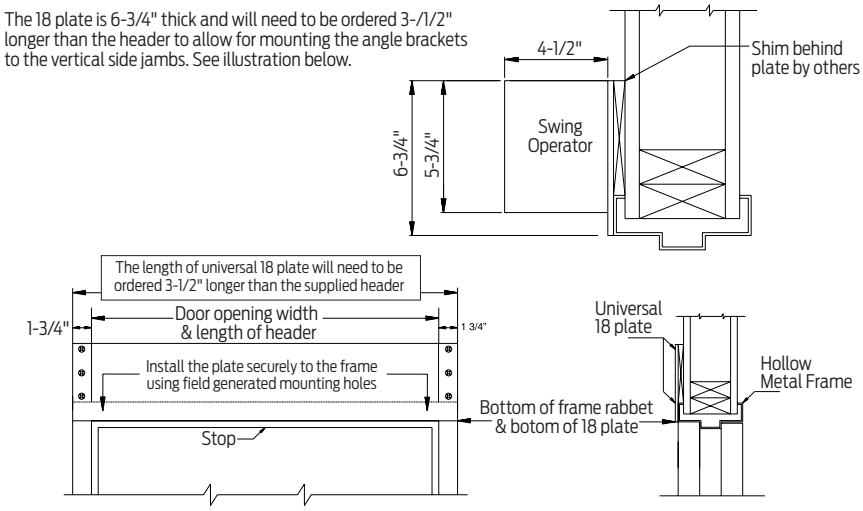
Special Templates | Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.





Offset pivot/butt hinge, center pivot, pull

NOTE: Cannot be used with swing clear hinges, pocket pivots or balanced doors.



Hollow metal frame

Suggested Installation.

Butt Hinges	Should not exceed 5″ (127 mm) in width
Reveal	Should not exceed 4″ (102 mm)
Head Frame	Minimum 1-3/4″ (44 mm). Face frame 6-3/4″ (171 mm) total operator clearance
Top Rail	Minimum 2-3/4″ (70 mm)
Opening and Closing Time	■ Variable by adjustments to the electronic control box ■ Maximum hold open time adjustable up to approximately 32 seconds
System Diagram	See "AUTOMATIC OPERATORS" section page 51 for typical system wiring and page 53 for electrical data
Maximum Opening	Template allows 90 degree power opening and 90 degree manual opening

Notes:

• Push N' Go permits non-switch activation with a power boost providing additional latching force
• Electromechanical unit with microprocessor control
• Digital keypad for easy setup
• 36" header length is standard. Specify 33" - 48" max
• Double door header available up to 98", specify other length 49" - 98" max
• Consult factory regarding this option
• Adjustable hold open period of 2 - 32 seconds in automatic or manual mode
• Actuators available separately, see pages 115-131

Motor Gearbox

9530-3454
Motor Gearbox

- Senior swing
- Handed
- Driving mechanism for operator
- Provides maximum 15 lbs opening force

Mount Brackets

9530-275
Mounting Bracket

- Motor gearbox mounting bracket for 2-3/4″ offset pivot or butt hinge installations
- Front bracket

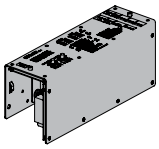
9530-3018
Rear Mounting Bracket

- Motor gearbox mounting bracket
- Rear bracket

9530-334-1
Angled Bracket

- Mounting bracket for surface applications (includes 2 mounting brackets)

Control Box



9530-3462
Control Box

- Electronic controlling device for Senior Swing

Headers

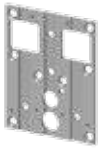
9530-3572HL
Header

- Standard
- Single door, single operator
- Specify length 33″ to 48″ maximum

9530-3572DD
Header

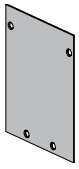
- Standard
- Double door, single operator
- Specify length 49″ to 98″ maximum

End Caps



9530-334
Header End Caps

- With openings for wiring



9530-334-2
End Dress Plate

- Metal finish end cap

Arms

9530-3077PLCM
Standard Arm Assembly

- Handed
- Track roller included (includes 3038, 3077T, 3034 & 73)

9530-3077T
Standard Arm

- Handed
- Track roller not included

Tracks

9530-3038
Track

- Non-handed
- Includes 3034 & 73

9530-73
Track End Cap

- Black plastic end caps

9530-3034
Roller

- Quiet low friction roller assembly

Installation Assembly

9530-11A
Spindle Plate

- Hides bottom of motor gearbox
- Completes header box
- Cutout allows for motor gearbox shaft
- For 2-3/4″ offset pivot or butt hinge installations

9530-12
Filler

- Plate blank
- Completes length of header box (specify Length)

9530-18
Mounting Plate

- Optional mounting plate for standard hollow metal door frames
- Specify length 36-1/2″ to 101-1/2″ maximum, when angle brackets
- Specify length 33″ to 98″ maximum when using end dress plates

NOTE: The length of a universal 18 plate will need to be ordered 3-1/2″ longer than the supplied header when using angle brackets

How-to-order 9530 Series closers

Specify hand
☐ RH
☐ LH

Specify header/length
☐ HL__ (Specify length 33″ to 48″)
☐ DD__ (Specify length 49″ to 98″)

Specify finish
☐ Standard Anodized Finish _____
Aluminum or Dark Bronze

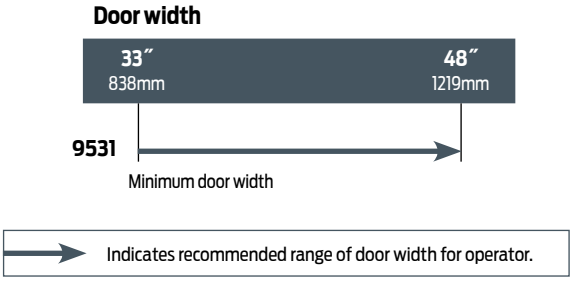
Operator will be shipped with:
- Standard motor gearbox
- Standard control box
- Header (at specified length, 36″ standard)
- Standard arm (3077T)
- 2-3/4″ pivot point
- Standard track w/track roller
- Machine screw pack

unless options listed below are selected

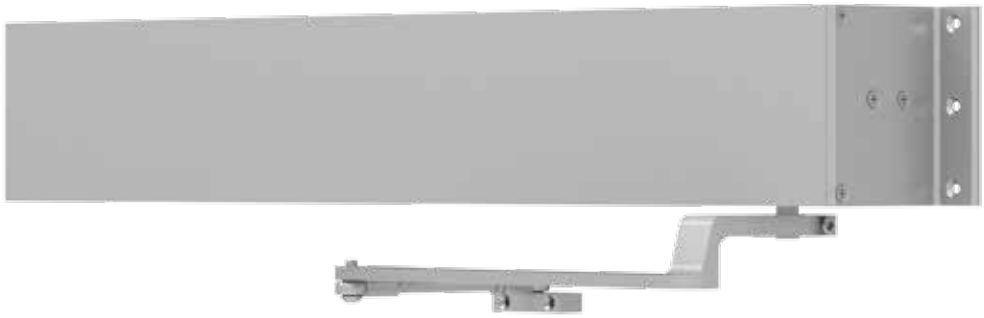
Operator options

Mounting plate
☐ Plate, ___ (Specify Length 33″ to 101-1/2″)

Table of sizes



NOTE: For all Senior Swing Series.
Single Door - Width per leaf 33″ minimum, 48″ maximum.

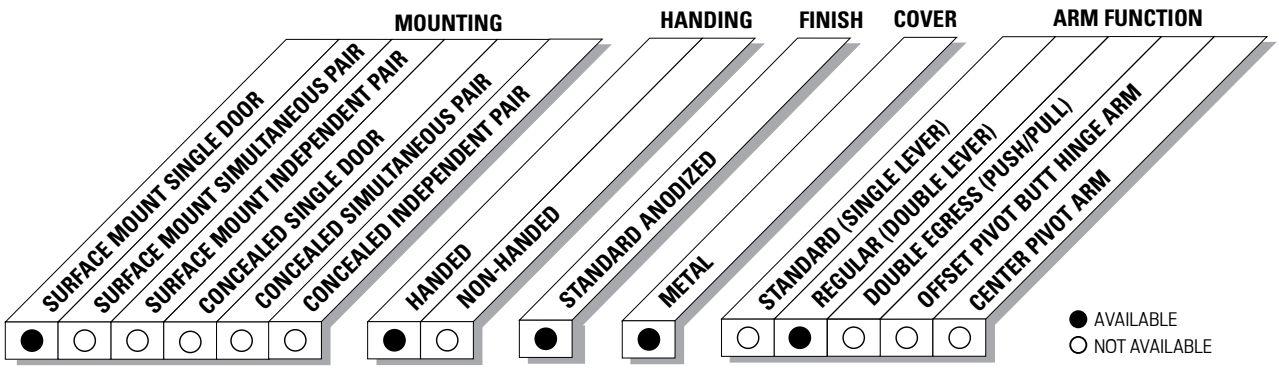


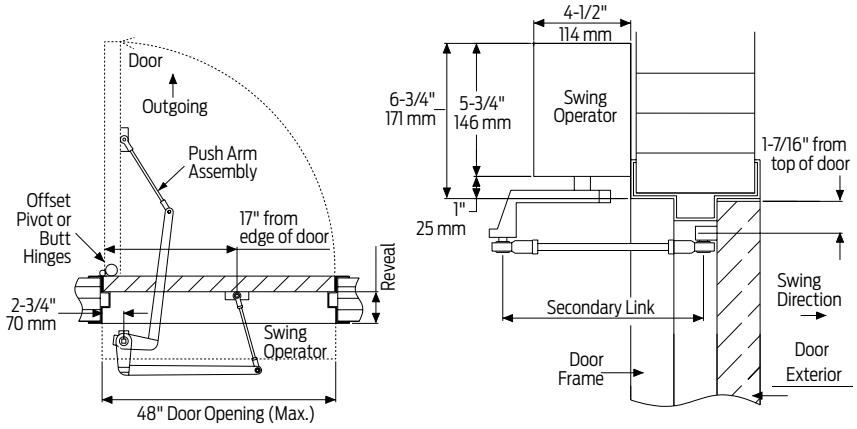
The 9540 SENIOR SWING by LCN is an ADA door operator that is a two-in-one swing door operator. SENIOR SWING operators when activated, opens doors automatically for wheelchair access, yet allows for manual operation for regular pedestrian traffic.

Certifications	Grade 1 - ANSI A156.19, UL325/228, UL1998, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act
Fluid	All Weather Fluid
Handing	Handed
Door Width	■ Minimum door width 33″ - 48″ ■ Single door - width per leaf 33″ minimum, 48″ maximum
Warranty	2 years

Fasteners	Machine screw pack
Mounting	Single door, surface mount, offset pivot, butt hinge (Pull Side)
Arms	Regular Arm (3077)
Finishes/Colors/ Powder Coat	■ Anodized Aluminum ■ Anodized Dark Bronze

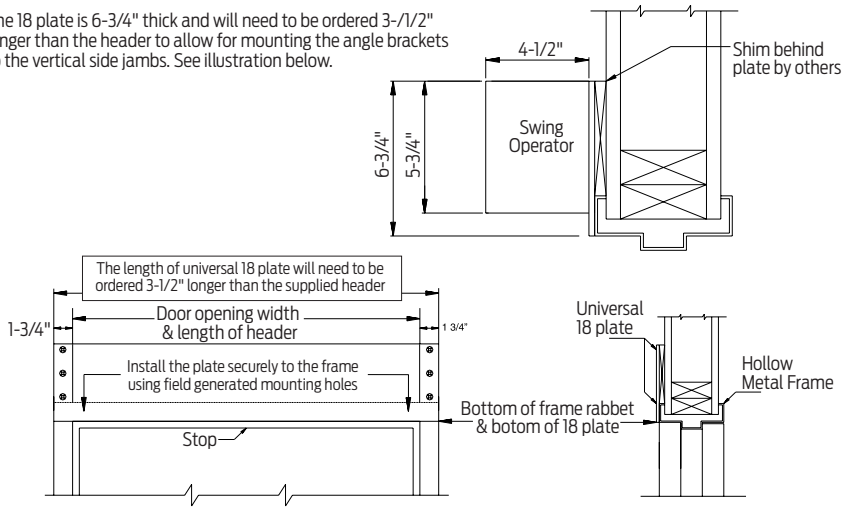
Special Templates | Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.





Offset pivot/butt hinge, center pivot, push
Consult factory for all balance door installations.

The 18 plate is 6-3/4" thick and will need to be ordered 3-/1/2" longer than the header to allow for mounting the angle brackets to the vertical side jambs. See illustration below.



Hollow metal frame
Suggested Installation.

Butt Hinges	Should not exceed 5˝ (127 mm) in width
Reveal	push installations should not exceed 10˝ (254 mm) for REGULAR ARM and 20˝ (508 mm) for LONG ARM
Head Frame	Minimum 1-3/4˝ (44 mm). Face frame 6-3/4˝ (171 mm) total operator clearance
Top Rail	Minimum 2-3/4˝ (70 mm)
Opening and Closing Time	■ Variable by adjustments to the electronic control box ■ Maximum hold open time adjustable up to approximately 32 seconds
System Diagram	See "AUTOMATIC OPERATORS" section page 51 for typical system wiring and page 53 for electrical data
Maximum Opening	Template allows 90 degree power opening and 90 degree manual opening

Notes:
• Push N' Go permits non-switch activation with a power boost providing additional latching force
• Electromechanical unit with microprocessor control
• Digital keypad for easy setup
• 36" header length is standard. Specify 33" - 48" max
• Double door header available up to 98", specify other length 49" - 98" max
• Adjustable hold open period of 2 - 32 seconds in automatic or manual mode
• Actuators available separately, see pages 115-131

Motor Gearbox

9540-3454
Motor Gearbox

- Senior swing
- Handed
- Driving mechanism for operator
- Provides maximum 15 lbs opening force

Mount Brackets

9540-275
Mounting Bracket

- Motor gearbox mounting bracket for 2-3/4″ offset pivot or butt hinge installations
- Front bracket

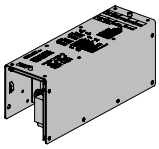
9540-3018
Rear Mounting Bracket

- Motor gearbox mounting bracket
- Rear bracket

9540-334-1
Angled Bracket

- Mounting bracket for surface applications (includes 2 mounting brackets)

Control Box



9540-3462
Control Box

- Electronic controlling device for Senior Swing

Headers

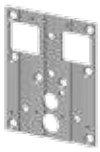
9540-3572HL
Header

- Single door, single operator
- Specify length 33″ to 48″ maximum
- Standard

9540-3572DD
Header

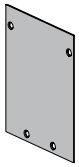
- Double door, single operator
- Specify length 49″ to 98″ maximum
- Standard

End Caps



9540-334
Header End Caps

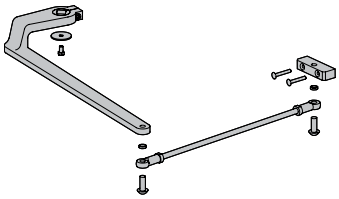
- With openings for wiring



9540-334-2
End Dress Plate

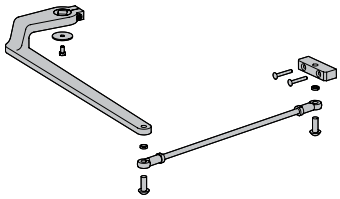
- Metal finish end cap

Arms



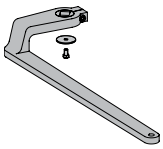
9540-3077
Regular Arm Assembly

- Handed
- Includes 77 main arm assembly and 79 linkage assembly



9540-3077L
Regular Long Arm Assembly

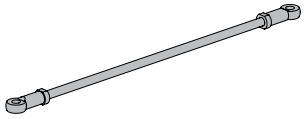
- Handed
- Includes 77 main arm assembly and 79LR linkage assembly



9540-77
Main Arm

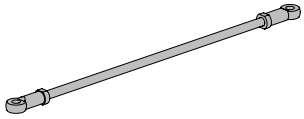
- Handed
- Attaches to motor gearbox

Tracks



9540-79
Linkage Assembly - 15″

- Threaded rod attaches to door
- Extends from main arm



9540-79LR
Linkage Assembly - 32″

- Threaded long rod attaches to door
- Extends from main arm.
- Used for reveal 10″ to 20″

Installation Accessories

9540-11A
Spindle Plate

- Hides bottom of motor gearbox
- Completes header box
- Cutout allows for motor gearbox shaft
- For 2-3/4″ offset pivot or butt hinge installations

9540-12
Filler Plate Blank

- Completes length of header box (specify length)

9540-18
Mounting Plate

- For standard hollow metal door frames
- Specify length 55-1/2″ to 101-1/2″ maximum when using angle brackets
- Specify length 52″ to 98″ maximum when using dress plates
- Optional

NOTE: The length of a universal 18 plate will need to be ordered 3-1/2″ longer than the supplied header when using angle brackets.

How-to-order 9540 Series closers

Specify hand
☐ RH
☐ LH

Specify header/length
☐ HL__ (Specify length 33″ to 48″)
☐ DD__ (Specify length 49″ to 98″)

Specify finish
☐ Standard Anodized Finish _____
Aluminum or Dark Bronze

Operator will be shipped with:
- Standard motor gearbox
- Standard control box
- Header (at specified length, 36″ standard)
- Regular arm (3077)
- 2-3/4″ pivot point
- Machine screw pack

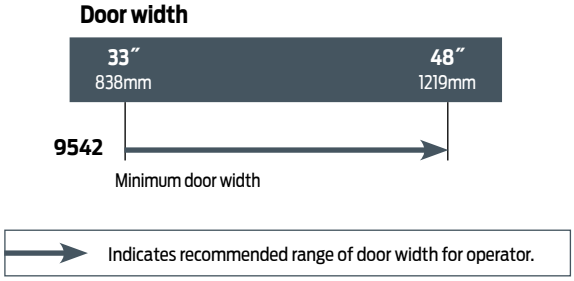
unless options listed below are selected.

Operator options

Mounting plate
☐ Plate, ___ (Specify Length 33″ to 101-1/2″)

Arm
☐ Long Arm (3077L)

Table of sizes



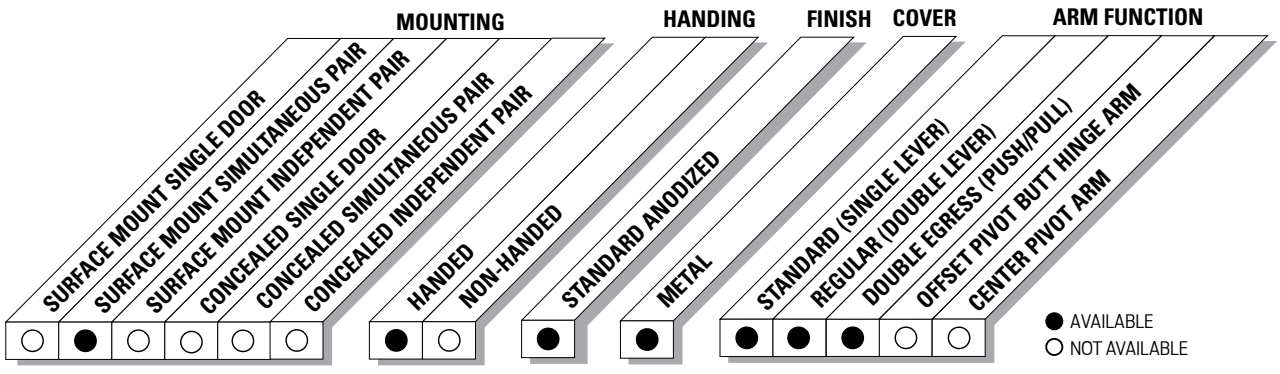
NOTE: For all Senior Swing Series.
Single Door - Width per leaf 33″ minimum, 48″ maximum.

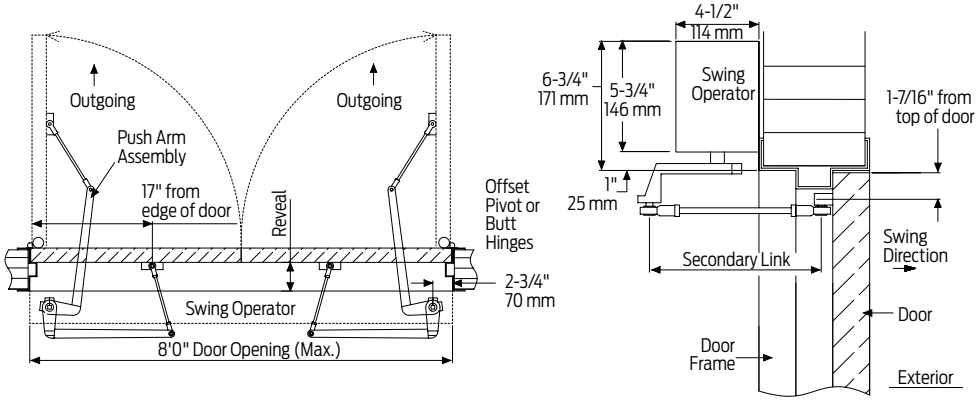
The 9550 SENIOR SWING by LCN is an ADA door operator that is a two-in-one swing door operator. SENIOR SWING operators when activated, opens doors automatically for wheelchair access, yet allows for manual operation for regular pedestrian traffic.

Certifications	Grade 1 - ANSI A156.19, UL325/228, UL1998, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act
Handing	Handed
Door Width	■ Minimum combined door width 52″ - 98″ (push) ■ Minimum combined door width 60″ - 98″ (pull; double egress) ■ Simultaneous pair - width per leaf 30″ minimum - 48″ maximum
Warranty	2 years

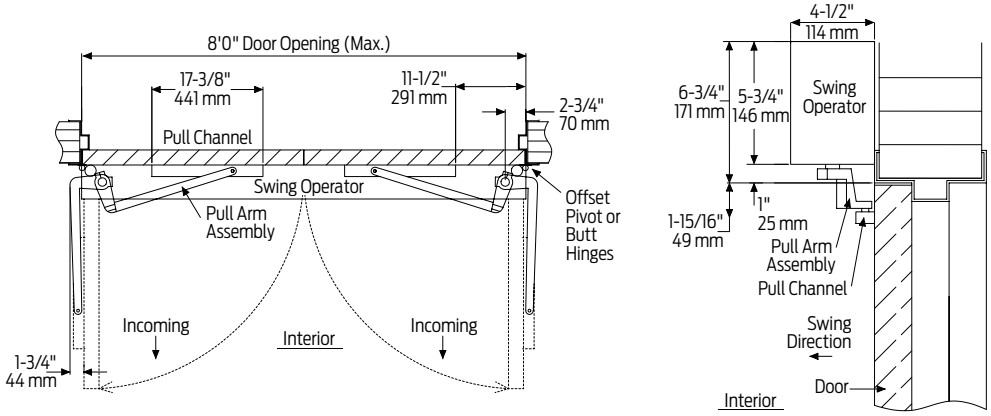
Fasteners	Machine screw pack
Mounting	Simultaneous pair, surface mount, pull side, push side, double egress
Arms	■ 2 Regular Arms (push) ■ 2 Standard Arms (pull) ■ 1 Regular and 1 Standard (double egress)
Finishes/Colors/ Powder Coat	■ Anodized Aluminum ■ Anodized Dark Bronze

Special Templates | Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.





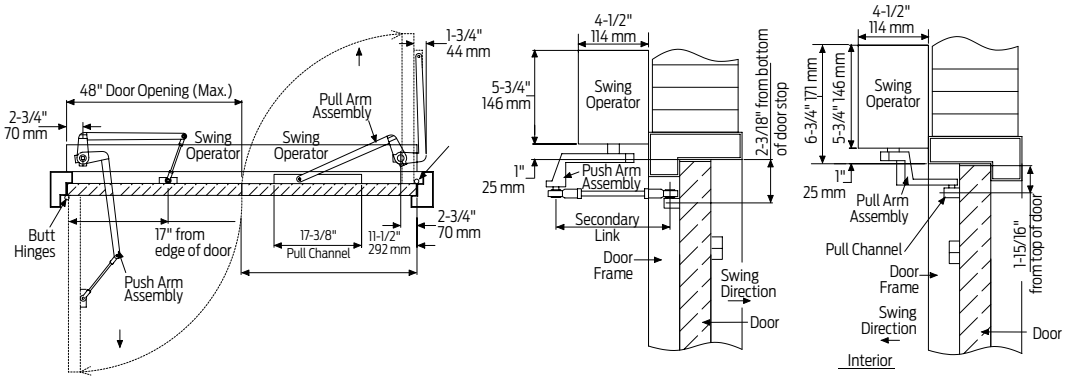
Offset pivot/butt hinge, center pivot, push
Consult factory for all balanced door installations.



Offset pivot/ butt hinge, center pivot, pull
NOTE: Cannot be used with swing clear hinges, pocket pivots or balanced doors.

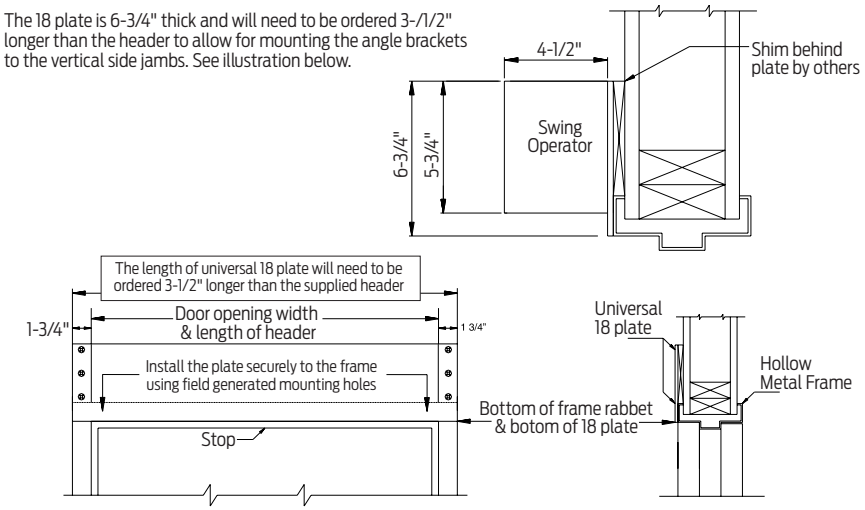
Butt Hinges	Should not exceed 5˝ (127 mm) in width
Reveal for push	Should not exceed 10˝ (254 mm) for REGULAR ARM and 20˝ (508 mm) for LONG ARM
Reveal for pull	Should not exceed 4˝ (102 mm)
Reveal	Double egress installations should not exceed 4˝ (102 mm)
Head Frame	■ Minimum 1-3/4˝ (44 mm) ■ Face frame 6-3/4˝ (171 mm) total operator clearance
Top Rail	Minimum 2-3/4˝ (70 mm)
Opening and Closing Time	■ Variable by adjustments to the electronic control box ■ Maximum hold open time adjustable up to approximately 32 seconds.
Door Stop	Required for each door panel
System Diagram	See “AUTOMATIC OPERATORS” section page 51 for typical system wiring and page 53 for electrical data
Maximum Opening	Template allows 90 degree power opening and 90 degree manual opening

Notes:
• Push N' Go permits non-switch activation with a power boost providing additional latching force
• Electromechanical unit with microprocessor control
• Digital keypad for easy setup
• 72" header length is standard. Specify other length 52" - 98" (push), specify other length 60" - 98" (pull; double egress). Consult factory regarding this option
• Adjustable hold open period of 2 - 32 seconds in automatic or manual mode
• Actuators available separately, see pages 115-131



RH double egress

Double egress applications with safety sensors require LCN 9560 series.
NOTE: Cannot be used with swing clear hinges, pocket pivots or balanced door.



Hollow metal frame

Suggested Installation.

Butt Hinges	Should not exceed 5″ (127 mm) in width
Reveal for push	Should not exceed 10″ (254 mm) for REGULAR ARM and 20″ (508 mm) for LONG ARM
Reveal for pull	Should not exceed 4″ (102 mm)
Reveal	Double egress installations should not exceed 4″ (102 mm)
Head Frame	■ Minimum 1-3/4″ (44 mm) ■ Face frame 6-3/4″ (171 mm) total operator clearance
Top Rail	Minimum 2-3/4″ (70 mm)
Opening and Closing Time	■ Variable by adjustments to the electronic control box ■ Maximum hold open time adjustable up to approximately 32 seconds.
Door Stop	Required for each door panel
System Diagram	See "AUTOMATIC OPERATORS" section page 51 for typical system wiring and page 53 for electrical data
Maximum Opening	Template allows 90 degree power opening and 90 degree manual opening

Notes:
· Push N' Go permits non-switch activation with a power boost providing additional latching force
· Electromechanical unit with microprocessor control
· Digital keypad for easy setup
· 72" header length is standard. Specify other length 52" - 98" (push), specify other length 60" - 98" (pull; double egress). Consult factory regarding this option
· Adjustable hold open period of 2 - 32 seconds in automatic or manual mode
· Actuators available separately, see pages 115-131

Motor Gearbox

9550-3454
Motor Gearbox

- Senior swing
- Handed
- Driving mechanism for operator
- Provides maximum 15 lbs opening force

Mount Brackets

9550-275
Mounting Bracket

- Motor gearbox mounting bracket for 2-3/4″ offset pivot or butt hinge installations
- Front bracket

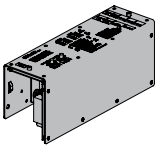
9550-3018
Rear Mounting Bracket

- Motor gearbox mounting bracket

9550-334-1
Angled Bracket

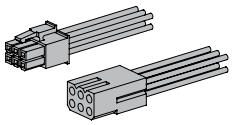
- Mounting bracket for surface applications (includes 2 mounting brackets)

Control Box



9550-3462
Control Box

- Electronic controlling device for Senior Swing



9550-982
Companion Cable

- Cable that allows one control box to run two motor gear boxes
- For use with Senior Swing

Header

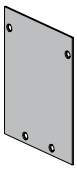
9550-3572HL
Header

- Pair door, two operators
- Specify other length 52″ to 98″ (Push)
- Specify other length 60″ to 98″ (Pull; Double Egress)
- Standard

End Caps

9550-334
Header End Caps

- With openings for wiring



9550-334-2
End Dress Plate

- Metal finish end cap

Tracks

9550-3038
Track

- Non-handed
- Standard

9550-73
Track End Cap

- Black plastic end caps

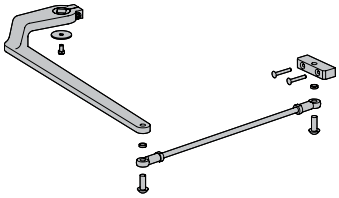
9550-3034
Roller

- Quiet low friction roller assembly

Arms

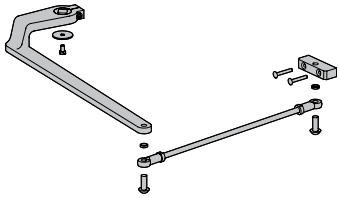
9550-3077Plcm
Standard Arm Assembly

- Handed
- Includes 3077 regular arm assembly, 3038 track, and 3034 track roller



9550-3077
Regular Arm Assembly

- Handed
- Includes 77 main arm assembly and 79 linkage assembly

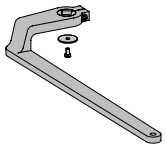


9550-3077L
Regular Long Arm Assembly

- Handed
- Includes 77 main arm assembly and 79LR linkage assembly

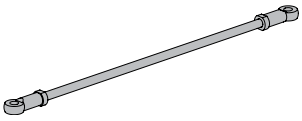
9550-3077T
Standard Arm

- Handed
- Track roller not included



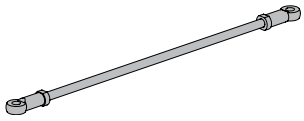
9550-77
Main Arm

- Handed
- Attaches to motor gearbox



9550-79
Linkage Assembly

- 15″
- Threaded rod attaches to door
- Extends from main arm



9550-79LR
Linkage Assembly

- 32″
- Threaded long rod attaches to door
- Extends from main arm
- Used for reveal 10″ to 20″

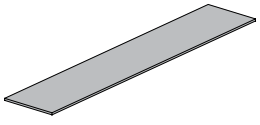
Installation Assembly

9550-11A
Spindle Plate

- Hides bottom of motor gearbox
- Completes header box
- Cutout allows for motor gearbox shaft
- For 2-3/4″ offset pivot or butt hinge installations

9550-12
Filler Plate

- Blank
- Completes length of header box
- Specify length



9550-18
Mounting Plate

- Optional mounting plate for standard hollow metal door frames
- Specify length 68-1/2″ to 101-1/2″ maximum when using angle brackets
- Specify length 65″ to 98″ maximum when using dress plates.

NOTE: The length of a universal 18 plate will need to be ordered 3-1/2″ longer than the supplied header when using angle brackets.

How-to-order 9550 Series closers

Specify hand
☐ RH
☐ LH

Specify header/length
☐ HL__ (Specify length 52″ to 98″) regular or long arm
☐ HL__ (Specify length 60″ to 98″) for standard or DE arm

Specify finish
☐ Standard Anodized Finish _____
Aluminum or Dark Bronze

Operator will be shipped with:
- Standard motor gearbox (SF) (2 ea)
- Standard control box (SC)
- Metal cover (at specified length 72″ standard)
- Regular arm (2 ea)
- 2-3/4″ pivot point
- Machine screw pack

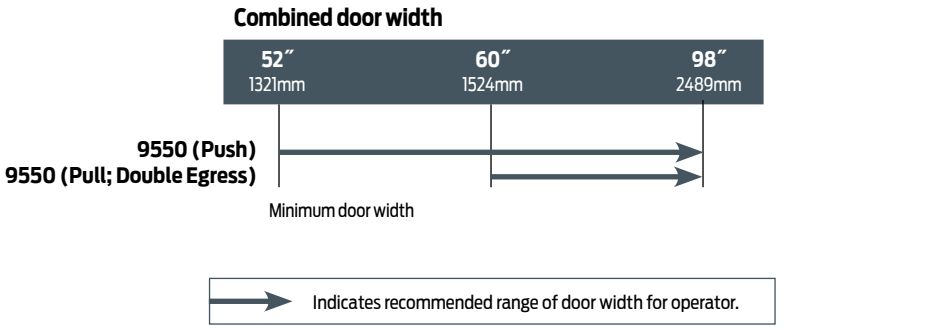
unless options listed below are selected

Operator options

Mounting plate
☐ Plate, ___ (Specify Length 52″ to 101-1/2″)

Arm
☐ Standard Arm (2 ea) w/Standard Track (2 ea)
☐ Double Egress includes Standard Arm w/Track (1 ea) & Regular Arm (1 ea)
☐ Long Arm (3077L)

Table of sizes



NOTE: For all Senior Swing Series.
Simultaneous Pair – Width per leaf 26" minimum (push) 30″ minimum (pull) to 48″ maximum.

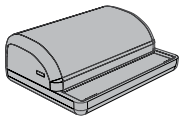
Automatic Operator Actuators & Accessories

8310-836T
Full Length Actuator (FLA)

- Hardwired low voltage actuator with stainless steel touch plate with 36″ x 6″ activation surface
- Blue handicap symbol conforms with most accessibility codes
- Added "PUSH TO OPEN" lettering for enhanced identification
- Designed to meet California building codes and increase accessibility for wheelchair bound entrants
- Can easily be mounted to any flat surface or a bollard post

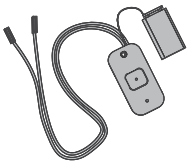
8310-836TW
Flush Length Actuator (FLA)

- Same as the 8310-836T with a built in wireless transmitter and 3v battery
- Use in conjunction with 8310-865 Receiver (not included)



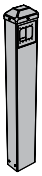
8310-865
Receiver

- Wireless, 1 Channel, w/Sequencing Feature
- Used in conjunction w/ Wireless Actuators & Transmitter(s)



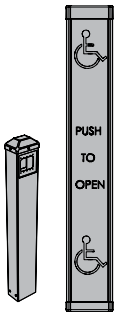
8310-844
Transmitter

- Wireless, 1 Channel, 9v Battery included.
- Used to convert standard actuators to wireless
- Requires 8310-865 Receiver
- Recommended for exterior application with 8310-836T
- Used with the 866FLA bollard post



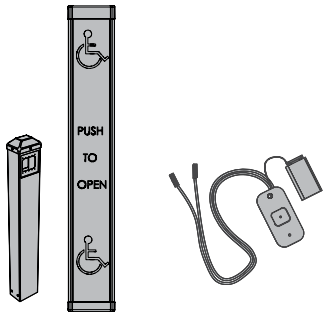
8310-866FLA
FLA Bollard Post

- A powder coated steel 42″ x 4″ x 6″: Bollard Post, mounting base pre prepped for the 8310-836T
- Includes 8310-866 CAP, 2 mounting screws & spacer for installation



8310-3836T
FLA Bollard Mount Kit

- 36″ x 6″ Actuator with 8310-866FLA Bollard for wired applications



8310-3836TW
FLA Bollard Mount Kit

- 36″ x 6″ Actuator with 8310-866FLA Bollard and 8310-844 wireless Transmitter
- Transmitter requires 8310-865 Receiver (not included)

Meets ANSI/BHMA 156.16, L11291 for brass and L31291 for aluminum.

WS40 Automatic Wall Holder

- Constructed of sturdy cast brass, or aluminum.
- Holder is mounted on wall and strike is mounted on door.
- Roller on holder rides up seats itself on strike, with a heavy duty bumper pad deadening the sound and shock.
- Universal screw pack accommodates all types wall construction.

Dimensions

Base Height: 2”
Base Width: 2-1/2”
Base Projection: 2-1/4”
Engaged Projection: 3-1/2”

Strike Height: 2-1/16”
Strike Width: 3/4”
Strike Projection: 2”

Finishes *brass*

Ives Number	US3	US4	US10	US10B	US26	US26D
BHMA	605	606	612	613	625	626

Finishes *aluminum*

Ives Number	US28
BHMA	628

WS45
Meets ANSI/BHMA 156.16, L11291 for brass and L31291 for aluminum.

WS45
WS45X Automatic Wall Holder

- Constructed of cast brass, bronze or aluminum.
- Spring loaded roller rides up the face of the strike, seating itself on the strike, holding the door firmly in the open position.
- A heavy rubber pad cushions the shock and absorbs the sound.
- With unit mounted on door and the strike on wall, vertical adjustment is available on body.
- The strike is adjustable 45 degrees left or right, both adjustments easily accomplished at time of installation or at a later date.

WS45 strike is furnished with wood screws for drywall mounting.

WS45X strike is furnished with a threaded stud and expansion shield for masonry type mounting.

Dimensions

Base Height: 3-11/16”
Base Width: 3”
Base Projection: 2”
Engaged Projection: 3-7/16”

Strike Diameter: 2-3/8
Strike Projection: 3”

Finishes *brass*

Ives Number	US3	US4	US10	US10B	US26	US26D
BHMA	605	606	612	613	625	626

Finishes *aluminum*

Ives Number	US28
BHMA	628

Meets ANSI/BHMA 156.16, L11241.

FS9 Floor Stop & Semi-Automatic Holder

- Semi-automatic floor-mounted holders accommodates with door to floor clearance of 1-1/2" or less.
- Cast from heavy-duty brass.
- Activate holder by flipping the engagement tongue forward. When door is opened, the hook (mounted on door) engages the tongue. To release, push firmly on door to disengage tongue.
- Universal screw pack accommodates all types of floor and door construction.

Dimensions

Overall Height: 3-1/2
Base Dimensions: 2" wide x 3-1/2" long

Finishes

Ives Number	US3	US4	US10	US10B	US26	US26D
BHMA	605	606	612	613	625	626

Meets ANSI/BHMA 156.16, L11301

FS40 FS41 FS42 FS43 Floor Stop & Automatic Holder

- Automatic door holders ideal for heavy-traffic situations that require a simple, fool-proof, Hold-Open device.
- Forged from brass.
- Unit is activated automatically when door is opened. A firm pull on door releases the mechanism.
- Strikes accommodate different door to floor clearances.
- Model numbers are determined by strike/door-to-floor clearances.
- Holder position on door is adjustable.
- Universal screw pack allows for installation in all types of door construction.

Dimensions

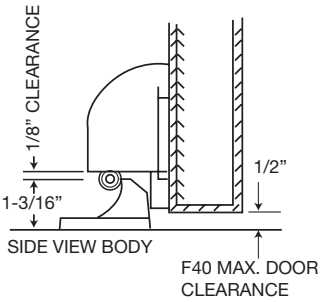
Door to Floor Clearance:

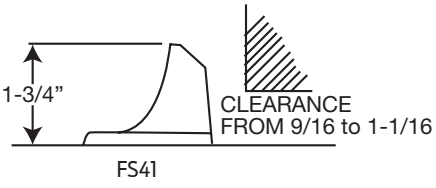
FS40	1/2" or less
FS41	9/16" to 1-1/16"
FS42	1-1/8" to 1-9/16"
FS43	1-5/8" to 2-1/16"

Holder Dimensions: 3" Wide x 3-11/16" High

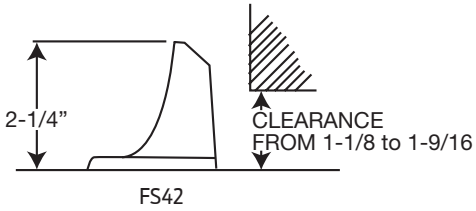
Finishes *brass*

Ives Number	US3	US4	US10	US10B	US26	US26D
BHMA	605	606	612	613	625	626





FS41



FS42

FS43

FS436
Meets ANSI/BHMA 156.16, L12141 for brass or bronze and L32141 for aluminum.

FS438
Meets ANSI/BHMA 156.16, L12141 for brass or bronze and L32141 for aluminum.

FS436 Dome Stop
FS438 Dome Stop

- FS436 for doors without threshold.
- FS438 for doors with threshold or undercut doors.
- Heavy-Duty Cast Dome Stops constructed of brass, bronze or aluminum.
- Packed with wood screw and plastic anchor.

Replaceable gray, non-marring rubber bumper.

Dimensions

FS436
Overall Height: 1"
Base Height: 3/16"
Base Diameter: 1-3/4" x 2" Oval

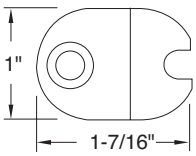
FS438
Overall Height: 1-3/8"
Base Height: 9/16"
Base Diameter: 1-3/4" x 2" Oval

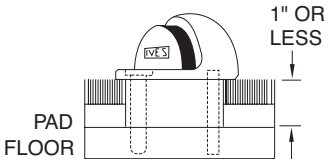
Finishes *brass*

Ives Number	US3	US4	US5	US10	US10B	US15	US26	US26D	B716
BHMA	605	606	609	612	613	619	625	626	

Finishes *aluminum*

Ives Number	US28
BHMA	628



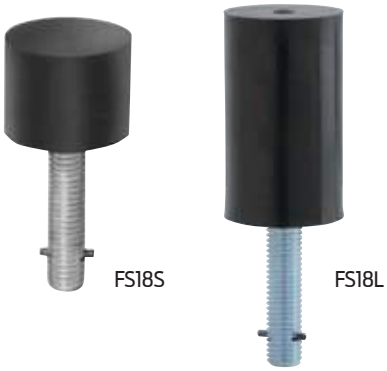


R435 Riser for FS436 Dome Stop
R437 Riser for FS438 Dome Stop

- Extruded aluminum, mill finish.
- R435 for conversion of FS436 Dome Stop to carpet installation.
- R437 For conversion of FS438 Dome Stop to carpet installation.
- Packed with wood screws, lead shield and stud. Specify Tampin (TPN) if required.

Dimensions

Available in 1/4", 3/8", 1/2", 5/8", 3/4" and 1" height.



FS18S
FS18L Floor Stops

- Security Door Stops designed for use in high vandalism areas.
- Molded from black flame resistant, resilient material around a heavy-duty stud.
- Once grouted in concrete, leaves no exposed fasteners to be tampered with or removed.
- Ideal for jail or security cell areas where floor mounted stops are required.
- FS18L also ideal for concrete wall applications.

Dimensions

FS18S Height: 1-1/2"
FS18S Diameter: 2"
FS18S Stud Length: 2-1/2"

FS18L Height: 3-1/2"
FS18L Diameter: 2"
FS18L Stud Length: 2-1/2"

FS434 Floor Stop

- Burnished wrought steel.
- For undercut doors up to 1-1/2".
- Packed with screws and plastic anchors.
- Replaceable soft, resilient gray rubber.

Dimensions

Overall Height: 2-5/8"
Base Size: 1-1/2" W x 2-3/4" L

Finishes

Ives Number	USC
BHMA	604

430 Floor Door Stop

- Burnished wrought steel.
- For undercut doors up to 1-1/2".
- Packed with screws and plastic anchors.
- Replaceable soft, resilient gray rubber.

Dimensions

Overall Height: 1-5/16"
Base Diameter: 1-1/4"

Finishes *brass*

Ives Number	B3	B4	B5	B10B	B15	B26	B26D
BHMA	605	606	609	613	619	625	626

Finishes *aluminum*

Ives Number	A3*	A5	A14	A92
BHMA	666		669	673

** only available in Slim-Pak of 25*

WS401CCV & WS402CCV
Meets ANSI/BHMA 156.16 L12251 for brass

WS401CVX & WS402CVX
Meets ANSI/BHMA 156.16 L12101 for brass

WS401CVX Wall Bumpers
WS401CCV
WS402CVX
WS402CCV

- Constructed in heavy-duty cast brass.
- Special retainer cup makes rubber tamper resistant.

WS401CVX (401) – convex rubber bumper, packed with wood screw and plastic anchor.
WS401CCV (401-1/2) – concave rubber bumper which avoids damage to locks with projecting buttons, packed with wood screw and plastic anchor.
WS402CVX (402) – convex rubber bumper packed with screw and drywall anchor.
WS402CCV (402-1/2) – concave rubber bumper which avoids damage to locks with projecting buttons and is packed with screw and drywall anchor.

Dimensions

Base Diameter: 2-1/2"

Base Thickness: 3/8"

Overall Projection: 1"

Finishes

Ives Number	US3	US4	US10	US10B	US15	US26	US26D
BHMA	605	606	612	613	619	625	626

WS404CVX Wall Bumpers

- Compact size.
- Constructed in cast brass.
- Totally concealed mounting discourages vandalism or tampering.
- Unit furnished with grey convex rubber bumper.
- Packed with sheet metal screw, rawl plug and brad.

Dimensions

Base Diameter: 1"

Overall Projection: 17/32"

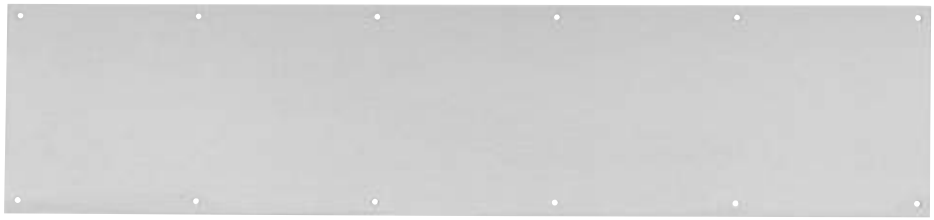
Finishes

Ives Number	US3	US4	US5	US10	US10B	US15	US26	US26D
BHMA	605	606	609	612	613	619	625	626

8400 Series Protection Plates

- Door protection plates are available in .050" thick brass, stainless steel or aluminum; and 1/8" thick high impact polyethylene in clear or black.
- Bevel edge options; specify B4E for all four edges.
- Mounting screw pack furnished standard, 16 screws per pack. Optional screw packs are available for TEK or TORK screw heads. Refer to the following chart for ordering.
- Specify NMH for no mounting holes. (Not available on 8402)
- Specify NMH-A for no mounting holes with adhesive. (Not available on 8402)
- Specify CS for counter sunk mounting holes.
- Specify ERS prepped with extra row of screws.

Kickplate Gasket Tape Tape is recommended when using a brass plate on a metal door to reduce tarnishing from electrolytic oxidation. One tape pack will cover an the perimeters of a 8" x 34" kickplate. Order 8401 Gasket Tape.



8400 Protection Plate
8402 (UL)* Protection Plate

**UL mark appears in upper right corner. Factory supplied screws must be used.*

Number of screw packs required by plate size (specify TEK Screws or TORK screws).

	22"-25"	26"-33"	34"-41"	42"-48"
4"-8"	1	1	1	1
9"-16"	1	1	1	1
17"-24"	1	1	1	2
25"-32"	1	1	2	2
33"-40"	1	2	2	2
41"-48"	2	2	2	2

Finishes *brass 24" x 48" max. size*

US Number	US3	US4	US10	US10B	US15	US26	US26D
BHMA	605	606	612	613	619	625	626

Finishes *stainless steel*

US Number	US32	US32D
BHMA	629	630

Finishes *aluminum*

US Number	US28
BHMA	628

Finishes *plastic*

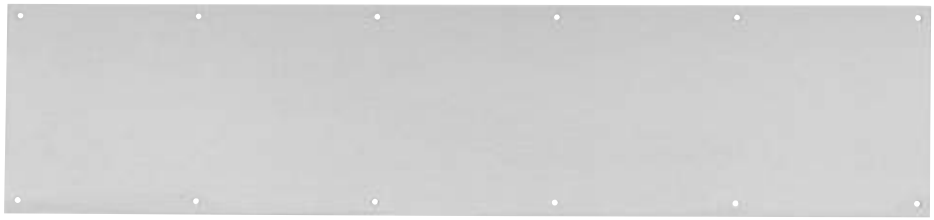
Clear and Black

Residential Grade Kickplates available Carded only, finishes PA28, PA3, PA619, PA716, B3, B505, B619, B716

8400 Series Protection Plates

- Door protection plates are available in .050" thick brass, stainless steel or aluminum; and 1/8" thick high impact polyethylene in clear or black.
- Bevel edge options; specify B4E for all four edges.
- Mounting screw pack furnished standard, 16 screws per pack. Optional screw packs are available for TEK or TORK screw heads. Refer to the following chart for ordering.
- Specify NMH for no mounting holes. (Not available on 8402)
- Specify NMH-A for no mounting holes with adhesive. (Not available on 8402)
- Specify CS for counter sunk mounting holes.
- Specify ERS prepped with extra row of screws.

Kickplate Gasket Tape Tape is recommended when using a brass plate on a metal door to reduce tarnishing from electrolytic oxidation. One tape pack will cover an the perimeters of a 8" x 34" kickplate. Order 8401 Gasket Tape.



8400 Protection Plate
8402 (UL)* Protection Plate

**UL mark appears in upper right corner. Factory supplied screws must be used.*

Number of screw packs required by plate size (specify TEK Screws or TORK screws).

	22"-25"	26"-33"	34"-41"	42"-48"
4"-8"	1	1	1	1
9"-16"	1	1	1	1
17"-24"	1	1	1	2
25"-32"	1	1	2	2
33"-40"	1	2	2	2
41"-48"	2	2	2	2

Finishes *brass 24" x 48" max. size*

US Number	US3	US4	US10	US10B	US15	US26	US26D
BHMA	605	606	612	613	619	625	626

Finishes *stainless steel*

US Number	US32	US32D
BHMA	629	630

Finishes *aluminum*

US Number	US28
BHMA	628

Finishes *plastic*

Clear and Black

Residential Grade Kickplates available Carded only, finishes PA28, PA3, PA619, PA716, B3, B505, B619, B716

8200 Push Plate
8300 Pull Plate, Prep for Pull (less pull)

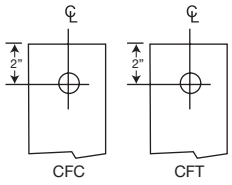
Available Sizes
3" x 12"
3.5" x 15"
4" x 16"
6" x 16"
8" x 16"
Special sizes are available. Consult factory.

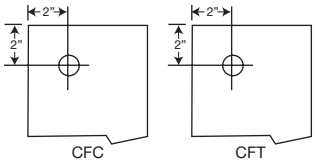
Plates Cut for Cylinder or Thumbturns

Plates are available with cutout for cylinder or thumbturn; standard cutout is 2" from top and centered on plates up to 4" wide. For plates wider than 4" cutout is located 2" from outer edge, specify LH or RH. When pull location interferes with standard cutout location a detail drawing should be furnished with the order.

Standard cutout is 1-1/4" for cylinder and 3/8" for thumbturn.

Specify CFC for cutout for cylinder or CFT for cutout for thumbturn.





Finishes *brass*

US Number	US3	US4	US10	US10B	US15	US26	US26D*
BHMA	605	606	612	613	619	625	626

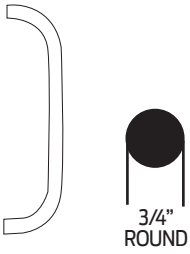
Finishes *stainless steel*

US Number	US32D*
BHMA	630

Finishes *aluminum*

US Number	US28
BHMA	628

** Available with Antimicrobial Coating, use suffix AM*



8302 Pull plate

Available mounting – Standard, F, G, H-I-L, or J see pages B15 and B16
Pulls have new heavy duty 5/16-18" mounting.

8300 Plate	**8102 Pull**
3-1/2" x 15"	6" centers
4" x 16"	8" centers
6" x 16"	10" centers

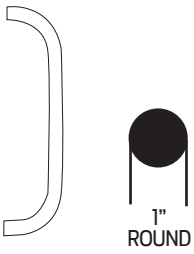
Finishes *brass*

US Number	US3	US4	US10	US10B	US26	US26D*
BHMA	605	606	612	613	625	626

Finishes *stainless steel*	
US Number	US32D*
BHMA	630

Finishes *aluminum*	
US Number	US28
BHMA	628

** Available with Antimicrobial Coating, use suffix AM*



8303 Pull plate

Available mounting – Standard, F, G, H-I-L, or J see pages B15 and B16
Pulls have new heavy duty 3/8-16" mounting.

8300 Plate	**8103 Pull**
3-1/2" x 15"	8" centers
4" x 16"	10" centers
6" x 16"	7" centers

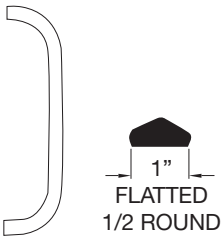
Finishes *brass*

US Number	US3	US4	US10	US10B	US26	US26D*
BHMA	605	606	612	613	625	626

Finishes *stainless steel*	
US Number	US32D*
BHMA	630

Finishes *aluminum*	
US Number	US28
BHMA	628

** Available with Antimicrobial Coating, use suffix AM*



8305 Pull plate

Available mounting – Standard or F see page B15
Pulls have 1/4 - 20" mounting

8300 Plate	**8105 Pull**
3-1/2" x 15"	6" centers
4" x 16"	8" centers
6" x 16"	10" centers

Finishes *brass*

US Number	US3	US4	US10	US10B	US26	US26D
BHMA	605	606	612	613	625	626

Finishes *stainless steel*	
US Number	US32D
BHMA	630

Finishes *aluminum*	
US Number	US28
BHMA	628

** Available with Antimicrobial Coating, use suffix AM*

8311 Pull plate

Available mounting – Standard or F see page B15
Pulls have 1/4-20" mounting.

8300 Plate
3-1/2" x 15"
4" x 16"
6" x 16"

8111-5 Pull
5-1/8" centers

Finishes *brass*

US Number	US3	US4	US10	US10B	US26	US26D*
BHMA	605	606	612	613	625	626

Finishes *stainless steel*

US Number	US32D*
BHMA	630

Finishes *aluminum*

US Number	US28
BHMA	628

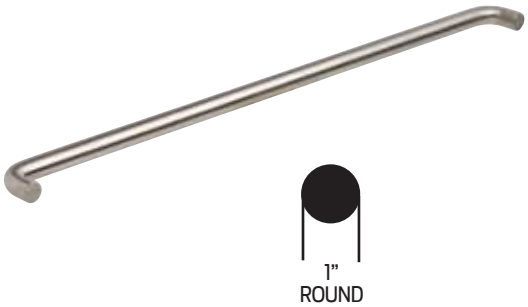
** Available with Antimicrobial Coating, use suffix AM*

9100 Series Push Bar and Pull Combinations

- Available in brass, stainless steel or aluminum.
- Standard fasteners furnished for 1-3/4" thick doors. Specify door thick if other than standard.
- Special lengths are available, contact customer service.

See page B17 for special mounting requirements.

Caution – the length of the pushbar should not interfere with the door jamb or cause a pinch point.



9100HD Push Bar

Available mounting – NO or NS see page B17
with heavy duty 3/8-16" mounting

Product No.	Projection	Clearance	Center to Center	Overall Length
9100-28	2-1/2"	1-1/2"	28"	29"
9100-33	2-1/2"	1-1/2"	33"	34"

Special lengths available, consult factory

Finishes *brass*

US Number	US3	US4	US10	US10B	US15	US26	US26D*
BHMA	605	606	612	613	619	625	626

Finishes *stainless steel*

US Number	US32	US32D*
BHMA	629	630

** Available with Antimicrobial Coating, use suffix AM*

LG11 Lock Guard

- Designed for use on aluminum doors with latch-type locks or doors equipped with electric strikes.
- Unit is Handed - Specify left or right hand when ordering.
- No exposed fasteners on face of unit.
- Unique design provides maximum security, virtually eliminating the opening between door and frame at latch point.
- Available in 13 Gauge Stainless Steel or 12 Gauge Steel.

Dimensions

2-1/2" Wide x 9-1/2" High

Stud center to center: 8-1/2"

Finishes

Ives Number	US32D	SP313
BHMA	630	695

LG12 Lock Guard

- Narrow design unit for use on rose or escutcheon 3-1/2" or less.
- For use with Type 86 Mortise and Type 161 Cylinder Locks (ANSI 156.13 Series 1000 and ANSI 156.2 Series 4000).
- No exposed fasteners on face of unit.
- Unique design provides maximum security, virtually eliminating the opening between door and frame at the latch point.
- Available in 13 Gauge Stainless Steel or 12 Gauge Steel

Dimensions

1-1/2" Wide x 9-1/2" High

Stud center to center: 8-1/2”

Finishes

Ives Number	USP	US32D
BHMA	600	630

Meets ANSI/BHMA 156.16, L03011.

SR64 Door Silencer

- For use on metal frames featuring pneumatic design that, once installed, forms an air pocket to absorb shock and reduce noise of door closing.
- Tamper-proof once installed on the frame.
- Proper installation also eliminates door rattle and provides constant tension for door latches or locks.

Packed in bags of 100.
Grey Available in bulk pack of 2500.
Each bag has an installation tool included.

Dimensions

Diameter: 1/2”

Thickness: 1/8”

Finishes

GRY, TAN

Meets ANSI/BHMA 156.16, L03021

SR65 Door Silencer

- For use on wood frames, also feature pneumatic design to cushion shock and absorb noise.
- To prevent removal, a small brad should be driven into stop strip and through stem of silencer, as shown in the detail.

Packed in bags of 100.

Dimensions

Height: 3/4”

Diameter: 3/8”

Thickness: 1/8”

Finishes

GRY

SR66 Door Silencer

- Self Adhesive Rubber Silencers.
- Economical installation requires no drilling of frames.

Packed two sheets of 50 (100 minimum).

Dimensions

Diameter: 1/2”

Thickness: 1/8”

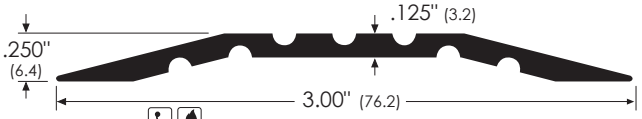
Finishes

BRN, GRY, WHT

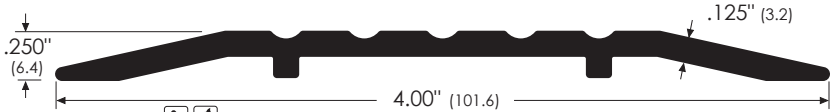
Utility Thresholds

Note: A = Aluminum B = Bronze
D = Dark Bronze Anodized STST = Stainless Steel

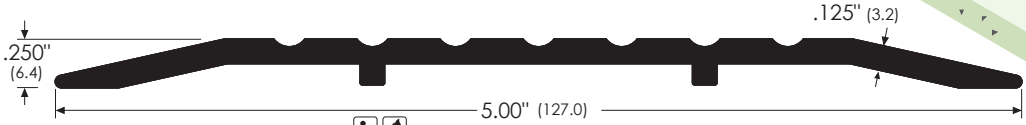
Thresholds can be ordered with E (Epoxy Abrasive), EL (Epoxy Abrasive Photoluminescent) or V3 (Full Body Strength) options.



#63A
#64A **2.5" wide** (not shown)

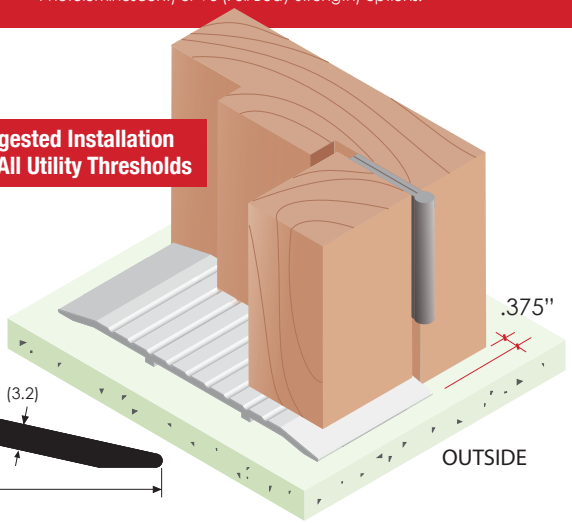


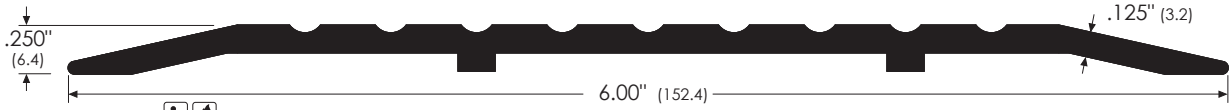
#544A



#545A **#545B** **#545D**

Suggested Installation For All Utility Thresholds





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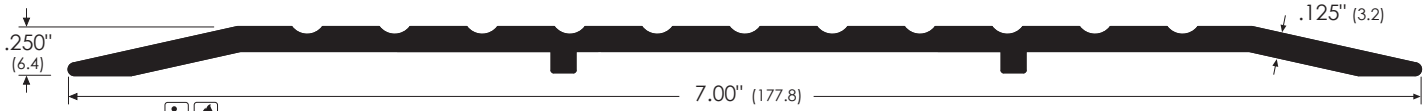

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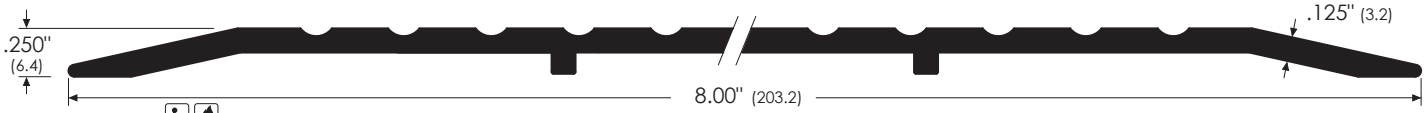

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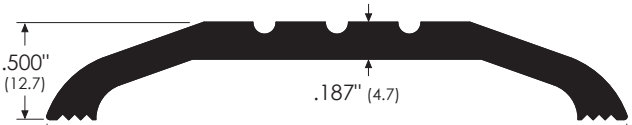
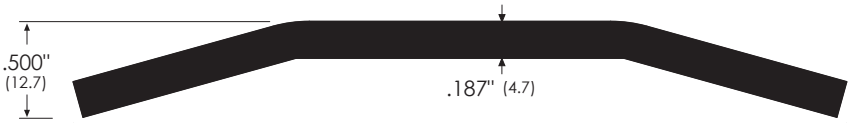


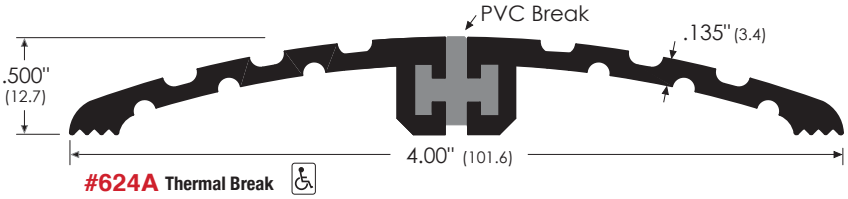
#653A

#654A **#654B**



#164STST "E" abrasive surface is suggested for public access area

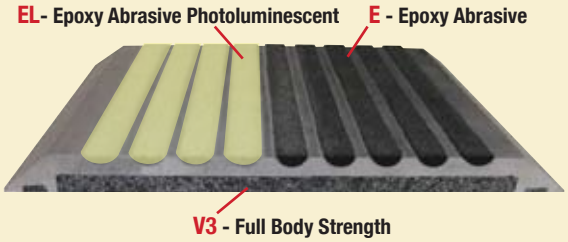
#164A **#164B**



#624A **Thermal Break**

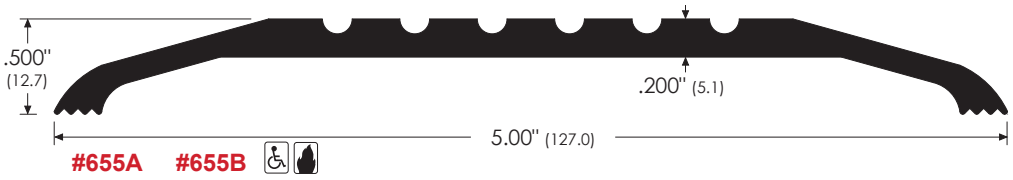
OPTIONS:

- **Non-Slip Epoxy Abrasive.** Thresholds can be ordered with non-slip epoxy abrasive particles bonded into the grooves. The tread provides a coefficient of friction of 1.02 dry and 0.98 wet to comply with ADA, OSHA and most local building code requirements. To order, add -E or -EL after the item number. Example : #657A-E or #657A-EL

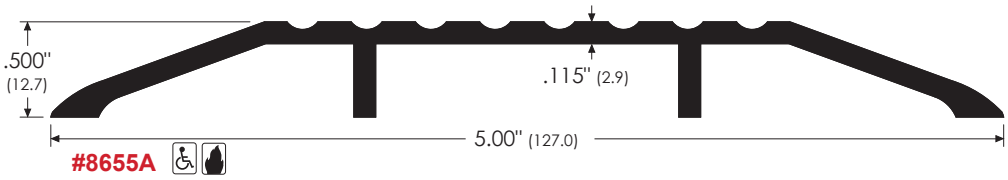


- **Full Body Strength.** An aluminum composite filler containing aluminum oxide and silicone carbide. Ideal applications include heavy commercial traffic in supply rooms, manufacturing buildings, schools, cafeterias, automobile dealers, hospitals, industrial facilities. To order, add -V3 after the item number. Example: #657A-V3

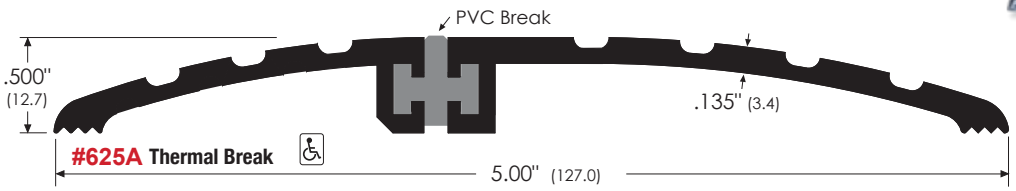
Note: A = Aluminum B = Bronze
R = Rubber W = Oak
Thresholds can be ordered with E (Epoxy Abrasive), EL (Epoxy Abrasive Photoluminescent) or V3 (Full Body Strength) options.



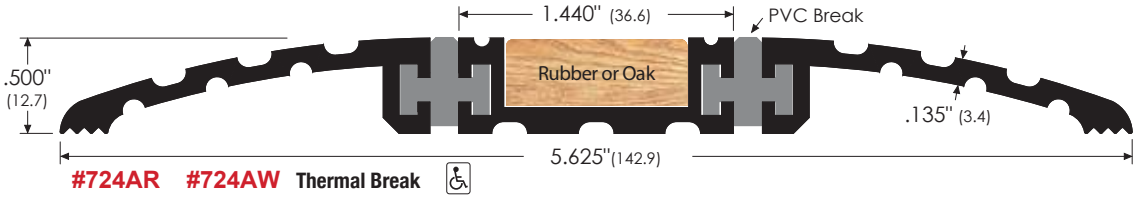
#655A #655B



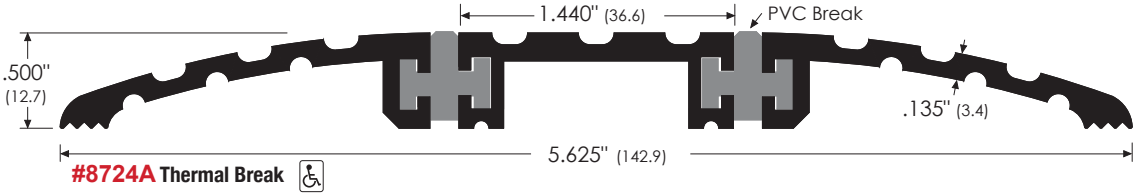
#8655A



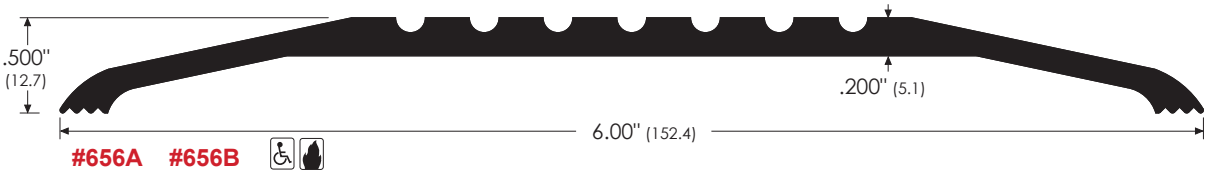
#625A Thermal Break



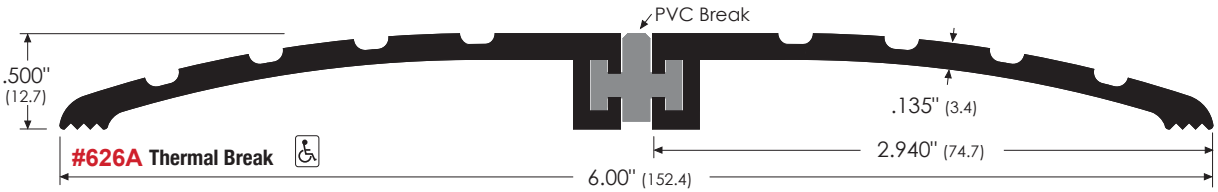
#724AR #724AW Thermal Break



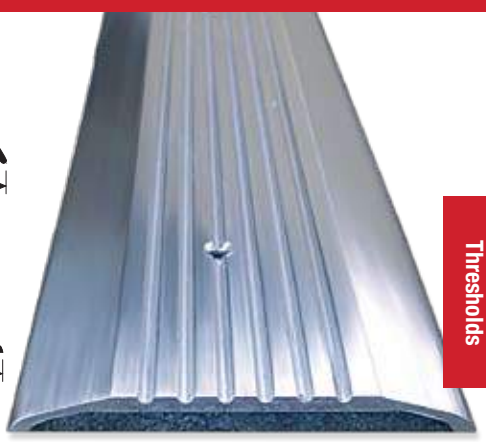
#8724A Thermal Break



#656A #656B



#626A Thermal Break

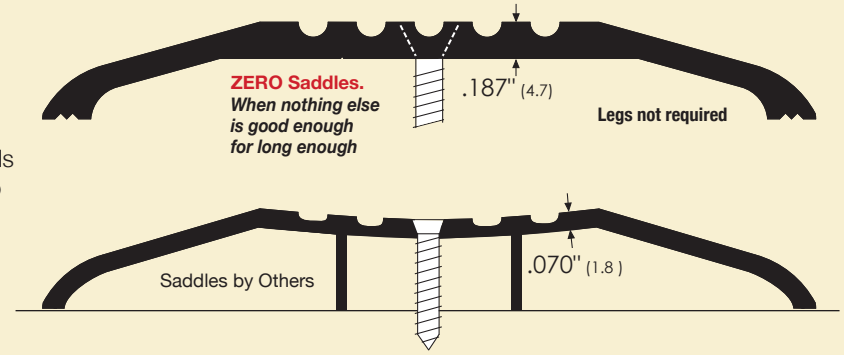


#655A-V3
Full Body Strength

V3 (Full Body Strength option)

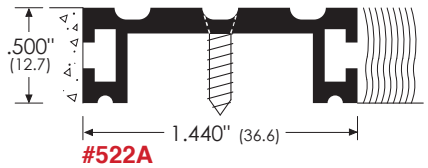
Which would you rather walk on or install?

Both pass the ANSI standard load test, but the ZERO threshold also passes the test of time and weight. The heavier-gauge material in our thresholds allows you to drill and screw right through and into concrete. Lighter-gauge thresholds can buckle and often loosen because screws cannot be tightened fully. Be sure you get the best....specify the heavier gauge when you need thresholds.

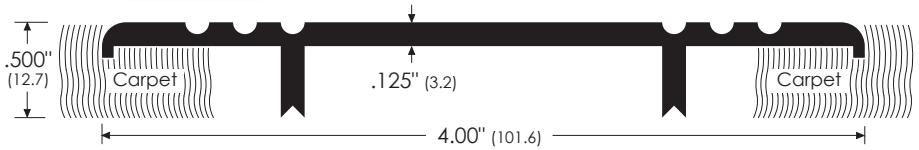


Carpet Divider and Thermal Break Threshold

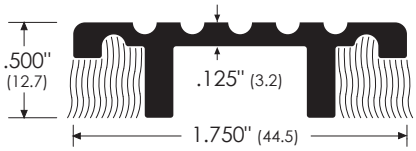
Note: A = Aluminum B = Bronze
R = Rubber W = Oak
Thresholds can be ordered with E (Epoxy Abrasive), EL (Epoxy Abrasive Photoluminescent) or V3 (Full Body Strength) options.



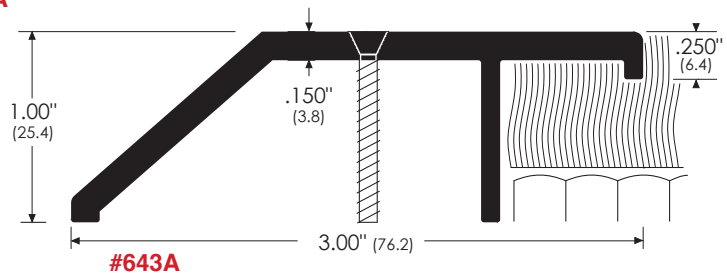
#522A



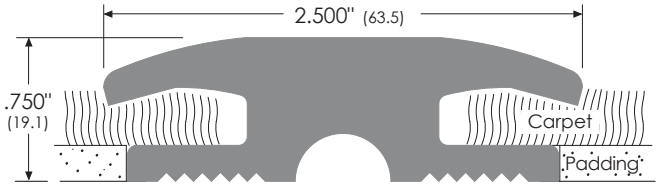
#1684A



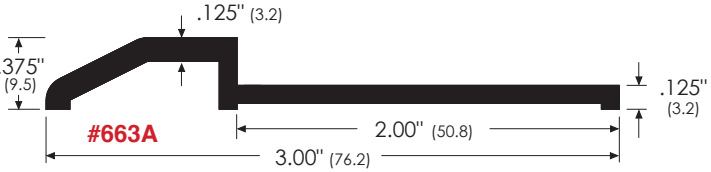
#1682A
#1682B



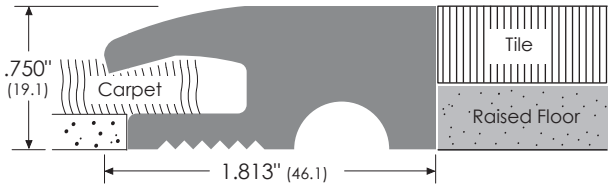
#643A



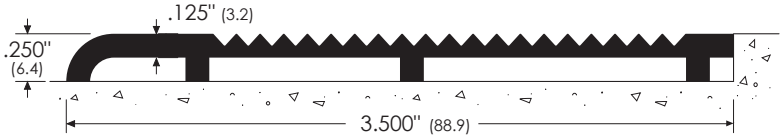
#1685R **Traction Tread™ Rubber** For non-rated door



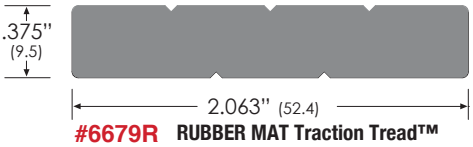
#663A



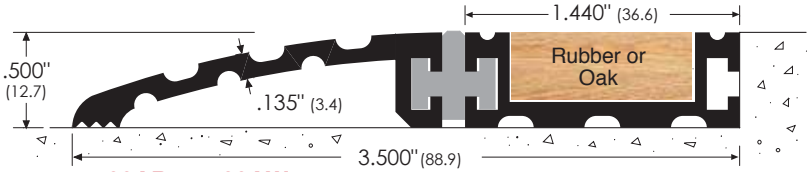
#1686R **Traction Tread™ Rubber**



#239A

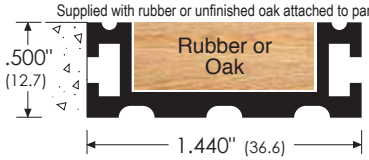


#6679R **RUBBER MAT Traction Tread™**

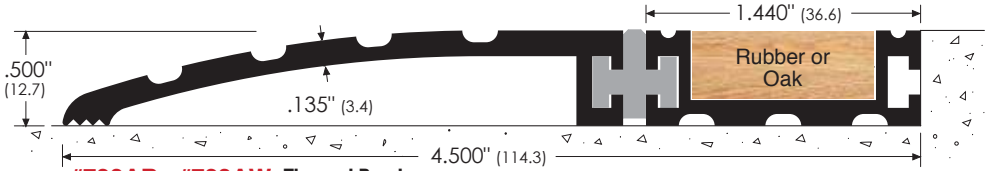


#722AR #722AW **Thermal Break**

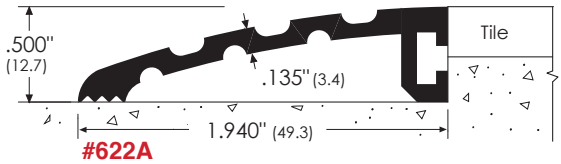
Supplied with rubber or unfinished oak attached to part.



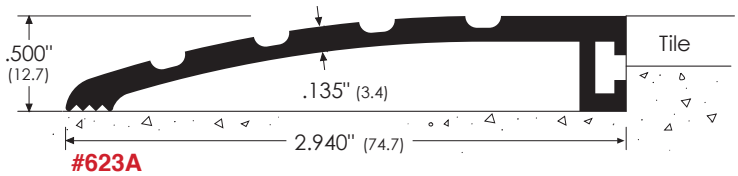
#522AR #522AW



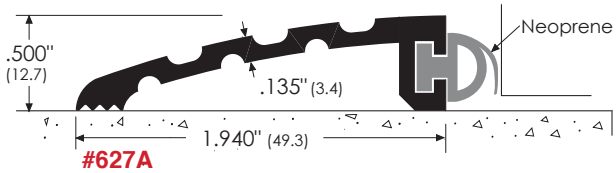
#723AR #723AW **Thermal Break**



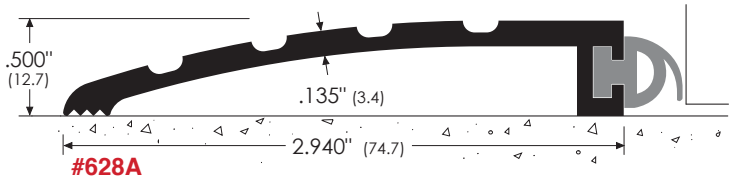
#622A



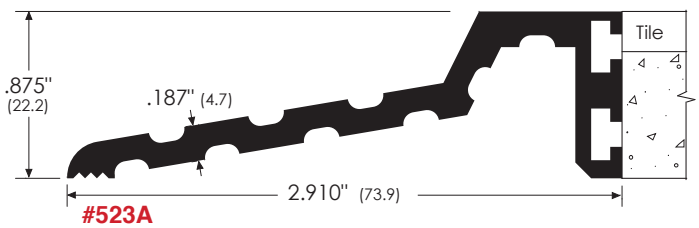
#623A



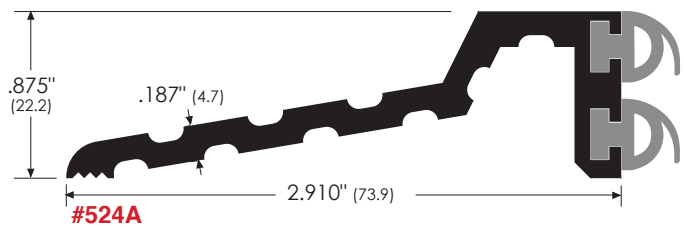
#627A



#628A



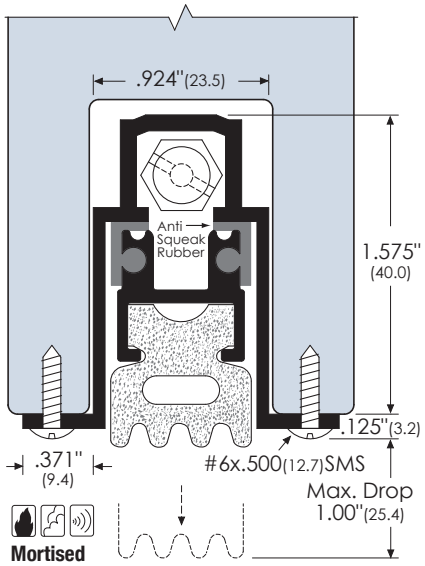
#523A



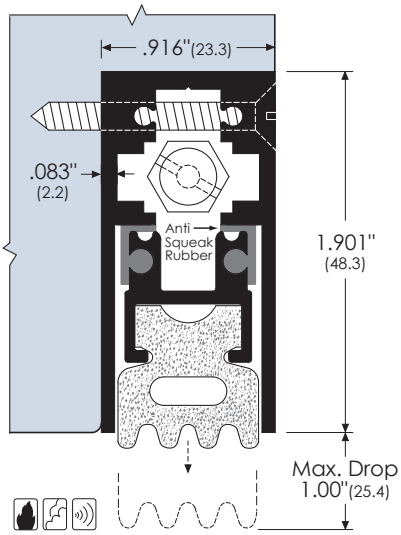
#524A

Sill Protection
Automatic Door Bottoms - Heavy Duty

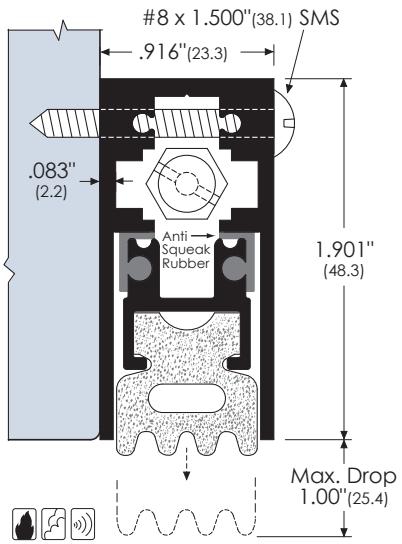
Note: A = Aluminum AA = Clear Anodized D = Dark Bronze Anodized G = Gold Anodized



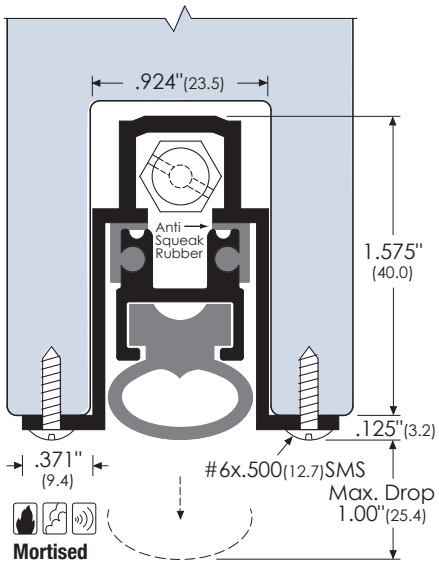
Mortised
#360AA



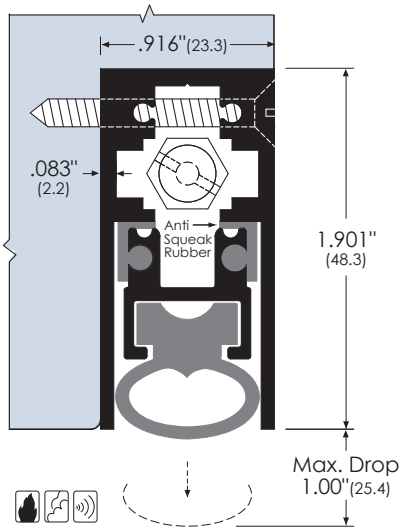
Semi-Mortised
#362AA #362D #362G



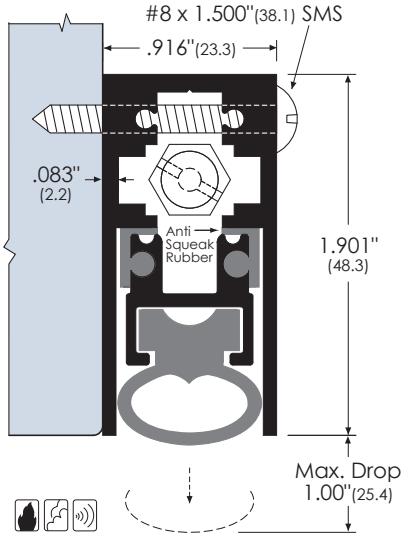
Surface-Mounted
#361AA #361D #361G



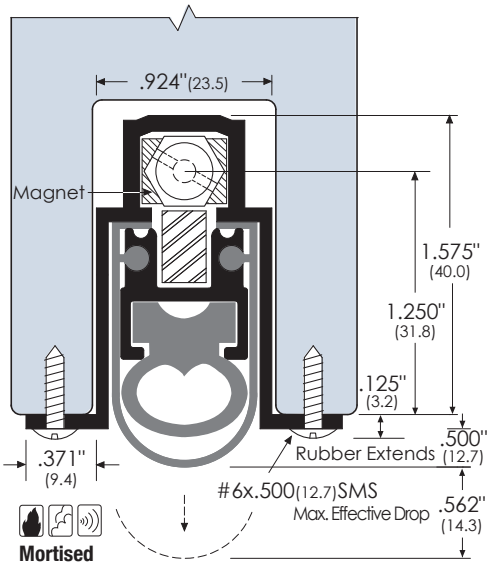
Mortised
#364AA



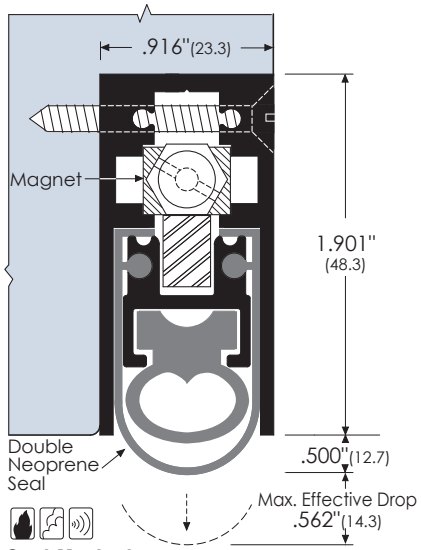
Semi-Mortised
#366AA #366D #366G



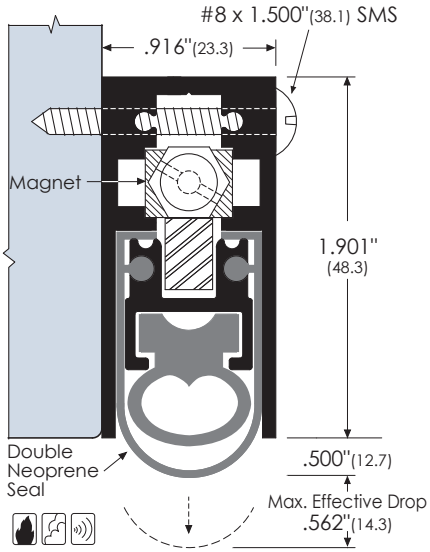
Surface-Mounted
#365AA #365D #365G



Mortised
#369AA



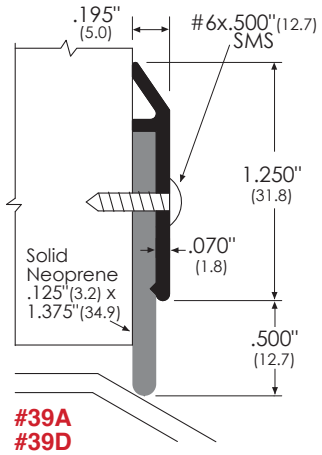
Semi-Mortised
#368AA #368D #368G



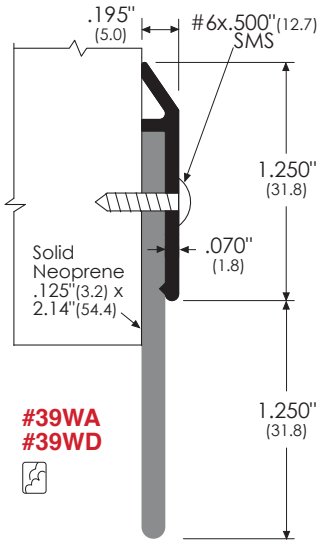
Surface-Mounted
#367AA #367D #367G

Sill Protection Sweeps

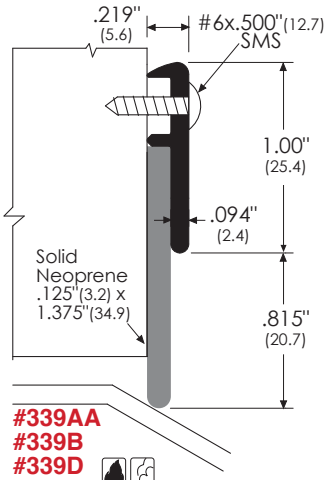
Note: A = Aluminum, AA = Clear Anodized, B = Bronze, D = Dark Bronze Anodized, G = Gold Anodized, PVC = Polyvinyl, clear



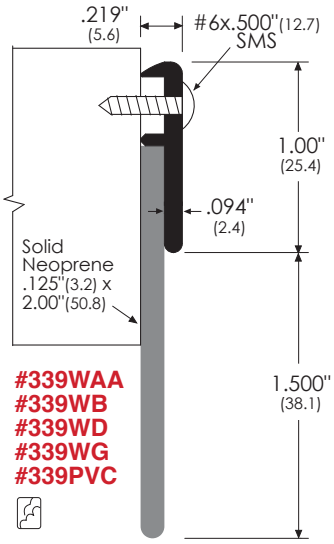
#39A
#39D



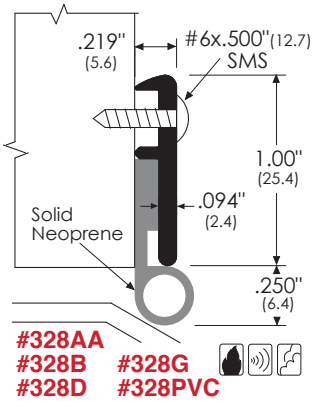
#39WA
#39WD



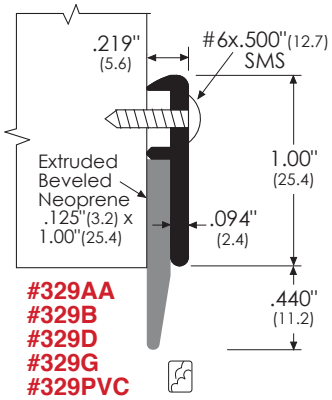
#339AA
#339B
#339D
#339G
#339PVC



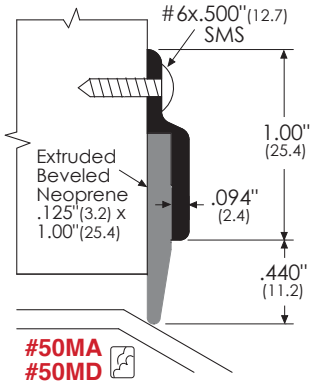
#339WAA
#339WB
#339WD
#339WG
#339PVC



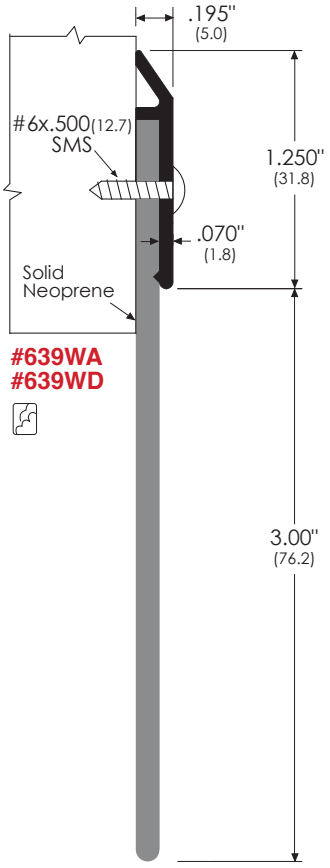
#328AA
#328B
#328D
#328G
#328PVC



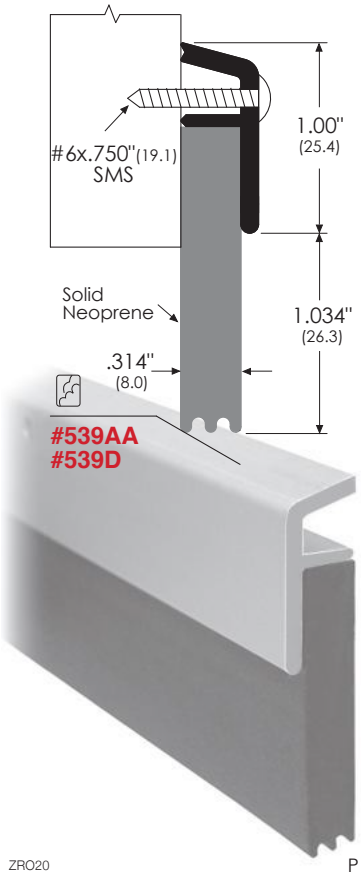
#329AA
#329B
#329D
#329G
#329PVC



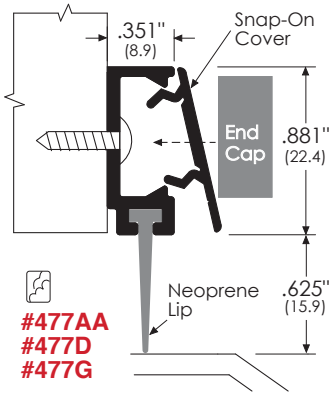
#50MA
#50MD



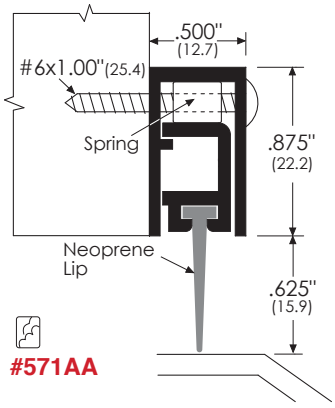
#639WA
#639WD



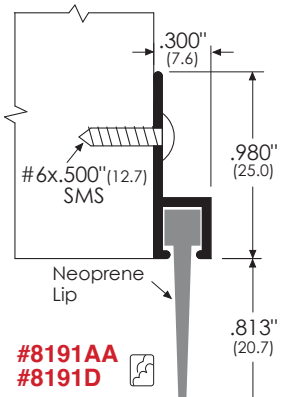
#539AA
#539D



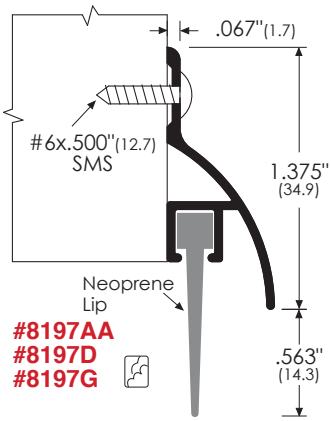
#477AA
#477D
#477G



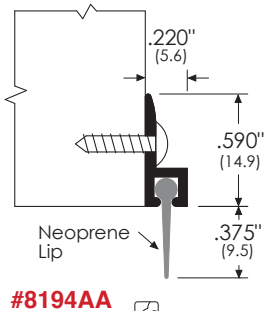
#571AA



#8191AA
#8191D

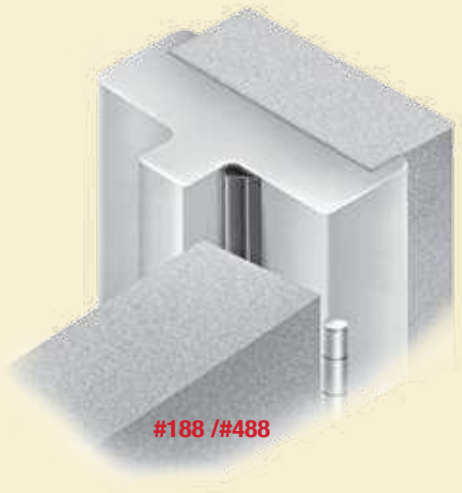


#8197AA
#8197D
#8197G

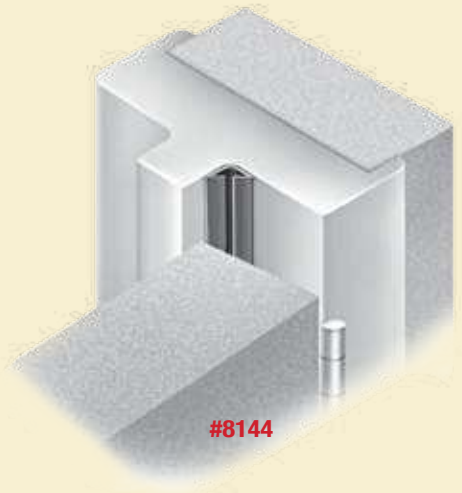


#8194AA
#8194D

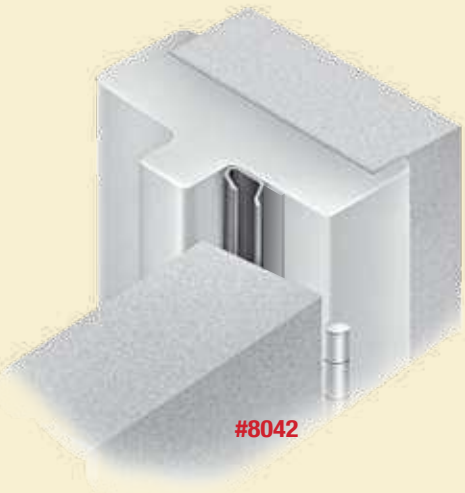
Note:
N = Neoprene
S-Bk = Silicone, Black
S-Wh = Silicone, White
S-Br = Silicone, Brown
S-Cl = Silicone, Clear
S-Gy = Silicone, Grey
FS= Intumet™ Rubber
Y-Bk = Polyvinyl, Black
BIO = Antibacterial Gasketing, White
PSA* is equipped with 3M self-adhesive tape
All products are available with ZAG feature (Anti-Ligature)



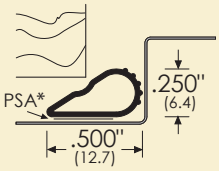
#188 /#488



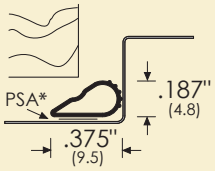
#8144



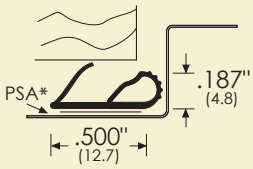
#8042



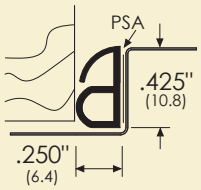
#188S-Bk #188S-Wh
#188S-Br #188FS
#188S-Cl #188BIO
#188S-Gy
ZERO Compress-O-Matic®



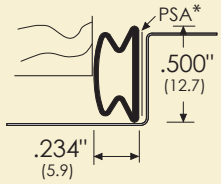
#488S-Bk #488S-Wh
#488S-Br #488FS
#488S-Cl #488BIO
#488S-Gy
ZERO Mini-Matic®



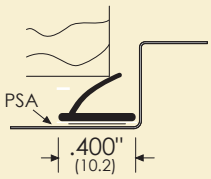
#8145S-Bk
ZERO Compress-O-Matic®



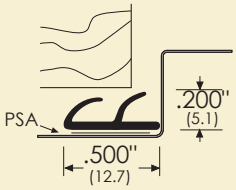
#824N



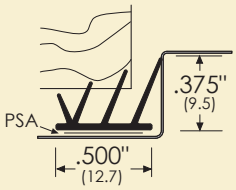
#8216S-Bk



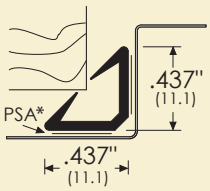
#117S-Bk



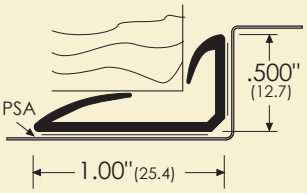
#8042S-Bk



#8150S-Bk

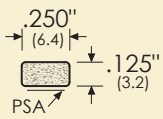


#8144S-Bk
#8144S-Wh
#8144 FS

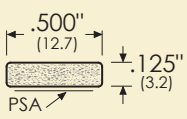


#8160Y-Bk

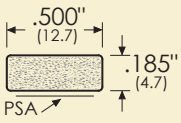
Closed Cell Sponge Neoprene



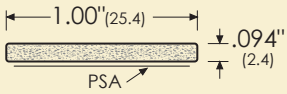
#8172N



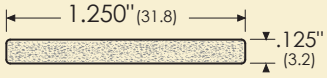
#8770N



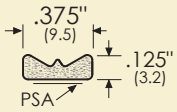
#312N



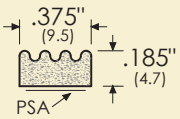
#8780N



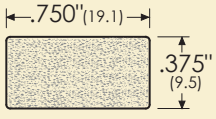
#139N



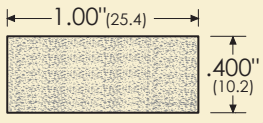
#826N



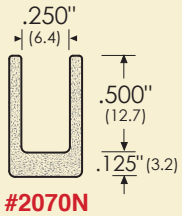
#926N



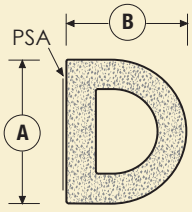
#318N



#3708N



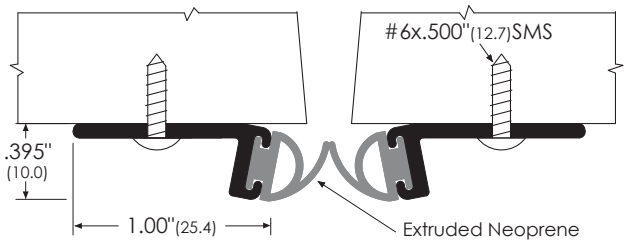
#2070N



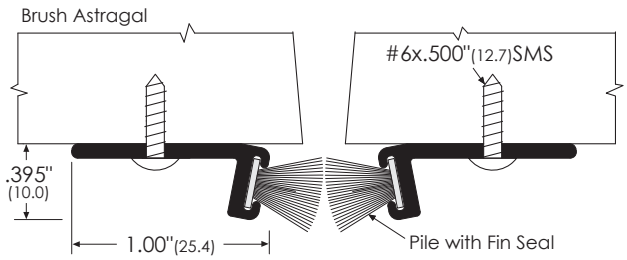
Part#	A	B
#810	.625" (15.9)	.625" (15.9)
#811	.750" (19.1)	.625" (15.9)
#812	1.00" (25.4)	.500" (12.7)
#813	1.250" (31.8)	.625" (15.9)

ZR031

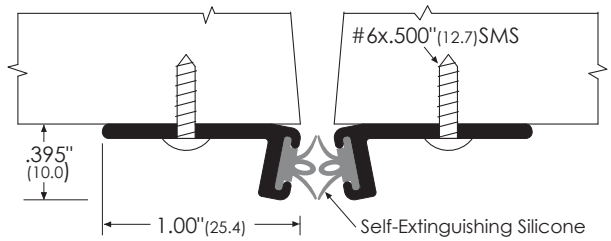
Note: A = Aluminum B = Bronze G = Gold Anodized AA = Clear Anodized D = Dr. Bronze Anodized



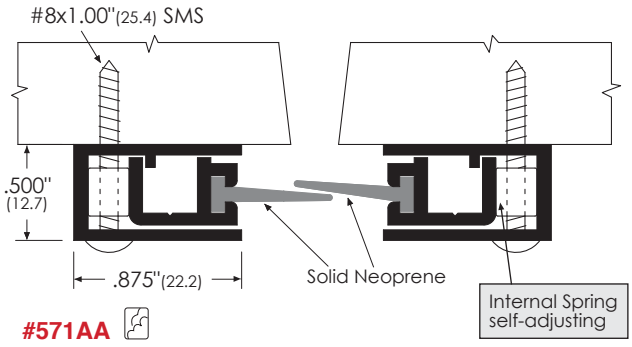
#99A
#99D



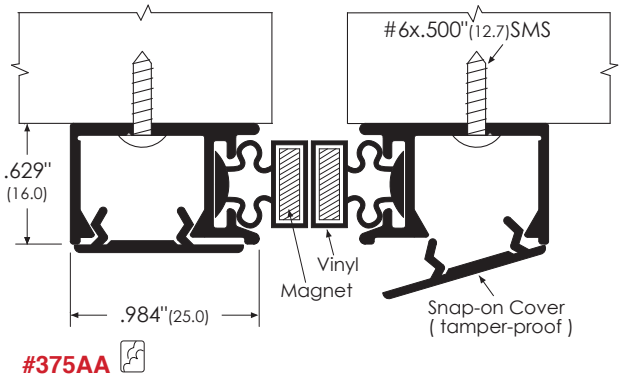
#98A
#98D



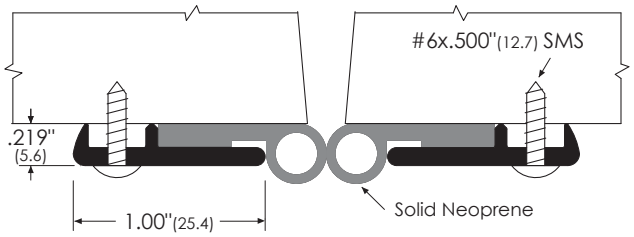
#100A
#100D



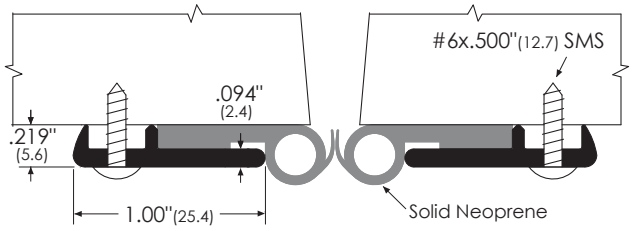
#571AA



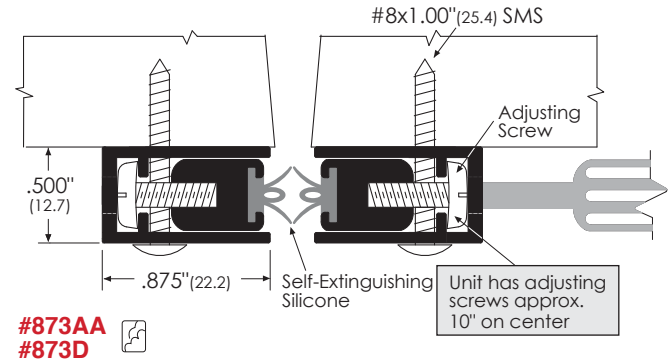
#375AA



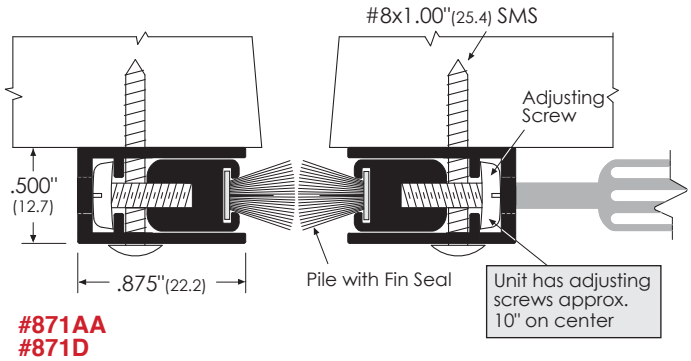
#328AA **#328D**
#328B **#328G**



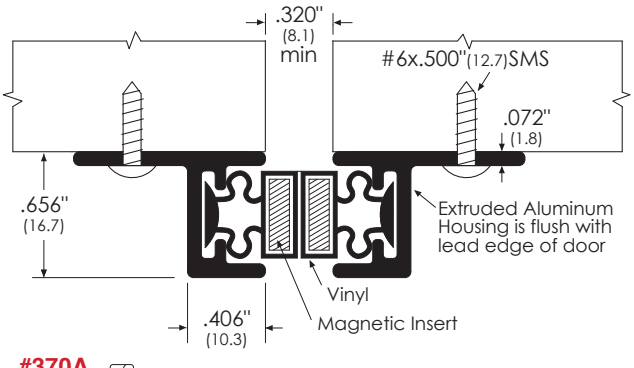
#326AA **#326D**
#326B **#326G**



#873AA
#873D

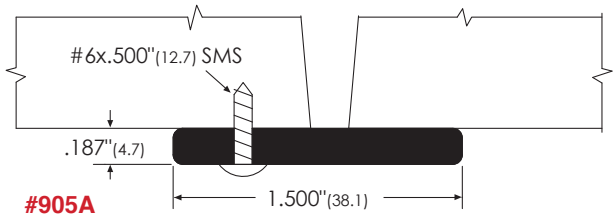


#871AA
#871D

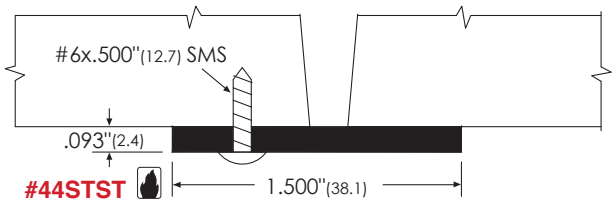


#370A
#370D

Note: A = Aluminum, B = Bronze, G = Gold Anodized, SP = Steel Prime, AA = Clear Anodized, D = Dark Bronze Anodized, STST = Stainless Steel, FS = INTUMET™ Rubber

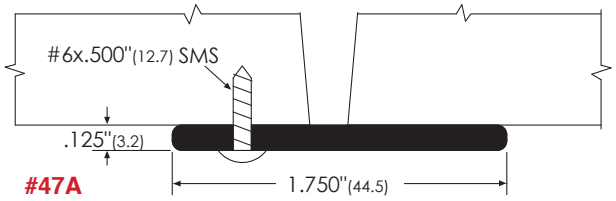


#905A

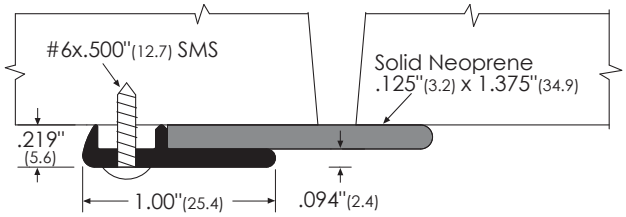


#44STST

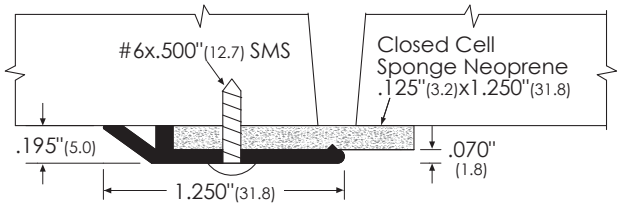
#44XA **Lead Lined, unexposed. Aluminum 1.470" x .375"** (not shown)



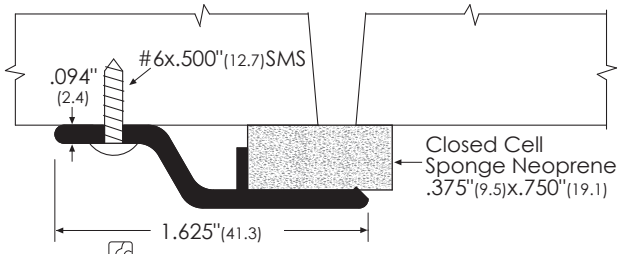
#47A



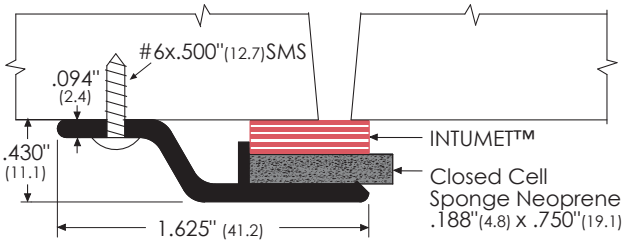
#339AA #339B #339D #339G



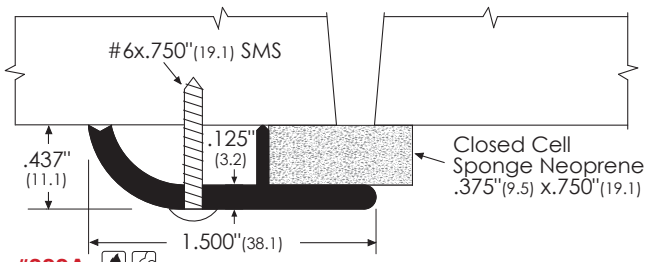
#139A #139D



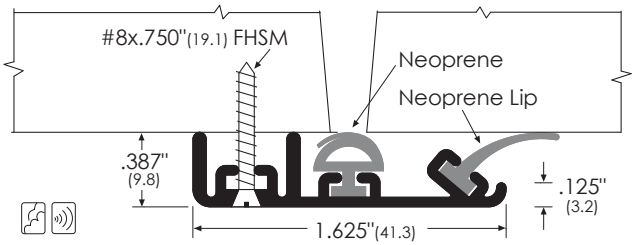
#140A



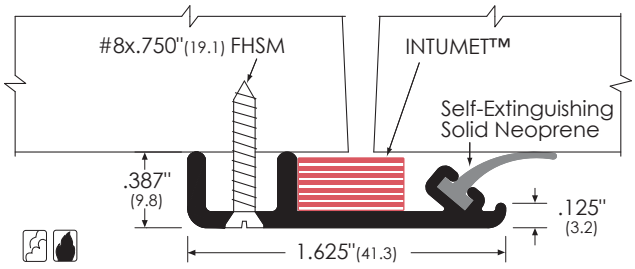
#140FS A



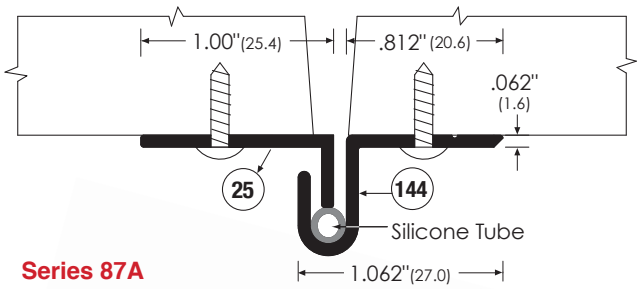
#322A



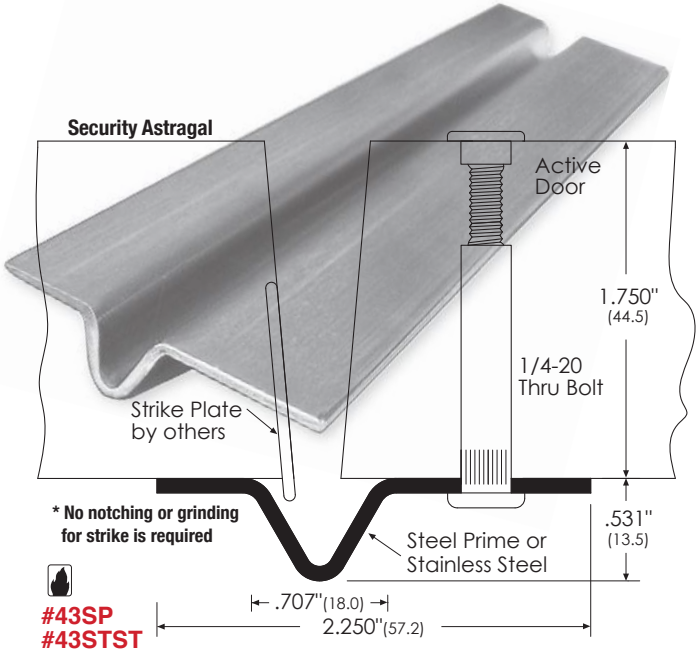
#383AA #383D



#383FS AA #383FS D

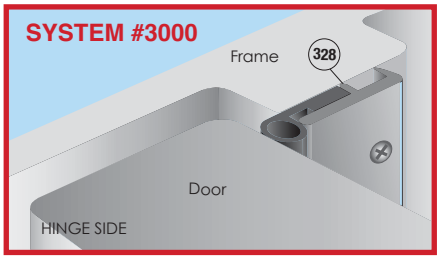


Series 87A

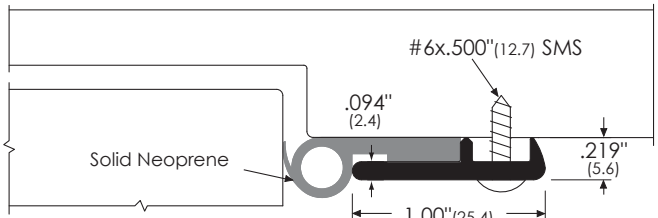


#43SP
#43STST

Note: A = Aluminum AA = Clear Anodized
B = Bronze D = Dark Bronze Anodized
G = Gold Anodized PVC = Polyvinyl, clear
ZAG = Ligature-Resistant gasketing

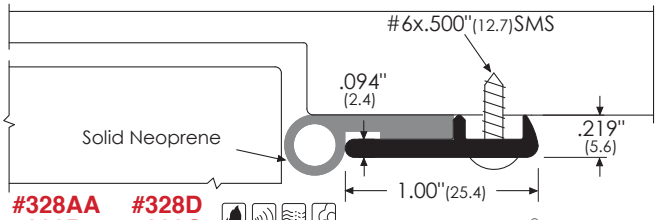


System #3000 consists of:
#328 (hinge side)
#326 (head & lock sides)



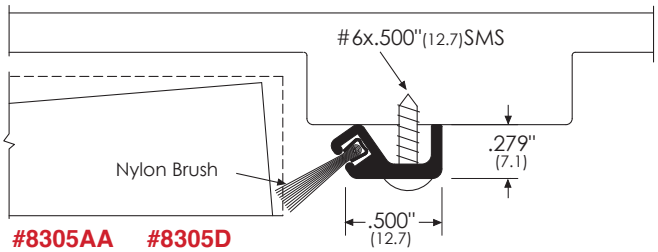
#326AA #326D
#326B #326G
#326PVC

ZERO Compress-O-Matic®
ZAG option available

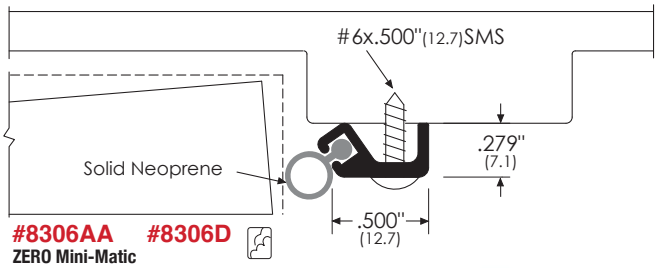


#328AA #328D
#328B #328G
#328PVC

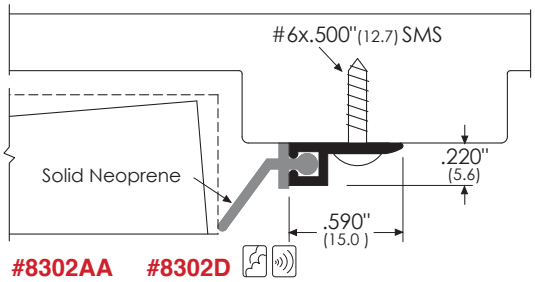
ZERO Compress-O-Matic®
ZAG option available



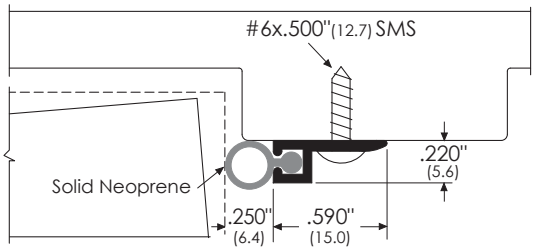
#8305AA #8305D



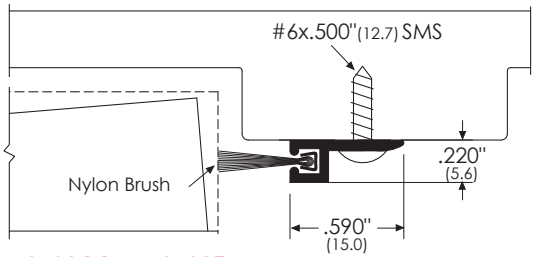
#8306AA #8306D
ZERO Mini-Matic



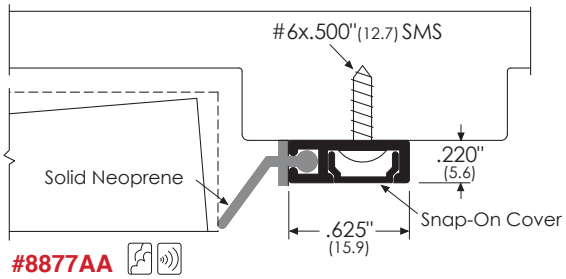
#8302AA #8302D



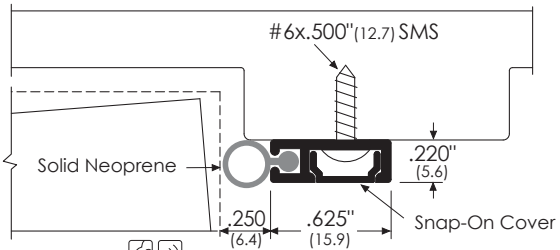
#8303AA #8303D
ZERO Mini-Matic



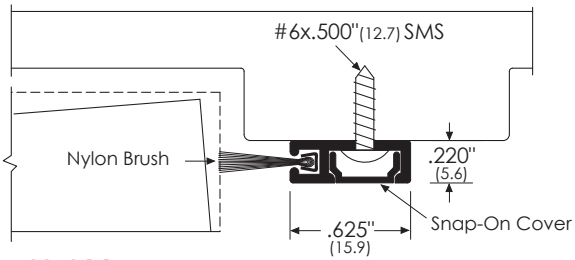
#8193AA #8193D



#8877AA

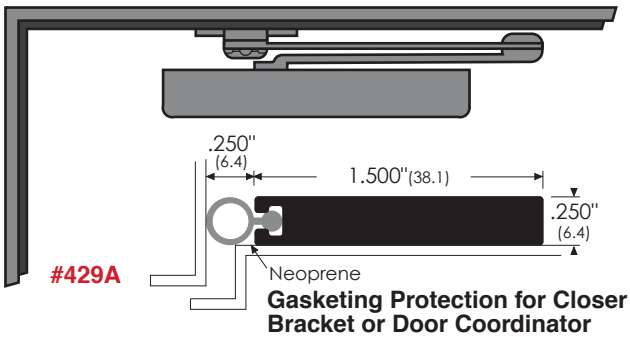


#8878AA
ZERO Mini-Matic



#8879AA

Note: A = Aluminum D= Dark Bronze Anodized SP= Steel Primed B= Bronze G= Gold Anodized



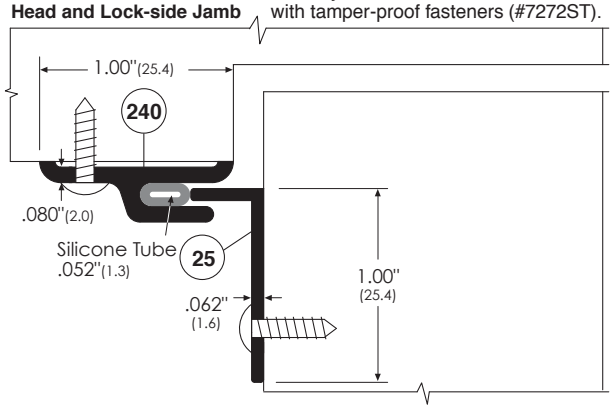
#429A

Gasketing Protection for Closer Bracket or Door Coordinator

Series 42A

Head and Lock-side Jamb

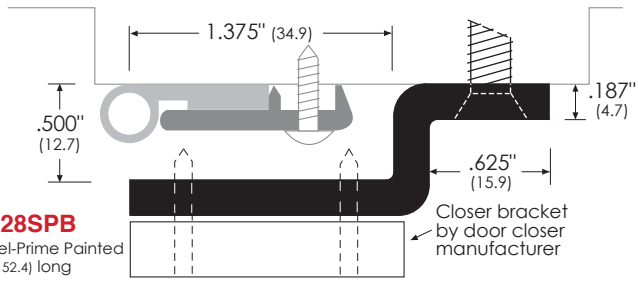
Security seal–when installed with tamper-proof fasteners (#7272ST).



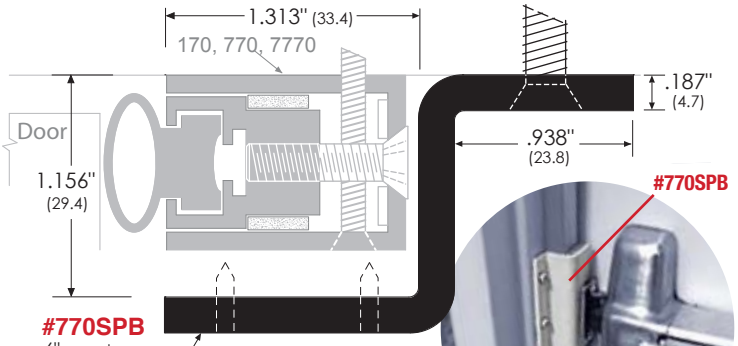
STRIKE PLATE MOUNTING BRACKETS

(Custom sizes available upon request)

#328SPB **#870SPB** **#770SPB**

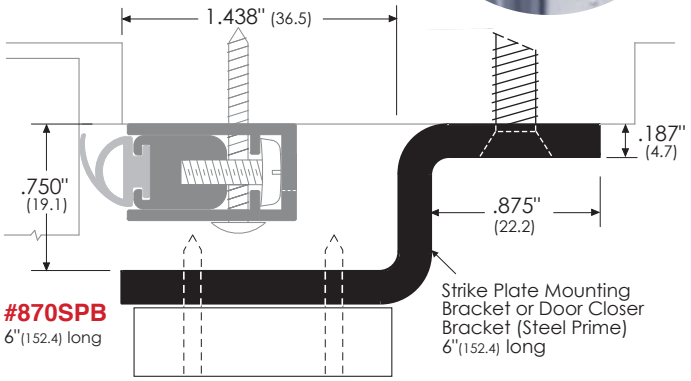


#328SPB
Steel-Prime Painted
6" (152.4) long



#770SPB
6" (152.4) long

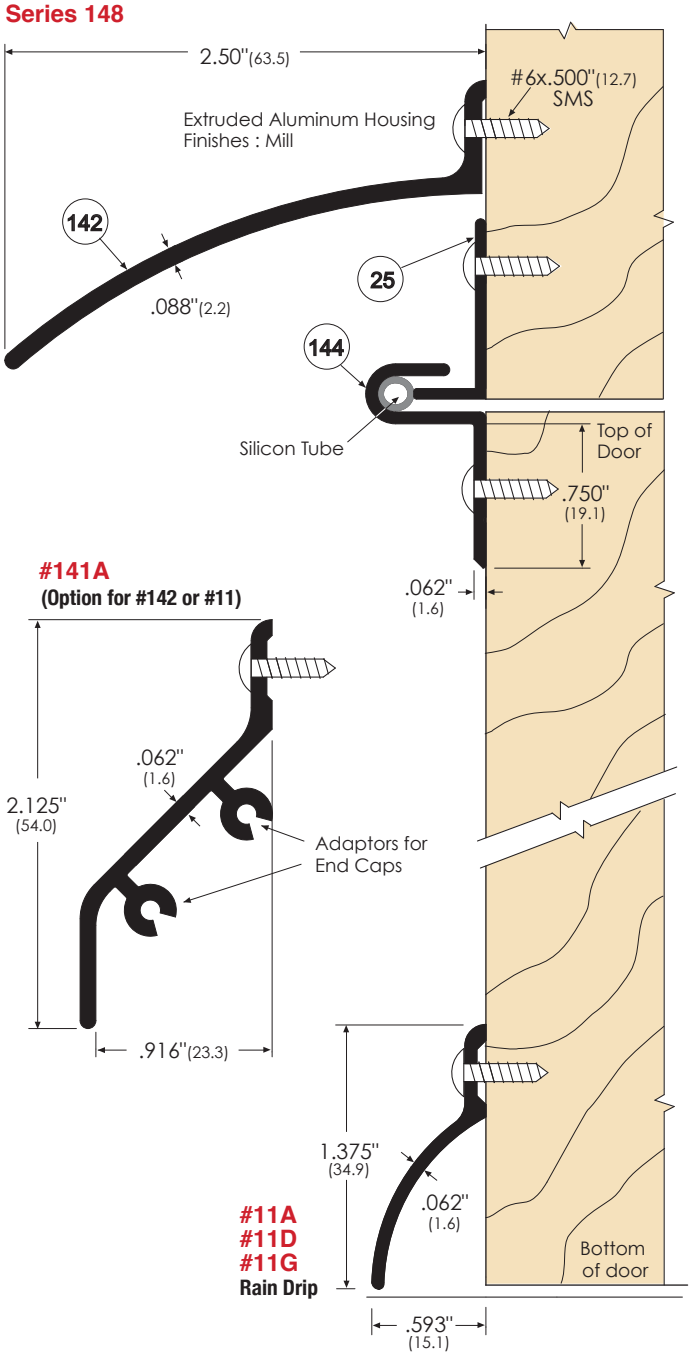
Strike Plate Mounting Bracke or Door Closer Bracket Steel Prime 6" (152.4) long



#870SPB
6" (152.4) long

INTERLOCKING WATER SHED For Outswinging Doors

Series 148



650 Series

Keyswitches

Overview

Schlage 650 Series keyswitches utilize an innovative magnetic spring design which allows installers to configure both clockwise and counterclockwise key turn direction as well as momentary or maintained action in seconds. Single gang and narrow stiles are available with numerous options which include heavy-duty plate, weather resistant cover (single gang size only), 2 LED lights – green/red, anti-tamper switch and Schlage Everest cylinder. in addition to the standard (626) satin chrome finish, there are five additional architectural finishes to choose from.

Features and benefits

- Easy to install and maintain
- Single gang and narrow stile offer ultimate flexibility
- Multiple options

Specifications

Standard keyswitch

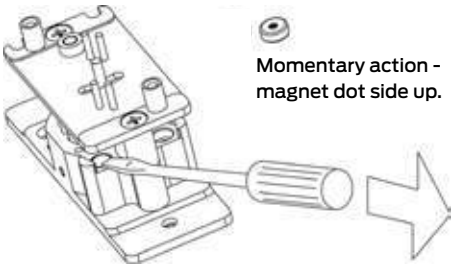
- 5 amp@250 VAC
- Dual voltage
- SPDT contacts

ATS switch closes when cover is on 0.025A@28VDC

LED indicator lights operate at 12/24 VDC 0.025A@28VDC

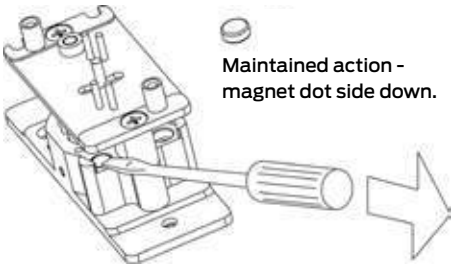
Innovative magnetic spring technology allows installers to configure models in seconds

Momentary action



Momentary action - magnet dot side up.

Maintained action



Maintained action - magnet dot side down.

Ordering information

- **653-04** - SPDT maintained single direction
- **653-05** - SPDT momentary single direction
- **653-14** - DPDT maintained single direction
- **653-15** - DPDT momentary single direction
- **653-1414** - (2) DPDT maintained bi-direction
- **653-1415** - DPDT maintained x DPDT momentary
- **653-1515** - (2) DPDT momentary bi-direction
- **653-041** - SPDT maintained x key remove one position
- **653-0404** - (2) SPDT maintained bi-direction
- **653-0405** - SPDT maintained x SPDT momentary
- **653-141** - DPDT maintained x key remove one position
- **653-0505** - (2) SPDT momentary bi-direction

Options

- **L2** - 2 LEDs green and red, dual voltage
- **NS** - Narrow stile - stainless steel plate (1 3/4" x 4 1/2")
- **ATS** - Anti-tamper switch
- **HDP** - Heavy-duty plate 1/4" thick cast zinc (standard 626 satin chrome finish with anti-tamper plugs)
- **WP** - Weather-resistant cover fits 1 1/8" cylinder only (not available with NS and L2 options)
- **CYL** - 1 1/4" Schlage Everest® mortise cylinder and 1/8" spacer ring (keyed different)
- **CYL-KA** - 1 1/4" Schlage Everest mortise cylinder and 1/8" spacer ring (keyed alike)

Finish

- **SF-626** - Satin chrome (standard)
- **SF-605** - Bright brass
- **SF-612** - Satin bronze
- **SF-613** - Oil satin bronze
- **SF-625** - Bright chrome
- **SF-2** - Black powder coat

Note: 650 Series keyswitches operate with either a 1 1/8", 1 1/4", 1 3/8", or 1 1/2" cylinder having a straight type cam.

- 1 1/8" mortise cylinder fits direct in key switch - no blocking ring required.
- 1 1/4" cylinders require a 1/8" blocking/spacer ring, Schlage part number 36-079-012 or equivalent (included with the CYL and CYL-KA options).
- 1 3/8" mortise cylinder housing for SFIC cores - requires 1/4" blocking ring Schlage part number 36-079-025 or equivalent.
- 1 1/2" mortise cylinder housing for FSIC cores - requires 3/8" blocking ring Schlage part number 36-079-037 or equivalent.

All cylinders, except 1 1/4" as CYL or CYL-KA options, must be ordered separately.

About Allegion

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Telecommunications Specifications and Installation Standards

Edited: 12-14-2017

Table of Contents

Part 1 – General

1.01 Introduction

The following specifications are intended to assist in the development of a telecommunications system for accommodating present and future technologies within the Lodi Unified School District. They provide a set of instructions and materials needed to install a telecommunications system within parameters set by industry standards. The requirements for the structured cabling systems within the facilities are continued in this document.

1.02 Work Included

- Contractor shall design and provide all materials in order to install a complete and functional data/telecommunications and cable television infrastructure.
- Only ONE Contractor shall be responsible for providing a complete and functional infrastructure, including necessary components and documentation.
- Documentation will include MS Visio drawings showing room drop locations, cable runs, and conduit pathways. Data, voice, and coax cables are all part of the same infrastructure and shall all be installed, terminated, labeled, and documented by only one contractor (no exceptions).

1.03 Contractor Qualifications

- Must be a Panduit Certified Installer and have an Anixter account in good standing.
- Must possess a valid C-7 California State contractor's license. This license must have been issued 2 years prior to the date of the bid. No other license classification is acceptable.
- Must be able to prove to the satisfaction of LUSD that they have significant experience in the installation of fiber optic systems.
    - Proper installation of fiber optic cable
    - Fiber termination
    - Interconnecting equipment
    - Test procedures with appropriate documentation.
- Must prove employees have been trained in the proper handling and cleanup of small quantities of lead paint. Contractor must contact Technology Services, prior to any work starting for an updated list of sites that require drilling work to be handled by a dedicated asbestos vendor. In the event Contractor encounters asbestos, stop work and notify district.
- Must be in trade of installing telecommunication systems, continuously, for a period of at least 3 years prior to the date of this bid.
- Must submit at least one project reference for each of the three years prior to the date of this bid.

- Must provide a minimum of 3 references supporting a claim of experience for a similar project within 2 years prior to this bid. These project references shall contain the starting and ending contract price, the project foreman or superintendent's name, and the name, address, and telephone number of a project contact.
- Must also provide a list of key installation personnel, their hire dates and a resume of their experience. Key installation personnel shall include at least one foreman and two journey level installers or technicians. By submitting the names of these personnel, contractor is committing them to the execution of the project outlined in this specification.

1.04 Requirements

Drawings and General Provisions of the contract, including General and Supplementary Conditions and Division 1 Specifications Sections shall apply to work specified, in this Section.

Rules and Regulations

All work and materials shall be in full accordance with the latest rules and regulations of the following:

- EIA/TIA Standards
- BICSI Standards
- NEC Standards
- Title 24 (California Code of Regulation)
- All Local Codes
- LUSD Standards
- NFPA Standards
- ADA Requirements
- Safety, Health and Environmental Standards

Permits, Fees, and Inspections

Contractor shall be responsible for all fees and permits required to any governmental agency having jurisdiction over the work of this section. Contractor shall arrange inspections required by any local ordinances during construction. Upon completion of the work, satisfactory evidence shall be furnished to LUSD to show that all work has been installed in accordance with the code(s).

Examination of Site

Contractor shall be held to have visited the site and been satisfied with the conditions under which the work is to be performed. Contractor shall check existing conditions that may affect the work. If the contractor retains services of other firms, those firms shall investigate existing systems and determine labor and other materials required to add devices or modify systems. No allowance shall subsequently be made on the contractor's behalf, for any extra expense resulting from a failure or neglect to discover conditions affecting the work.

Cleaning and Cleanup

All work areas shall be cleaned to remove all dust, dirt, grease, paint, or other marks. All electrical equipment shall be left in a clean condition inside and out, satisfactory to LUSD. Buildings and premises will be kept free from accumulated waste materials, rubbish and debris resulting from work. Upon completion of work: tools, appliances, surplus and waste materials, rubbish and/or debris will be removed and/or legally disposed of offsite.

Interruption of Services

- The underground route may run through areas of existing underground irrigation, signal, power, gas, water and sewer.
- Contractor must take precautions to avoid damaging/killing the root systems of existing trees. Contractor shall hand-dig as necessary to prevent disruption to existing systems, and make all repairs as required if damage occurred, at no additional cost to LUSD.
- LUSD will make every effort to assist contractor in locating existing underground routes. However, contractor will be required to pothole and inspect as needed. Contractor is responsible for USA surveys (Underground Service Alert).
- Power and signal services to existing buildings and related circuits are to remain in operation and shall not be interrupted, except by specific written approval from LUSD.
- If it is deemed necessary to shutdown circuits for the installation of new work, such shutdowns shall be scheduled with LUSD who may at its choosing, have a representative present during shutdown. Shutdowns shall be scheduled "after hours" or on weekends when an interruption would not cause a disturbance to school activities. Any accidental interruption of service to circuits or equipment as a result of work performed by the contractor shall be restored immediately in a manner acceptable to LUSD, at the contractor's expense.

Cooperation and Coordination

Contractor shall be solely responsible for instituting and maintaining safe working conditions for the project area under construction. Noise, dust, and other nuisance control measures will be implemented as effectively as possible. Work will be executed at a time when the space required by this installation is accessible. Adequate barrier and trench covers will be provided, and no equipment will be left unattended, ensuring the safety of students and staff.

Inspection

Contractor shall cooperate with the LUSD Designer/Inspector and provide assistance at all times for inspection of the work performed under this contract. Work that will be contained behind or under access covers, ground covering, or similar impediments shall be left exposed until inspected by LUSD. Contractor shall remove covers, operate devices, or perform any reasonable work that, in the opinion of LUSD, will be necessary to determine the quality and adequacy of the work.

Manufacturers Direction

Contractor shall follow manufacturer's directions that cover points not included in the drawings or specifications.

Workmanship

Contractor shall take all precautions necessary to protect existing structures. Structures or items to remain that are damaged during the course of work, shall be repaired or replaced by the contractor. Good workmanship shall be evident by the proper installation of all materials and equipment. Equipment shall be level, plumb and true with the structure and other equipment. All materials shall be firmly secured in place, adequately supported and permanent.

Contractor's Supervision

Contractor shall personally, or through an authorized and competent representative, constantly supervise the work from its commencement to its completion and acceptance. Contractor shall have the same foreman and workers on the job from its commencement to it completion, as much as possible. LUSD shall be notified of any personnel changes and supplied with the proper documents for any new personnel (I.e. lead certificates). All non-LUSD personnel shall be identified either by an ID tag or uniform with a company logo when on school grounds.

Scheduling of Work

Due to its nature, this work will have to proceed with a definite sequence of operations to minimize outages and continue facilities to all areas. The site will remain in operation during the work, and the contractor shall make every effort to maintain required services.

Guarantees

- Acceptance of the contract for this work includes this guarantee: Contractor guarantees that he has performed the work in accordance with the contract documents. Contractor also agrees to replace or repair, as new, any defective work, materials, or parts which appears within 4 years of final payment. LUSD will make the final determination of whether any defects are the responsibility of the contractor to replace or repair.
- Warranties, guarantees and certificates shall be provided for equipment and materials furnished and installed, as of the date of final payment and be delivered to LUSD. A set of "As Built" Visio drawings and test results for all installed cabling shall be provided to LUSD, before the project will be considered complete.
- Panduit Pan-Net Performance Guarantee - Contractor shall provide a 25 year application performance warranty for all Panduit Pan-Net copper cable and connectivity products. The system must be installed to meet all TIA/EIA commercial building wiring standards and installed per appropriate Panduit instruction sheets. If any Panduit product fails to perform as stated above, Panduit will provide new components at no charge.

1.05 Submittals and Substitutions

LUSD has evaluated and approved all the approved items listed in the LUSD Parts List. Substitutions to this list are possible but must be approved before a bid is accepted. Substitutions must be submitted to LUSD 10 working days before a bid is due and will either be approved or rejected 5 working days before a bid is due. The substitution documentation shall include the comparative specification listing for the approved product and the proposed product, including a complete listing of the characteristics of the equipment in the specification.

Within 10 working days after the date of the award of the contract, contractor shall submit to 3 copies of a complete submission to LUSD for review. The submission shall consist of 5 major sections, with each section separated with index tabs:

1. Section 1 shall be the Index, which will include the project title, address, name of the firm submitting the proposal and name of the architect. Each page in the submission shall be numbered chronologically and summarized in the index.
2. Section 2 shall include a copy of the contractor's valid C-7 California State Contractor's License, documentation outlined in Section 1.02 and a list of instrumentation to be used for system testing.
3. Section 3 shall contain the pre-approved substitution submittal and the written approval from LUSD. If no substitutions are planned, it will be noted in this section as well.
4. Section 4 shall contain samples of proposed cable markers and labeling.
5. Section 5 shall contain a complete and detailed satellite cable count, workstation count, bill-of-materials and Visio drawing showing proposed work ("As Planned"). Any contractor failing to include all of the required information shall be deemed non-responsive and may be disqualified, at the discretion of LUSD.

PART 2 – Products and Procedures

2.01 Approved LUSD Parts List

An approved parts list is detailed in "Enclosure C" of this document. Preferred education pricing provided for this list is available through Anixter Inc. (1-800-ANIXTER, reference Lodi Unified).

All products must be selected from the "LUSD Parts List," unless substitutions have been approved by LUSD.

2.02 Labeling

- Shall follow the "LUSD Labeling Format" specified in Enclosure B, with the exception of workstation cables (i.e. patch cords).
- Shall never be hand-written.
- Shall be machine printed on clear or opaque tape, stenciled onto adhesive labels, or type written onto adhesive labels.
- Shall have font that is at least 1/8" in height, block characters, and legible.
- Shall have text that is of a color contrasting with the label so that it may be easily read. If labeling tape is utilized, the font color shall contrast with the background.
- Patch panels shall exhibit workstation numbers, in a sequential order, for all workstations served by the MDF or IDF.
- Shall be completed before testing commences. Labeling discrepencies found during inspection will void all test results.

2.03 Copper Backbone Cable

Description: The backbone cabling used to connect all IDF's to the MDF, used for voice/data.

- Shall be Category 5e and installation must be in compliance with all EIA/TIA standards.
- The number of available wire pairs to each IDF must account for a minimum of 2 pairs per classroom. A minimum of 25 pairs of cable shall be used to any building encompassing an office. Each pathway, upon the population of cable, shall have enough wire pairs to accommodate all existing and future IDF's in that pathway's route.
- Cable must be rated for the environment that it will be installed in, such as plenum, riser or outdoor rated.
- Only Cat 5e 110 punch blocks will be allowed for terminations. Backbone pairs shall be terminated at the top left of the blocks installed in the IDF.
- Each copper backbone cable shall be machine labeled and printed EIA/TIA 606 Section 8 compliant at each end with its respective IDF number/letter. All binder groups shall be tied off with their respective identifying ribbon at every breakout point.

2.04 Wi-Fi Cable

Description: Cabling between Wi-Fi jacks and IDF/MDF's.

- Shall be blue Category 6A - 802.3bt Type 4 and installation must be in compliance with all EIA/TIA standards.
- Each blue cable shall be terminated at both ends with white Panduit Cat 6A RJ45 jacks.
- Panduit Executive style faceplate shall be used at access point location.
- Wireless access points shall be in every classroom, common areas, and exterior for full campus coverage.

2.05 Workstation Cable

Description: Cabling between workstations and IDF/MDF's.

- Installation must be in compliance with all EIA/TIA standards.
- Each standard classroom must have a minimum of two workstations:
    - One workstation (the teacher's) consists of 2 purple Cat 6A cables and 1 grey Cat 6A cable.
    - The second workstation (the student's) consists of 4 purple Cat 6A cables.
    - Each purple cable shall be terminated at both ends with a beige Panduit Cat 6A RJ45 jacks.
    - Each gray cable shall be terminated, with slack loop at IDF/MDF location with a Cat 6A black RJ45 for VOIP and 110 punch block for non-VOIP. District will identify where to use VOIP and where to non-VOIP. Workstation terminates with a black Panduit, Cat 6A RJ45 jack.
- Panduit LDP series or Panduit T-70 series (both Cat 6A compliant) raceway shall be used on interior walls where raceway is required for station drops. Panduit T -70 shall be used for computer labs and have access points every 5 feet (an access point shall consist of one duplex outlet 110 VAC receptacle and two beige Cat 6A data jacks).
- Copper station cabling may run outside of conduits and above T-Bar suspended ceilings when available. Cables installed in this fashion must follow these guidelines:
    - Run horizontally in bundles and tie down neatly without the use of zip-ties.
    - Be well clear of any light fixtures or other electrical appliances that may affect data transmissions.
    - Have their own support system, such as J-Hooks or a cable tray
    - Cable tray shall be a minimum of 12"x4" wire mesh and UL listed.
    - Cannot be supported by other items in the ceiling such as conduit, ducts and ceiling grids.

2.06 Fiber Inner Duct

Description: Ducting specifically manufactured to enclose and protect fiber optic cable.

- Must be used for all fiber installations, with exceptions where conduits are too small to run inner duct.
- LUSD will be notified, in writing, that conduits might be too small to run inner duct. LUSD must approve, in writing, any fiber run not in inner duct.

2.07 Fiber Distribution

Description: The backbone cabling used to connect all IDF's to the MDF.

- Only 50 um-multimode fiber (OM4) shall be used and installation must comply with all EIA/TIA standards.
- Singlmode fiber (OS2) shall be used as needed due to distances.
- Only 62.5/125 um-multimode fiber shall be used for fire alarm applications
- A minimum of 12-strand fiber shall be used from the IDF's to the MDF.
- Each fiber cable shall homerun from the IDF's to the MDF without the use of interconnects.
- Each pathway, upon the population of fiber, shall have enough fibers to accommodate all existing and future IDF's in that pathway route, and also be accompanied by a coax cable.
- SC style connectors shall be used for all fiber termination.
- All fiber strands shall be terminated and labeled at both ends with its respective IDF identifier.
- All fiber interconnect devices shall be labeled with their respective IDF identifier.
- At each location where the fiber cable is exposed to human intrusion, it shall be marked with warning tags. These tags shall be yellow or orange in color, and shall contain the warning: "CAUTION FIBER OPTIC CABLE." The text shall be black, block characters and at least 3/16" high. A warning tag shall be permanently affixed to each exposed cable or bundle of cables.

2.08 Main Distribution Facility (MDF)

Description: A location within a building or complex of buildings, where the entire telecommunications system originates. EIA/TIA-569 standards refer to the room housing the MDF as the "Equipment Room."

- Must be in compliance with all EIA/TIA standards.
- Must have fire treated ¾" plywood on all walls.
- Must have (1) 4-post rack and (2) 2-post racks in secured dedicated rooms
- Cabinets must have a dedicated power outlet mounted inside.

- Cabinet shall be load tested with no less than 200 pounds and up to rated shear strength.
- Ladder racking must be mounted on the perimeter of all walls and above cabinets.
- A Panduit wire manager must be mounted in-between every patch panel (must use one wire management panel for every patch panel).
- A 3-foot slack loop shall be required at MDF for all cables.
- MDF room sizing:
    - High School – 15'x10'
    - Middle School – 10'x8'
    - Elementary School – 9'x8'

2.09 Intermediate Distribution Facility (IDF)

Description: A location in a building that interconnects and manages the telecommunications wiring between the MDF and workstation devices.

- Must be in compliance with all EIA/TIA standards.
- Must have fire treated ¾" plywood on all walls.
- Cabinets must have a dedicated power outlet mounted inside.
- Must have (2) lockable 90" tall, 19-inch / 40 RU, front and rear swing cabinets in unsecured locations.
- Must have (2) 2-post racks in secured dedicated rooms.
- Cabinet shall be load tested with no less than 200 pounds and up to rated shear strength.
- Ladder racking must be mounted on the perimeter of all walls and above cabinets.
- Cabinets must adhere to ADA requirements. See Enclosure G
- A Panduit wire manager must be mounted in-between every patch panel (must use one wire management panel for every patch panel).
- A 3-foot slack loop shall be required at IDF for all cables.

2.10 Backboard

Description: Generally, refers to the plywood sheeting lining the walls of telecommunications facilities. Backboard may also refer to the entire wall-mounted assembly including wire management, wiring blocks, and equipment cabinets.

- Must have fire treated ¾" plywood on all walls.
- Dimensions shall be no larger than the cabinet/IDF when installed in a classroom.
- Shall be fastened to two separate wall studs with 4 lag bolts.
- Shall be no thinner than 5/8."

2.11 Grounding and Bonding

Description: Generally, refers to the grounding and bonding requirements for telecommunications rooms, including data cabinets, racks, and ladder racking systems. Strictly adhere to all Building Industry Consulting Service International (BICSI), Telecommunications Industry Association (TIA) recommended installation, best practices, codes, and standards when installing the grounding and telecommunications bonding infrastructure.

- Telecommunications Main Grounding Busbar (TMGB) shall be located in the MDF: busbar placed in convenient and accessible location and bonded by means of bonding conductor for telecommunications to building service equipment (power) ground.
    - Telecommunications Main Grounding Busbar (TMGB) shall be constructed of .25" (6.4 mm) thick solid copper bar. The busbar shall be 4" (100 mm) high and 20" (510 mm) long and shall have 30 attachment points (two rows of 15 each) for two-hole grounding lugs. The hole pattern for attaching grounding lugs shall meet the requirements of ANSI-J-STD – 607-A and shall accept 27 lugs with 5/8" (15.8 mm) hole centers and 3 lugs with 1" (25.4) mm) hole centers. The busbar shall include wall-mount stand-off brackets, assembly screws and insulators creating a 4" (100 mm) standoff from the wall. The busbar shall be UL Listed as grounding and bonding equipment.
- Telecommunications Grounding Busbar (TGB) shall be located in the IDF: interface to building telecommunications grounding system generally located in telecommunications room. Common point of connection for telecommunications system and equipment bonding to ground, and located in telecommunications room or equipment room.
    - Telecommunications Grounding Busbar (TGB) shall be constructed of .25" (6.4 mm) thick solid copper bar. The busbar shall be 2" (50 mm) high and 12" (300 mm) long and shall have 9 attachment points (one row) for two-hole grounding lugs. The hole pattern for attaching grounding lugs shall meet the requirements of ANSI-J-STD – 607-A and shall accept 6 lugs with 5/8" (15.8 mm) hole centers and 3 lugs with 1" (25.4 mm) hole centers. The busbar shall include wall-mount stand-off brackets, assembly screws and insulators creating a 4" (100 mm) standoff from the wall. The busbar shall be UL Listed as grounding and bonding equipment.

2.12 Testing and Documentation

Testing: Contractor shall test each fiber strand and each pair of twisted pair copper cable after labeling is 100% complete. LUSD reserves the right to have a representative present during testing.

- **Fiber Optics Cable**: Each strand shall undergo bi-directional testing for signal attenuation losses.
    - Test Equipment:
        - Multi-mode: Fluke DSP 4000 for equivalent.
        - Single-mode: Laser Precision TD2000 OTDR with appropriate modules, or equivalent.
    - Tests:
        - Multi-mode: Bi-directional signal attenuation at 850 and 1300 nm.
        - Single-mode: Bi-directional signal attenuation at 1310 and 1550 nm.
    - Test Criteria:
        - Signal loss less than the link loss budget as determined by the tables below.

SC Connector Pair	0.5dB
Multi-Mode Cable	
Wavelength (nm)	Maximum Attenuation (dB/km)
850	3.5
1300	1.5

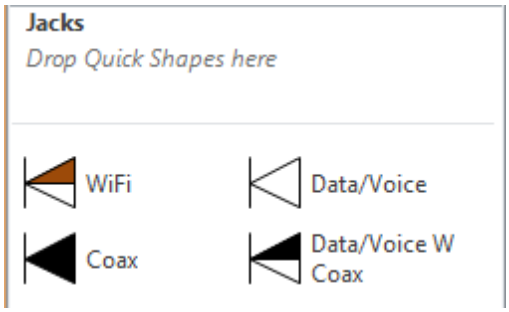
Example: A link with 3 connectors and a total length of 500m should have a maximum attenuation of 3.25dB at 850nm and 2.25dB at 1300nm

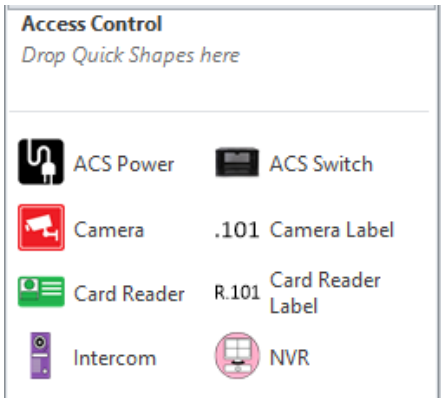
SC Connector Pair	0.5dB
Single-Mode Cable	
Wavelength (nm)	Maximum Attenuation (dB/km)
850	1.0
1300	1.0

- **Workstation Cable:** Each workstation cable shall be tested from the Jack Panel to the data outlet after labeling is completed.
    - Test Equipment: Fluke DSP-4000 or equivalent.
    - Tests: Conform to EIA/TIA Standards for Category 6A.
    - Test Criteria: Tested to Category 6A for permanent link compliance.
- **Wi-Fi Cable:** Each Wi-Fi cable shall be tested from the Jack Panel to the data outlet after labeling is completed.
    - Test Equipment: Fluke DSP-4000 or equivalent.
    - Tests: Conform to EIA/TIA Standards for Category 6A and 802.3bt Type 4.
    - Test Criteria: Tested to Category 6A for permanent link compliance.

Documentation: Contractor shall provide documentation to include test results and Visio "As-Built" drawings in both soft and hard copy format.

- **Fiber Test Results**: Shall be entered onto the attached form "Fiber Test Results."
    - Only original signed copies will be acceptable.
    - Hand written results are not acceptable.
    - Copies of test results are not acceptable.
    - Test results shall be in PDF format.
- **Workstation/Wi-Fi Test Results**: Shall be provided in the form of printouts from the test equipment, as well as computer file copies on CD including the software needed to read the results.
    - Only original signed copies will be acceptable.
    - Hand written results are not acceptable.
    - Copies of test results are not acceptable.
    - Test results shall be in PDF format.
- **As-Built Drawings:** Contractor shall produce drawings while adhering to the following guidelines:
    - Always use icons from the Visio stencils provided by LUSD. Not all available icons are shown below.

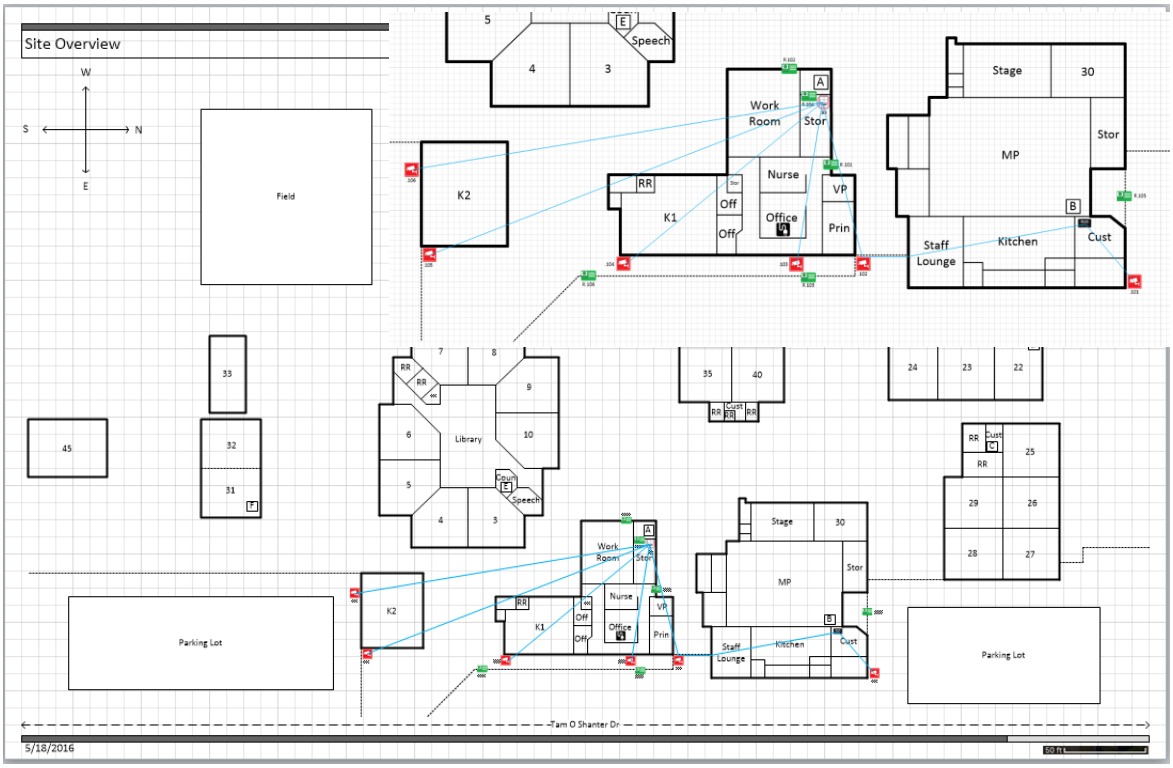




    - Depiction of backbone cable routing.
    - Locations of access points, card readers, distribution cabinets, intercoms, jacks, NVRs, security cameras and workstations.
        - Active components between an end point and NVR/switch, must be documented (power injectors, switches/repeaters, hubs, etc.).
        - Access Control components must have power sources identified.
        - Jacks must be accompanied by a jack label.
        - Nodes must be accompanied by an IP address.

- Submit before final inspection for punch list. Incorrect Visio drawings are punch list items and are to be corrected before re-inspection.
- Additional copies corresponding to the appropriate IDF/MDF, shall be posted in the MDF's and IDF's.

Sample of LUSD Visio drawing



Sample of LUSD Visio Backbone

2.13 Acceptance

Acceptance of the Data Communications System, by LUSD, shall be based on the results of testing, functionality, and the receipt of documentation.

- With regard to testing, all fiber segments and workstation data cables must meet the testing criteria established in Section 2.12 above.
- With regard to functionality, contractor must demonstrate to LUSD that Gigabit Ethernet data signals can be successfully transmitted bi-directionally, from the MDF/IDF to and from a number of individual data outlets.
  - No more than 5% of the data jacks will be tested.
    - If any locations fail, an additional 5% will be tested until no more links fail.
- With regard to documentation, all required documentation shall be submitted to LUSD

PART 3 – Execution

3.01 Division of Work

Contractor shall design and install the data communications system as described in the preceding documentation. Installation shall result in a functional system. The scope of work shall include:

- All necessary conduit and raceway with a Visio drawing showing proposed cable routes, existing conduit to be used, new conduit being installed, equipment racks and approximate drop location. (Note: The EIA/TIA specifies at least 2 drops per workstation location, back to the IDF/MDF).
- Necessary trenching, backfill, replacement of landscape material, repair of damage to utilities or structures, replacement of asphalt and base, and replacement or repair to concrete work resulting from conduit or raceway installation.
- Provide and install all equipment.
- Test and document system upon completion. Copies of all other forms and enclosures shall be included.
- Supply and install all necessary materials resulting in a safe, complete and functional system. The scope of work shall be reviewed by no less than 1 person for completeness from the following departments: Facilities & Planning, Maintenance & Operations.

PART 4 – Conduit

4.01 Underground

- Contractor will use PVC schedule 40 underground, with rigid 90-degree elbows and tracer tape placed 6” to 12” over the top of the PVC portions. Elbows shall have a radius of at least 10 times the diameter of the conduit used.
- See NEC for appropriate depths and pull box sizes.
- Should be next to existing underground where possible.
- All new underground conduits shall be (2) 4” plus (1) 4” spare, PVC to support data/voice/intercom/PA. All new underground conduits shall be 2” PVC to support fire alarm.
- Areas near tree roots and other underground utilities will need to be hand dug. LUSD will identify those areas. Pull boxes are to have traffic lid covers (that say Data). The bottom will be grooved with drains installed. LUSD will provide diagrams upon request.

4.02 Aboveground

- All roof penetrations shall be approved by LUSD, before actual penetration is made.
- All exterior conduit that is accessible shall be in rigid conduit.
- A pull rope will be installed in all new and existing conduits used, including underground and interior conduit.

- Firewall penetrations will extend though the wall a minimum of 12 inches.
    - Shall be sealed around the outside with firecaulk.
    - Shall be sealed around the inside with firecaulk duct seal (the depth shall be 50% diameter of the conduit).
    - No innerduct shall be installed in a firewall penetration.
- Conduit size to be determined by EIA/TIA Standards leaving room for future expansion.
- EMT conduit shall be used in the following interior areas:
    - Gyms.
    - Multi-Purpose rooms.
    - Industrial Arts buildings.
- LB's shall not be used in new and existing conduit for data applications.
- Data/Voice conduits shall service LUSD's voice and managed IP network only.

4.03 Portable Classrooms

- All conduits to be installed on the exterior of a portable will be approved by LUSD personnel before installation.
- The center beam of a portable shall not be penetrated.

PART 5 – Concrete

- ALL concrete and asphalt repair shall be included in the scope of work and will be replaced from joint to joint (no patching, except when done temporarily for safety).
- Soft patch may not be used as a permanent patch for asphalt or concrete.

PART 6 – Change Orders

ALL change orders shall be routed to the department originating the project. Departments are typically Facilities & Planning and Technology Services and will be approved or disapproved on a case by case basis.

Approved change order form will be added to the scope of work and completed as a part of the contract.

PART 7 – Departure from Specifications

During unusual or unique situations, a departure from specifications (DFS) may be granted for specific locations and/or equipment. Approval is granted or denied in writing by Technology Services. See section 1.05 for materials substitutions.

The contractor will keep all forms on file until the warranty on the installation expires.

PART 8 – Asbestos and Lead Containing Paint Waiver

Asbestos work must be performed by M&O approved certified remediation company. Contractor must contact LUSD's Maintenance and Operations (M&O) department for a current list of Asbestos Hazard Emergency Response Act (AHERA) sites, requiring work to be performed by a remediation company.

All District sites will be considered to be a lead containing paint facility unless the area of work has been sampled and determined to be otherwise. All work including but not limited to cutting and/or hole drilling will be performed by a lead awareness trained individual that is also trained in HW collection and disposal activities. Otherwise the contractor must employee the services of an environmental company approved by M&O and certified to perform theses duties. All environmental activity will be reported to the Maintenance & Operation Structural Supervisor at (209) 331-7193 prior to the commencement of work.

PART 9 – Access Control & Video Safety

9.01 Introduction

In addition to LUSD Infrastructure Wiring Specifications, the following guidelines apply to access control card readers, security cameras, and other access devices installed within LUSD.

A site walk must also be performed with a Technology Services staff member before work begins.

9.02 JAESC/Transportation/Warehouse Specific Guidelines

- Access control devices and security cameras will be:
  - Connected directly on the LUSD network.
    - Operations, VLAN 99.
  - Powered by LUSD POE switches.
- All access control nodes should be fed from the MDF, when the run is within EIA/TIA specifications.
- NVR will be housed in the Data Center and rack mounted.

9.03 School Site Specific Guidelines

- Access control card readers and other access devices will be:
  - Connected directly on the LUSD network.
    - Operations, VLAN 99.
  - Powered by LUSD POE switches.
- Security cameras will be placed on their own private network.

- The installation location of the NVR is to be coordinated with Technology Services. Ideally, the NVR will be installed in the MDF where security and environmental conditions are monitored.
    - NVR's are to have two NICs
        - One placed on the private network
        - The other on LUSD's Operations network.
- A maximum of 1 external (public network) viewing license/user, will be allowed for each site.

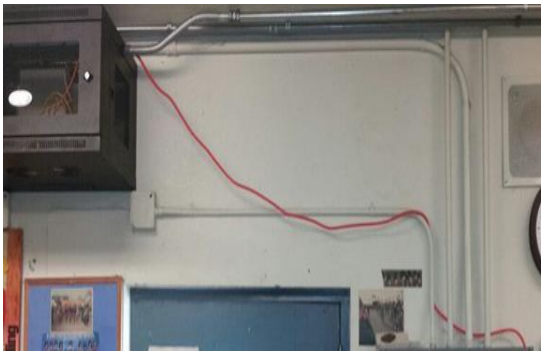
9.04 District Wide Guidelines

- Network Video Recorder (NVR), GateKeeper, and other full OS devices (Windows/Mac), will have the LUSD's Anti-Virus and LanRev agents installed on the systems. In addition, the device name and description are setup according to LUSD specifications.
- All power supplies shall be housed in a cabinet or communications closet.
- All cable runs shall be terminated at a jack, not a modular plug.
- No faceplate needed in ceiling jacks and utilize yellow patch cables.
- Contractor shall receive approval from LUSD before sharing any cabling pathways with existing LUSD infrastructure.
- Yellow Cat 6A cable shall be used for infrastructure cabling runs, terminated into yellow Panduit jacks.
- 19" Patch Panel required for all cabinets (both existing or new cabinets).
- Repeaters/switches used where a 90 meter run is exceeded, are to be located 5 feet from an existing MDF/IDF.
- All jacks shall be labeled in accordance with LUSD specifications.
- Technology Services Network Operations Center (NOC) shall be contacted before anything is patched into LUSD's network. The NOC will be able to verify connectivity and ensure there are no other issues.
    - NOC can be reached at: (209)331-8911.

9.05 Documentation Guidelines

- Please see section 2.12 for cable testing and Visio drawing guidelines

9.06 Power



All cabinets will have a dedicated circuit/breaker and power sources must be mounted per NEC requirements.

During the initial walk with Technology Services, power sources will be identified. If power source is not available, Technology Services will work with M&O to coordinate the installation of power source. ***Powering cabinets with extension cords is not permissible.***

Temporary Power

If active components are not operating off a dedicated power outlet/source, then it needs to be noted on the drawing with building/location. All active components mounted in a cabinet must have a dedicated power outlet within the cabinet. Do not affix raceway to walls for temporary power/extension cords.

9.07 Miscellaneous

- All wires must be labeled w/ wire-wrap style labels within 3 inches of the jacks.

- Jacks should be labeled and tested at both ends of each smallest segment according to Specifications. This type of passive cross connect is no longer allowed.

- As of July 1st, 2016, single gang boxes are not permitted in IDFs.
- This photo depicts what **not** to use anymore.
    - Jacks are now placed in a 24 port patch panel
        - Panduit part #CP24BLY

PART 10 – A/V Projectors

10.01 Mounting Guidelines

- For new construction, DSA approved drawings on following pages must be observed by both architect and installer.
- DSA standards must be followed
- Any non-standard mounts must be approved by F&P.
- All mounts must be tagged with contractor's name and date of installation. See DSA approved mounting documentation.
- HDMI cables mounted in raceway must be able to pass a clean digital signal, with an allowance for a standard quality user patch cable to span 35 feet.
    - For example: If the user connects a 35-foot cable to the user interface/wall plate and the length of the infrastructure cable between the wall plate and the projector is 10 feet, then the total length of digital transmission is 45 feet; therefore, the installer must demonstrate that the infrastructure cable can deliver a clear picture while being extended with a 35-foot HDMI male-to-male patch cable. Sound must also be demonstrated through jacks in faceplates.
- User connection interface/wall plate will contain, one VGA, one HDMI, and one 1/8 stereo audio jack. Active faceplates will be used for VGA/HDMI connection.
- User connection interface/wall plate will contain one VGA, one HDMI, and one 1/8 stereo audio jack. Active faceplates will be used for VGA connection.
- Power will be installed high on the wall within two feet of the projector.

10.02 Short Throw Projectors

- Mounted to a plate/backboard that spans two studs.
- Secured to wall studs with 4 lag bolts.
- Head clearance from bottom of projector must be a minimum of 78 inches from floor.
- All CAT6A network connections, AV connections, and power shall be installed behind the short throw wall mount bracket.
- The use of short throw projectors shall be determined per project, and with District approval.

10.03 Ceiling Mount Projectors

- For T-Bar Ceiling: Two drop ceiling T-bar rods must be attached to opposite corners of the T-bar projector mount panels.
- For Hard Lid Ceiling: Mount must be bolted to cross-members(or ceiling joist) with no less than two bolts and some additional mounting brackets.
- All CAT6A network connections, AV connections, and power shall be installed above the ceiling mount bracket.
- The use of ceiling mount projectors shall be determined per project, and with District approval.

10.04 Promethean Boards

- 75” wall mounted Promethean Boards shall be installed in all classrooms
- Promethean Boards shall have adjustable mounts when used in Kindergarten through 6th grade classrooms.
- HMDI cabling shall be from Promethean Board to the teaching station with a CAT6A connection. An additional HMDI connections shall be installed directly below the board with a CAT6A connection.

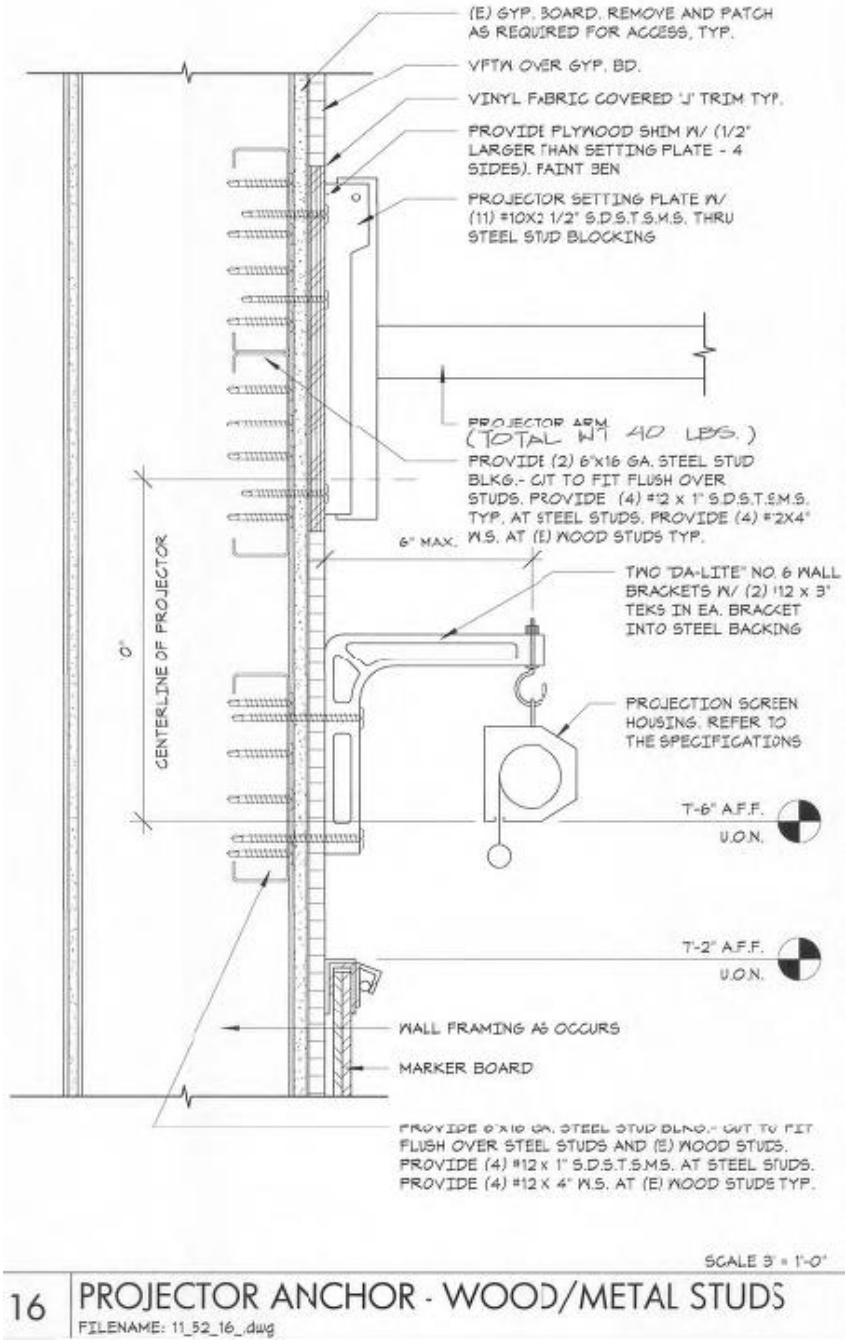
10.05 Multipurpose Rooms/Gyms

- Large assembly areas shall receive electric large format projection screens and lamp less ceiling mounted projectors. Refer to current District standards for current manufacture and model number.
- Large assembly areas shall have a dedicated AV cabinet to facilitate local presentations and house wireless microphones and AV amplifiers.
- Large assembly areas shall have separate sound systems.
- AV wall controls shall be based on Extron Electronics and control all AV in the space, with the capability to integrate lighting and shades.
- Sizing of screens, throw distance of projector, and locations shall be engineered by AV Contractor and approved by the District.

10.06 DSA Mounting Documentation

Projector Anchor – Wood/Metal Studs (Sample)

- Electric screens shall be used, where applicable.



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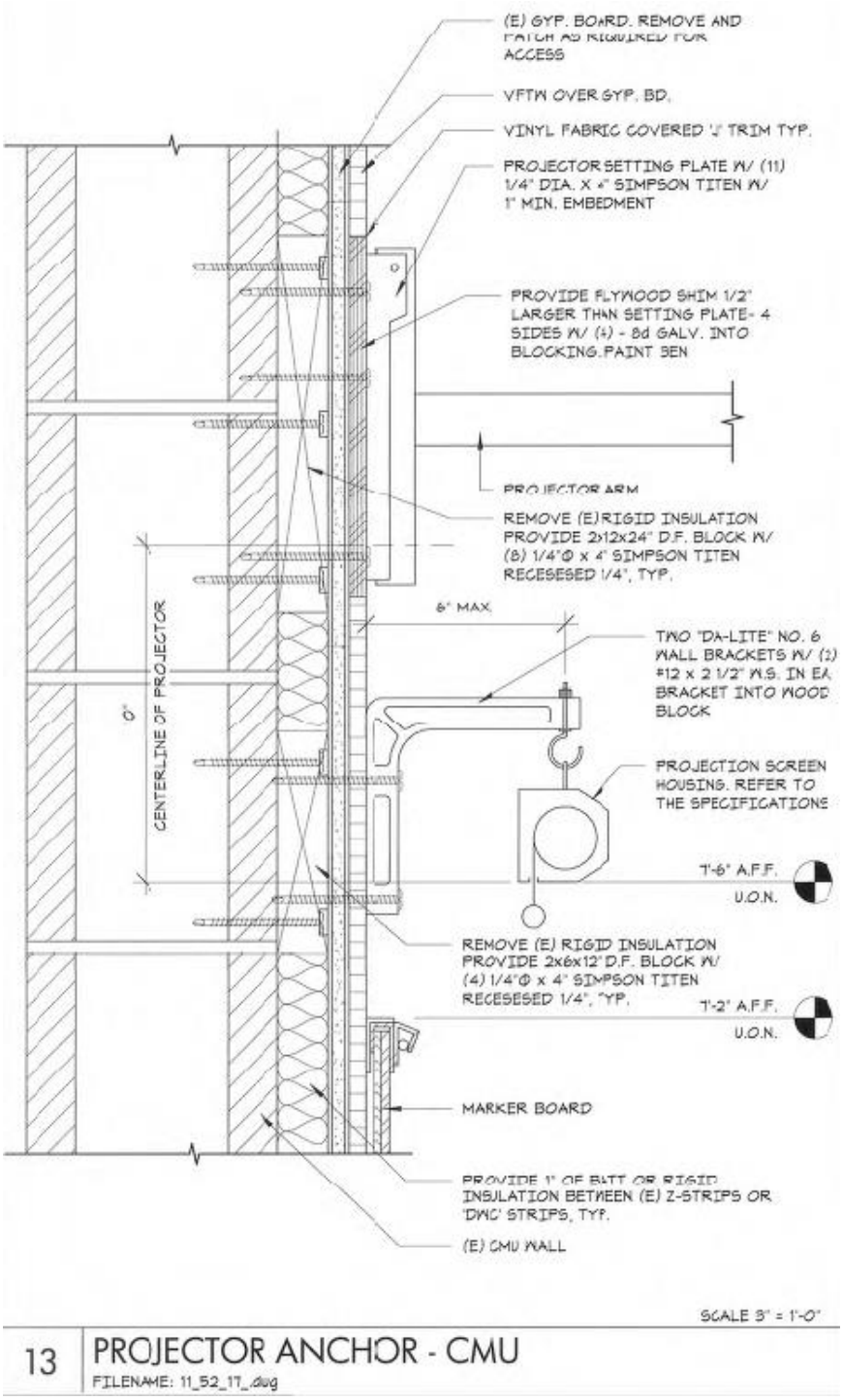
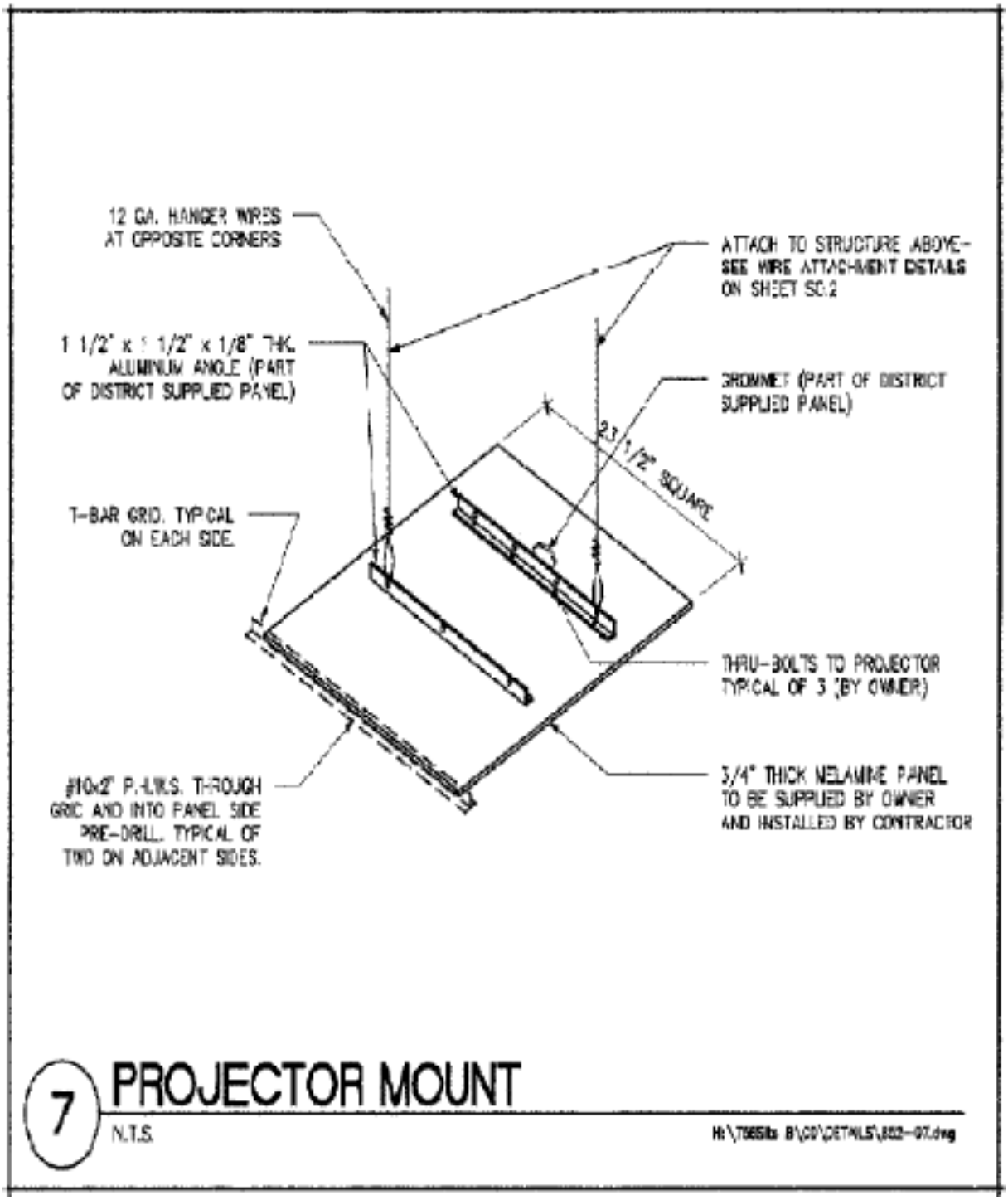
Projector Anchor – CMU (Sample)



Projector Mount (Sample)

Panel must have two drop ceiling suspension wires.



PART 11 – Intrusion Alarm

11.01 System

- The system is based on Ademco panels, keypads, and devices
- No door contacts

11.02 Telco Interconnect

- Shall be clearly identified by the CSID noted on the keypad for each COM panel.
- Each new COM panel shall have a dedicated Measured Business Line.
- 3-pair 66 block style biscuit-blocks are preferred at point of termination for COM panel phone lines (No RJ31X's).
- LUSD will only test Measured Business Line to 66 block style biscuit-block.

11.03 Wiring

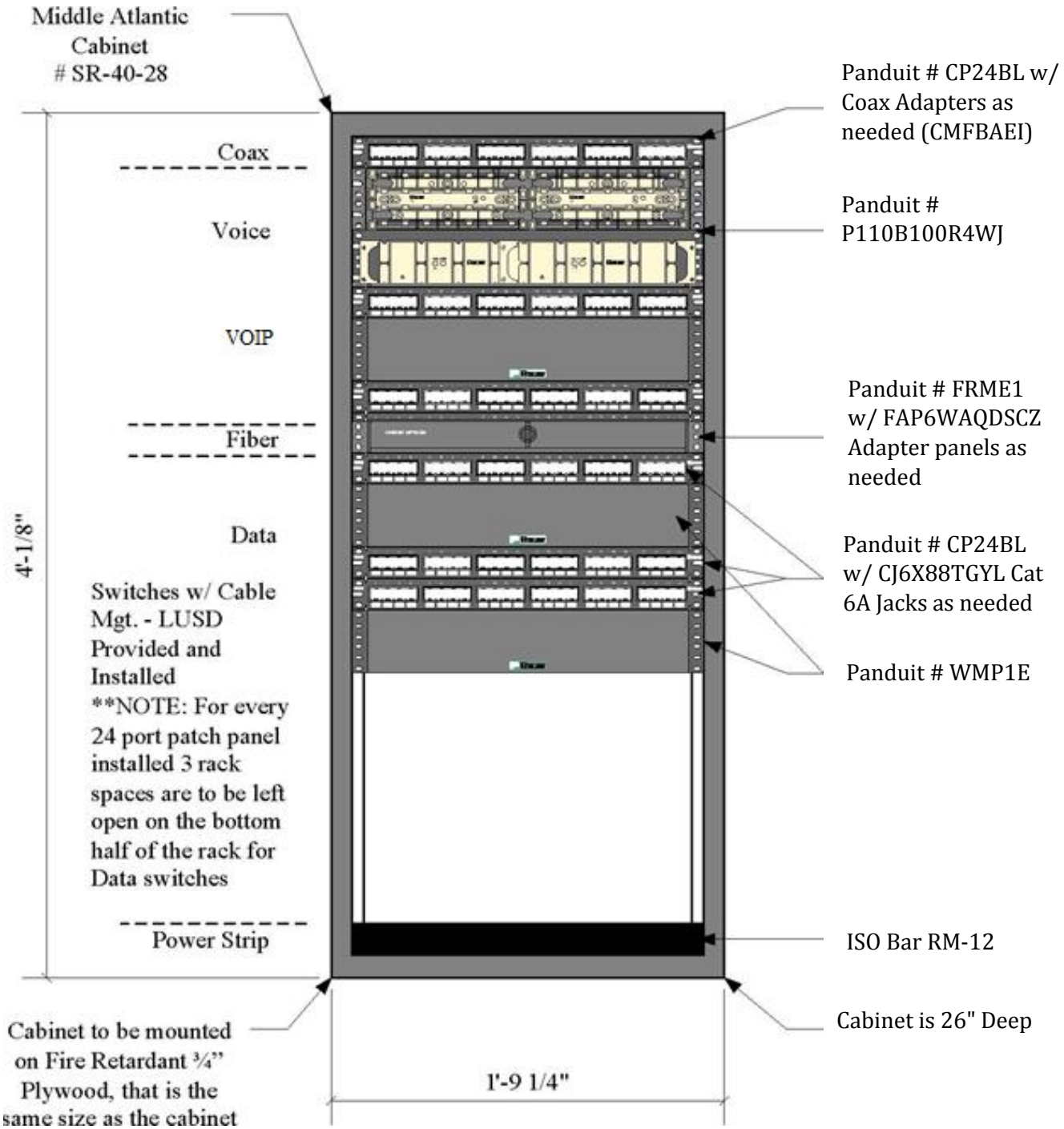
- Shall be supported by D rings, Velcro, or J hooks.
- Pathways should not be shared with data cabling.
- When overriding existing voice or data cables in a box or conduit, Technology Services must be contacted and give approval to do so.

PART 12 – Enclosures

A. LUSD IDF Layout
B. LUSD Labeling Format
C. LUSD Parts List
D. LUSD Telecommunications Jack Legend

Enclosure A - LUSD IDF Layout

The Intended layout of ALL 19-inch racks and/or patch panels need to be verified and approved by the LUSD wiring inspector of the I.S. Department before any racks, jacks, or patch panels are mounted.



Enclosure B – LUSD Labeling Format

The LUSD labeling format is a 4-part identifier that indicates the campus, type of jack, IDF location, room, and jack. Below is a key to determine the jack information and name new locations.

WW-XX-YY-ZZ

CAMPUS AND VOICE OR DATA	MDF OR IDF DESIGNATION	ROOM # OR ABBREVIATION	JACK # (TWO DIGITS)
Data = Even # (Purple) Voice = Odd # (Grey) Video = C (Coax) Card Readers = CR Camera = VS NVR = NVR See Next Page for Voice and Data numbers for each campus.	MDF = A IDF-B = B IDF-C = C etc.	West Admin Office = WA East Admin Office = EA Library = Lib 15 = 15 M2 = M2 etc. Determined by Campus Architect or IT Staff.	01 (1st Jack in Room) 02 (2nd Jack in Room) 03 (3rd Jack in Room) etc. Starts in corner of room and counts clockwise. New jacks increase from last jack.

VOICE EXAMPLE: The first voice jack in room M1 = "09-G-M1-01"

DATA EXAMPLE: The first data jack in room M2 = “10-G-M2-01"

DATA EXAMPLE: The first data jack in room E1 = "10-F-E1-01"

VOICE EXAMPLE: The first voice jack in room E1 = "09-F-E1-01"

DATA EXAMPLE: The first data jack in the West Admin Office = "10-A-WA-01"

CARD READER EXAMPLE: IDF Alpha ID + "CR" + IP address node # = DCR101

VIDEO SURVEILLANCE CAMERA EXAMPLE: IDF Alpha ID + "VS" + IP address node # = BVS101

NVR SECURITY EXAMPLE: IDF Alpha ID + "NVR" + IP address node # = ANVR101

*Dashes do not need to be included. However, the jack number must be two numeric characters Example: “10GM201” instead of “10GM21”

MDF/IDF'S & WORKSTATIONS ALL JACKS ARE TO BE IDENTIFIED WITH THE APPROPRIATE NUMBERING SCHEME.

All numbers must be legibly written on the jacks (or 110 punch panels, etc.) with a black permanent marker and then labeled.

Enclosure B Continued – LUSD Labeling Format

Site Location	Site Numbers	
	Data	Voice
Nutrition Services Operations Center	3	4
Bear Creek High	6	5
Lodi High	8	7
Tokay High	10	9
M&O	12	11
Julia Morgan	14	13
Liberty High	16	15
Plaza Robles High	18	17
Delta Sierra	20	19
Lodi Middle	22	21
Millswood	24	23
Woodbridge	26	25
Morada	28	27
Beckman	30	29
Clairmont	32	31
Creekside	36	35
Davis	38	37
Henderson	40	39
Heritage	42	41
Houston	44	43
John Muir	46	45
Lakewood	48	47
Larson	86	85
Lawrence	50	49
Live Oak	52	51
Lockeford	54	53
Lois Borchardt	56	55
Nichols	58	57
Oakwood	60	59
Parklane	62	61
Reese	64	63
Sutherland	66	65
Tokay Colony (Turner Academy)	68	67
Turner School	70	69
Victor	72	71
Vinewood	74	73
Wagner Holt	76	75
Washington	78	77
Christa McAuliffe	80	79
Westwood	82	81
Heritage Int.	84	83
Children's Center	86	85
Transportation	88	87
Warehouse	90	89
Lincoln Tech	92	91
Mosher	94	93
Elkhorn	96	95
Serna	98	97
Silva	100	99
Podesta	134	133

Enclosure C – Approved LUSD Parts List

CABINET and GROUNDING			
Manufacturer	**Part Number**	**Description**	**Location**
Middle Atlantic	SR-40-28	40 space, black, 90" tall swinging cabinet	MDF/IDF
Middle Atlantic	Lace-44LP	Vertical Lacing Bar	MDF/IDF
Middle Atlantic	QFAN	Accessory Quiet fan for cabinet	MDF/IDF
Panduit	RGW-100-1Y	Paint piercing grounding washer kit	MDF/IDF
Panduit	RGS134-1Y	Rack Grounding Strip Kit	MDF/IDF
Panduit	RGEJ624PHY	Equipment Jumper Grounding Kit, 24" jumpers	MDF/IDF

FIBER PRODUCTS			
Manufacturer	**Part Number**	**Description**	**Location**
Panduit	FRME4	Holds up to 12 FAP or FMP adapter panels	MDF
Panduit	FREM3	Holds up to 9 FAP or FMP adapter panels	MDF
Panduit	FREM2U	Holds up to 6 FAP or FMP adapter panels	MDF
Panduit	FRME1U	Holds up to 3 FAP or FMP adapter panels	IDF
Panduit	FAP3WAQDSC	OM4 SC FAP loaded with 3 SC duplex coupler	MDF/IDF
General Cable	BL0061PNU	OM4 6F 50um MM TB OFNP	Backbone
General Cable	AP0061PNU	OS2 6F SM TB OFNP	Backbone
General Cable	BL0061PNU	OM4 6F 50um MM TB OFNP	Backbone
General Cable	BL0061ANU.BK	OM4 6F 50um MM TB OFNP I/O	Backbone
General Cable	AP0061ANU.BK	OS2 6F SM TB OFNP I/O	Backbone
General Cable	BL0064M1A-DWB	OM4 6F 50um MM LT SINGLE JKT	Backbone
General Cagle	AQ0064M1A-DWB	OS2 6F SM LT SINGLE JKT	Backbone

WIRE MANAGMENT			
Manufacturer	**Part Number**	**Description**	**Location**
Panduit	WMP1E (NM2)	Wire Management to be mounted between every 24-port patch panel	MDF/IDF
Panduit	WMPSE (NM1)	Wire Management to be mounted between every switch like component	MDF/IDF

Enclosure C Continued – Approved LUSD Parts List

TWISTED PAIR PRODUCTS			
Manufacturer	**Part Number**	**Description**	**Location**
Panduit	CP24BL	24 Port Mini-Com patch panel	MDF/IDF
Panduit	CP48BLY	48 Port Mini-Com patch panel (Metal panel)	MDF/IDF/WS
Panduit	CPPL24WBLY	24 Port Mini-Com modular patch panel (Plastic)	MDF/IDF/WS
Panduit	FP6X88MTG	TX6A™ Category 6A UTP Field-Term RJ45 Plug	MDF/IDF/WS
Panduit	CJ6X88TGIG	GRAY CAT6A MOD JACK (for Server Locations)	MDF/IDF
Panduit	CJ6X88TGYL	Yellow 6A Mini-Com Jack (Access Control)	Access Control System
Panduit	CJ6X88TGWH	White 6A Min-com Jack (user Station)	WS
Panduit	CJ6X88TGBU	Blue Cat 6A Mini Com Jack (for VoIP)	MDF/IDF/WS
Panduit	CJ6X88TGGR	Green Cat 6A Mini Com Jack (for Intercom)	MDF/IDF/WS
Panduit	CJ6X88TGEI	Electric Ivory Cat 6A Mini Com Jack	WS
Panduit	UTP6XXYL	Non- Shielded Yellow 6A Patch Cord, XX is length	MDF/IDF/WS
Panduit	UTP28X*YL	Cat.6A, 28AWG, Yellow, * = length: 1,3,5,7,19,14 feet	MDF/IDF/WS
Panduit	P110B100R4WJ	19" Rack Mount Panel w 2 100pr 110 punch-down blocks and jumper troughs	MDF/IDF
Panduit	P110CB4-X	4pr 110 Connecting Clips 10pk	MDF/IDF
Panduit	P110CB5-X	5pr 110 Connecting Clips 10pk	MDF/IDF
General Cable	7133825	Purple CAT 6A CMR (for Data at workstations)	Horizontal
General Cable	7133819	Blue CAT 6A CMR (for Server drops, closets) – Wi-Fi	Horizontal
General Cable	7131823	Green CAT 6A CMP (for Intercom drops, closets)	Horizontal
General Cable	7131823	Green CAT 6A CMP (for Server drops, closets)	Horizontal
General Cable	7133767 (7133803)	Gray CAT 6 CMR 4 Pair wire (for Voice)	Horizontal
Commscope	CM-00424SMX-CF6A-02	SystiMax, Black CAT 6A OSP (Voice and Data)	Horizontal
General Cable	2131550E	Cat.5e, 25 pair CMP, White	MDF/IDF
General Cable	2133269E	Cat.5e, 25 pair CMP, Gray	MDF/IDF
Superior Essex	04-097-31	CAT 5 25 Pair OSP	MDF/IDF

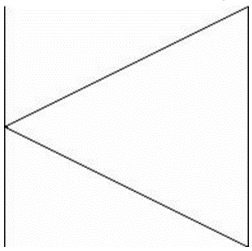
Enclosure C Continued – Approved LUSD Parts List

COAX PRODUCTS			
Manufacturer	**Part Number**	**Description**	**Location**
Belden	6139B8	RG-11 Coax Dou-foil w/100% Shielding Plenum	Backbone
Belden	1523A	RG-11 Coax Dou-foil w/100% Shielding Non-Plenum	Backbone
Belden	1525A	RG-11 Coax Dou-foil w/100% Shielding OSP	Backbone

RACEWAY PRODUCTS			
Manufacturer	**Part Number**	**Description**	**Location**
Panduit	LD-5	Raceway for Data/Wi-Fi/Access Control System	Wi-Fi/ACS
Panduit	LDP-10	Raceway for Data/Voice/Coax	WorkStation
Panduit	T-70	Raceway for Comp. Lab That will accept communications and power	WorkStation
Panduit	CMBEI-X	Mini-Com Blank Ivory	WorkStation
Panduit	CFPSE4EI	Executive Faceplate Sloped	WorkStation
Panduit	JBX3510EI-A	Single gang Junction box	WorkStation

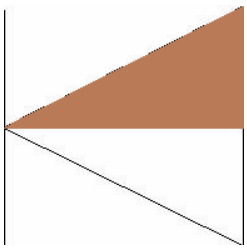
Enclosure D - LUSD Telecommunications Jack Legend

Data/Voice



2/1

Wi-Fi



W1/0

This example has "2" for two data and "1" for one voice.

Data only *would be d/0 with "d" as the number of data jacks.*

Voice only *would be 0/v with "v" as the number of voice jacks.*

Category 6A cabling/jacks are indicated by a "W" preceding the number (or jack count)

Jack Color Code		
White - Wi-Fi		Electric Ivory - Data
Black - Voice		Yellow - Access Control
Blue - VOIP		Green - Intercom

Enclosure E – Data/Camera System Install Inspection Check List - Sample

Data/Camera System Install Inspection Check List

	Yes	No	N/A or Undetermined
1. Does the work done match the scope of work?	☐	☐	☐
Notes:			
2. Does the Visio match what was installed?	☐	☐	☐
Notes:			
3. Are all of the test results completed?	☐	☐	☐
Notes:			
4. Cabinet			
a. Is it mounted to the backboard and firmly affixed?	☐	☐	☐
b. Does the cabinet block anything and open?	☐	☐	☐
c. Is there dedicated 115 VAC?	☐	☐	☐
d. Are the cables bundled neatly and labeled in the back?	☐	☐	☐
e. Are all of the parts used in the Lodi USD specifications?	☐	☐	☐
f. Is everything labeled in front to Lodi USD specifications?	☐	☐	☐
Notes:			
5. Wiring			
a. Spot check the wire in the ceiling – is it supported every 4' to 8 ' per EIA/TIA?	☐	☐	☐
b. No black tape is to be used. Is there any black tape?	☐	☐	☐
c. No zip ties are to be used. Are there any zip ties?	☐	☐	☐
d. Is the pipe/raceway not overfilled per EIA/TIA?	☐	☐	☐
e. Was slack-loop provided?	☐	☐	☐
Notes:			
6. Stations			
a. Is each device labeled and have a wraparound label on the wire as per EIA/TIA?	☐	☐	☐
b. Is each device mounted with approved hardware?	☐	☐	☐
Notes:			

Enclosure E – Data/Camera System Install Inspection Check List – Sample Continued

	Yes	No	N/A or Undetermined
7. Pipe/Raceway			
a. Is all raceway Panduit?	☐	☐	☐
b. Are all pipe runs are rigid when below 8' or on the roof as per Lodi USD specifications?	☐	☐	☐
c. Does the firewall have 3' on each side of the wall as per building code?	☐	☐	☐
d. No set screw fitting shall be used. Is there any set screw fitting?	☐	☐	☐
e. Whenever pulling into a pipe/raceway, a pull string is required per Lodi USD specifications. Is there a string?	☐	☐	☐
Notes:			
8. Penetrations			
a. Do penetrations to an outside wall have a nipple and is it sealed with silicon on both the outside and inside?	☐	☐	☐
b. Were the penetrations approved by the Lead and Asbestos Manager?	☐	☐	☐
Notes:			
9. Does the Site Administrator approve and are they happy?	☐	☐	☐
Notes:			
Additional Notes:			

Enclosure F – Projector System Install Inspection Check List - Sample

Projector System Installation Inspection Check List

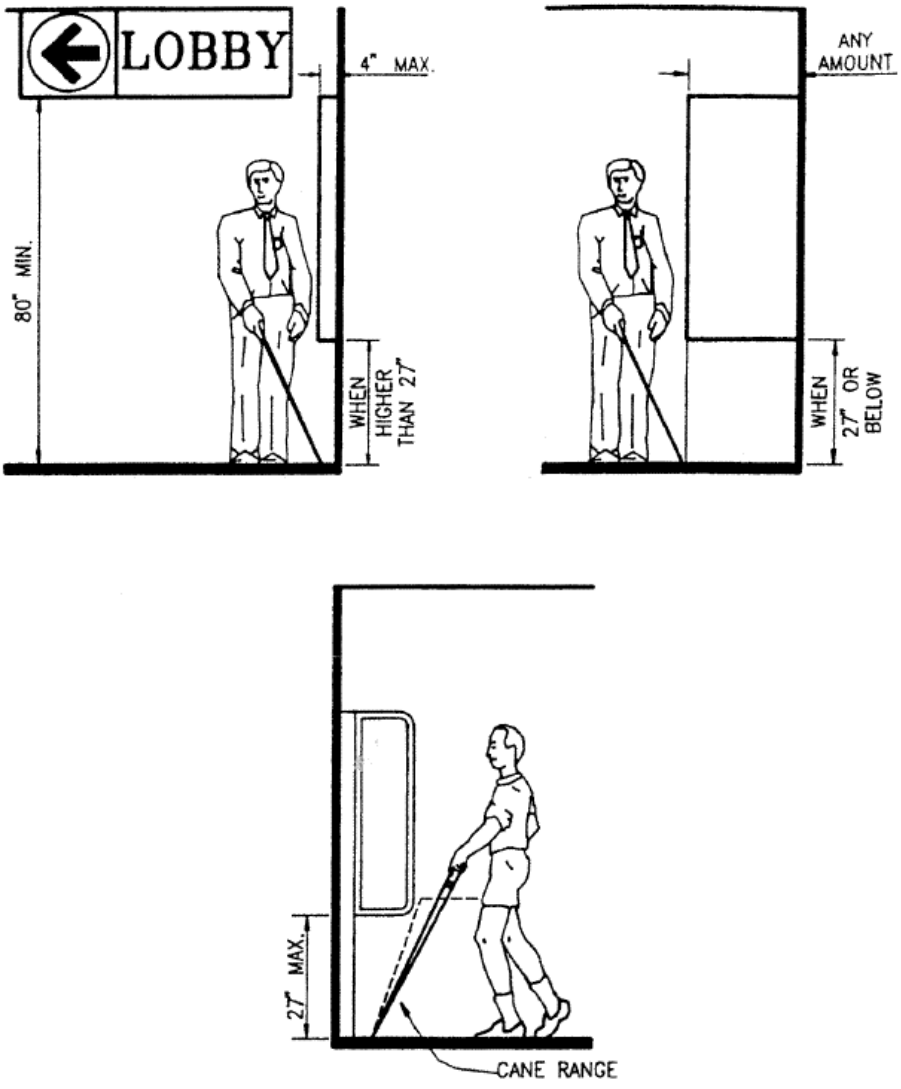
1.	**Does the work done match the scope of work?**	☐	Yes	☐ No
	Notes:			
2.	**Does the Visio match what was installed?**	☐	Yes	☐ No
	Notes:			
3.	**Are all of the test results completed?**	☐	Yes	☐ No
	Notes:			
4.	**SmartBoard**			
	a. Is existing whiteboard re-mounted correctly w/ white block style trim butted against end-cuts?	☐	Yes	☐ No
	Notes:			
5.	**Projector**			
	a. Is it mounted to the backboard and firmly affixed (back-board reaches studs)?	☐	Yes	☐ No
	b. Is it ceiling mounted in an approved manner (2 T-bar rods per mount)?	☐	Yes	☐ No
	c. Is there dedicated 115 VAC?	☐	Yes	☐ No
	d. Are the cables bundled neatly in the raceway?	☐	Yes	☐ No
	e. Are all of the parts used in the Lodi USD specifications?	☐	Yes	☐ No
	f. Is everything labeled in front to Lodi USD specifications?	☐	Yes	☐ No
	Notes:			
6.	**Wiring (if it is run in the ceiling)**			
	a. Spot check the wire in the ceiling – is it supported every 4' to 8 ' per EIA/TIA?	☐	Yes	☐ No
	b. No black tape is to be used. Is there any black tape?	☐	Yes	☐ No
	c. No zip ties are to be used. Are there any zip ties?	☐	Yes	☐ No
	d. Is the pipe/raceway not overfilled per EIA/TIA?	☐	Yes	☐ No
	e. Was slack-loop provided?	☐	Yes	☐ No
	Notes:			

Enclosure F – Projector System Install Inspection Check List – Sample Continued

7. Stations (if Cat5/6 wire and applicable)			
a. Is each device labeled and have a wraparound label on the wire as per EIA/TIA?	☐ Yes	☐ No	
b. Is each device mounted with approved hardware?	☐ Yes	☐ No	
Notes:			
8. Pipe/Raceway (if applicable)			
a. Is all raceway Panduit?	☐ Yes	☐ No	
b. Are all pipe runs rigid when below 8' or on the roof as per Lodi USD specifications?	☐ Yes	☐ No	
c. Does the firewall have 3' of pipe on each side of the wall as per building code?	☐ Yes	☐ No	
d. No set screw fitting shall be used. Is there any set screw fitting?	☐ Yes	☐ No	
e. Whenever pulling into a pipe/raceway, a pull string is required per Lodi USD specifications. Is there a string?	☐ Yes	☐ No	
Notes:			
9. Penetrations (if applicable)			
a. Do penetrations to an outside wall have a nipple and is it sealed with silicon on both the outside and inside?	☐ Yes	☐ No	
b. Were the penetrations approved by the Lead and Asbestos Manager?	☐ Yes	☐ No	
Notes:			
10. Does the Site Administrator approve and are they happy?	☐ Yes	☐ No	
Notes:			
Additional Notes:			

Inspected by: _____ Print Name: _____ Date: _____

Enclosure G – Accessible Requirements for Cabinet Mounting
(Images below for reference only)



WALKING PERPENDICULAR TO WALL

THESE DIAGRAMS ILLUSTRATE THE SPECIFIC REQUIREMENTS OF THESE REGULATIONS AND ARE INTENDED ONLY AS AN AID FOR BUILDING DESIGN AND CONSTRUCTION.

FIGURE 11B-7A—PROTRUDING OBJECTS

1–134.61

1305 E. Vine Street

Lodi, California 94513

(209) 953-8111

Telecommunication Specifications and Installation Standards

Edited: 11-08-2019

Table of Contents

Part 1 – General

1.01 Introduction

The following specifications are intended to assist in the development of a telecommunications system for accommodating present and future technologies within the Lodi Unified School District. They provide a set of instructions and materials needed to install a telecommunications system within parameters set by industry standards. The requirements for the structured cabling systems within the facilities are continued in this document.

1.02 Work Included

- Contractor shall design and provide all materials in order to install a complete and functional data/telecommunications and cable television infrastructure.
- Only ONE Contractor shall be responsible for providing a complete and functional infrastructure, including necessary components and documentation.
- Documentation will include MS Visio drawings showing room drop locations, cable runs, and conduit pathways. Data, voice, and coax cables are all part of the same infrastructure and shall all be installed, terminated, labeled, and documented by only one contractor (no exceptions).

1.03 Contractor Qualifications

- Must be a Panduit Certified Installer and have an Anixter account in good standing.
- Must possess a valid C-7 California State contractor's license. This license must have been issued 2 years prior to the date of the bid. No other license classification is acceptable.
- Must be able to prove to the satisfaction of LUSD that they have significant experience in the installation of fiber optic systems.
    - Proper installation of fiber optic cable
    - Fiber termination
    - Interconnecting equipment
    - Test procedures with appropriate documentation.
- Must prove employees have been trained in the proper handling and cleanup of small quantities of lead paint. Contractor must contact Technology Services, prior to any work starting for an updated list of sites that require drilling work to be handled by a dedicated asbestos vendor. In the event Contractor encounters asbestos, stop work and notify district.
- Must be in trade of installing telecommunication systems, continuously, for a period of at least 3 years prior to the date of this bid.

- Must submit at least one project reference for each of the three years prior to the date of this bid.
- Must provide a minimum of 3 references supporting a claim of experience for a similar project within 2 years prior to this bid. These project references shall contain the starting and ending contract price, the project foreman or superintendent's name, and the name, address, and telephone number of a project contact.
- Must also provide a list of key installation personnel, their hire dates and a resume of their experience. Key installation personnel shall include at least one foreman and two journey level installers or technicians. By submitting the names of these personnel, contractor is committing them to the execution of the project outlined in this specification.

1.04 Requirements

Drawings and General Provisions of the contract, including General and Supplementary Conditions and Division 1 Specifications Sections shall apply to work specified, in this Section.

Rules and Regulations

All work and materials shall be in full accordance with the latest rules and regulations of the following:

- EIA/TIA Standards
- BICSI Standards
- NEC Standards
- Title 24 (California Code of Regulation)
- All Local Codes
- LUSD Standards
- NFPA Standards
- ADA Requirements
- Safety, Health and Environmental Standards

Permits, Fees, and Inspections

Contractor shall be responsible for all fees and permits required to any governmental agency having jurisdiction over the work of this section. Contractor shall arrange inspections required by any local ordinances during construction. Upon completion of the work, satisfactory evidence shall be furnished to LUSD to show that all work has been installed in accordance with the code(s).

Examination of Site

Contractor shall be held to have visited the site and been satisfied with the conditions under which the work is to be performed. Contractor shall check existing conditions that may affect

the work. If the contractor retains services of other firms, those firms shall investigate existing systems and determine labor and other materials required to add devices or modify systems. No allowance shall subsequently be made on the contractor's behalf, for any extra expense resulting from a failure or neglect to discover conditions affecting the work.

Cleaning and Cleanup

All work areas shall be cleaned to remove all dust, dirt, grease, paint, or other marks. All electrical equipment shall be left in a clean condition inside and out, satisfactory to LUSD. Buildings and premises will be kept free from accumulated waste materials, rubbish and debris resulting from work. Upon completion of work: tools, appliances, surplus and waste materials, rubbish and/or debris will be removed and/or legally disposed of offsite.

Interruption of Services

- The underground route may run through areas of existing underground irrigation, signal, power, gas, water and sewer.
- Contractor must take precautions to avoid damaging/killing the root systems of existing trees. Contractor shall hand-dig as necessary to prevent disruption to existing systems, and make all repairs as required if damage occurred, at no additional cost to LUSD.
- LUSD will make every effort to assist contractor in locating existing underground routes. However, contractor will be required to pothole and inspect as needed. Contractor is responsible for USA surveys (Underground Service Alert).
- Power and signal services to existing buildings and related circuits are to remain in operation and shall not be interrupted, except by specific written approval from LUSD.
- If it is deemed necessary to shutdown circuits for the installation of new work, such shutdowns shall be scheduled with LUSD who may at its choosing, have a representative present during shutdown. Shutdowns shall be scheduled "after hours" or on weekends when an interruption would not cause a disturbance to school activities. Any accidental interruption of service to circuits or equipment as a result of work performed by the contractor shall be restored immediately in a manner acceptable to LUSD, at the contractor's expense.

Cooperation and Coordination

Contractor shall be solely responsible for instituting and maintaining safe working conditions for the project area under construction. Noise, dust, and other nuisance control measures will be implemented as effectively as possible. Work will be executed at a time when the space required by this installation is accessible. Adequate barrier and trench covers will be provided, and no equipment will be left unattended, ensuring the safety of students and staff.

Inspection

Contractor shall cooperate with the LUSD Designer/Inspector and provide assistance at all times for inspection of the work performed under this contract. Work that will be contained behind or

under access covers, ground covering, or similar impediments shall be left exposed until inspected by LUSD. Contractor shall remove covers, operate devices, or perform any reasonable work that, in the opinion of LUSD, will be necessary to determine the quality and adequacy of the work.

Manufacturers Direction

Contractor shall follow manufacturer's directions that cover points not included in the drawings or specifications.

Workmanship

Contractor shall take all precautions necessary to protect existing structures. Structures or items to remain that are damaged during the course of work, shall be repaired or replaced by the contractor. Good workmanship shall be evident by the proper installation of all materials and equipment. Equipment shall be level, plumb and true with the structure and other equipment. All materials shall be firmly secured in place, adequately supported and permanent.

Contractor's Supervision

Contractor shall personally, or through an authorized and competent representative, constantly supervise the work from its commencement to its completion and acceptance. Contractor shall have the same foreman and workers on the job from its commencement to it completion, as much as possible. LUSD shall be notified of any personnel changes and supplied with the proper documents for any new personnel (I.e. lead certificates). All non-LUSD personnel shall be identified either by an ID tag or uniform with a company logo when on school grounds.

Scheduling of Work

Due to its nature, this work will have to proceed with a definite sequence of operations to minimize outages and continue facilities to all areas. The site will remain in operation during the work, and the contractor shall make every effort to maintain required services.

Guarantees

- Acceptance of the contract for this work includes this guarantee: Contractor guarantees that he has performed the work in accordance with the contract documents. Contractor also agrees to replace or repair, as new, any defective work, materials, or parts which appears within 4 years of final payment. LUSD will make the final determination of whether any defects are the responsibility of the contractor to replace or repair.
- Warranties, guarantees and certificates shall be provided for equipment and materials furnished and installed, as of the date of final payment and be delivered to LUSD. A set of "As Built" Visio drawings and test results for all installed cabling shall be provided to LUSD, before the project will be considered complete.

- Panduit Pan-Net Performance Guarantee - Contractor shall provide a 25 year application performance warranty for all Panduit Pan-Net copper cable and connectivity products. The system must be installed to meet all TIA/EIA commercial building wiring standards and installed per appropriate Panduit instruction sheets. If any Panduit product fails to perform as stated above, Panduit will provide new components at no charge.

1.05 Submittals and Substitutions

LUSD has evaluated and approved all the approved items listed in the LUSD Parts List. Substitutions to this list are possible but must be approved before a bid is accepted. Substitutions must be submitted to LUSD 10 working days before a bid is due and will either be approved or rejected 5 working days before a bid is due. The substitution documentation shall include the comparative specification listing for the approved product and the proposed product, including a complete listing of the characteristics of the equipment in the specification.

Within 10 working days after the date of the award of the contract, contractor shall submit to 3 copies of a complete submission to LUSD for review. The submission shall consist of 5 major sections, with each section separated with index tabs:

1. Section 1 shall be the Index, which will include the project title, address, name of the firm submitting the proposal and name of the architect. Each page in the submission shall be numbered chronologically and summarized in the index.
2. Section 2 shall include a copy of the contractor's valid C-7 California State Contractor's License, documentation outlined in Section 1.02 and a list of instrumentation to be used for system testing.
3. Section 3 shall contain the pre-approved substitution submittal and the written approval from LUSD. If no substitutions are planned, it will be noted in this section as well.
4. Section 4 shall contain samples of proposed cable markers and labeling.
5. Section 5 shall contain a complete and detailed satellite cable count, workstation count, bill-of-materials and Visio drawing showing proposed work ("As Planned"). Any contractor failing to include all of the required information shall be deemed non-responsive and may be disqualified, at the discretion of LUSD.

PART 2 – Products and Procedures

2.01 Approved LUSD Parts List

An approved parts list is detailed in "Enclosure C" of this document. Preferred education pricing provided for this list is available through Anixter Inc. (1-800-ANIXTER, reference Lodi Unified).

All products must be selected from the "LUSD Parts List," unless substitutions have been approved by LUSD.

2.02 Labeling

- Shall follow the "LUSD Labeling Format" specified in Enclosure B, with the exception of workstation cables (i.e. patch cords).
- Shall never be hand-written.
- Shall be machine printed on clear or opaque tape, stenciled onto adhesive labels, or type written onto adhesive labels.
- Shall have font that is at least 1/8" in height, block characters, and legible.
- Shall have text that is of a color contrasting with the label so that it may be easily read. If labeling tape is utilized, the font color shall contrast with the background.
- Patch panels shall exhibit workstation numbers, in a sequential order, for all workstations served by the MDF or IDF.
- Shall be completed before testing commences. Labeling discrepencies found during inspection will void all test results.

2.03 Copper Backbone Cable

Description: The backbone cabling used to connect all IDF's to the MDF, used for voice/data.

- Shall be Category 5e and installation must be in compliance with all EIA/TIA standards.
- The number of available wire pairs to each IDF must account for a minimum of 2 pairs per classroom. A minimum of 25 pairs of cable shall be used to any building encompassing an office. Each pathway, upon the population of cable, shall have enough wire pairs to accommodate all existing and future IDF's in that pathway's route.
- Cable must be rated for the environment that it will be installed in, such as plenum, riser or outdoor rated.
- Only Cat 5e 110 punch blocks will be allowed for terminations. Backbone pairs shall be terminated at the top left of the blocks installed in the IDF.
- Each copper backbone cable shall be machine labeled and printed EIA/TIA 606 Section 8 compliant at each end with its respective IDF number/letter. All binder groups shall be tied off with their respective identifying ribbon at every breakout point.

2.04 Wi-Fi Cable

Description: Cabling between Wi-Fi jacks and IDF/MDF's.

- Shall be blue Category 6A - 802.3bt Type 4 and installation must be in compliance with all EIA/TIA standards.
- Each blue cable shall be terminated at both ends with white Panduit Cat 6A RJ45 jacks.
- Panduit Executive style faceplate shall be used at access point location.
- Wireless access points shall be in every classroom, common areas, and exterior for full campus coverage.

2.05 Workstation Cable

Description: Cabling between workstations and IDF/MDF's.

- Installation must be in compliance with all EIA/TIA standards.
- Each standard classroom must have a minimum of three workstations:
    - Each workstation shall consist of 2 purple Cat 6A cables and 1 grey Cat 6A cable.
    - Workstations shall be disbursed around the room and not within 10 feet of the main door.
    - Each purple cable shall be terminated at both ends with a beige Panduit Cat 6A RJ45 jacks.
    - Each gray cable shall be terminated, with slack loop at IDF/MDF location with a Cat 6A Blue RJ45 for VOIP and 110 punch block for non-VOIP. District will identify where to use VOIP and where to non-VOIP. Workstation terminates with a Blue Panduit Cat 6A RJ45 jack for Voip and a Cat6A Black RJ45 for non-VOIP.
- Panduit LDP series or Panduit T-70 series (both Cat 6A compliant) raceway shall be used on interior walls where raceway is required for station drops. Panduit T -70 shall be used for computer labs and have access points every 5 feet (an access point shall consist of one duplex outlet 110 VAC receptacle and two beige Cat 6A data jacks).
- Copper station cabling may run outside of conduits and above T-Bar suspended ceilings when available. Cables installed in this fashion must follow these guidelines:
    - Run horizontally in bundles and tie down neatly without the use of zip-ties.
    - Be well clear of any light fixtures or other electrical appliances that may affect data transmissions.
    - Have their own support system, such as J-Hooks or a cable tray
    - Cable tray shall be a minimum of 12"x4" wire mesh and UL listed.
    - Cannot be supported by other items in the ceiling such as conduit, ducts and ceiling grids.

2.06 Intercom Cable

Description: Cabling between Intercom Speakers/Horns and IDF/MDF's.

- Green Cat6A cable shall be used for new IDF's/buildings.

- Indoor Speakers:
  - Indoor speakers shall have a Green Jack at the patch panel and at designated indoor speaker locations using a Panduit executive faceplate.
  - Locations shall be 18 inches away from Access Points , 4 inches below ceiling, and 4 feet away from HVAC vents.
- Outdoor Horns:
  - Shall have a green Jack at the patch panel and a Panduit Field Terminable RJ45 plug in a dual gang double-deep weatherproof bell box.
  - Bell boxes shall be 4 inches away from ceilings, soffits, other devices, etc. and be protected with a wire cage, allowing protected interior space of 14 (h) x 14 (w) x 16 (d) or more. Note: Outdoor horns should be used in gyms, locker rooms, multi-purpose rooms, and other noisy areas.

2.07 Access Control & Cameras

Description: Cabling between cameras or access control devices and IDF/MDF's.

- Yellow Cat6A cable shall be used with yellow jacks.
- Access Control:
  - Shall be terminated with a yellow jack at each end of cable.
- Cameras:
  - Camera location shall be terminated with a Panduit Field Terminable RJ45 plug in a flush mount four square box w/ a single gang mud ring or an 8x8 weather tight NEMA rated box with screw on lid.
  - Cameras should be mounted in locations shielded from the sun when possible.

2.08 Promethean Boards/LCD Displays

Description: Cabling between Promethean Boards/Displays and IDF/MDF's.

- Purple Cat6A cable shall be used with abeige jack.
  - Beige jack shall be mounted in a Panduit Executive faceplate, located 29 inches below the ceiling, directly above the display (unless specified otherwise).
  - HDMI receptacle/faceplate shall also be mounted below the display, 14 inches above the floor, and terminate with an HDMI cable coiled behind the display.

2.09 Fiber Inner Duct

Description: Ducting specifically manufactured to enclose and protect fiber optic cable.

- Must be used for all fiber installations, with exceptions where conduits are too small to run inner duct.
- LUSD will be notified, in writing, that conduits might be too small to run inner duct. LUSD must approve, in writing, any fiber run not in inner duct.

2.10 Fiber Distribution

Description: The backbone cabling used to connect all IDF's to the MDF.

- Only 50 um-multimode fiber (OM4) shall be used and installation must comply with all EIA/TIA standards.
- Singlmode fiber (OS2) shall be used as needed due to distances.
- Only 62.5/125 um-multimode fiber shall be used for fire alarm applications
- A minimum of 12-strand fiber shall be used from the IDF's to the MDF.
- Each fiber cable shall homerun from the IDF's to the MDF without the use of interconnects.
- Each pathway, upon the population of fiber, shall have enough fibers to accommodate all existing and future IDF's in that pathway route, and also be accompanied by a coax cable.
- SC style connectors shall be used for all fiber termination.
- All fiber strands shall be terminated and labeled at both ends with its respective IDF identifier.
- All fiber interconnect devices shall be labeled with their respective IDF identifier.
- At each location where the fiber cable is exposed to human intrusion, it shall be marked with warning tags. These tags shall be yellow or orange in color, and shall contain the warning: "CAUTION FIBER OPTIC CABLE." The text shall be black, block characters and at least 3/16" high. A warning tag shall be permanently affixed to each exposed cable or bundle of cables.

2.11 Main Distribution Facility (MDF)

Description: A location within a building or complex of buildings, where the entire telecommunications system originates. EIA/TIA-569 standards refer to the room housing the MDF as the "Equipment Room."

- Must be in compliance with all EIA/TIA standards.
- Must have fire treated ¾" plywood on all walls.
- Must have (1) 4-post rack and (2) 2-post racks in secured dedicated rooms
- Cabinets must have a dedicated power outlet mounted inside.

- Cabinet shall be load tested with no less than 200 pounds and up to rated shear strength.
- Ladder racking must be mounted on the perimeter of all walls and above cabinets.
- A Panduit wire manager must be mounted in-between every patch panel (must use one wire management panel for every patch panel).
- A 3-foot slack loop shall be required at MDF for all cables.
- MDF room sizing:
    - High School – 15'x10'
    - Middle School – 10'x8'
    - Elementary School – 9'x8'

2.12 Intermediate Distribution Facility (IDF)

Description: A location in a building that interconnects and manages the telecommunications wiring between the MDF and workstation devices.

- Must be in compliance with all EIA/TIA standards.
- Must have fire treated ¾" plywood on all walls.
- Cabinets must have a dedicated power outlet mounted inside.
- Must have (2) lockable 90" tall, 19-inch / 40 RU, front and rear swing cabinets in unsecured locations.
- Must have (2) 2-post racks in secured dedicated rooms.
- Cabinet shall be load tested with no less than 200 pounds and up to rated shear strength.
- Ladder racking must be mounted on the perimeter of all walls and above cabinets.
- Cabinets must adhere to ADA requirements. See Enclosure G
- A Panduit wire manager must be mounted in-between every patch panel (must use one wire management panel for every patch panel).
- A 3-foot slack loop shall be required at IDF for all cables.

2.13 Backboard

Description: Generally, refers to the plywood sheeting lining the walls of telecommunications facilities. Backboard may also refer to the entire wall-mounted assembly including wire management, wiring blocks, and equipment cabinets.

- Must have fire treated ¾" plywood on all walls.
- Dimensions shall be no larger than the cabinet/IDF when installed in a classroom.
- Shall be fastened to two separate wall studs with 4 lag bolts.
- Shall be no thinner than 5/8."

2.14 Grounding and Bonding

Description: Generally, refers to the grounding and bonding requirements for telecommunications rooms, including data cabinets, racks, and ladder racking systems. Strictly adhere to all Building Industry Consulting Service International (BICSI), Telecommunications Industry Association (TIA) recommended installation, best practices, codes, and standards when installing the grounding and telecommunications bonding infrastructure.

- Telecommunications Main Grounding Busbar (TMGB) shall be located in the MDF: busbar placed in convenient and accessible location and bonded by means of bonding conductor for telecommunications to building service equipment (power) ground.
    - Telecommunications Main Grounding Busbar (TMGB) shall be constructed of .25" (6.4 mm) thick solid copper bar. The busbar shall be 4" (100 mm) high and 20" (510 mm) long and shall have 30 attachment points (two rows of 15 each) for two-hole grounding lugs. The hole pattern for attaching grounding lugs shall meet the requirements of ANSI-J-STD – 607-A and shall accept 27 lugs with 5/8" (15.8 mm) hole centers and 3 lugs with 1" (25.4) mm) hole centers. The busbar shall include wall-mount stand-off brackets, assembly screws and insulators creating a 4" (100 mm) standoff from the wall. The busbar shall be UL Listed as grounding and bonding equipment.
- Telecommunications Grounding Busbar (TGB) shall be located in the IDF: interface to building telecommunications grounding system generally located in telecommunications room. Common point of connection for telecommunications system and equipment bonding to ground, and located in telecommunications room or equipment room.
    - Telecommunications Grounding Busbar (TGB) shall be constructed of .25" (6.4 mm) thick solid copper bar. The busbar shall be 2" (50 mm) high and 12" (300 mm) long and shall have 9 attachment points (one row) for two-hole grounding lugs. The hole pattern for attaching grounding lugs shall meet the requirements of ANSI-J-STD – 607-A and shall accept 6 lugs with 5/8" (15.8 mm) hole centers and 3 lugs with 1" (25.4 mm) hole centers. The busbar shall include wall-mount stand-off brackets, assembly screws and insulators creating a 4" (100 mm) standoff from the wall. The busbar shall be UL Listed as grounding and bonding equipment.

2.15 Testing and Documentation

Testing: Contractor shall test each fiber strand and each pair of twisted pair copper cable after labeling is 100% complete. LUSD reserves the right to have a representative present during testing.

- **Fiber Optics Cable**: Each strand shall undergo bi-directional testing for signal attenuation losses.
    - Test Equipment:
        - Multi-mode: Fluke DSP 4000 for equivalent.
        - Single-mode: Laser Precision TD2000 OTDR with appropriate modules, or equivalent.
    - Tests:
        - Multi-mode: Bi-directional signal attenuation at 850 and 1300 nm.
        - Single-mode: Bi-directional signal attenuation at 1310 and 1550 nm.
    - Test Criteria:
        - Signal loss less than the link loss budget as determined by the tables below.

SC Connector Pair	0.5dB
Multi-Mode Cable	
Wavelength (nm)	Maximum Attenuation (dB/km)
850	3.5
1300	1.5

Example: A link with 3 connectors and a total length of 500m should have a maximum attenuation of 3.25dB at 850nm and 2.25dB at 1300nm

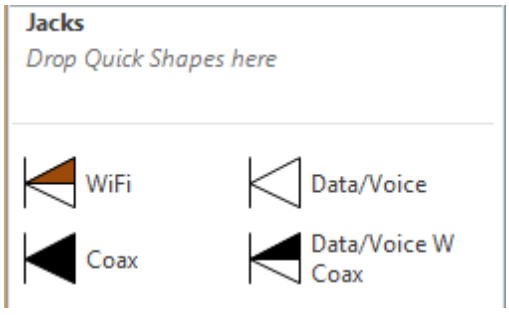
SC Connector Pair	0.5dB
Single-Mode Cable	
Wavelength (nm)	Maximum Attenuation (dB/km)
850	1.0
1300	1.0

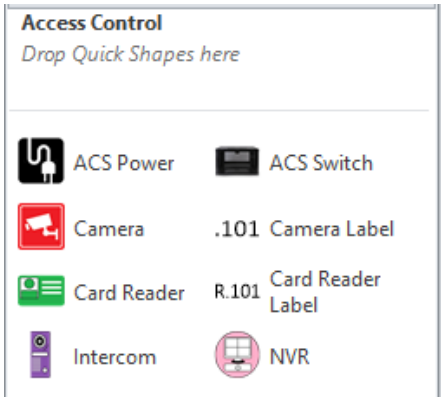
- **Workstation Cable:** Each workstation cable shall be tested from the Jack Panel to the data outlet after labeling is completed.
    - Test Equipment: Fluke DSP-4000 or equivalent.
    - Tests: Conform to EIA/TIA Standards for Category 6A.
    - Test Criteria: Tested to Category 6A for permanent link compliance.

- **Wi-Fi Cable:** Each Wi-Fi cable shall be tested from the Jack Panel to the data outlet after labeling is completed.
    - Test Equipment: Fluke DSP-4000 or equivalent.
    - Tests: Conform to EIA/TIA Standards for Category 6A and 802.3bt Type 4.
    - Test Criteria: Tested to Category 6A for permanent link compliance.

Documentation: Contractor shall provide documentation to include test results and Visio "As-Built" drawings in both soft and hard copy format.

- **Fiber Test Results**: Shall be entered onto the attached form "Fiber Test Results."
    - Only original signed copies will be acceptable.
    - Hand written results are not acceptable.
    - Copies of test results are not acceptable.
    - Test results shall be in PDF format.
- **Workstation/Wi-Fi Test Results**: Shall be provided in the form of printouts from the test equipment, as well as computer file copies on CD including the software needed to read the results.
    - Only original signed copies will be acceptable.
    - Hand written results are not acceptable.
    - Copies of test results are not acceptable.
    - Test results shall be in PDF format.
- **As-Built Drawings:** Contractor shall produce drawings while adhering to the following guidelines:
    - Always use icons from the Visio stencils provided by LUSD. Not all available icons are shown below.

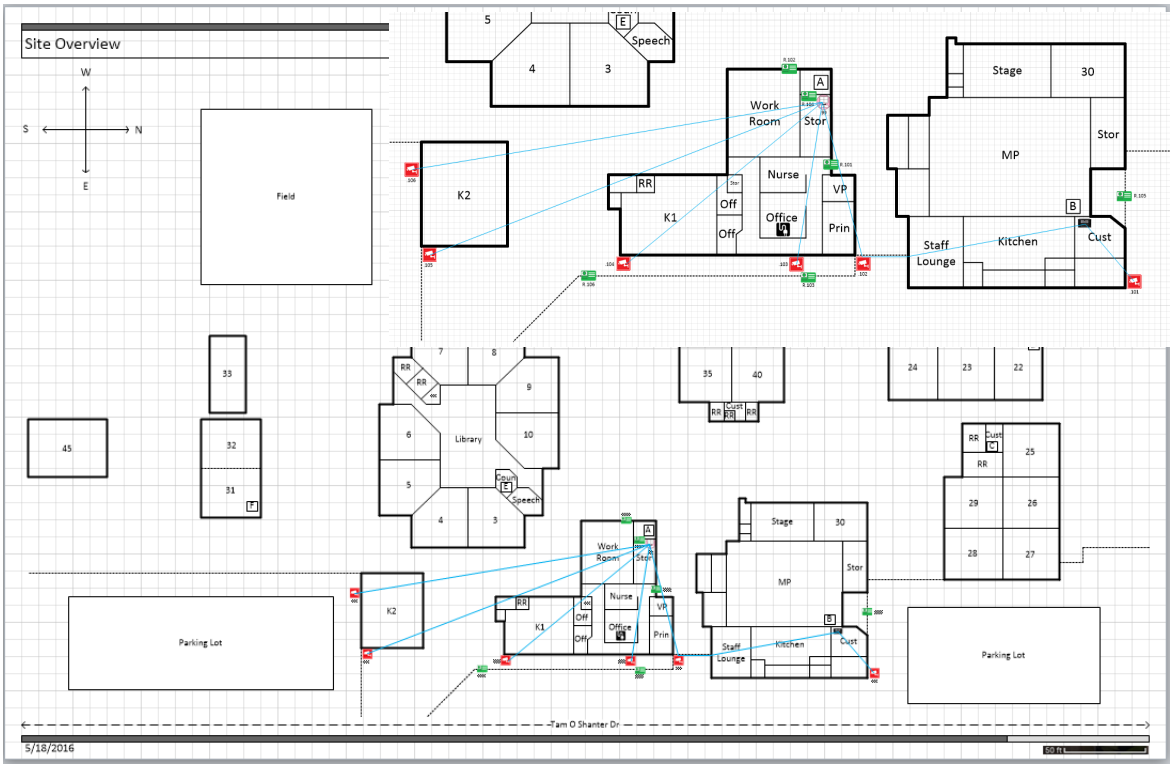




    - Depiction of backbone cable routing.

- Locations of access points, card readers, distribution cabinets, intercoms, jacks, NVRs, security cameras and workstations.
  - Active components between an end point and NVR/switch, must be documented (power injectors, switches/repeaters, hubs, etc.).
  - Access Control components must have power sources identified.
  - Jacks must be accompanied by a jack label.
  - Nodes must be accompanied by an IP address.
- Submit before final inspection for punch list. Incorrect Visio drawings are punch list items and are to be corrected before re-inspection.
- Additional copies corresponding to the appropriate IDF/MDF, shall be posted in the MDF's and IDF's.

Sample of LUSD Visio drawing



Sample of LUSD Visio Backbone

2.16 Acceptance

Acceptance of the Data Communications System, by LUSD, shall be based on the results of testing, functionality, and the receipt of documentation.

- With regard to testing, all fiber segments and workstation data cables must meet the testing criteria established in Section 2.12 above.
- With regard to functionality, contractor must demonstrate to LUSD that Gigabit Ethernet data signals can be successfully transmitted bi-directionally, from the MDF/IDF to and from a number of individual data outlets.
    - No more than 5% of the data jacks will be tested.
        - If any locations fail, an additional 5% will be tested until no more links fail.
- With regard to documentation, all required documentation shall be submitted to LUSD

PART 3 – Execution

3.01 Division of Work

Contractor shall design and install the data communications system as described in the preceding documentation. Installation shall result in a functional system. The scope of work shall include:

- All necessary conduit and raceway with a Visio drawing showing proposed cable routes, existing conduit to be used, new conduit being installed, equipment racks and approximate drop location. (Note: The EIA/TIA specifies at least 2 drops per workstation location, back to the IDF/MDF).
- Necessary trenching, backfill, replacement of landscape material, repair of damage to utilities or structures, replacement of asphalt and base, and replacement or repair to concrete work resulting from conduit or raceway installation.
- Provide and install all equipment.
- Test and document system upon completion. Copies of all other forms and enclosures shall be included.
- Supply and install all necessary materials resulting in a safe, complete and functional system. The scope of work shall be reviewed by no less than 1 person for completeness from the following departments: Facilities & Planning, Maintenance & Operations.

PART 4 – Conduit

4.01 Underground

- Contractor will use PVC schedule 40 underground, with rigid 90-degree elbows and tracer tape placed 6” to 12” over the top of the PVC portions. Elbows shall have a radius of at least 10 times the diameter of the conduit used.
- See NEC for appropriate depths and pull box sizes.
- Should be next to existing underground where possible.
- All new underground conduits shall be (2) 4” plus (1) 4” spare, PVC to support data/voice/intercom/PA. All new underground conduits shall be 2” PVC to support fire alarm.

- Areas near tree roots and other underground utilities will need to be hand dug. LUSD will identify those areas. Pull boxes are to have traffic lid covers (that say Data). The bottom will be grooved with drains installed. LUSD will provide diagrams upon request.

4.02 Aboveground

- All roof penetrations shall be approved by LUSD, before actual penetration is made.
- All exterior conduit that is accessible shall be in rigid conduit.
- A pull rope will be installed in all new and existing conduits used, including underground and interior conduit.

- Firewall penetrations will extend though the wall a minimum of 12 inches.
    - Shall be sealed around the outside with firecaulk.
    - Shall be sealed around the inside with firecaulk duct seal (the depth shall be 50% diameter of the conduit).
    - No innerduct shall be installed in a firewall penetration.
- Conduit size to be determined by EIA/TIA Standards leaving room for future expansion.
- EMT conduit shall be used in the following interior areas:
    - Gyms.
    - Multi-Purpose rooms.
    - Industrial Arts buildings.
- LB's shall not be used in new and existing conduit for data applications.
- Data/Voice conduits shall service LUSD's voice and managed IP network only.

4.03 Portable Classrooms

- All conduits to be installed on the exterior of a portable will be approved by LUSD personnel before installation.
- The center beam of a portable shall not be penetrated.

PART 5 – Concrete

- ALL concrete and asphalt repair shall be included in the scope of work and will be replaced from joint to joint (no patching, except when done temporarily for safety).
- Soft patch may not be used as a permanent patch for asphalt or concrete.

PART 6 – Change Orders

ALL change orders shall be routed to the department originating the project. Departments are typically Facilities & Planning and Technology Services and will be approved or disapproved on a case by case basis.

Approved change order form will be added to the scope of work and completed as a part of the contract.

PART 7 – Departure from Specifications

During unusual or unique situations, a departure from specifications (DFS) may be granted for specific locations and/or equipment. Approval is granted or denied in writing by Technology Services. See section 1.05 for materials substitutions.

The contractor will keep all forms on file until the warranty on the installation expires.

PART 8 – Asbestos and Lead Containing Paint Waiver

Asbestos work must be performed by M&O approved certified remediation company. Contractor must contact LUSD's Maintenance and Operations (M&O) department for a current list of Asbestos Hazard Emergency Response Act (AHERA) sites, requiring work to be performed by a remediation company.

All District sites will be considered to be a lead containing paint facility unless the area of work has been sampled and determined to be otherwise. All work including but not limited to cutting and/or hole drilling will be performed by a lead awareness trained individual that is also trained in HW collection and disposal activities. Otherwise the contractor must employee the services of an environmental company approved by M&O and certified to perform theses duties. All environmental activity will be reported to the Maintenance & Operation Structural Supervisor at (209) 331-7193 prior to the commencement of work.

PART 9 – Access Control & Video Safety

9.01 Introduction

In addition to LUSD Infrastructure Wiring Specifications, the following guidelines apply to access control card readers, security cameras, and other access devices installed within LUSD.

A site walk must also be performed with a Technology Services staff member before work begins.

9.02 JAESC/Transportation/Warehouse Specific Guidelines

- Access control devices and security cameras will be:
    - Connected directly on the LUSD network.
        - Operations, VLAN 99.
    - Powered by LUSD POE switches.
- All access control nodes should be fed from the MDF, when the run is within EIA/TIA specifications.
- NVR will be housed in the Data Center and rack mounted.

9.03 School Site Specific Guidelines

- Access control card readers and other access devices will be:
    - Connected directly on the LUSD network.
        - Operations, VLAN 99.
    - Powered by LUSD POE switches.
- Security cameras will be placed on their own private network.
- The installation location of the NVR is to be coordinated with Technology Services. Ideally, the NVR will be installed in the MDF where security and environmental conditions are monitored.
    - NVR's are to have two NICs
        - One placed on the private network
        - The other on LUSD's Operations network.
- A maximum of 1 external (public network) viewing license/user, will be allowed for each site.

9.04 District Wide Guidelines

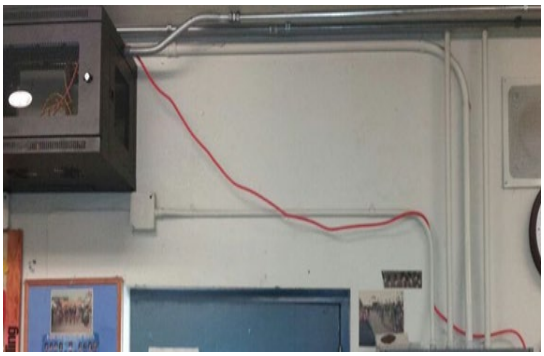
- Network Video Recorder (NVR), GateKeeper, and other full OS devices (Windows/Mac), will have the LUSD's Anti-Virus and LanRev agents installed on the systems. In addition, the device name and description are setup according to LUSD specifications.
- All power supplies shall be housed in a cabinet or communications closet.
- All cable runs shall be terminated at a jack, not a modular plug.
- No faceplate needed in ceiling jacks and utilize yellow patch cables.
- Contractor shall receive approval from LUSD before sharing any cabling pathways with existing LUSD infrastructure.
- Yellow Cat 6A cable shall be used for infrastructure cabling runs, terminated into yellow Panduit jacks.
- 19" Patch Panel required for all cabinets (both existing or new cabinets).
- Repeaters/switches used where a 90 meter run is exceeded, are to be located 5 feet from an existing MDF/IDF.
- All jacks shall be labeled in accordance with LUSD specifications.

- Technology Services Network Operations Center (NOC) shall be contacted before anything is patched into LUSD's network. The NOC will be able to verify connectivity and ensure there are no other issues.
    - NOC can be reached at: (209)331-8911.

9.05 Documentation Guidelines

- Please see section 2.12 for cable testing and Visio drawing guidelines

9.06 Power



All cabinets will have a dedicated circuit/breaker and power sources must be mounted per NEC requirements.

During the initial walk with Technology Services, power sources will be identified. If power source is not available, Technology Services will work with M&O to coordinate the installation of power source. ***Powering cabinets with extension cords is not permissible.***

Temporary Power

If active components are not operating off a dedicated power outlet/source, then it needs to be noted on the drawing with building/location. All active components mounted in a cabinet must have a dedicated power outlet within the cabinet. Do not affix raceway to walls for temporary power/extension cords.

9.07 Miscellaneous

- All wires must be labeled w/ wire-wrap style labels within 3 inches of the jacks.

- Jacks should be labeled and tested at both ends of each smallest segment according to Specifications. This type of passive cross connect is no longer allowed.

- As of July 1st, 2016, single gang boxes are not permitted in IDFs.
- This photo depicts what **not** to use anymore.
    - Jacks are now placed in a 24 port patch panel
        - Panduit part #CP24BLY

PART 10 – Promethean Boards, Displays, & A/V Projectors

10.01 Mounting Guidelines

- For new construction, DSA approved drawings on following pages must be observed by both architect and installer.
- DSA standards must be followed
- Any non-standard mounts must be approved by F&P.
- All mounts must be tagged with contractor's name and date of installation. See DSA approved mounting documentation.
- HDMI cables mounted in raceway must be able to pass a clean digital signal, with an allowance for a standard quality user patch cable to span 35 feet.
    - For example: If the user connects a 35-foot cable to the user interface/wall plate and the length of the infrastructure cable between the wall plate and the projector is 10 feet, then the total length of digital transmission is 45 feet; therefore, the installer must demonstrate that the infrastructure cable can deliver a clear picture while being extended with a 35-foot HDMI male-to-male patch cable. Sound must also be demonstrated through jacks in faceplates.
- User connection interface/wall plate will contain, one VGA, one HDMI, and one 1/8 stereo audio jack. Active faceplates will be used for VGA/HDMI connection.
- User connection interface/wall plate will contain one VGA, one HDMI, and one 1/8 stereo audio jack. Active faceplates will be used for VGA connection.

- Power will be installed high on the wall within two feet of the projector.

10.02 Short Throw Projectors

- Mounted to a plate/backboard that spans two studs.
- Secured to wall studs with 4 lag bolts.
- Head clearance from bottom of projector must be a minimum of 78 inches from floor.
- All CAT6A network connections, AV connections, and power shall be installed behind the short throw wall mount bracket.
- The use of short throw projectors shall be determined per project, and with District approval.

10.03 Ceiling Mount Projectors

- For T-Bar Ceiling: Two drop ceiling T-bar rods must be attached to opposite corners of the T-bar projector mount panels.
- For Hard Lid Ceiling: Mount must be bolted to cross-members(or ceiling joist) with no less than two bolts and some additional mounting brackets.
- All CAT6A network connections, AV connections, and power shall be installed above the ceiling mount bracket.
- The use of ceiling mount projectors shall be determined per project, and with District approval.

10.04 Promethean Boards

- 75” wall mounted Promethean Boards shall be installed in all classrooms
- Promethean Boards shall have adjustable mounts when used in Kindergarten through 6th grade classrooms.
- HMDI cabling shall be from Promethean Board to the teaching station with a CAT6A connection. An additional HMDI connections shall be installed directly below the board with a CAT6A connection.

10.05 Multipurpose Rooms/Gyms

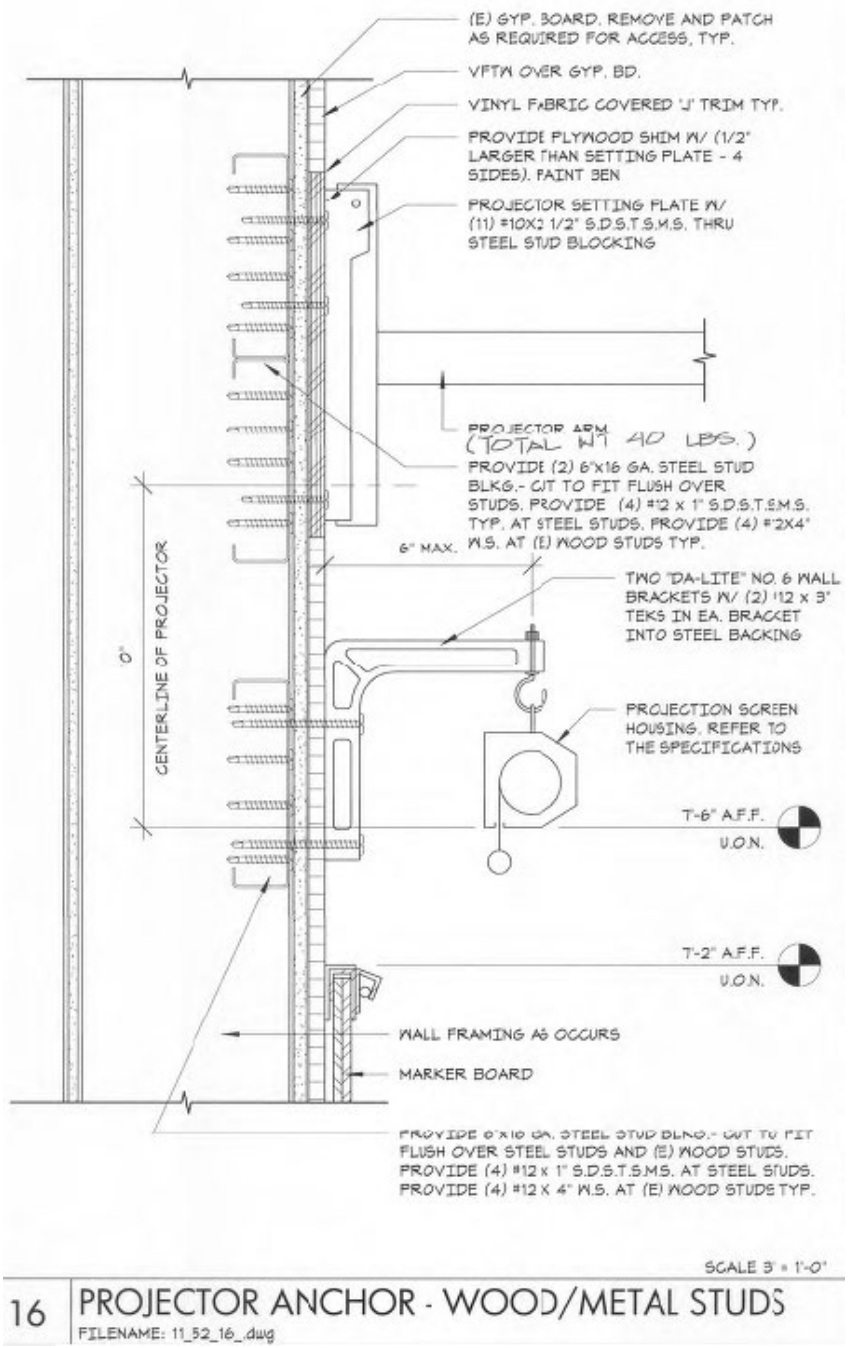
- Large assembly areas shall receive electric large format projection screens and lamp less ceiling mounted projectors. Refer to current District standards for current manufacture and model number.
- Large assembly areas shall have a dedicated AV cabinet to facilitate local presentations and house wireless microphones and AV amplifiers.
- Large assembly areas shall have separate sound systems.

- AV wall controls shall be based on Extron Electronics and control all AV in the space, with the capability to integrate lighting and shades.
- Sizing of screens, throw distance of projector, and locations shall be engineered by AV Contractor and approved by the District.

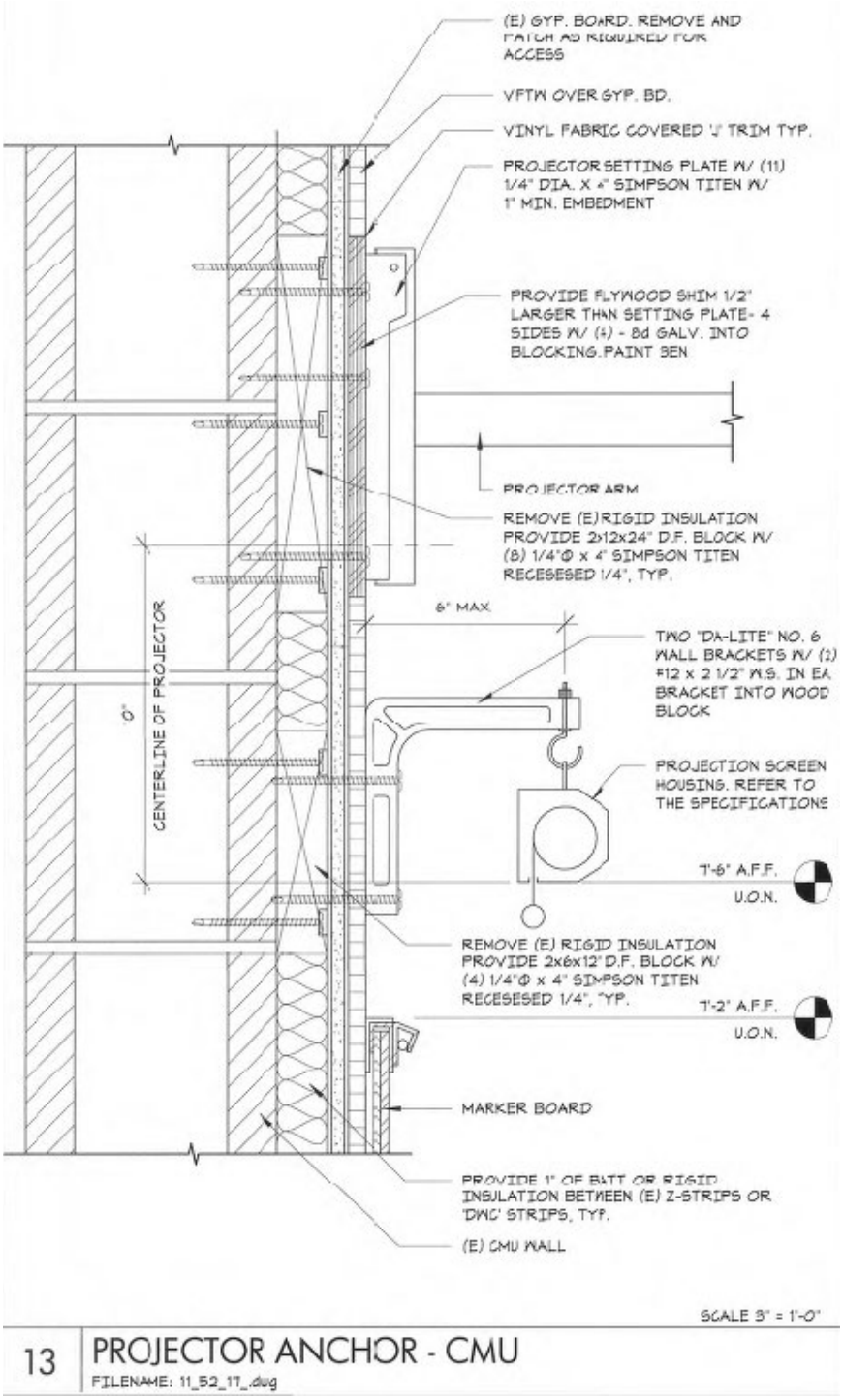
10.06 DSA Mounting Documentation

Projector Anchor – Wood/Metal Studs (Sample)

- Electric screens shall be used, where applicable.

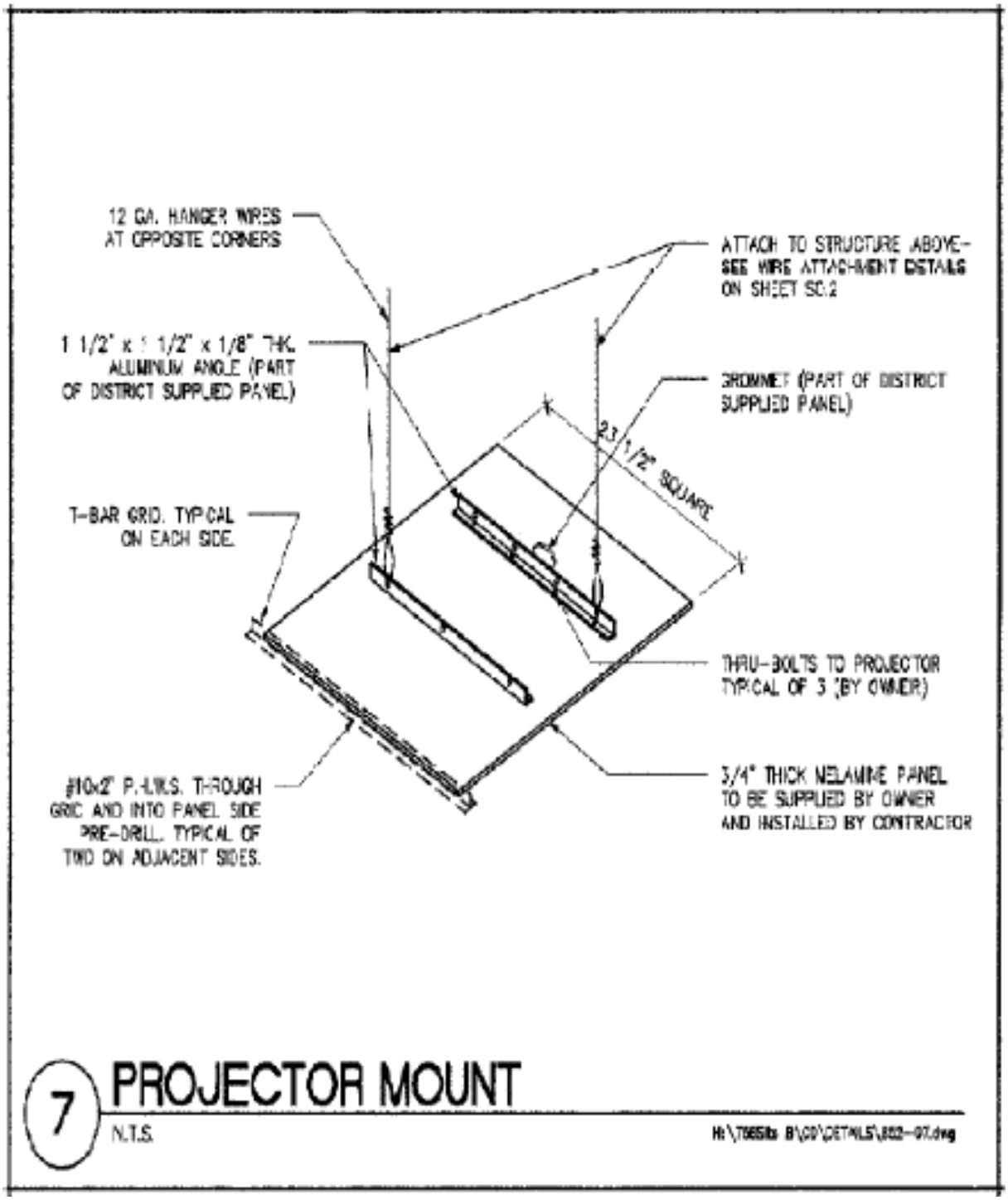


Projector Anchor – CMU (Sample)



Projector Mount (Sample)

Panel must have two drop ceiling suspension wires.



PART 11 – Intrusion Alarm

11.01 System

- The system is based on Ademco panels, keypads, and devices
- No door contacts

11.02 Telco Interconnect

- Shall be clearly identified by the CSID noted on the keypad for each COM panel.
- Each new COM panel shall have a dedicated Measured Business Line.
- 3-pair 66 block style biscuit-blocks are preferred at point of termination for COM panel phone lines (No RJ31X's).
- LUSD will only test Measured Business Line to 66 block style biscuit-block.

11.03 Wiring

- Shall be supported by D rings, Velcro, or J hooks.
- Pathways should not be shared with data cabling.
- When overriding existing voice or data cables in a box or conduit, Technology Services must be contacted and give approval to do so.

PART 12 – Enclosures

A. LUSD IDF Layout

B. LUSD IDF Layout

C. LUSD Double 2-Post Rack Lay-out

D. LUSD Previous IDF Layout

E. LUSD Labeling Format

F. JAESC Labeling Format

G. Approved LUSD Parts Lisit

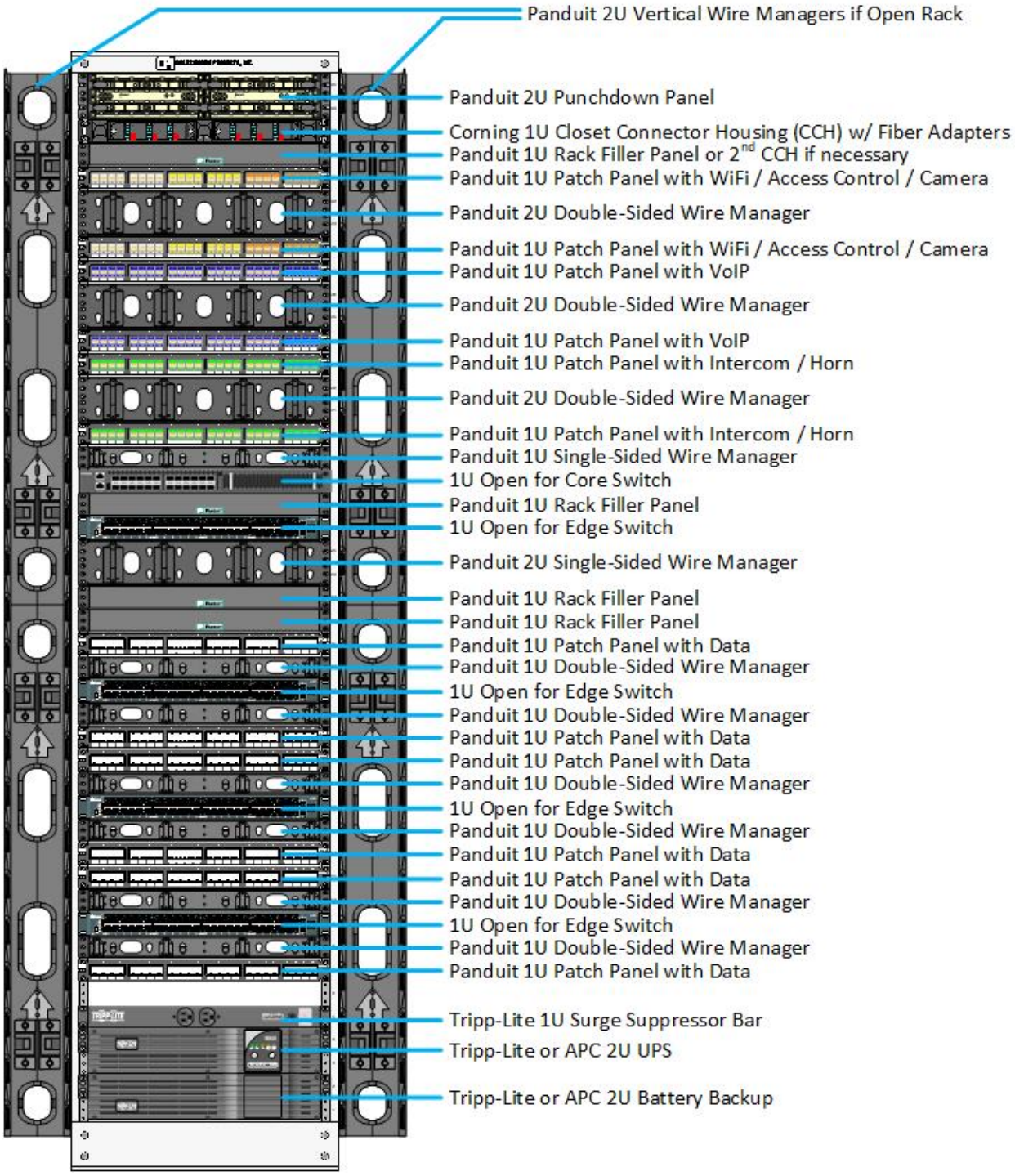
H. LUSD Basic Telecommunications Jack Legend

I. Data/Camera System Install Inspection Check List

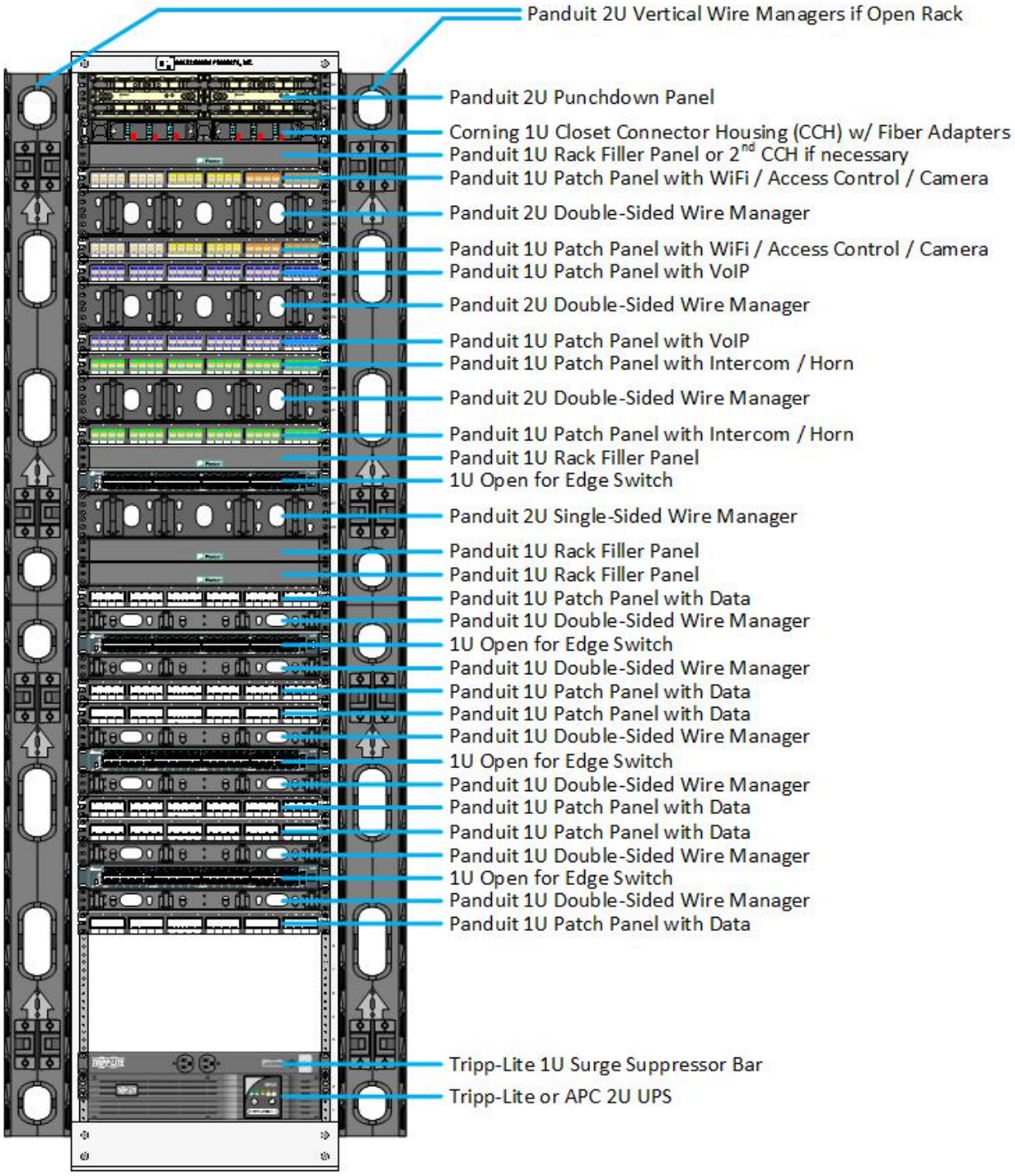
J. Projector System Install Inspection Check List – Sample Continued

K. Accessible Requirements for Cabinet Mounting

Enclosure A - LUSD MDF Layout

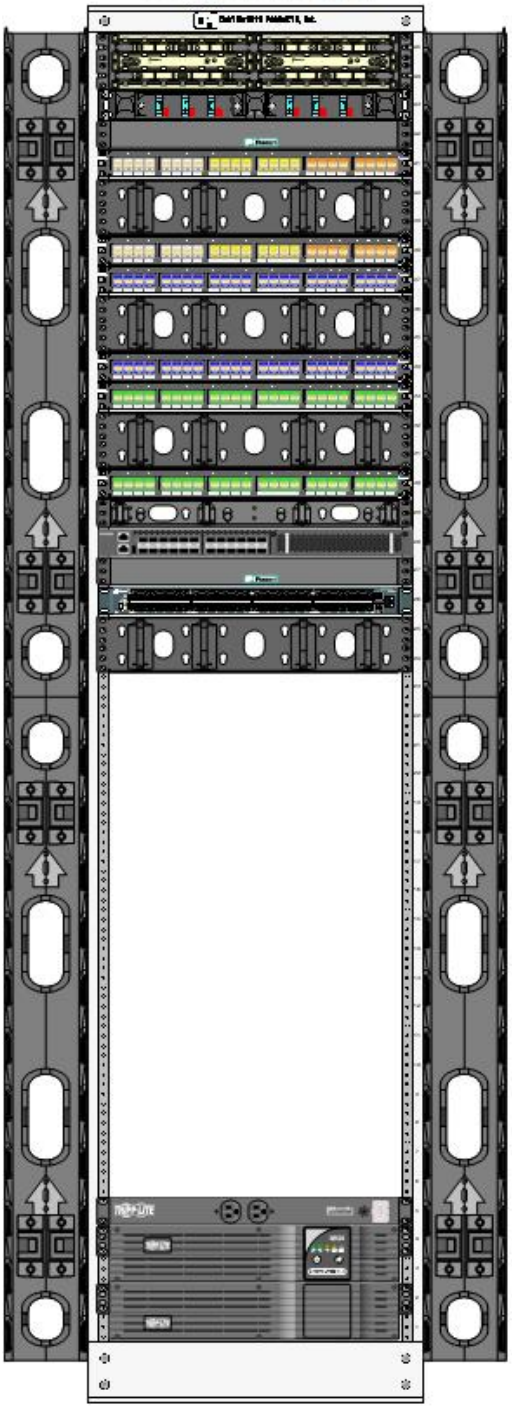


Enclosure B - LUSD IDF Layout

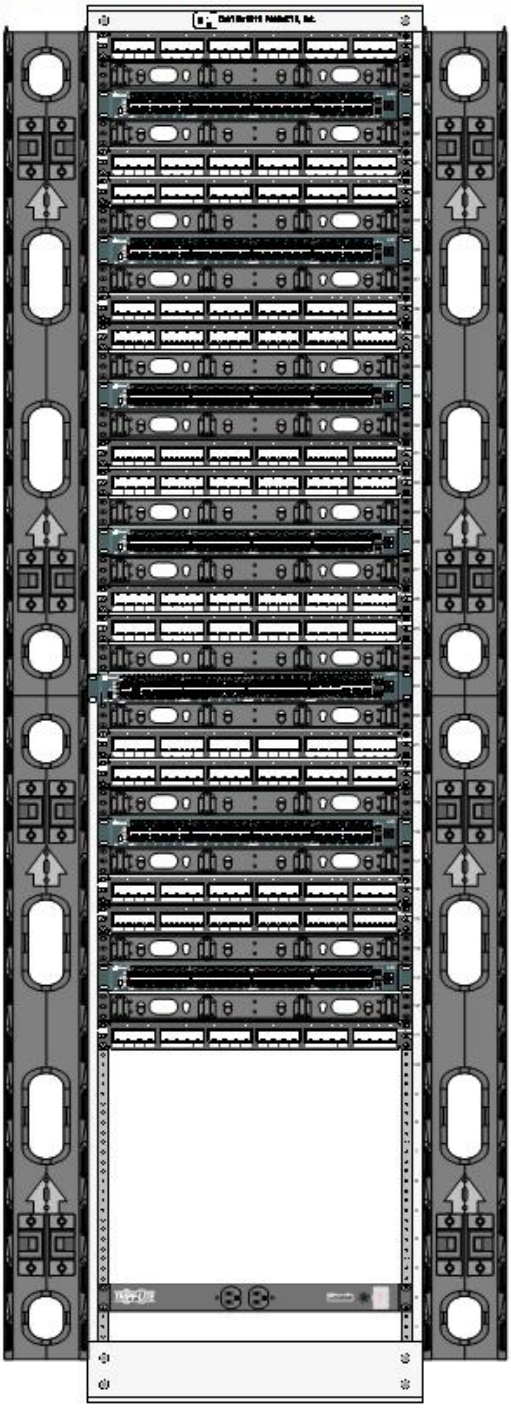


Enclosure C - LUSD Double 2-Post Rack Layout

110 Block
Fiber
PoE Jacks
Core Switch(es)
Poe Edge Switch(es)

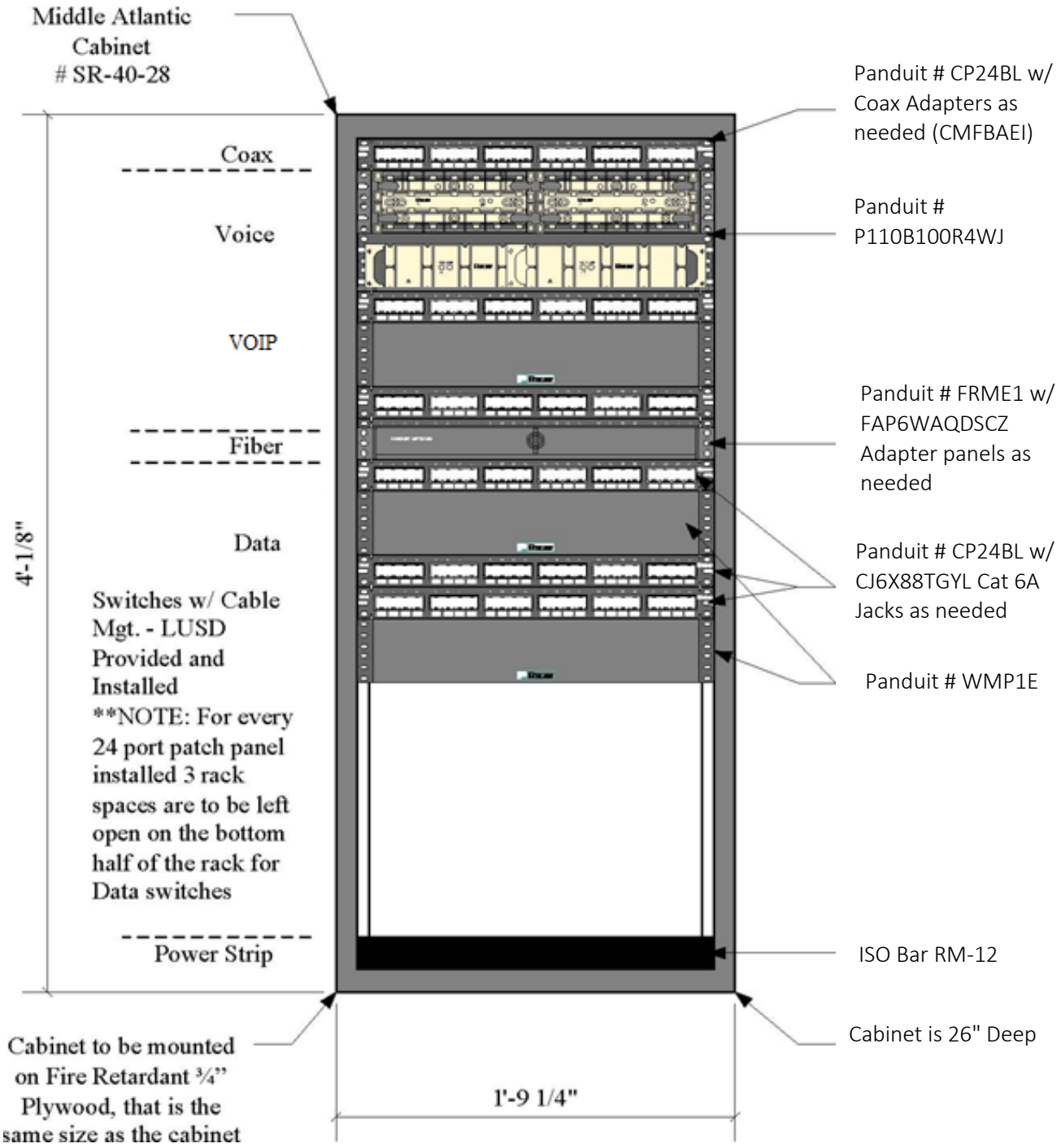


Data Jacks
Data Edge Switches
Maximum 7 Switches if there's 1 PoE Switch
Maximum 6 Switches if there's 2 PoE Switches



Enclosure D – LUSD Previous IDF Layout

The Intended layout of ALL 19-inch racks and/or patch panels need to be verified and approved by the LUSD wiring inspector of the I.S. Department before any racks, jacks, or patch panels are mounted.



Enclosure E – LUSD Labeling Format

The LUSD labeling format is a 4-part identifier that indicates the campus, type of jack, IDF location, room, and jack. Below is a key to determine the jack information and name new locations.

WW-XX-YY-ZZ

CAMPUS AND VOICE OR DATA	MDF OR IDF DESIGNATION	ROOM # OR ABBREVIATION	JACK # (TWO DIGITS)
Data = Even # (Purple) Voice = Odd # (Grey) Video = C (Coax) Card Readers = CR Camera = VS NVR = NVR See Next Page for Voice and Data numbers for each campus.	MDF = A IDF-B = B IDF-C = C etc.	West Admin Office = WA East Admin Office = EA Library = Lib 15 = 15 M2 = M2 etc. Determined by Campus Architect or IT Staff.	01 (1st Jack in Room) 02 (2nd Jack in Room) 03 (3rd Jack in Room) etc. Starts in corner of room and counts clockwise. New jacks increase from last jack.

VOICE EXAMPLE: The first voice jack in room M1 = "09-G-M1-01"

DATA EXAMPLE: The first data jack in room M2 = “10-G-M2-01"

DATA EXAMPLE: The first data jack in room E1 = "10-F-E1-01"

VOICE EXAMPLE: The first voice jack in room E1 = "09-F-E1-01"

DATA EXAMPLE: The first data jack in the West Admin Office = "10-A-WA-01"

CARD READER EXAMPLE: IDF Alpha ID + "CR" + IP address node # = DCR101

VIDEO SURVEILLANCE CAMERA EXAMPLE: IDF Alpha ID + "VS" + IP address node # = BVS101

NVR SECURITY EXAMPLE: IDF Alpha ID + "NVR" + IP address node # = ANVR101

*Dashes do not need to be included. However, the jack number must be two numeric characters Example: “10GM201” instead of “10GM21”

MDF/IDF'S & WORKSTATIONS ALL JACKS ARE TO BE IDENTIFIED WITH THE APPROPRIATE NUMBERING SCHEME.

All numbers must be legibly written on the jacks (or 110 punch panels, etc.) with a black permanent marker and then labeled.

Enclosure E Continued – LUSD Labeling Format

Site Location	Site Numbers	
	Data	Voice
Nutrition Services Operations Center	3	4
Bear Creek High	6	5
Lodi High	8	7
Tokay High	10	9
M&O	12	11
Julia Morgan	14	13
Liberty High	16	15
Plaza Robles High	18	17
Delta Sierra	20	19
Lodi Middle	22	21
Millswood	24	23
Woodbridge	26	25
Morada	28	27
Beckman	30	29
Clairmont	32	31
Creekside	36	35
Davis	38	37
Henderson	40	39
Heritage	42	41
Houston	44	43
John Muir	46	45
Lakewood	48	47
Larson	86	85
Lawrence	50	49
Live Oak	52	51
Lockeford	54	53
Lois Borchardt	56	55
Nichols	58	57
Oakwood	60	59
Parklane	62	61
Reese	64	63
Sutherland	66	65
Tokay Colony (Turner Academy)	68	67
Turner School	70	69
Victor	72	71
Vinewood	74	73
Wagner Holt	76	75
Washington	78	77
Christa McAuliffe	80	79
Westwood	82	81
Heritage Int.	84	83
Children's Center	86	85
Transportation	88	87
Warehouse	90	89
Lincoln Tech	92	91
Mosher	94	93
Elkhorn	96	95

Serna	98	97
Silva	100	99
Podesta	134	133

Enclosure F – JAESC Labeling Format

Data Jack Matrix

Site	Floor	IDF	Zone	Jack#
01 (Phone)	1	A	01	01
02 (Data)	2	B	02	02
	3	C	03	03
		D	04	04
		E	05	05

Note: New VoIP jacks are 02, not 01
Only old phone jacks are 01

Wireless Jack Matrix

Site	Floor	IDF	Zone	Jack#
02 (Data)	1	A	01	W1
	2	B	02	W2
	3	C	03	W3
		D	04	W4
		E	05	W5

Enclosure G – Approved LUSD Parts List

CABINET and GROUNDING			
Manufacturer	**Part Number**	**Description**	**Location**
Middle Atlantic	SR-40-28	40 space, black, 90" tall swinging cabinet	MDF/IDF
Middle Atlantic	Lace-44LP	Vertical Lacing Bar	MDF/IDF
Middle Atlantic	QFAN	Accessory Quiet fan for cabinet	MDF/IDF
Panduit	RGW-100-1Y	Paint piercing grounding washer kit	MDF/IDF
Panduit	RGS134-1Y	Rack Grounding Strip Kit	MDF/IDF
Panduit	RGEJ624PHY	Equipment Jumper Grounding Kit, 24" jumpers	MDF/IDF

FIBER PRODUCTS			
Manufacturer	**Part Number**	**Description**	**Location**
Panduit	FRME4	Holds up to 12 FAP or FMP adapter panels	MDF
Panduit	FREM3	Holds up to 9 FAP or FMP adapter panels	MDF
Panduit	FREM2U	Holds up to 6 FAP or FMP adapter panels	MDF
Panduit	FRME1U	Holds up to 3 FAP or FMP adapter panels	IDF
Panduit	FAP3WAQDSC	OM4 SC FAP loaded with 3 SC duplex coupler	MDF/IDF
General Cable	BL0061PNU	OM4 6F 50um MM TB OFNP	Backbone
General Cable	AP0061PNU	OS2 6F SM TB OFNP	Backbone
General Cable	BL0061PNU	OM4 6F 50um MM TB OFNP	Backbone
General Cable	BL0061ANU.BK	OM4 6F 50um MM TB OFNP I/O	Backbone
General Cable	AP0061ANU.BK	OS2 6F SM TB OFNP I/O	Backbone
General Cable	BL0064M1A-DWB	OM4 6F 50um MM LT SINGLE JKT	Backbone
General Cagle	AQ0064M1A-DWB	OS2 6F SM LT SINGLE JKT	Backbone

WIRE MANAGMENT			
Manufacturer	**Part Number**	**Description**	**Location**
Panduit	WMPSE	1U Dual-Sided Horizontal Wire Management	MDF/IDF
Panduit	WMPH2E	2U Dual-Sided Horizontal Wire Management	MDF/IDF
Panduit	WMPFSE	1U Single-Sided Horizontal Wire Management	MDF/IDF
Panduit	WMPF1E	2U Single-Sided Horizontal Wire Management	MDF/IDF
Panduit	WMPV45E	Dual-Sided Vertical Wire Management	MDF/IDF

Enclosure G Continued – Approved LUSD Parts List

TWISTED PAIR PRODUCTS			
Manufacturer	**Part Number**	**Description**	**Location**
Panduit	CP24BL	24 Port Mini-Com patch panel	MDF/IDF
Panduit	CP48BLY	48 Port Mini-Com patch panel (Metal panel)	MDF/IDF/WS
Panduit	CPPL24WBLY	24 Port Mini-Com modular patch panel (Plastic)	MDF/IDF/WS
Panduit	FP6X88MTG	TX6A™ Category 6A UTP Field-Term RJ45 Plug	MDF/IDF/WS
Panduit	CJ6X88TGIG	GRAY CAT6A MOD JACK (for Server Locations)	MDF/IDF
Panduit	CJ6X88TGYL	Yellow 6A Mini-Com Jack (Access Control)	Access Control System
Panduit	CJ6X88TGWH	White 6A Min-com Jack (user Station)	WS
Panduit	CJ6X88TGBU	Blue Cat 6A Mini Com Jack (for VoIP)	MDF/IDF/WS
Panduit	CJ6X88TGGR	Green Cat 6A Mini Com Jack (for Intercom)	MDF/IDF/WS
Panduit	CJ6X88TGEI	Electric Ivory Cat 6A Mini Com Jack	WS
Panduit	FPUD6X88MTG	Up/Down Field Term Plug (for Intercom Horn/Speaker Weather Tight Bell Boxes Only; terminate using down orientation diagram)	Horn, Hallway, & Flush Mount Speakers
Panduit	FP6X88MTG	Field Term Plug for Camera locations.	
Panduit	UTP6XXYL	Non- Shielded Yellow 6A Patch Cord, XX is length	MDF/IDF/WS
Panduit	UTP28X*YL	Cat.6A, 28AWG, Yellow, * = length: 1,3,5,7,19,14 feet	MDF/IDF/WS
Panduit	P110B100R4WJ	19" Rack Mount Panel w 2 100pr 110 punch-down blocks and jumper troughs	MDF/IDF
Panduit	P110CB4-X	4pr 110 Connecting Clips 10pk	MDF/IDF
Panduit	P110CB5-X	5pr 110 Connecting Clips 10pk	MDF/IDF
General Cable	7133825	Purple CAT 6A CMR (for Data at workstations)	Horizontal
General Cable	7133819	Blue CAT 6A CMR (for Server drops, closets) – Wi-Fi	Horizontal
General Cable	7131823	Green CAT 6A CMP (for Intercom drops, closets)	Horizontal

General Cable	7131823	Green CAT 6A CMP (for Server drops, closets)	Horizontal
General Cable	7133821	Gray CAT 6A CMR 4 Pair wire (f or Voice)	Horizontal
Commscope	CM-00424SMX-CF6A-02	SystiMax, Black CAT 6A OSP (Voice and Data)	Horizontal
General Cable	2131550E	Cat.5e, 25 pair CMP, White	MDF/IDF
General Cable	2133269E	Cat.5e, 25 pair CMP, Gray	MDF/IDF
Superior Essex	04-097-31	CAT 5 25 Pair OSP	MDF/IDF

Enclosure G Continued – Approved LUSD Parts List

COAX PRODUCTS			
Manufacturer	**Part Number**	**Description**	**Location**
Belden	6139B8	RG-11 Coax Dou-foil w/100% Shielding Plenum	Backbone
Belden	1523A	RG-11 Coax Dou-foil w/100% Shielding Non-Plenum	Backbone
Belden	1525A	RG-11 Coax Dou-foil w/100% Shielding OSP	Backbone

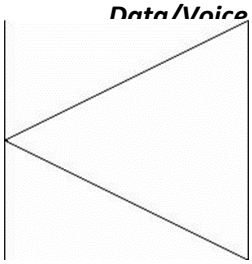
RACEWAY PRODUCTS			
Manufacturer	**Part Number**	**Description**	**Location**
Panduit	LD-5	Raceway for Data/Wi-Fi/Access Control System	Wi-Fi/ACS
Panduit	LDP-10	Raceway for Data/Voice/Coax	WorkStation
Panduit	T-70	Raceway for Comp. Lab That will accept communications and power	WorkStation
Panduit	CMBEI-X	Mini-Com Blank Ivory	WorkStation
Panduit	CFPSE4EI	Executive Faceplate Sloped	WorkStation
Panduit	JBX3510EI-A	Single gang Junction box	WorkStation

INTERCOM PRODUCTS			
Manufacturer	**Part Number**	**Description**	**Location**
Algo	8188	PoE SIP Ceiling Speaker	Recessed Locations
Algo	8188MEM	Hydrophobic Membrane Screen for 8188	Bathrooms, Kitchens, etc.
Algo	8186	Not installed by contractor; contractor installs Panduit Up/Down Field Term plug in double gang double-deep weather tight bell box w/ cap.	Outdoor Locations, Multi-Purpose Rooms, Gyms, Locker Rooms, etc.
Algo	8180	Not installed by contractor; contractor installs green data jack in Panduit Executive faceplate	Classrooms

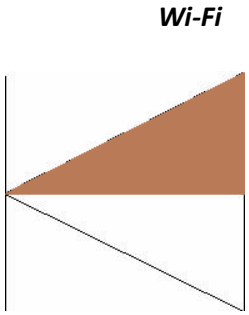
Enclosure G Continued – Approved LUSD Parts List

CAMERA PRODUCTS			
Manufacturer	**Part Number**	**Description**	**Location**
Speco Technologies	O8D6M	4K h.265 DOME IP CAMERA	Interior / Exterior

Enclosure H - LUSD Basic Telecommunications Jack Legend



2/1



W1/0

This example has "2" for two data and "1" for one voice.

***Data only** would be d/0 with "d" as the number of data jacks.*

***Voice only** would be 0/v with "v" as the number of voice jacks.*

Category 6A cabling/jacks are indicated by a "W" preceding the number (or jack count)

Jack Color Code		
White - Wi-Fi		Electric Ivory - Data
Black - Voice		Yellow - Access Control
Blue - VOIP		Green - Intercom

Enclosure I – Data/Camera System Install Inspection Check List - Sample

Data/Camera System Install Inspection Check List

	Yes	No	N/A or Undetermined
1. Does the work done match the scope of work?	☐	☐	☐
Notes:			
2. Does the Visio match what was installed?	☐	☐	☐
Notes:			
3. Are all of the test results completed?	☐	☐	☐
Notes:			
4. Cabinet			
a. Is it mounted to the backboard and firmly affixed?	☐	☐	☐
b. Does the cabinet block anything and open?	☐	☐	☐
c. Is there dedicated 115 VAC?	☐	☐	☐
d. Are the cables bundled neatly and labeled in the back?	☐	☐	☐
e. Are all of the parts used in the Lodi USD specifications?	☐	☐	☐
f. Is everything labeled in front to Lodi USD specifications?	☐	☐	☐
Notes:			
5. Wiring			
a. Spot check the wire in the ceiling – is it supported every 4' to 8 ' per EIA/TIA?	☐	☐	☐
b. No black tape is to be used. Is there any black tape?	☐	☐	☐
c. No zip ties are to be used. Are there any zip ties?	☐	☐	☐
d. Is the pipe/raceway not overfilled per EIA/TIA?	☐	☐	☐
e. Was slack-loop provided?	☐	☐	☐
Notes:			
6. Stations			
a. Is each device labeled and have a wraparound label on the wire as per EIA/TIA?	☐	☐	☐
b. Is each device mounted with approved hardware?	☐	☐	☐
Notes:			

Enclosure I – Data/Camera System Install Inspection Check List – Sample Continued

	Yes	No	N/A or Undetermined
7. Pipe/Raceway			
a. Is all raceway Panduit?	☐	☐	☐
b. Are all pipe runs are rigid when below 8' or on the roof as per Lodi USD specifications?	☐	☐	☐
c. Does the firewall have 3' on each side of the wall as per building code?	☐	☐	☐
d. No set screw fitting shall be used. Is there any set screw fitting?	☐	☐	☐
e. Whenever pulling into a pipe/raceway, a pull string is required per Lodi USD specifications. Is there a string?	☐	☐	☐
Notes:			
8. Penetrations			
a. Do penetrations to an outside wall have a nipple and is it sealed with silicon on both the outside and inside?	☐	☐	☐
b. Were the penetrations approved by the Lead and Asbestos Manager?	☐	☐	☐
Notes:			
9. Does the Site Administrator approve and are they happy?	☐	☐	☐
Notes:			
Additional Notes:			

Enclosure J – Projector System Install Inspection Check List - Sample

Projector System Installation Inspection Check List

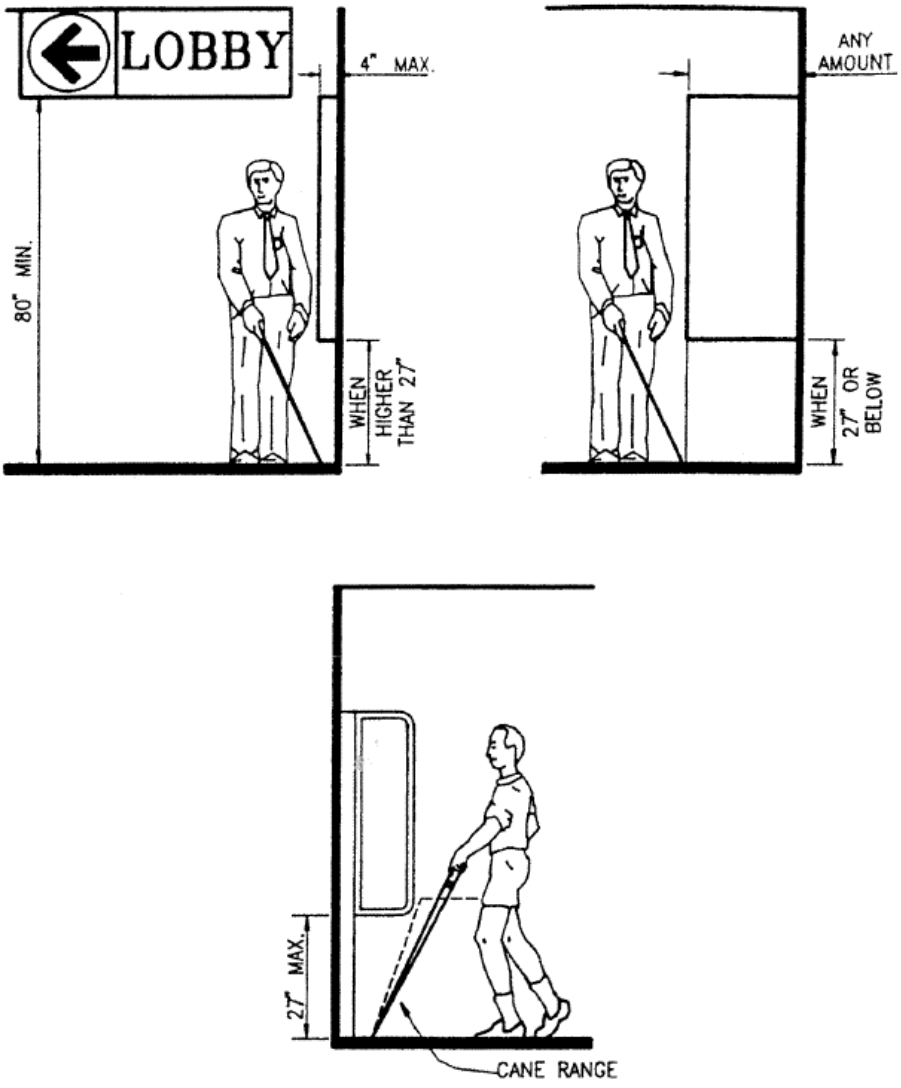
1.	**Does the work done match the scope of work?**	□	Yes	□ No
	Notes:			
2.	**Does the Visio match what was installed?**	□	Yes	□ No
	Notes:			
3.	**Are all of the test results completed?**	□	Yes	□ No
	Notes:			
4.	**SmartBoard**			
	a. Is existing whiteboard re-mounted correctly w/ white block style trim butted against end-cuts?	□	Yes	□ No
	Notes:			
5.	**Projector**			
	a. Is it mounted to the backboard and firmly affixed (back-board reaches studs)?	□	Yes	□ No
	b. Is it ceiling mounted in an approved manner (2 T-bar rods per mount)?	□	Yes	□ No
	c. Is there dedicated 115 VAC?	□	Yes	□ No
	d. Are the cables bundled neatly in the raceway?	□	Yes	□ No
	e. Are all of the parts used in the Lodi USD specifications?	□	Yes	□ No
	f. Is everything labeled in front to Lodi USD specifications?	□	Yes	□ No
	Notes:			
6.	**Wiring (if it is run in the ceiling)**			
	a. Spot check the wire in the ceiling – is it supported every 4' to 8 ' per EIA/TIA?	□	Yes	□ No
	b. No black tape is to be used. Is there any black tape?	□	Yes	□ No
	c. No zip ties are to be used. Are there any zip ties?	□	Yes	□ No
	d. Is the pipe/raceway not overfilled per EIA/TIA?	□	Yes	□ No
	e. Was slack-loop provided?	□	Yes	□ No
	Notes:			

Enclosure J – Projector System Install Inspection Check List – Sample Continued

7. Stations (if Cat5/6 wire and applicable)			
a. Is each device labeled and have a wraparound label on the wire as per EIA/TIA?	☐ Yes	☐ No	
b. Is each device mounted with approved hardware?	☐ Yes	☐ No	
Notes:			
8. Pipe/Raceway (if applicable)			
a. Is all raceway Panduit?	☐ Yes	☐ No	
b. Are all pipe runs rigid when below 8' or on the roof as per Lodi USD specifications?	☐ Yes	☐ No	
c. Does the firewall have 3' of pipe on each side of the wall as per building code?	☐ Yes	☐ No	
d. No set screw fitting shall be used. Is there any set screw fitting?	☐ Yes	☐ No	
e. Whenever pulling into a pipe/raceway, a pull string is required per Lodi USD specifications. Is there a string?	☐ Yes	☐ No	
Notes:			
9. Penetrations (if applicable)			
a. Do penetrations to an outside wall have a nipple and is it sealed with silicon on both the outside and inside?	☐ Yes	☐ No	
b. Were the penetrations approved by the Lead and Asbestos Manager?	☐ Yes	☐ No	
Notes:			
10. Does the Site Administrator approve and are they happy?	☐ Yes	☐ No	
Notes:			
Additional Notes:			

Inspected by: _____ Print Name: _____ Date: _____

Enclosure K – Accessible Requirements for Cabinet Mounting
(Images below for reference only)



WALKING PERPENDICULAR TO WALL

THESE DIAGRAMS ILLUSTRATE THE SPECIFIC REQUIREMENTS OF THESE REGULATIONS AND ARE INTENDED ONLY AS AN AID FOR BUILDING DESIGN AND CONSTRUCTION.

FIGURE 11B-7A—PROTRUDING OBJECTS

1–134.61

Geotechnical Engineering and Geologic Hazards Report

CLYDE W. NEEDHAM ELEMENTARY SCHOL

WKA No. 12150.01P

August 7, 2019

Prepared for:

Lodi Unified School District

1305 E. Vine Street

Lodi, California 95240

Geotechnical Engineering and Geologic Hazards Investigation

CLYDE W. NEEDHAM ELEMENTARY SCHOOL

Lodi, California

WKA No. 12150.01P

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Geotechnical Engineering and Geologic Hazards Investigation
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420 South Pleasant Avenue
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WKA No. 12150.01P
August 7, 2019

INTRODUCTION

We have completed a geotechnical engineering and geologic hazards study for the design and construction of the modular classrooms and multipurpose building on the existing Clyde W. Needham campus in Lodi, California (see Figure 1). The purposes of our study have been to explore the existing soil, geologic, and groundwater conditions at the site, and to provide geotechnical engineering and geologic hazards conclusions and recommendations for use by the other members of the design team for design and construction of the proposed project. This presents the results of our study.

Scope of Work

Our scope of work included the following:

1. Site reconnaissance;
2. Review of United States Geological Survey (USGS) topographic maps, aerial photographs and available groundwater data;
3. Review of geologic maps and fault maps;
4. Review of seismic activity within 100 kilometers (62 miles) of the site;
5. Subsurface exploration, including the drilling and sampling of eight borings to depths of approximately 15 to 51½ feet below the ground surface (BGS);
6. Bulk sampling of near-surface soils;
7. Laboratory testing of selected soil samples;
8. Engineering analyses; and,
9. Preparation of this report.

Figures and Attachments

The following figures are included with this report:

Table 1: Figures

Figure	Title	Figure	Title
1	Vicinity Map	6	Fault Map
2	Site Plan	7	Epicenter Map
3	USGS Topographic Map	8 – 15	Logs of Soil Borings
4	Geologic Map	16	Unified Soil Classification System
5	Geologic Cross Section	17	FEMA Flood Map

Appended to this report are:

- General information regarding project concepts, exploratory methods used during our field investigation and laboratory test results not included on the Logs of Soil Borings (Appendix A).
- A list of references cited (Appendix B).
- Liquefaction Analysis Results (Appendix C)

Proposed Development

We understand the project will consist of the demolition of several existing buildings and the design and construction of seven new modular (premanufactured) classroom buildings, two restrooms, and a multipurpose building. We understand the new buildings will be single-story structures, with slab-on-grade and/or raised floors. The new modular classroom buildings will be structurally connected and are anticipated to cover about 7200 square feet in plan area. We understand the new multipurpose building will cover about 7680 square feet in plan area. Associated development is anticipated to consist of underground utilities and concrete flatwork improvements.

FINDINGS

Site Description

The new building sites are located within the north and northeast portion of the existing Clyde W. Needham Elementary School campus located at 420 South Pleasant Avenue in Lodi,

California (Figure 1). The portion of the campus that the project occupies is identified as San Joaquin County Assessor's Parcel Number (APN) 045-020-310-000. The school property is bounded to the north by Chestnut Street, beyond which is a residential subdivision and retail shopping; to the east by Church Street, beyond which is a residential subdivision; to the south by West Tokay Street, beyond which is a residential subdivision; and, to the west by South Pleasant Avenue, beyond which is a residential subdivision and a school.

At the time of our field exploration on June 26, 2019, the planned building sites had existing one- and two-story, structures; interior and exterior concrete flatwork; asphalt concrete paving; and/or, grass in the planned new construction locations. Some trees and shrubs are present on the north and northeast portion of the site. Based on the existing development, and our experience on other school sites, various underground utilities are expected in the planned new construction areas.

The topography of the site is relatively flat. Average surface elevation of the planned building area is about +50 feet relative to mean sea level (msl) based on review of the USGS *7.5 Minute Topographic Map of the Lodi North Quadrangle, California*, dated 1960.

Historical Aerial Photographic Review

We reviewed historical aerial photographs of the site available from the Historicaerials.com and the Google Earth website. Available photographs were taken in 1967, 1993, 1998, and 2002 through 2018. The review of the photograph from 1967 shows the site with the existing campus buildings minus the 13 modular classroom buildings in the center of the site. The photographs from 1993 and 1998 show the four most northern modular classroom buildings present. The photograph from 2002 shows five more modular classroom buildings present just south of the first four modular classroom buildings from previous photographs. The photographs from 2004 show an additional modular classroom building south of the previous modular classroom buildings. The photographs from 2005 until 2018 show two additional modular classroom buildings south of the previous modular classroom buildings. The site has remained essentially unchanged since 2005.

General Site Geology

The site is located within the Great Valley geomorphic province of California, a 500-mile, northwest-trending structural trough, generally constrained to the west by the Coast Ranges and to the east by the foothills of the Sierra Nevada Range (Norris and Webb, 1990). The Great Valley consists of two valleys lying end-to-end, with the Sacramento Valley to the north and the San Joaquin Valley to the south.

The Sacramento and San Joaquin Valleys have been filled to their present elevations with thick sequences of sediment derived from both marine and terrestrial sources. The sedimentary deposits range in thickness from relatively thin deposits along the eastern valley edge to more than 25,000 feet in the south-central portion of the Great Valley (Norris and Webb, 1990). The sedimentary geologic formations of the Great Valley Province vary in age from Jurassic to Quaternary, with the older deposits being primarily marine in origin. Younger sediments are continentally derived and were typically deposited in lacustrine, fluvial, and alluvial environments with their primary source being the Sierra Nevada Range.

According to the USGS Geologic Map of the Sacramento Quadrangle (Wagner, 1981), and the California Geological Survey's Preliminary Geologic Map of the Lodi 30' x 60' Quadrangle (Dawson, 2009), the school campus is underlain by the lower member of the Pleistocene-aged Modesto formation (Qm2) and late Pleistocene-aged dune sands (Qds) respectively. The geologic materials that comprise the Modesto formation are "Arkosic alluvium, sand with minor gravel and silt, forming low terraces, high floodplains, and alluvial fans along the Consumnes and Mokelumne Rivers. The mapped geology was found to be consistent with the subsurface soil conditions encountered within our borings performed at the site, which revealed the presence of sands, silts, and some near surface trace clays, to the explored depth of approximately 51½ feet below site grade.

A copy of a portion of the 2009 Preliminary Lodi Quadrangle Geologic Map is provided as Figure 4. A geologic cross section is included in this report as Figure 5.

Subsurface Soil Conditions

Eight exploratory borings (D1 through D8) were performed on June 26, 2019 at the approximate locations shown on the attached Site Plan (Figure 2).

The soils encountered at the boring locations generally consisted of very loose to dense sands with varying clay, silt, and sand contents to the explored 51½ foot depths of the borings. Very loose to loose sands were encountered within the upper five feet at Borings D1, D2, D3, and D4. In general, the density of the soils increased with depth below depths of five feet below the ground surface. Borings D1 through D3 had approximately 3½ inches of asphalt concrete at the surface.

For specific information regarding the soil conditions at a specific location, please refer to the Logs of Soil Borings (Figures 8 through 15).

Groundwater

Groundwater was not encountered during the drilling operations at the boring locations drilled on June 26, 2019. However, shortly after the drilling operations, groundwater was observed at a depth of about 38 feet below the ground surface within Boring D1. The bore hole may not have been left open long enough for the groundwater to have reached static equilibrium.

To supplement the groundwater information gained from the borings, we reviewed available groundwater data published by the California Department of Water Resources (DWR) from a monitoring well (381292N1212757W002) located at the northern end of the site. DWR has monitored water levels in the well from August 2015 to at least March 2019. Ground surface elevation at the well is indicated to be about +47 feet (North American Vertical Datum of 1988 [NAVD 88]) which is similar to the subject property's elevation. Groundwater measurements at the DWR well have fluctuated from a "high" of about -1 foot (NAVD 88) in March of 2018 to a "low" of about -49 feet (NAVD 88) in October of 2018. The most recent groundwater measurement obtained on March 19, 2019 was -1.64 feet, or about 49 feet below the ground surface at the well location. Based on this data, groundwater elevations at the site have fluctuated from about 48 to 96 feet below site grades between the period from 2015 to 2019.

Faulting

Based on our review of available geologic and seismic references, the Clyde W. Needham Elementary School campus is not located across a mapped trace of any fault and we observed no surface evidence of faulting during our site reconnaissance. The site is ***not*** located within an Alquist-Priolo (AP) Earthquake Fault Zone (Hart and Bryant, 2007). The nearest Alquist-Priolo Earthquake Fault Zone have been established around the Greenville Fault; the closest edge of this fault zone is located approximately 56.0 kilometers (34.8 miles) southwest of the site.

Using the *Revised 2002 California Probabilistic Seismic Maps* (Cao, 2003) and USGS 2008 National Seismic Hazards maps Source Parameters (https://earthquake.usgs.gov/cfusion/hazfaults_2008_search/query_main.cfm), we have prepared Table 2 containing faults and fault systems within 100 kilometers (62 miles) of the site that are considered capable of producing earthquakes with a moment magnitude (M_W) of 6.5 or greater. A fault map is presented as Figure 6.

Table 2: Fault Systems within 100 Kilometers of the Subject Site

Fault Name	Distance		Maximum Earthquake Magnitude (Mw)
	Miles	Kilometers	
Foothills Fault System	28.0	38.6	6.5
Great Valley 7	30.4	49.0	6.9
Great Valley 5, Pittsburg Kirby Hills	32.0	51.6	6.7
Greenville Connected	34.8	56.0	7.0
Great Valley 4b, Gordon Valley	38.1	61.4	6.8
Mount Diablo Thrust	40.7	65.4	6.7
Green Valley Connected	42.1	67.7	6.8
Calaveras; CN	45.5	73.2	6.9
Calaveras; CN+CC+CS	45.5	73.2	7.0
Calaveras; CN+CC	45.5	73.2	7.0
Great Valley 4a, Trout Creek	48.2	77.5	6.6
Great Valley 8	48.4	77.8	6.8
West Napa	52.9	85.1	6.7
Hayward-Rogers Creek; HS	53.9	86.7	6.8
Hayward-Rogers Creek; HN+HS	53.9	86.7	7.0
Hayward-Rogers Creek; RC+HN+HS	53.9	86.7	7.3
Hunting Creek-Berryessa	54.9	88.3	7.1
Hayward-Rogers Creek; HN	55.3	89.0	6.6
Hayward-Rogers Creek; RC+HN	55.3	89.0	7.2
Calaveras; CC	55.4	89.2	6.4
Calaveras; CC+CS	55.4	89.2	6.5
Great Valley 3, Mysterious Ridge	57.1	91.9	7.1
Ortigalita	59.2	95.3	7.1

Coseismic Ground Deformation

The California State Legislature passed the Seismic Hazards Mapping Act (SHMA) in 1990 (Public Resources Code Division 2, Chapter 7.8) following the earthquake damage caused by the 1987 Whittier Narrows and 1989 Loma Prieta earthquakes. The purpose of the SHMA is to protect public safety from the effects of strong ground shaking, liquefaction, landslides, or other ground failure, and other hazards caused by earthquakes (California Geological Survey [CGS] SP117). The Clyde W. Needham Elementary School site is not mapped within any seismic hazard zones and there are no published maps available on the CGS website that cover the Clyde W. Needham Elementary School site.

Historic Seismicity

Seismological data regarding significant historical earthquakes affecting the site was obtained using the commercially available software program EQSEARCH (Blake, 2000; database updated to August 2016). The EQSEARCH database was developed by extracting records of events greater than magnitude 4.0 from the Division of Mine and Geology Comprehensive Computerized Earthquake Catalog and supplemented by records from the USGS; University of California, Berkeley; the California Institute of Technology; and, the University of Nevada at Reno. A search radius of 100 kilometers (62 miles) was specified for this analysis. A historic earthquake epicenter map is presented as Figure 7. An examination of the tabulated data suggests that the site has experienced ground shaking equivalent to Modified Mercalli Intensity (MMI) VII. According to the tabulated data, the most intense earthquake ground shaking within 100 kilometers of the site resulted from an MR 6.0 earthquake on May 19, 1889, with an epicenter located approximately 56.4 kilometers (35.1 miles) southwest of the site.

CONCLUSIONS

Seismic Site Class

The soil conditions encountered at the boring locations indicates the site is underlain by the Pleistocene- aged (10,000 to 700,000 years before present) upper member of the Modesto Formation with a thin cover of late-Pleist. The Modesto Formation has been identified as a material meeting Site Classification C/D (Wills, et al., 2001).

Based on Table 20.3-1 of ASCE 7-10, a seismic Site Class D applies to sites with average Standard Penetration Test (SPT) blow counts between 15 and 50 blows per foot for the upper 100 feet of the ground surface. SPT blow counts obtained within the upper 51½ feet at Boring D1 varied from 2 to 57 blows per foot. To calculate the Site Classification based on Table 20.3-1 of *American Society of Civil Engineers (ASCE) Standard 7-10*, we have conservatively assumed the blow counts between 51½ and 100 feet below the ground surface are at least 15 blows per foot based on the site geology and the blow counts obtained within the upper 51½ feet of the soil profile. Based on the above information and assumptions, an average SPT blow count of 15.3 was obtained at Boring D1.

Based on the soil conditions encountered at the boring locations, the SPT blow counts obtained within the upper 51½ feet of the boring, conservatively assuming the blow counts are least 15 blows per foot from depths of 51½ to 100 feet below the ground surface, and the documented

site geology, it is our opinion that a Site Class D is applicable to the Clyde W. Needham Elementary School site, in accordance with Table 20.3-1 of *ASCE 7-10* and the 2016 *California Building Code* (*CBC)*.

2016 CBC/ASCE 7-10 Seismic Design Criteria

The 2016 edition of the California Building Code (CBC) references *ASCE 7-10* for seismic design. The following seismic parameters provided in Table 3 were determined based on the site latitude and longitude using the public domain computer program developed by the Structural Engineers Association of California (SEAOC)/ Office of Statewide Health and Planning Development (OSHPD). The seismic design parameters summarized below in Table 3 may be used for seismic design of the building.

Table 3: 2016 CBC/ASCE 7-10 Seismic Design Parameters

Latitude: 38.1289° N Longitude: 121.2760° W	ASCE 7-10 Table/Figure	2016 CBC Table/Figure	Factor/ Coefficient	Value
Short-Period MCE at 0.2 seconds	Figure 22-1	Figure 1613.3.1(1)	S_S	0.746 g
1.0 second Period MCE	Figure 22-2	Figure 1613.3.1(2)	S_1	0.300 g
Soil Class	Table 20.3-1	Section 1613.3.2	Site Class	D
Site Coefficient	Table 11.4-1	Table 1613.3.3(1)	F_a	1.203
Site Coefficient	Table 11.4-2	Table 1613.3.3(2)	F_v	1.800
Adjusted MCE Spectral Response Parameters	Equation 11.4-1	Equation 16-37	S_{MS}	0.897 g
	Equation 11.4-2	Equation 16-38	S_{M1}	0.540 g
Design Spectral Acceleration Parameters	Equation 11.4-3	Equation 16-39	S_{DS}	0.598 g
	Equation 11.4-4	Equation 16-40	S_{D1}	0.360 g
Seismic Design Category	Table 11.6-1	Section 1613.3.5(1)	Risk Category IV	D
	Table 11.6-2	Section 1613.3.5(2)	Risk Category IV	D

Notes: MCE = Maximum Considered Earthquake
g = gravity

Liquefaction Potential

Liquefaction is a soil strength and stiffness loss phenomenon that typically occurs in loose, saturated cohesionless soils exposed to strong ground shaking during earthquakes. The potential for liquefaction at a site is usually determined based on the results of a subsurface geotechnical investigation and the groundwater conditions beneath the site. Hazards to buildings associated with liquefaction include bearing capacity failure, lateral spreading, and differential settlement of soils below foundations, which can contribute to structural damage or collapse.

The results of our subsurface soil exploration at the site indicates the underlying soils at Boring D1 generally consist of very loose to medium dense silty sands over relatively dense sands and silts to the explored depth of 51½ feet below the existing ground surface. Historical high groundwater is indicated to be on the order of about 38 feet below the existing ground surface. These site conditions require that an evaluation of the liquefaction potential be performed at per the 2016 CBC.

A liquefaction analysis to determine factors of safety against liquefaction was performed for the soil and groundwater conditions encountered at Boring D1.

Liquefaction Analysis and Results

We performed a liquefaction analysis of data obtained from Boring D1 including the SPT blow counts measured in the hollow stem auger boring performed at the site for this evaluation. The boring was analyzed using LiqIT (version 4.7) and the liquefaction analyses were performed utilizing the National Center for Earthquake Engineering Research (NCEER) methodology. A conservative historical high static groundwater level of approximately 30 feet below the existing ground surface was used in our analysis based on our review of historic groundwater levels near the site. Note that the LiqIT output shows the in-situ groundwater level at the time the drilling was performed (i.e., 38 feet); however, the analysis is performed based on a groundwater level of 30 feet below the ground surface during the design seismic event. A peak ground acceleration (PGA) of 0.33 g was used in the liquefaction analysis based on Equation 11.8-1 of ASCE 7-10. A mode magnitude earthquake of 6.24 was used for this analysis using the USGS Unified Hazard Tool web site.

The results of the liquefaction analysis indicate calculated seismic settlements of 0.06 inches within the granular soil layers encountered within Boring D1. In our opinion, based on the soil conditions and results of the liquefaction analysis, the granular soil layers are generally not susceptible to liquefaction. Therefore, based on the soil conditions encountered at the site and

our liquefaction analysis, it is our professional opinion that the potential for liquefaction of the soils beneath the site is very low if the site experiences significant ground shaking during an earthquake. Copies of the liquefaction analysis results performed for this investigation are presented in Appendix C.

Seismic Hazards

No active or potentially active faults are known to underlie the site based on the published geologic maps or aerial photographs that we reviewed. The site is not located within an Alquist-Priolo Earthquake Fault Zone, and we observed no surface evidence of faulting during our site reconnaissance. Therefore, it is our opinion that ground rupture at the site resulting from seismic activity is unlikely. The site is not located within a seismic hazard zone pursuant to the Seismic Hazard Zone Mapping Act.

Volcanic Hazards

The school site is not located within a volcanic hazard zone (e.g., pyroclastic flow, volcanic debris flow, lava flow, bas surge, tephra, etc.) associated with potential volcanic eruptions of Mt. Shasta, Clear Lake, Lassen Peak or the Mono Lake - Long Valley Volcanic areas (Miller, 1989). Therefore, the risk to the site associated with volcanic hazards is very low.

Landslides

The topography across the site is relatively flat based on visual observations and review of topographic maps. The USGS Topographic Map of the *Lodi North Quadrangle, California* indicates the surface elevation at the site is approximately +50 feet msl. Since the site topography is flat and there are no slopes in the vicinity of the site, it is our opinion that the potential for landslides is nonexistent.

Flood Hazards

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map for San Joaquin County, California (Community-Panel Numbers 06077C0169F, October 16, 2012), the elementary school campus is located within ZONE X defined as “Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood.” The FEMA flood map for the site vicinity is presented in Figure 17 of this report.

Dam Inundation

According to the *Dam Failure Plan* (December 2003) prepared by the San Joaquin County Office of Emergency Services, the elementary school campus is located within an area subject to inundation due to dam failure or overspill. There are 15 major dams that have been identified as having the potential to inundate portions of San Joaquin County in the event of a dam failure.

Tsunamis and Seiches

The publicly available "Tsunami Inundation" maps developed by the CGS do not cover the site. Given that the site is not located near a coastal region or near a large body of standing water, we consider the occurrence of tsunamis or seiches to be very unlikely.

Subsidence and Hydrocollapse

Subsidence occurs when a large land area settles due to extensive withdrawal of ground water, oil, natural gas or oxidation of peat. Based on our subsurface exploration, the soil at the project site generally consists of sand and silt layers to the explored depths of 15 to 51½ feet BGS.

DWR has mapped the entire Central Valley of California as having potential (low to high) for future land subsidence; however, DWR indicates the mapping is intended to be advisory only to assist state and local agencies in defining areas of potential subsidence that may require additional study (DWR, 2014).

Based on the subsurface conditions encountered at the site, it is our opinion that settlement at the site due to subsidence is very unlikely, provided the recommendations of this report are followed.

Naturally Occurring Asbestos (NOA)

Review of *A General Location Guide for Ultramafic Rocks in California - Areas More Likely to Contain Naturally Occurring Asbestos*, CGS Open-File Report 2000-19 (Churchill and Hill, 2000) indicate the site is not underlain by ultramafic rocks likely to contain asbestos. This is consistent with our observations.

Radon-222 Gas

Radon is a naturally occurring radioactive gas that is produced from radioactive decay of uranium and thorium, most abundant in coastal marine sedimentary rocks and felsic granitic and volcanic rocks. *Geologic Controls on the Distribution of Radon in California* (Churchill, 1991) does not identify San Joaquin County as an area containing common indicators of naturally occurring radon gas.

According to the Environmental Protection Agency's Map of Radon Zones, the project site is located within Zone 3, meaning the site has a predicted average indoor screening level less than two picocuries per liter. Therefore, there is a low potential for radon gas at the site. Based on the regional geology of the site and review of available data, we consider the presence of naturally occurring radon gas to be unlikely at the site.

Bearing Capacity

Relatively loose near-surface soils were encountered within the upper 10 feet at borings D1 through D4 performed at the site. The loose soils are not considered capable of providing adequate or uniform support for the planned buildings in their current condition without experiencing significant total and/or differential settlements, which can potentially result in structural damage. Therefore, it is our opinion the planned buildings will need to be supported on an improved subgrade or a deep foundation system.

It is also our opinion that an improved subgrade consisting of over-excavation, processing, and re-compaction of the over-excavated soils beneath foundations, or an improved subgrade consisting of rammed aggregate piers (RAP), will be necessary to adequately support the buildings on conventional shallow foundations.

Several deep foundation systems also were considered for support of the buildings, including drilled piers and driven and auger-cast piles. However, we anticipate a deep foundation system will not be as cost effective as shallow foundations on an improved subgrade.

Specific recommendations for shallow foundations supported on an over-excavated/re-compacted and/or an improved subgrade consisting of a RAP system are provided in this report.

Effect of New Construction on Existing Development

There are existing buildings and other improvements (e.g. pavements, exterior flatwork, underground utilities, etc.) adjacent to the planned buildings. We assume that the buildings are supported on conventional shallow foundations (isolated spread and/or continuous footings). It is our opinion that excavations associated with the proposed development of the site should not affect the foundations of the existing buildings and other improvements, provided the new excavations are at least 10 feet from the existing improvements or do not encroach within a one horizontal to one vertical (1H:1V) projection from the bottom of the existing building foundations or improvements. If excavations will encroach within the zone described above, stabilizing the existing buildings and/or other improvements using an underpinning system that supports the existing foundations should be evaluated by the Geotechnical Engineer in coordination with the design team.

Soil Expansion Potential

The near surface soil encountered at the boring locations generally consist of granular soils, which are not considered expansive. Laboratory test results on the near-surface soils indicates these materials to be non-plastic when tested in accordance with American Society of Testing and Materials (ASTM) D4318 test method (see Figure A2). In addition, laboratory testing of soils collected from the upper three feet within the planned location of the proposed buildings revealed the near-surface soils possess a “very low” expansion potential (Expansion Index [EI]=0) when tested in accordance with the ASTM D4829 test method (see Figure A3). Based on the soil conditions encountered at the borings and the results of the laboratory testing, special site preparation or foundation designs to mitigate expansive soils are not required for development of this site.

Pavement Subgrade Quality

Based upon laboratory testing of near-surface soils at the site the anticipated pavement subgrade soils indicate poor to moderate quality materials for support of asphalt concrete pavements. A Resistance ("R") value of 16 was obtained on near-surface soil samples tested in accordance with California Test 301 (Figure A4). Based on the results of the R-value test and our experience in the area, an R-value of 15 is considered appropriate for design pavements at the site.

Excavation Conditions

The surface and near-surface soils at the site should be readily excavatable with conventional earthmoving and trenching equipment. Subsurface remnants from existing development and demolition of the site may be encountered and can be slow to excavate with a standard, rubber-tired backhoe; however, experience has shown that excavators can remove these materials with moderate effort.

Based on our borings, excavations associated with building foundations, shallow trenches for utilities, and other excavations less than five feet deep associated with the proposed construction, may stand vertically for short periods of time (i.e. less than one day) required for construction. However, the existing dune sands and fills composed of dune sands are essentially cohesionless and may be unstable in excavation and shallow trenches. Cohesionless sands and saturated or disturbed soils may be unstable conditions resulting in caving or sloughing; therefore, the contractor should be prepared to brace or shore the excavations, as necessary.

Excavations or trenches exceeding five feet in depth that will be entered by workers should be sloped, braced or shored to conform to current Occupational Safety and Health Administration (OSHA) requirements. The contractor must provide an adequately constructed and braced shoring system in accordance with federal, state and local safety regulations for individuals working in an excavation that may expose them to the danger of moving ground.

Temporarily sloped excavations should be constructed no steeper than a one horizontal to one vertical (1H:1V) inclination. Temporary slopes likely will stand at this inclination for the short-term duration of construction, provided significant pockets of loose and/or saturated granular soils are not encountered. Flatter slopes would be required if these conditions are encountered.

Excavated materials should not be stockpiled directly adjacent to an open excavation to prevent surcharge loading of the excavation sidewalls. Excessive truck and equipment traffic should be avoided near excavations. If material is stored or heavy equipment is stationed and/or operated near an excavation, a shoring system must be designed to resist the additional pressure due to the superimposed loads.

Groundwater Effect on Development and Seasonal Water

Available data indicates permanent groundwater is located at a depth of at least 38 feet below the existing ground surface. Therefore, groundwater should not adversely affect construction of

the project for excavations extending less than about 30 feet below the ground surface. However, during the winter and spring months, infiltrating surface run-off water will create saturated surface soil conditions.

Soils located beneath existing pavements and slabs will likely be at elevated moisture contents regardless of the time of year of construction and also will require drying. Wet soils should be anticipated and considered in the construction schedule for this project.

It is probable that grading operations attempted following the onset of winter rains and prior to prolonged drying periods will be hampered by high soil moisture contents. Such soils, intended for use as engineered fill, will require a prolonged period of dry weather and/or considerable aeration to reach a moisture content suitable for proper compaction.

On-site Soil Suitability for Use in Fill Construction

The on-site soils encountered in our borings are considered suitable for use in engineered fill construction, provided these materials do not contain rubble, rubbish, significant organic concentrations, and are at a workable moisture content appropriate for compaction. Imported materials, if necessary, should be granular and approved by our office prior to importing the materials to the site.

Existing pavements and flatwork (asphalt concrete and concrete), if any, within areas to be demolished may be broken up and pulverized for use as fill. Asphalt and Portland cement concrete rubble may be used as fill provided it is processed into fragments less than three inches in largest dimension, is mixed with soil to form a compactable mixture, and is approved by the Owner.

Soil Corrosion Potential

A soil sample was tested to determine resistivity, pH, chloride, and sulfate concentrations to help evaluate the potential for corrosive attack upon reinforced concrete and buried metal. The results of the corrosivity test are summarized in Table 4. Copies of the corrosion potential test results performed by Sunland Analytical are presented on Figures A6 and A7.

Table 4: Soil Corrosivity Testing Results

Analyte	Test Method	D1 (1'-3')
pH	CA DOT 643 Modified*	7.24
Minimum Resistivity	CA DOT 643 Modified*	5360 Ω-cm
Chloride	CA DOT 422	1.5 ppm
Sulfate	CA DOT 417	10.0 ppm
Sulfate – SO4	ASTM D-516	12.2 mg/kg

* = Small cell method; Ω-cm = Ohm-centimeters; ppm = Parts per million

The California Department of Transportation Corrosion and Structural Concrete Field Investigation Branch, Corrosion Guidelines (Version 2.1 dated January 2015), considers a site to be corrosive to foundation elements if one or more of the following conditions exists for the representative soil and/or water samples taken: has a chloride concentration greater than or equal to 500 ppm, sulfate concentration greater than or equal to 2000 ppm, or the pH is 5.5 or less. Based on this criterion, the on-site soils tested are not considered corrosive to steel reinforcement properly embedded within Portland cement concrete (PCC).

Table 19.3.1.1 – Exposure Categories and Classes, of American Concrete Institute (ACI) 318-14, Section 19.3 – Concrete Durability Requirements, as referenced in Section 1904.1 of the 2013 CBC, indicates the severity of sulfate exposure for one of the samples tested is Exposure Class S0. Exposure Class S0 is assigned for conditions where the water-soluble sulfate concentration in contact with concrete is low and injurious sulfate attack is not a concern. The project structural engineer should review the requirements of ACI 318 and determine their applicability to the site.

Wallace-Kuhl & Associates are not corrosion engineers. Therefore, if it is desired to further define the soil corrosion potential at the site a corrosion engineer should be consulted.

RECOMMENDATIONS

General

The recommendations in this report are based on assumed excavations and fills on the order of about two to five feet for the development of the site. We consider it essential that our office review grading and structural foundation plans to verify the applicability of the following recommendations, to verify that the intent of our recommendations has been incorporated into the construction documents, and to provide supplemental recommendations, if necessary.

The recommendations presented below are appropriate for typical construction in the late spring through fall months. The on-site soils likely will be saturated by rainfall in the winter and early spring months and will not be compactable without drying by aeration or chemical treatment. Should the construction schedule require work to continue during the wet months, additional recommendations can be provided, as conditions dictate.

Site preparation should be accomplished in accordance with the provisions of this report . A representative of the Geotechnical Engineer should be present during all earthwork operations to evaluate compliance with the recommendations and the guide specifications included in this report. The Geotechnical Engineer of Record referenced herein is the Geotechnical Engineer that is retained to provide geotechnical engineering observation and testing services during construction.

Site Clearing

Prior to site grading, construction areas should be cleared of rubble, deleterious debris, if any, and any other surface and subsurface items designated for removal to expose undisturbed firm and stable native soils. Where practical, the clearing should extend a minimum of five feet beyond the limits of the proposed structural areas of the site. Existing underground utilities (if encountered) and utilities to be abandoned should be completely removed, including existing trench backfill.

All trees/large brush designated for removal, if any, should include the rootballs and roots ½ inch or larger in size. Adequate removal of debris and tree roots may require handpicking by laborers to clear the subgrade soils to the satisfaction of our on-site representative.

Soils containing excessive organic soils should be removed and not used within the pavements, slabs, and building areas. For this project, the acceptable organic content is less than four percent (4%) organics by weight as determined by ASTM D2974 (Organic Content by Ignition Method). In our opinion, soils having excessive organic matter contents should be removed to expose undisturbed native soils with acceptable organic contents.

Soils containing organic material may be used in landscape areas. However, the landscape architect should have the final decision as to the placement of soils containing organic material in landscape areas.

Existing underground utilities within the proposed building pads should be completely removed and/or rerouted as necessary. Any existing underground utilities designated to be removed or relocated should include all trench backfill and be replaced with engineered fill. Utilities located

outside the building areas should be properly abandoned (i.e., fully grouted provided the abandoned utility is situated at least 2½ feet below the final subgrade level to reduce the potential for localized “hard spots”).

Existing pavements and flatwork (asphalt concrete and concrete) that are not incorporated into the new design should be broken up and removed from the site. Alternatively, pulverized asphalt and Portland cement concrete rubble may be used as fill provided it is processed into fragments less than three inches in largest dimension, is mixed with soil to form a compactable mixture, and approved by the Owner.

Soils located beneath existing pavements and slabs will likely be at elevated moisture contents regardless of the time of year of construction and also will require drying. Wet soils should be anticipated and considered in the construction schedule for this project.

Depressions resulting from removal of underground structures, if encountered, (e.g., foundations, utilities, etc.) should be cleaned of loose soil and properly backfilled in accordance with the recommendations of this report.

Where encountered, any loose, soft or saturated soils should be cleaned out to firm native soil and backfilled with engineered fill in accordance with the recommendations in this report. It is important that the Geotechnical Engineer’s representative be present for a sufficient time during clearing operations to verify adequate removal of the surface and subsurface items, as well as the proper backfilling of resulting excavations.

Subgrade Preparation

Based on the soil conditions encountered at the borings performed at the site, we conclude the existing near-surface soils at the site are not considered suitable for shallow foundation support of the planned buildings unless the subgrade soils are improved (i.e. over-excavated and recompacted or improved with a RAP system). Therefore, subgrade preparation for development of the site will depend on the specific ground improvement alternative chosen (i.e. subgrade over-excavation or subgrade improvement with a RAP system). A discussion of the subgrade preparation required for the subgrade over-excavation and RAP system ground improvement alternatives is provided below. The intent of these subgrade improvement alternatives is to provide adequate and uniform support for the planned buildings.

Over-excavation of Building Pad Areas

The following grading recommendations should be used for support of the planned buildings if shallow conventional foundation systems are supported on over-excavated and re-compacted subgrade soils (i.e. without a RAP system). Following site clearing activities, the building pad areas should be over-excavated to a depth of at least five feet below existing grades or at least three feet below the bottom of the foundations, whichever is deeper. The over-excavation should extend at least five feet beyond the edge of exterior foundations or the building footprints, whichever is greater. Any debris exposed by the required over-excavation should be removed and the resulting excavations should be restored to grade with engineered fill placed and compacted in accordance with the recommendations in this report. The lateral extents of the required over-excavation should be clearly marked on the final grading plans. The Geotechnical Engineer should be given the opportunity to review the final grading plan to determine if the intent of the over-excavation recommendation has been properly incorporated.

Following over-excavation operations, the upper 12 inches of the exposed subgrade soils should be scarified, moisture conditioned to at least the optimum moisture content, and compacted to at least 90 percent of the ASTM D1557 maximum dry density. Difficulty in achieving the recommended compaction may require the use of a layer of geogrid reinforcement (Tensar BX1100, Tensar TX140, Mirafi 5XT, or equivalent) placed directly on the exposed subgrade. Overlap of the geogrid reinforcement should be performed in accordance with the manufacturer's recommendations. The geogrid should be covered with at least a six inch thick lift of Caltrans Class 2 aggregate base and the aggregate base should be uniformly compacted to at least 90 percent of the ASTM D1557 maximum dry density at no less than the optimum moisture content. Recycled aggregate base is acceptable for use. The resulting over-excavations following scarification and recompaction and/or a geogrid stabilized bottom should be restored with engineered fill placed and compacted in accordance with Engineered Fill Construction section of this report.

Rammed Aggregate Pier (RAP) Alternative

If a RAP system will be used to improve the subgrade beneath the footprint of the buildings, over-excavation of the building pads would not be necessary. The RAP system uses a drilled shaft backfilled with compacted aggregate base to improve subgrade stability and reduce settlements within the treated areas. The RAP system should be designed by a professional engineer in the State of California that is qualified and experienced in RAP design.

Although over-excavation of the building pads would not be required if a RAP system is used for support of the buildings, the floor slab subgrade should be scarified and compacted to

provide adequate and uniform floor slab support across the building footprints. Specifically, areas to receive fill and at-grade areas should be scarified to a depth of at least 12 inches, thoroughly moisture conditioned to at least the optimum moisture content, and uniformly compacted to at least 90 percent relative compaction.

Pavement and Exterior Flatwork

Please note that the ground improvement recommendations provided above are not necessary within areas designated for exterior flatwork or pavements (at least five feet outside of the building pad areas). Any other surfaces to receive fill outside of the building pad areas, achieved by excavation or remain at grade, should be scarified to a depth of at least 12 inches, thoroughly moisture conditioned to at least the optimum moisture content and uniformly compacted to at least 90 percent of the ASTM D1557 maximum dry density.

The upper six inches of pavement subgrades should be uniformly compacted to at least 95 percent of the ASTM D1557 maximum dry density at a moisture content of at least the optimum moisture content, regardless of whether final grade is established by excavation, engineered fill or left at grade. Additional recommendations regarding pavement subgrades are provided in the Pavement Design section of this report.

General

Compaction of all subgrade soils should be performed using a heavy, self-propelled, sheepsfoot compactor capable of achieving the required compaction and must be performed in the presence of the Geotechnical Engineer's representative who will evaluate the performance of subgrade under compactive load. Difficulty in achieving subgrade compaction may be an indication of loose, soft or unstable soil conditions that could require additional excavation. If these conditions exist, additional subgrade stabilization recommendations may be required at the time of construction.

Engineered Fill Construction

On-site soils are considered suitable for use in engineered fill construction, if they do not contain significant concentrations of organic materials, rubble debris, or particles greater than three inches in maximum dimension. Imported fill materials, if required, should be granular, compactable materials with a Plasticity Index of 15 or less when tested in accordance with ASTM D4318; an Expansion Index of 20 or less when tested in accordance with ASTM D4829; an organic content less than four percent; do not contain particles greater than three inches in

maximum dimension, and be within a compactable moisture content. Additionally, import fill materials that will be used within pavement areas should be non-expansive and have a minimum Resistance value of at least 15 when tested in accordance with California Test 301. Imported fill should be observed and approved by the Geotechnical Engineer at least three business days prior to being transported to the site. Also, if import fills are required (other than aggregate base), the contractor must provide appropriate documentation that the import is clean of known contamination and within acceptable corrosion limits.

Engineered fill should be placed in lifts not exceeding six inches in compacted thickness with each lift being uniformly moisture conditioned to at least the optimum moisture content and compacted to not less than 90 percent of the maximum dry density per ASTM D1557.

The upper six inches of final pavement subgrade should be uniformly compacted to at least 95 percent of the ASTM D1557 maximum dry density at a moisture content of at least the optimum moisture and must be stable under construction traffic prior to placement of aggregate base. Final pavement subgrade processing and compaction should be performed just prior to placement of aggregate base, after construction of underground utilities is complete. The moisture content of the subgrade soils must be maintained until covered by aggregate base, or the subgrade soils re-moisture conditioned just prior to base placement.

To help identify unstable pavement subgrades, a proof-roll should be performed with a fully-loaded water truck on the exposed subgrades prior to placement of aggregate base. The proof-roll should be observed by a representative of the Geotechnical Engineer.

Permanent excavation and fill slopes should be constructed no steeper than two horizontal to one vertical (2H:1V) and should be vegetated as soon as practical following grading to minimize erosion. As a minimum, the following erosion control measures should be considered: placement of straw bale sediment barriers or construction of silt filter fences in areas where surface run-off may be concentrated. Slopes should be over-built and cutback to design grades and inclinations. The final decision of erosion control measures should be made by the Project Stormwater Pollution Prevention Plan Engineer.

All earthwork operations should be accomplished in accordance with the recommendations contained within this report. We recommend the Geotechnical Engineer's representative be present on a regular basis during all earthwork operations to observe and test the engineered fill and to verify compliance with the recommendations of this report and the project plans and specifications.

Utility Trench Backfill

Utility trench backfill should be mechanically compacted as engineered fill in accordance with the following recommendations. Bedding and initial backfill around and over the pipe should conform to the pipe manufacturers recommendations for the pipe materials selected and applicable sections of the governing agency standards.

Utility trench backfill should be placed in thin lifts, thoroughly moisture conditioned to at least the optimum moisture content and compacted to at least 90 percent of the maximum dry density as determined by ASTM D1557. The lift thickness will depend on the type of compaction equipment used to backfill utility trenches.

The upper six inches of utility trench backfill within pavement areas should be compacted to at least 95 percent of the ASTM D1557 maximum dry density.

We recommend that all underground utility trenches aligned nearly parallel with new foundations be at least three feet from the outer edge of foundations, wherever possible. Trenches should not encroach into the zone extending outward at a one horizontal to one vertical (1H:1V) inclination below the bottom of foundations. The intent of these recommendations is to prevent loss of both lateral and vertical support of foundations, resulting in possible settlement.

Foundations

Based on the subsurface conditions encountered at the boring locations, the foundations may consist of shallow spread foundations on an improved subgrade, or a deep foundation system. In our experience, we anticipate shallow spread foundations on an improved subgrade will be the most cost-effective foundation system and will provide sufficient support for the proposed improvements. Therefore, our recommendations for shallow spread foundations on an improved subgrade are provided below.

The buildings may be supported on a conventional shallow foundation system with an interior slab-on-grade floor, provided the building pad areas are over-excavated and constructed in accordance with the recommendations included in the Subgrade Preparation section of this report. Below we have provided recommendations for conventional shallow foundations supported on an over-excavated building pad. We have also provided preliminary recommendations for shallow foundations supported on a RAP improved subgrade. The Geotechnical Engineer should be given the opportunity to review final grading plans and

foundation plans to determine if the intent of our recommendations has been properly implemented into those documents.

Conventional Shallow Foundations on Over-Excavated Building Pads

The planned buildings may be supported upon a continuous perimeter foundation with continuous and/or isolated interior spread foundations embedded at least 18 inches below lowest adjacent soil grade, provided the subgrade has been prepared in accordance with the Subgrade Preparation and Engineered Fill Construction sections of this report. Lowest soil grade is defined as either the adjacent exterior soil grade or the soil subgrade beneath the building, whichever is lower. Continuous foundations should maintain a minimum width of 12 inches and isolated spread foundations should be at least 24 inches in plan dimension.

Foundations constructed as such may be sized for maximum allowable "net" soil bearing pressures of 3,000 pounds per square foot (psf) for dead plus live loads, with a 1/3 increase for total loads including the short-term effects of wind or seismic forces. The weight of the foundation concrete extending below lowest adjacent soil grade may be disregarded in sizing computations.
We recommend that all foundations be adequately reinforced to provide structural continuity, mitigate cracking and permit spanning of local soil irregularities. The structural engineer should determine final foundation reinforcing requirements.

Resistance to lateral foundation displacement for conventional shallow foundations may be computed using an allowable friction factor of 0.30, which may be multiplied by the effective vertical load on each foundation. Additional lateral resistance may be computed using an allowable passive earth pressure equivalent to a fluid pressure of 300 psf per foot of depth, acting against the vertical projection of the foundation. These two modes of resistance should not be added unless the frictional component is reduced by 50 percent since full mobilization of the passive resistance requires some horizontal movement, effectively reducing the frictional resistance.

We recommend that all foundation excavations be observed by the Geotechnical Engineer's representative prior to placement of reinforcement and concrete to verify firm bearing materials are exposed.

Conventional Shallow Foundations on Rammer Aggregate Piers (RAPs)

The planned buildings may also be supported on continuous and/or isolated spread foundations, or a mat foundation, supported on a RAP system extending below the bottom of

foundations. The RAP system is considered capable of densifying the subsurface soils at the site and provide adequate and uniform support for the planned buildings. This will result in an increased ultimate bearing capacity and mitigation of some of the effects of total and differential settlement. A qualified RAP contractor licensed in the State of California should be contacted directly to provide final recommendations for the RAP system, including RAP depths, allowable capacities, and post-construction settlements. Upon request, we can recommend qualified contractors familiar with the local area.

Continuous and/or isolated spread foundations or a mat foundation bearing on a RAP improved subgrade should extend at least 18 inches below the lowest adjacent soil grade, provided the subgrade has been prepared in accordance with the Subgrade Preparation section of this addendum. Lowest soil grade is defined as either the adjacent exterior soil grade or the soil subgrade beneath the structure, whichever is lower. Continuous foundations should maintain a minimum width of 12 inches and isolated spread foundations should be at least 24 inches in plan dimension.

Our previous experience with RAP systems and similar soil conditions indicates the allowable bearing capacity of conventional shallow foundations constructed over a RAP system would be on the order of about 4,000 to 6,000 psf for dead plus live load condition assuming a properly installed RAP system. The RAP system layout, final bearing pressures, cell capacities and anticipated settlement will depend on the actual loading conditions for the buildings and should be determined by the RAP system designer. The final bearing pressures and cell capacities should include an appropriate factor of safety. The weight of foundation concrete extending below adjacent soil grade may be disregarded in sizing computations.

We recommend that all foundations be adequately reinforced to provide structural continuity, mitigate cracking and permit spanning of local soil irregularities. The structural engineer should determine final foundation reinforcing requirements.

Preliminary resistance to lateral foundation displacement for conventional foundations supported on a RAP system may be computed using an allowable friction factor of 0.30 for soil subgrade and 0.40 for aggregate base (RAPs), which may be multiplied by the effective vertical load on each foundation. Additional lateral resistance may be computed using an allowable passive earth pressure of 200 psf per foot of depth, acting against vertical projections of the foundations. These two modes of resistance should not be added unless the frictional value is reduced by 50 percent since full mobilization of these resistances typically occurs at different degrees of horizontal movement, effectively reducing the frictional resistance.

Interior Floor Slab Support

Interior concrete slab-on-grade floors for the proposed buildings can be supported upon the soil subgrade prepared in accordance with the recommendations in this report, provided the subgrade soils are maintained in a moist condition and protected from disturbance.

Interior concrete slab-on-grade floors for the planned buildings should be at least five inches thick. We recommend that interior floor slabs be reinforced to provide structural continuity, mitigate cracking and permit spanning of local soil irregularities. The structural engineer should determine final floor slab reinforcing requirements. Temporary loads exerted during construction from vehicle traffic, construction equipment, storage of palletized construction materials, etc. should be considered in the design of the thickness and reinforcement of the interior slab-on-grade floor.

Interior floor slabs should be underlain by a layer of free-draining gravel/crushed rock, serving as a deterrent to migration of capillary moisture. The gravel/crushed rock layer should be between four and six inches thick and graded such that 100 percent passes a one-inch sieve and less than five percent passes a No. 4 sieve. Additional moisture protection may be provided by placing a plastic, water vapor retarder (at least 10-mils thick) directly over the gravel/crushed rock. The water vapor retarder should meet or exceed the minimum specifications for plastic water vapor retarders as outlined in ASTM E1745 and be installed in strict conformance with the manufacturer's recommendations.

Floor slab construction practice over the past 30 years or more has included placement of a thin layer of sand or pea gravel over the vapor retarder membrane. The intent of the sand/ pea gravel is to aid in the proper curing of the slab concrete. However, recent debate over excessive moisture vapor emissions from floor slabs includes concern of water trapped within the sand/pea gravel. As a consequence, we consider use of the sand/pea gravel layer as optional. The concrete curing benefits should be weighed against efforts to reduce slab moisture vapor transmission.

The recommendations presented above are intended to reduce significant soils-related cracking of slab-on-grade floors. Also important to the performance and appearance of a PCC slab is the quality of the concrete, the workmanship of the concrete contractor, the curing techniques utilized and the spacing of control joints.

Floor Slab Moisture Penetration Resistance

It is considered likely that floor slab subgrade soils will become wet to near saturated at some time during the life of structures. This is a certainty when slabs are constructed during the wet seasons, or when constantly wet ground or poor drainage conditions exist adjacent to structures. For this reason, it should be assumed that interior slabs intended for moisture-sensitive floor coverings or materials, require protection against moisture or moisture vapor penetration. Standard practice includes the gravel/crushed rock and vapor retarder as suggested above. However, the gravel/crushed rock and plastic membrane offer only a limited, first line of defense against soil-related moisture; they do not moisture-proof the slab. Recommendations contained in this report concerning foundation and floor slab design are presented as *minimum* requirements, only from the geotechnical engineering standpoint.

It is emphasized that the use of gravel/crushed rock and plastic membrane below the slab will not "moisture proof" the slab, nor does it assure that slab moisture transmission levels will be low enough to prevent damage to floor coverings or other building components. If increased protection against moisture vapor penetration of slabs is desired, a concrete moisture protection specialist should be consulted. The design team should consider all available measures for slab moisture protection. It is commonly accepted that maintaining the lowest practical water-cement ratio in the slab concrete is one of the most effective ways to reduce future moisture vapor penetration of the completed slabs.

Exterior Flatwork Construction

Soil subgrades supporting exterior concrete flatwork (i.e., sidewalks, courtyards, etc.) should be brought to at least the optimum moisture content and uniformly compacted to at least 90 percent of the ASTM D1557 maximum dry density prior to the placement of the aggregate base. Exterior concrete flatwork should be at least four inches thick in pedestrian traffic areas and underlain by at least four inches of aggregate base compacted to at least 95 percent of the ASTM D1557 maximum dry density.

Proper moisture conditioning of the subgrade soils is considered important to the performance of exterior flatwork. Expansion joints should be provided to allow for minor vertical movement of the flatwork. Exterior flatwork should be constructed independent of the perimeter building foundation and isolated column foundations by the placement of a layer of felt material between the flatwork and the foundation.

Consideration should be given to thickening the edges of exterior flatwork to at least twice the slab thickness. Flatwork reinforcement for crack control, if desired, should be determined by the structural engineer.

Our recommendations are intended to reduce the effects of variable soil subgrade conditions in exterior concrete flatwork areas. However, some seasonal movement of exterior flatwork should be anticipated where flatwork is adjacent to landscape areas.

Areas adjacent to new exterior flatwork should be landscaped to maintain more uniform soil moisture conditions adjacent to and beneath flatwork. We recommend final landscaping plans not allow fallow ground adjacent to exterior concrete flatwork.

Practices recommended by the Portland Cement Association (PCA) for proper placement, curing, joint depth and spacing, construction, and placement of concrete should be followed during exterior concrete flatwork construction.

Pavement Design

The following pavement sections have been calculated based on the results of R-value testing. The procedures used for pavement design are in general conformance with Chapters 600 to 670 of the *California Highway Design Manual*, dated November 20, 2017. An R-value of 15 was used for the design of on-site pavements. The project civil engineer should determine the appropriate traffic index based on anticipated traffic conditions. We can provide alternate pavement sections based on different traffic indices, upon request.

Table 5: Pavement Design Alternatives (R-value = 15)

Traffic Index (TI)	Traffic Condition/Street Classification	Type B Asphalt Concrete (inches)	Class 2 Aggregate Base (inches)	Portland Cement Concrete (inches)
4.5	Light Automobile Parking	2½*	8	--
		--	4	5
6.5	Moderate Truck and Emergency Vehicle Traffic	3	14	--
		4*	12	
		--	6	6

* = Asphalt thickness includes Caltrans Factor of Safety.

In the summer heat, high axle loads coupled with shear stresses induced by sharply turning tire movements can lead to failure in asphalt concrete pavements. Therefore, we recommend that consideration be given to using the PCC pavements in areas subjected to concentrated heavy wheel loading, such as truck turning areas and in front of trash enclosures. These PCC pavements should be at least four inches thick, supported on at least four inches of compacted Class 2 aggregate base as noted in Table 5 above.

We emphasize that the performance of pavements is critically dependent upon uniform and adequate compaction of the soil subgrade, as well as all engineered fill and utility trench backfill within the limits of the pavements. We recommend that pavement subgrade preparation (i.e. scarification, moisture conditioning and compaction) be performed after underground utility construction is completed and just prior to aggregate base placement. The upper six inches of pavement subgrade soils should be compacted to at least 95 percent relative compaction at the optimum moisture content. All aggregate base should be compacted to at least 95 percent of the ASTM D1557 maximum dry density.

We suggest the concrete slabs be constructed with thickened edges in accordance with ACI design standards. Reinforcing for crack control, if desired, should consist of No. 4 reinforcing bars placed on maximum 24-inch centers each way throughout the slab. Reinforcement must be located at mid-slab depth to be effective. Joint spacing and details should conform with the current PCA or ACI guidelines. Portland cement concrete should achieve a minimum compressive strength of 3500 pounds per square inch at 28 days.

Pavement subgrades must be stable and unyielding under heavy wheel loads of construction equipment. A proof-roll test using a fully loaded water truck should be performed prior to placement of aggregate base to help identify areas that are unstable, as observed by our representative. Areas that are found to be unstable should be excavated to firm, undisturbed materials and restored to grade with compacted aggregate base.

Materials quality and construction within the structural section of the pavement should conform to the applicable provisions of the latest edition of the Caltrans Standard Specifications.

Site Drainage

Final site grading should be accomplished to provide positive drainage of surface water away from buildings and prevent ponding of water adjacent to foundations or slabs.

Subgrades adjacent to buildings should be sloped away from foundations at a minimum two percent gradient for at least 10 feet, where possible.

We recommend connecting all roof drains to solid PVC pipes which are connected to available drainage features to convey water away from the structures, or discharging the drains onto paved, or hard surfaces that slope away from the foundations. Discharging or ponding of surface water should not be allowed adjacent to buildings, exterior flatwork or onto slope surfaces. Landscape berms, if planned, should not be constructed in such a manner as to promote drainage toward buildings.

Geotechnical Engineering Observation and Testing During Construction

Site preparation should be accomplished in accordance with the recommendations of this report. Geotechnical testing and observation during construction is considered a continuation of our geotechnical engineering investigation. Wallace-Kuhl & Associates should be retained to provide testing and observation services during site clearing, earthwork, and foundation construction at the project to verify compliance with this geotechnical report and the project plans and specifications, and to provide consultation as required during construction. These services are beyond the scope of work authorized for this investigation; however, we would be pleased to submit a proposal to provide these services upon request.

Section 1803A.5.8 Compacted Fill Material of the 2016 CBC requires that the geotechnical engineering report provide a number and frequency of field compaction tests to determine compliance with the recommended minimum compaction. Many factors can affect the number of tests that should be performed during construction, such as soil type, soil moisture, season of the year and contractor operations/performance. Therefore, it is crucial that the actual number and frequency of testing be determined by the Geotechnical Engineer during construction based on their observations, site conditions, and difficulties encountered.

If Wallace-Kuhl & Associates is not retained to provide geotechnical engineering observation and testing services during construction, the Geotechnical Engineer retained to provide these services should indicate in writing that they agree with the recommendations of this report or prepare supplemental recommendations as necessary (Form DSA-109). A final report by the "Geotechnical Engineer" should be prepared upon completion of the project.

Additional Services

We recommend that our firm be retained to review the final plans and specifications to determine if the intent of our recommendations has been implemented in those documents. We would be pleased to submit a proposal to provide these services upon request.

LIMITATIONS

Our recommendations are based upon the information provided regarding the proposed construction, combined with our analysis of site conditions revealed by the field exploration and laboratory testing programs. We have used prudent engineering and geologic judgment based upon the information provided and the data generated from our investigation. This report has been prepared in substantial compliance with generally accepted geotechnical engineering practices that exist in the area of the project at the time the report was prepared. No warranty, either express or implied, is provided.

If the proposed construction is modified or relocated or, if it is found during construction that subsurface conditions differ from those we encountered at our boring locations, we should be afforded the opportunity to review the new information or changed conditions to determine if our conclusions and recommendations must be modified.

We emphasize that this report is applicable only to the proposed construction and the investigated site. This report should not be utilized for construction on any other site. This report is considered valid for the proposed construction for a period of two years following the date of this report. If construction has not started within two years, we must re-evaluate the recommendations of this report and update the report, if necessary.

Wallace - Kuhl & Associates

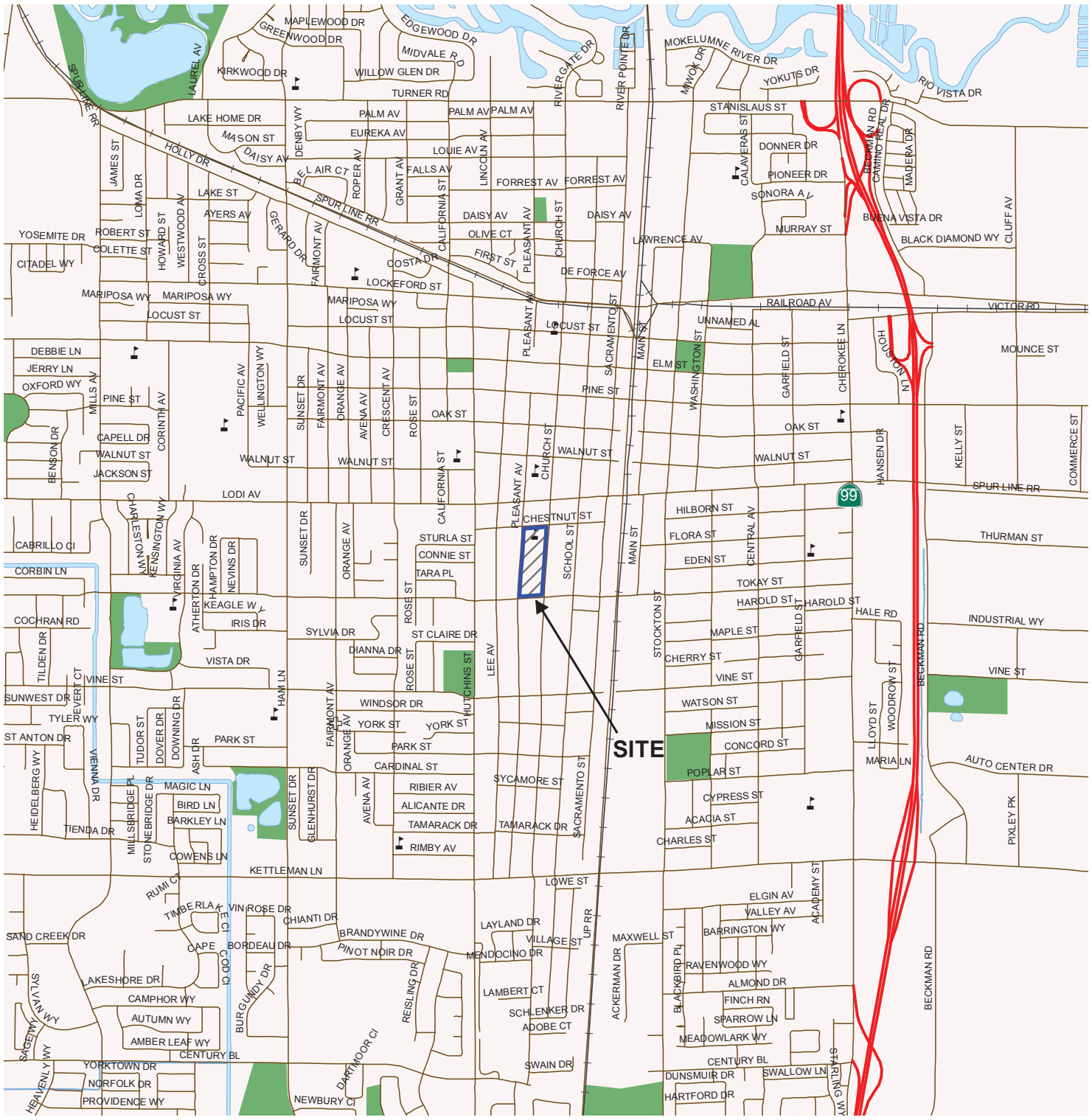
Joseph R. Ybarra
Staff Geologist

Matthew S. Moyneur
Senior Engineer

REGISTERED PROFESSIONAL ENGINEER
MATTHEW S. MOYNEUR
NO. 2920
Exp. 6/30/20
GEOTECHNICAL
STATE OF CALIFORNIA

David R. Gius, Jr.
Senior Engineering Geologist

PROFESSIONAL GEOLOGIST
DAVID R. GIUS, JR.
No. #1681
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA



Street data courtesy of San Joaquin County.
Hydrography courtesy of the U.S. Geological Survey acquired from the GIS Data Depot, December, 2007.
Projection: NAD 83, California State Plane, Zone III

N

0 1,000 2,000
Feet

WallaceKuhl & ASSOCIATES

VICINITY MAP

CLYDE W. NEEDHAM ELEMENTARY SCHOOL

Lodi, California

FIGURE	1
DRAWN BY	KKP
CHECKED BY	JRY
PROJECT MGR	DRG
DATE	07/19
WKA NO. 12150.01P	

Aerial imagery provided by ESRI
Site plan adapted from a drawing prepared by Rainforth Grau Architects on 05/21/19
Projection: NAD 83, California State Plane, Zone III

Legend

- Approximate Site Boundary
- Approximate Boring Location
- Geologic Cross Section

N

0 50 100
Feet

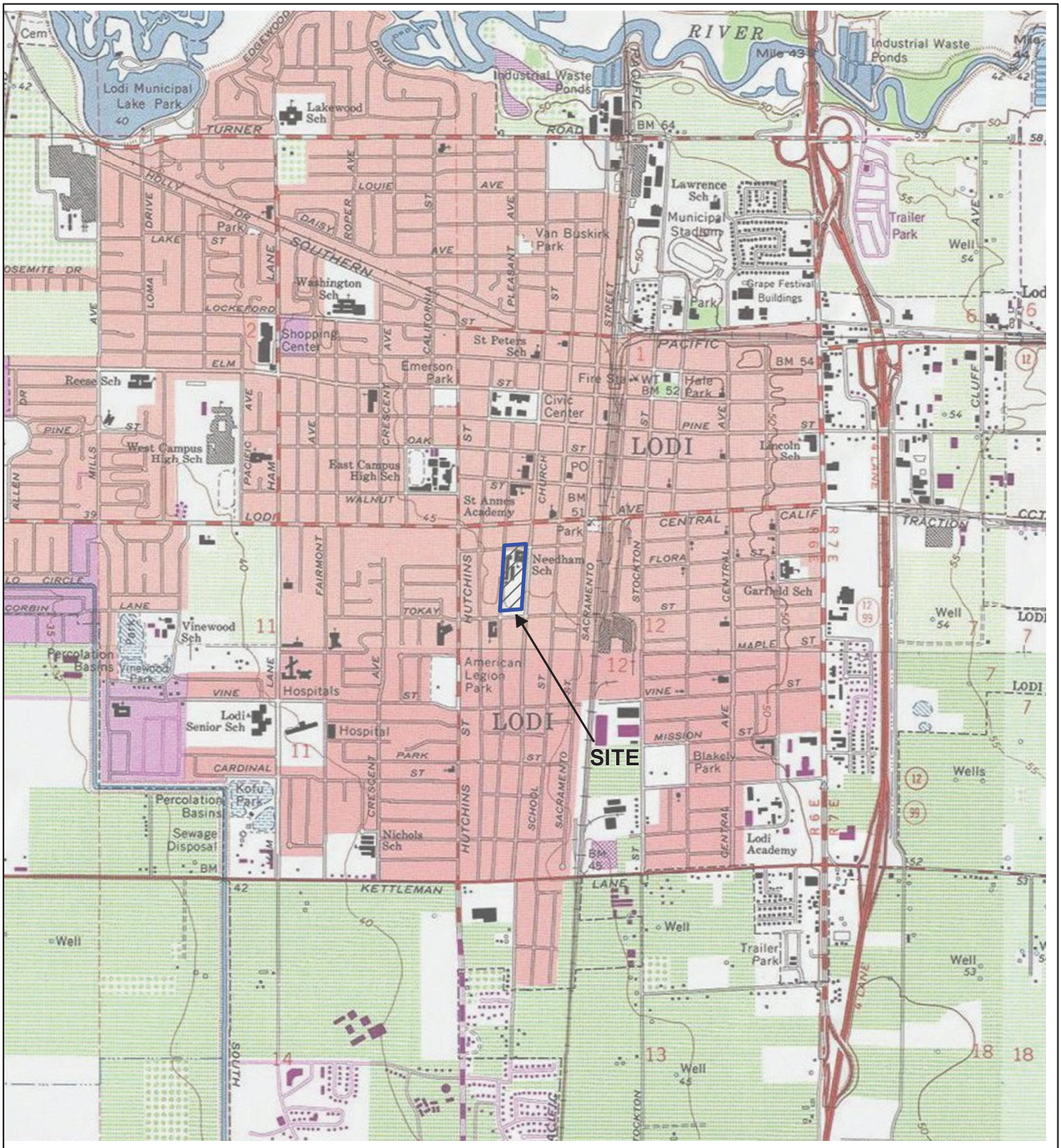
WallaceKuhl & ASSOCIATES

SITE PLAN

CLYDE W. NEEDHAM ELEMENTARY SCHOOL

Lodi, California

FIGURE	2
DRAWN BY	JBV
CHECKED BY	JRY
PROJECT MGR	DRG
DATE	07/19
WKA NO. 12150.01P	



Adapted from U.S. Geological Survey 7.5 minute topographic map of the Lodi quadrangle, California, 1960.
Projection: NAD 83, California State Plane, Zone III

N

0 1,000 2,000

Feet

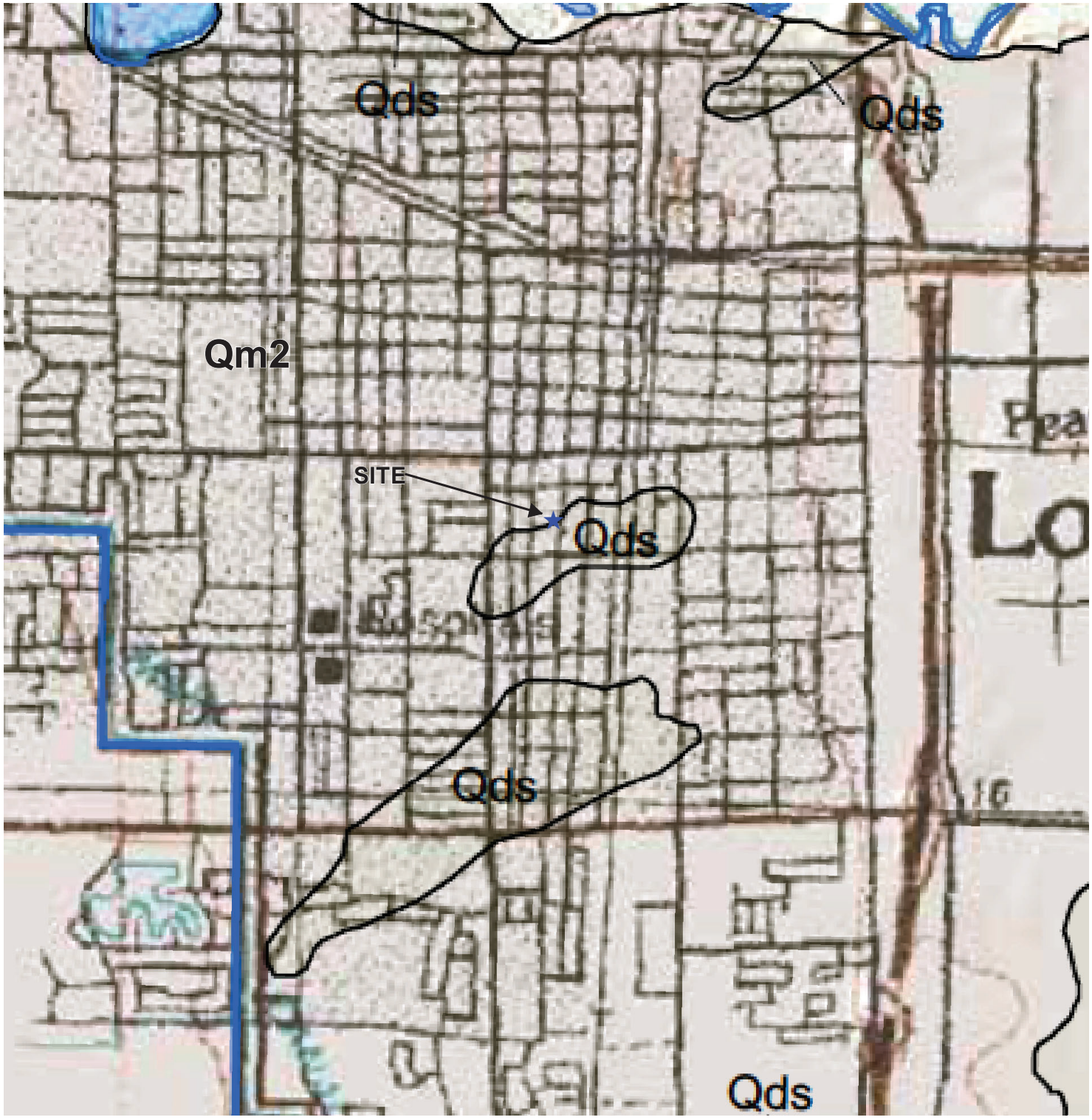
WallaceKuhl & ASSOCIATES

TOPOGRAPHIC MAP

CLYDE W. NEEDHAM ELEMENTARY SCHOOL

Lodi, California

FIGURE	3
DRAWN BY	JBV
CHECKED BY	JRY
PROJECT MGR	DRG
DATE	07/19
WKA NO. 12150.01P	



Geologic Map adapted from the Preliminary Geologic Map of the Lodi 30' X 60' Quadrangle, California, by Dawson, dated 2009.
Projection: NAD 83, California State Plane, Zone III

Legend

★ site
Qds Dune Sand
Qm2 Modesto Formation, upper member, undivided alluvium

N

0 1,000 2,000
Feet

WallaceKuhl & ASSOCIATES

GEOLOGIC MAP

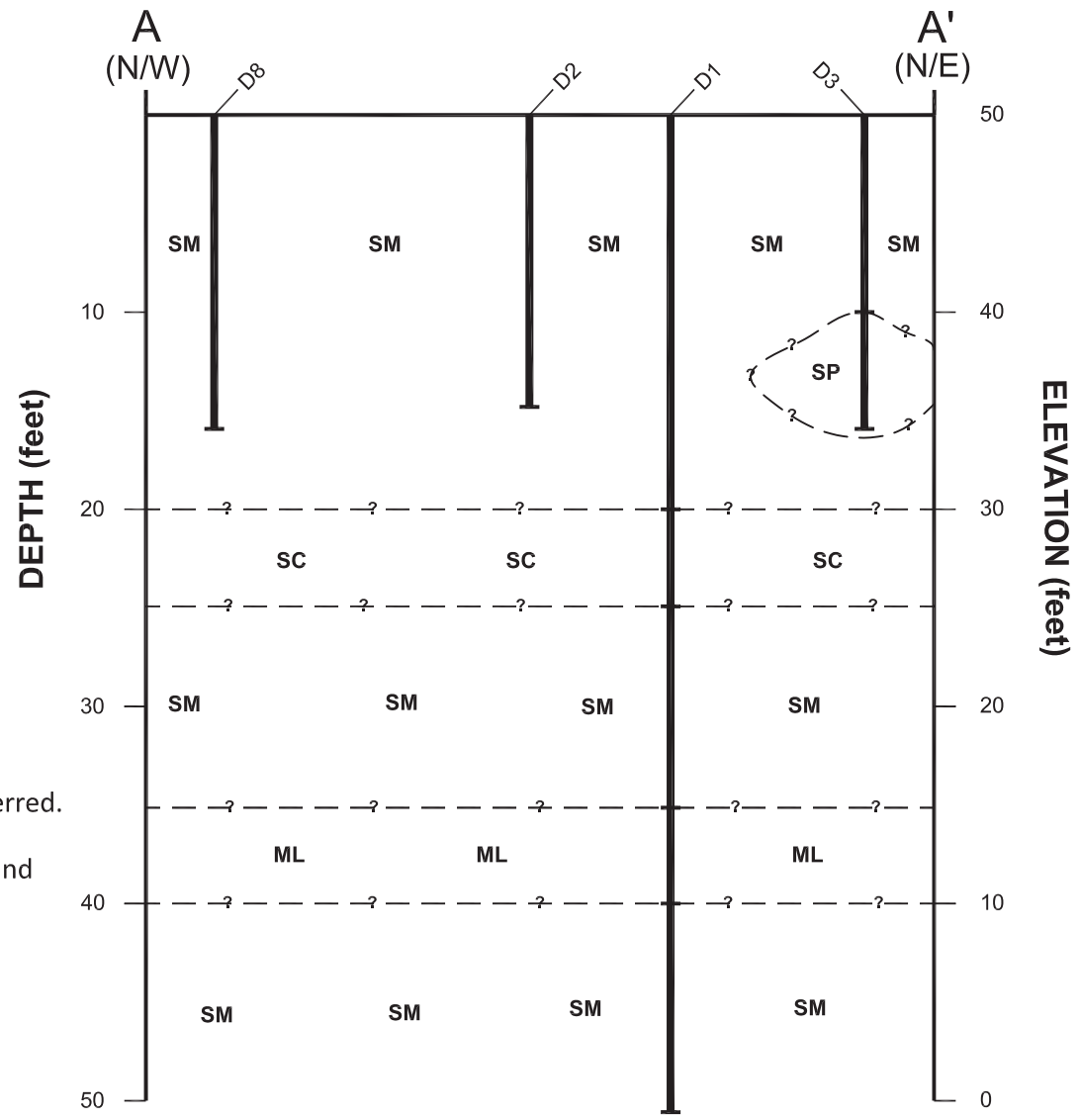
CLYDE W. NEEDHAM ELEMENTARY SCHOOL

Lodi, California

FIGURE	4
DRAWN BY	JBV
CHECKED BY	JRY
PROJECT MGR	DRG
DATE	07/19

WKA NO. 12150.01P

Scale
Horizontal: 1" = 100'
Vertical: 1" = 10'



Key:

—?—?— Geologic contact, solid where well located, dashed where approximate, queried where inferred.

Dominant soil types and symbols (USCS shorthand after ASTM D2487-5)*

* Detailed soil logs and descriptions available in Boring Logs, Figures 8 through 15.

(XX) * Elevations, Depths, and Locations are approximate.

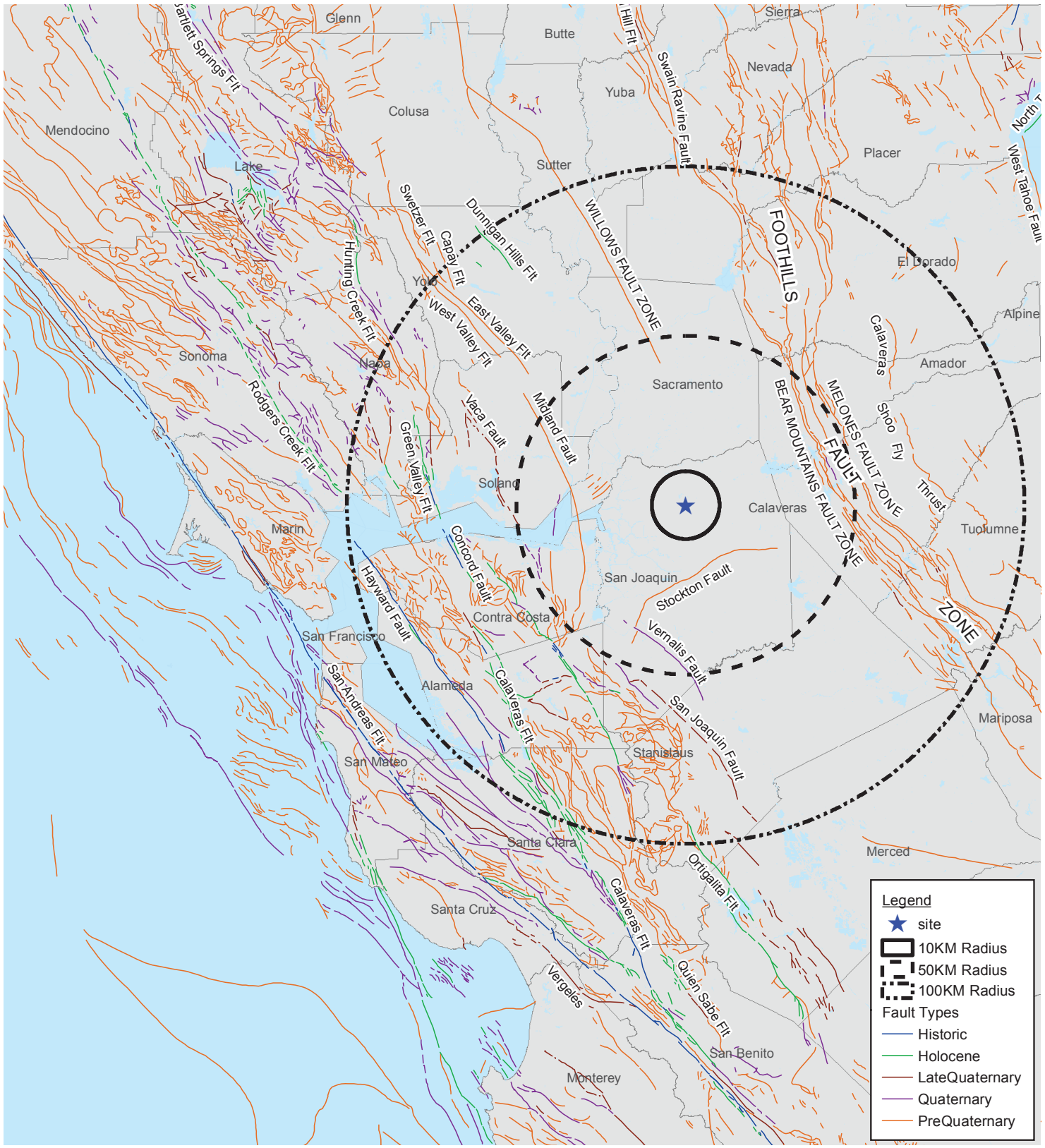
WallaceKuhl & ASSOCIATES

GEOLOGIC CROSS SECTION A-A'

CLYDE W. NEEDHAM ELEMENTARY SCHOOL

Lodi, California

FIGURE	5
DRAWN BY	JBV
CHECKED BY	JRY
PROJECT MGR	DRG
DATE	07/19
WKA NO.12150.01P	



Modified from Division of Mines and Geology, CD-ROM 2000-08 (2000), Digital database of faults from the Fault Activity Map of California and Adjacent Areas and from the USGS Quaternary Fault and Fold Database of the United States, dated November 3, 2010.
Projection: NAD 83, California State Plane, Zone II

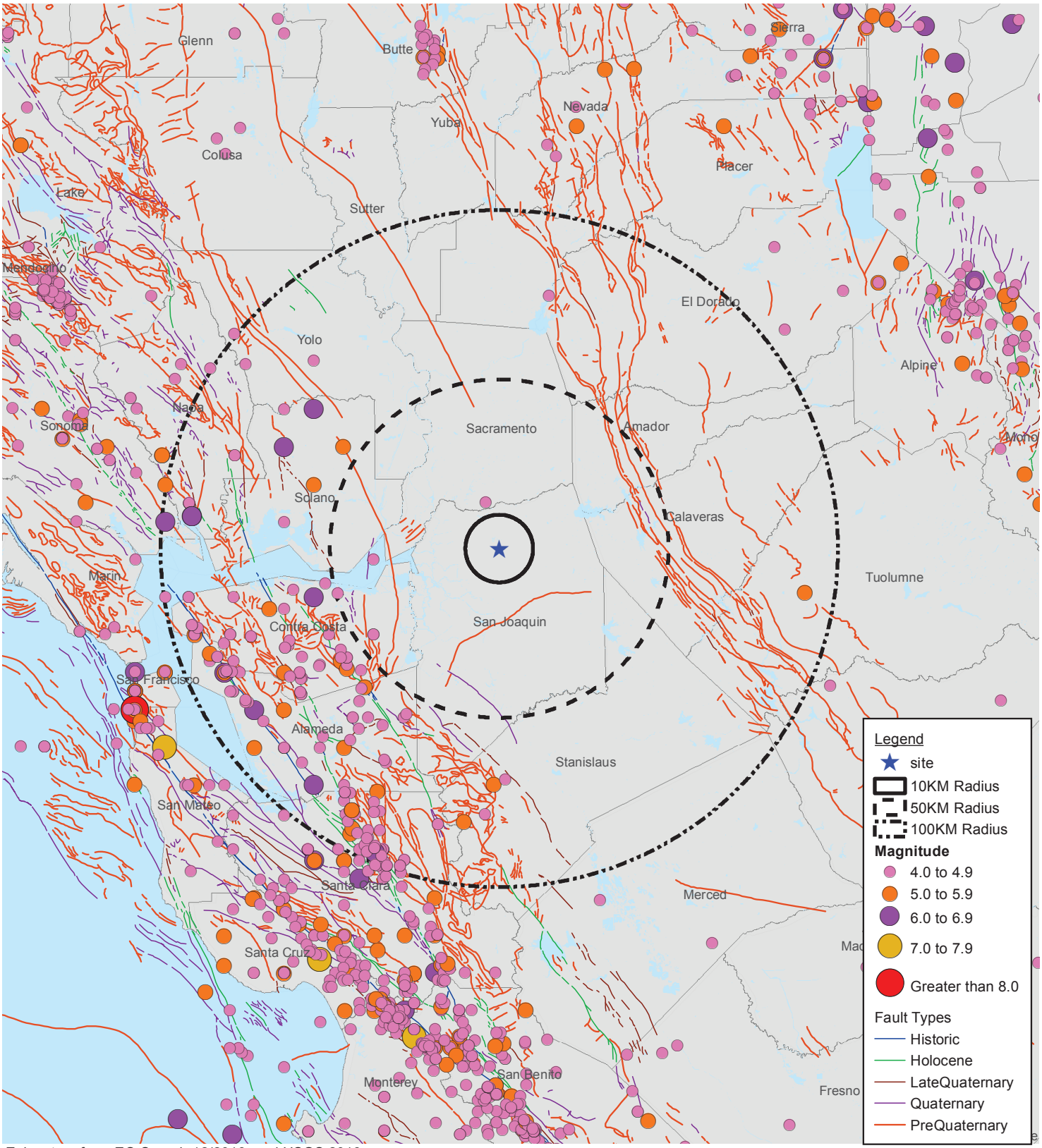
WallaceKuhl & ASSOCIATES

FAULT MAP

CLYDE W. NEEDHAM ELEMENTARY SCHOOL

Lodi, California

FIGURE	6
DRAWN BY	JBV
CHECKED BY	JRY
PROJECT MGR	DRG
DATE	07/19
WKA NO. 12150.01P	



Epicenters from EQ Search 12/2016, and USGS 2016.
Projection: NAD 83, California State Plane, Zone II

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EPICENTER MAP

CLYDE W. NEEDHAM ELEMENTARY SCHOOL

Lodi, California

FIGURE	7
DRAWN BY	JBV
CHECKED BY	JRY
PROJECT MGR	DRG
DATE	07/19

WKA NO. 12150.01P

Project: Clyde W. Needham Elementary School
Project Location: Lodi, California
WKA Number: 12150.01P

LOG OF SOIL BORING D1

Sheet 1 of 2

Date(s) Drilled	**6/26/19**	Logged By	**JRY**	Checked By	**MSM**
Drilling Method	**Hollow Stem Auger**	Drilling Contractor	**V&W Drilling**	Total Depth of Drill Hole	**51.5 feet**
Drill Rig Type	**CME-75**	Diameter(s) of Hole, inches	**8"**	Approx. Surface Elevation, ft MSL	
Groundwater Depth [Elevation], feet	**38.0**	Sampling Method(s)	**1.4" Standard Penetration Test (SPT)**	Drill Hole Backfill	
Remarks	**Bulk (1-3')**			Driving Method and Drop	**140lb auto. hammer with 30" drop**

ELEVATION, feet	DEPTH, feet	GRAPHIC LOG	ENGINEERING CLASSIFICATION AND DESCRIPTION	SAMPLE DATA: SAMPLE	SAMPLE NUMBER	NUMBER OF BLOWS	TEST DATA: MOISTURE CONTENT, %	DRY UNIT WEIGHT, pcf	ADDITIONAL TESTS
			3 1/2 inches asphalt concrete						
			Dark Brown to brown, moist, very loose, silty fine to medium SAND (SM) with trace clay		D1-1	2	10.5		
	5		brown, loose, no clay		D1-2	7	13.0		
	10		very dense		D1-3	57			
	15		medium dense		D1-4	22			
	20		Brown, Moist, dense, clayey fine to medium SAND (SC)		D1-5	37			
	25		Brown, moist, dense, silty fine to medium SAND (SM)		D1-6	48			

BORING LOG 12150.01P - CLYDE W. NEEDHAM ES.GPJ WKA.GDT 8/6/19 4:39 PM

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FIGURE 8

Project: Clyde W. Needham Elementary School
Project Location: Lodi, California
WKA Number: 12150.01P

LOG OF SOIL BORING D1

Sheet 2 of 2

ELEVATION, feet	DEPTH, feet	GRAPHIC LOG	ENGINEERING CLASSIFICATION AND DESCRIPTION	SAMPLE DATA: SAMPLE	SAMPLE NUMBER	NUMBER OF BLOWS	TEST DATA: MOISTURE CONTENT, %	DRY UNIT WEIGHT, pcf	ADDITIONAL TESTS
			yellowish brown		D1-7	38			
	35		Light brown, moist, dense, SILT (ML)		D1-8	48			
	40		Yellowish brown, moist, dense, silty fine to medium SAND (SM) with trace clay		D1-9	38			
	45		medium dense, no clay		D1-10	28			
	50		yellowish brown to brown		D1-11	24			
			Boring terminated at 51 1/2 feet below existing site grade Groundwater was not encountered intitially, but was recorded at 38 feet below ground surface at time of backfill						

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Wallace Kuhl & ASSOCIATES

FIGURE 8

Project: Clyde W. Needham Elementary School
Project Location: Lodi, California
WKA Number: 12150.01P

LOG OF SOIL BORING D2

Sheet 1 of 1

Date(s) Drilled	**6/26/19**	Logged By	**JRY**	Checked By	**MSM**
Drilling Method	**Solid Flight Auger**	Drilling Contractor	**V&W Drilling**	Total Depth of Drill Hole	**15.0 feet**
Drill Rig Type	**CME-75**	Diameter(s) of Hole, inches	**6"**	Approx. Surface Elevation, ft MSL	
Groundwater Depth [Elevation], feet		Sampling Method(s)	**2.0" Modified California with 6-inch sleeve**	Drill Hole Backfill	
Remarks				Driving Method and Drop	**140lb auto. hammer with 30" drop**

ELEVATION, feet	DEPTH, feet	GRAPHIC LOG	ENGINEERING CLASSIFICATION AND DESCRIPTION	SAMPLE DATA: SAMPLE	SAMPLE NUMBER	NUMBER OF BLOWS	TEST DATA: MOISTURE CONTENT, %	DRY UNIT WEIGHT, pcf	ADDITIONAL TESTS
			3 1/2 inches asphalt concrete						
			Dark brown, moist, loose, silty fine to medium SAND (SM)	■	D2-1I	8	11.0	111	
			dark brown to brown, very loose	■	D2-2I	3	11.9	116	TR
	5								
			yellowish brown to brown, loose	■	D2-3I	6			
	10								
			medium dense	■	D2-4I	22			
	15		Boring terminated at 15 feet below existing site grade Groundwater was not encountered						

BORING LOG 12150.01P - CLYDE W. NEEDHAM ES.GPJ WKA.GDT 8/6/19 4:39 PM

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FIGURE 9

Project: Clyde W. Needham Elementary School
Project Location: Lodi, California
WKA Number: 12150.01P

LOG OF SOIL BORING D3

Sheet 1 of 1

Date(s) Drilled	**6/26/19**	Logged By	**JRY**	Checked By	**MSM**
Drilling Method	**Solid Flight Auger**	Drilling Contractor	**V&W Drilling**	Total Depth of Drill Hole	**16.5 feet**
Drill Rig Type	**CME-75**	Diameter(s) of Hole, inches	**6"**	Approx. Surface Elevation, ft MSL	
Groundwater Depth [Elevation], feet		Sampling Method(s)	**2.0" Modified California with 6-inch sleeve**	Drill Hole Backfill	
Remarks				Driving Method and Drop	**140lb auto. hammer with 30" drop**

ELEVATION, feet	DEPTH, feet	GRAPHIC LOG	ENGINEERING CLASSIFICATION AND DESCRIPTION	SAMPLE DATA: SAMPLE	SAMPLE NUMBER	NUMBER OF BLOWS	TEST DATA: MOISTURE CONTENT, %	DRY UNIT WEIGHT, pcf	ADDITIONAL TESTS
			3 1/2 inches asphalt concrete						
			Olive brown to brown, moist, loose, silty fine to medium SAND (SM)						
				■	D3-1I	5	10.4	110	
	5		yellowish brown, medium dense	■	D3-2I	12	11.3	107	
	10		Yellowish brown, moist, fine to medium dense, medium SAND (SP)	■	D3-3I	24			
	15		dense	■	D3-4I	39			
			Yellowish brown, moist, dense, SILT (ML)						
			Boring terminated at 16 1/2 feet below existing site grade Groundwater was not encountered						

BORING LOG 12150.01P - CLYDE W. NEEDHAM ES.GPJ WKA.GDT 8/6/19 4:39 PM

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FIGURE 10

Project: Clyde W. Needham Elementary School
Project Location: Lodi, California
WKA Number: 12150.01P

LOG OF SOIL BORING D4

Sheet 1 of 1

Date(s) Drilled	**6/26/19**	Logged By	**JRY**	Checked By	**MSM**
Drilling Method	**Solid Flight Auger**	Drilling Contractor	**V&W Drilling**	Total Depth of Drill Hole	**15.0 feet**
Drill Rig Type	**CME-75**	Diameter(s) of Hole, inches	**6"**	Approx. Surface Elevation, ft MSL	
Groundwater Depth [Elevation], feet		Sampling Method(s)	**2.0" Modified California with 6-inch sleeve**	Drill Hole Backfill	
Remarks	**Bulk (0-3'), E.I.**			Driving Method and Drop	**140lb auto. hammer with 30" drop**

ELEVATION, feet	DEPTH, feet	GRAPHIC LOG	ENGINEERING CLASSIFICATION AND DESCRIPTION	SAMPLE DATA: SAMPLE	SAMPLE NUMBER	NUMBER OF BLOWS	TEST DATA: MOISTURE CONTENT, %	DRY UNIT WEIGHT, pcf	ADDITIONAL TESTS
			Light brown, moist, loose, SILT (ML) with trace fine sand		D4-1I	8	3.2	91	
			Light brown, moist, loose, silty fine SAND (SM)		D4-2I	6	5.4	96	
	5								
			yellowish brown		D4-3I	10			
	10								
			dark brown to brown, dense		D4-4I	39			
	15		Boring terminated at 15 feet below existing site grade Groundwater was not encountered						

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Wallace Kuhl & ASSOCIATES

FIGURE 11

Project: Clyde W. Needham Elementary School
Project Location: Lodi, California
WKA Number: 12150.01P

LOG OF SOIL BORING D5

Sheet 1 of 1

Date(s) Drilled	**6/26/19**	Logged By	**JRY**	Checked By	**MSM**
Drilling Method	**Solid Flight Auger**	Drilling Contractor	**V&W Drilling**	Total Depth of Drill Hole	**16.5 feet**
Drill Rig Type	**CME-75**	Diameter(s) of Hole, inches	**6"**	Approx. Surface Elevation, ft MSL	
Groundwater Depth [Elevation], feet		Sampling Method(s)	**2.0" Modified California with 6-inch sleeve**	Drill Hole Backfill	
Remarks				Driving Method and Drop	**140lb auto. hammer with 30" drop**

ELEVATION, feet	DEPTH, feet	GRAPHIC LOG	ENGINEERING CLASSIFICATION AND DESCRIPTION	SAMPLE DATA: SAMPLE	SAMPLE NUMBER	NUMBER OF BLOWS	TEST DATA: MOISTURE CONTENT, %	DRY UNIT WEIGHT, pcf	ADDITIONAL TESTS
			Light brown to brown, moist, medium dense, silty fine SAND (SM)						
				■	D5-1I	17	5.2		GR
	5			■	D5-2I	13	10.0	106	TR
	10		reddish brown to brown, dense	■	D5-3I	44	9.0	112	
	15		medium dense	■	D5-4I	22			
			Boring terminated at 16 1/2 feet below existing site grade Groundwater was not encountered						

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Wallace Kuhl & ASSOCIATES

FIGURE 12

Project: Clyde W. Needham Elementary School
Project Location: Lodi, California
WKA Number: 12150.01P

LOG OF SOIL BORING D6

Sheet 1 of 1

Date(s) Drilled	**6/26/19**	Logged By	**JRY**	Checked By	**MSM**
Drilling Method	**Solid Flight Auger**	Drilling Contractor	**V&W Drilling**	Total Depth of Drill Hole	**15.0 feet**
Drill Rig Type	**CME-75**	Diameter(s) of Hole, inches	**6"**	Approx. Surface Elevation, ft MSL	
Groundwater Depth [Elevation], feet		Sampling Method(s)	**2.0" Modified California with 6-inch sleeve**	Drill Hole Backfill	
Remarks				Driving Method and Drop	**140lb auto. hammer with 30" drop**

ELEVATION, feet	DEPTH, feet	GRAPHIC LOG	ENGINEERING CLASSIFICATION AND DESCRIPTION	SAMPLE DATA: SAMPLE	SAMPLE NUMBER	NUMBER OF BLOWS	TEST DATA: MOISTURE CONTENT, %	DRY UNIT WEIGHT, pcf	ADDITIONAL TESTS
			Light brown to yellowish brown, moist, medium dense, silty fine SAND (SM)						
				■	D6-1I	12	4.1	91	
				■	D6-2I	13	9.5	99	
	5								
				■	D6-3I	17			
	10		Grayish brown, moist, medium dense, fine to medium SAND (SP)						
				■	D6-4I	17			
	15		Boring terminated at 15 feet below existing site grade Groundwater was not encountered						

BORING LOG 12150.01P - CLYDE W. NEEDHAM ES.GPJ WKA.GDT 8/6/19 4:39 PM

Wallace Kuhl & ASSOCIATES

FIGURE 13

Project: Clyde W. Needham Elementary School
Project Location: Lodi, California
WKA Number: 12150.01P

LOG OF SOIL BORING D7

Sheet 1 of 1

Date(s) Drilled	**6/26/19**	Logged By	**JRY**	Checked By	**MSM**
Drilling Method	**Solid Flight Auger**	Drilling Contractor	**V&W Drilling**	Total Depth of Drill Hole	**16.5 feet**
Drill Rig Type	**CME-75**	Diameter(s) of Hole, inches	**6"**	Approx. Surface Elevation, ft MSL	
Groundwater Depth [Elevation], feet		Sampling Method(s)	**2.0" Modified California with 6-inch sleeve**	Drill Hole Backfill	
Remarks	**Bulk (0-3')**			Driving Method and Drop	**140lb auto. hammer with 30" drop**

ELEVATION, feet	DEPTH, feet	GRAPHIC LOG	ENGINEERING CLASSIFICATION AND DESCRIPTION	SAMPLE DATA: SAMPLE	SAMPLE NUMBER	NUMBER OF BLOWS	TEST DATA: MOISTURE CONTENT, %	DRY UNIT WEIGHT, pcf	ADDITIONAL TESTS
			Light brown to brown, moist, medium dense, sandy SILT (ML)						
				■	D7-1I	18	10.2		GR
	5		grayish brown to brown, variably cemented, very dense	■	D7-2I	55	13.2	103	
	10		Grayish brown to brown, moist, loose, silty fine to medium SAND (SM)	■	D7-3I	10			
	15		medium dense	■	D7-4I	18			
			Boring terminated at 16 1/2 feet below existing site grade Groundwater was not encountered						

BORING LOG 12150.01P - CLYDE W. NEEDHAM ES.GPJ WKA.GDT 8/6/19 4:39 PM

Wallace Kuhl & ASSOCIATES

FIGURE 14

Project: Clyde W. Needham Elementary School
Project Location: Lodi, California
WKA Number: 12150.01P

LOG OF SOIL BORING D8

Sheet 1 of 1

Date(s) Drilled	**6/26/19**	Logged By	**JRY**	Checked By	**MSM**
Drilling Method	**Solid Flight Auger**	Drilling Contractor	**V&W Drilling**	Total Depth of Drill Hole	**16.5 feet**
Drill Rig Type	**CME-75**	Diameter(s) of Hole, inches	**6"**	Approx. Surface Elevation, ft MSL	
Groundwater Depth [Elevation], feet		Sampling Method(s)	**2.0" Modified California with 6-inch sleeve**	Drill Hole Backfill	
Remarks	**Bulk (0-3')**			Driving Method and Drop	**140lb auto. hammer with 30" drop**

ELEVATION, feet	DEPTH, feet	GRAPHIC LOG	ENGINEERING CLASSIFICATION AND DESCRIPTION	SAMPLE DATA: SAMPLE	SAMPLE NUMBER	NUMBER OF BLOWS	TEST DATA: MOISTURE CONTENT, %	DRY UNIT WEIGHT, pcf	ADDITIONAL TESTS
			Light brown, moist, medium dense, silty fine SAND (SM)						
				■	D8-1I	16	3.7	97	
	5		variably cemented with orange mottling	■	D8-2I	37	15.9	95	
	10		Light brown to brown, medium dense	■	D8-3I	25			
	15		yellowish brown to brown	■	D8-4I	28			
			Boring terminated at 16 1/2 feet below existing site grade Groundwater was not encountered						

BORING LOG 12150.01P - CLYDE W. NEEDHAM ES.GPJ WKA.GDT 8/6/19 4:39 PM

Wallace Kuhl & ASSOCIATES

FIGURE 15

UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D2487)

MAJOR DIVISIONS		USCS[4]	CODE	CHARACTERISTICS
COARSE GRAINED SOILS (More than 50% of soil > no. 200 sieve size)	GRAVELS[1] (More than 50% of coarse fraction > no. 4 sieve size)	GW		Well-graded gravels or gravel - sand mixtures, trace or no fines
		GP		Poorly graded gravels or gravel - sand mixtures, trace or no fines
		GM		Silty gravels, gravel - sand - silt mixtures, containing little to some fines[2]
		GC		Clayey gravels, gravel - sand - clay mixtures, containing little to some fines[2]
	SANDS[1] (50% or more of coarse fraction < no. 4 sieve size)	SW		Well-graded sands or sand - gravel mixtures, trace or no fines
		SP		Poorly graded sands or sand - gravel mixtures, trace or no fines
		SM		Silty sands, sand - gravel - silt mixtures, containing little to some fines[2]
		SC		Clayey sands, sand - gravel - clay mixtures, containing little to some fines[2]
FINE GRAINED SOILS (50% or more of soil < no. 200 sieve size)	SILTS & CLAYS LL < 50	ML		Inorganic silts, gravely silts, and sandy silts that are non-plastic or with low plasticity
		CL		Inorganic lean clays, gravelly lean clays, sandy lean clays of low to medium plasticity[3]
		OL		Organic silts, organic lean clays, and organic silty clays
	SILTS & CLAYS LL ≥ 50	MH		Inorganic elastic silts, gravelly elastic silts, and sandy elastic silts
		CH		Inorganic fat clays, gravelly fat clays, sandy fat clays of medium to high plasticity
		OH		Organic fat clays, gravelly fat clays, sandy fat clays of medium to high plasticity
HIGHLY ORGANIC SOILS		PT		Peat
ROCK		RX		Rocks, weathered to fresh
FILL		FILL		Artificially placed fill material

OTHER SYMBOLS

= Drive Sample: 2-1/2" O.D. Modified California sampler

= Drive Sampler: no recovery

= SPT Sampler

= Initial Water Level

= Final Water Level

— — — = Estimated or gradational material change line

——— = Observed material change line

Laboratory Tests

CR = Corrosion
PI = Plasticity Index
EI = Expansion Index
UCC = Unconfined Compression Test (TSF)
TR = Triaxial Compression Test
GR = Gradational Analysis (Sieve/Hydro)
FC = Wash (Fines Content)
PP = Pocket Penetrometer Test (TSF)
PID = Photo Ionization Detector Test (PPM)
RV = Resistance ("R") Value

REF = Refusal (>50 blows in 6 inches)

GRAIN SIZE CLASSIFICATION

CLASSIFICATION	RANGE OF GRAIN SIZES	
	U.S. Standard Sieve Size	Grain Size in Millimeters
BOULDERS (b)	Above 12"	Above 300
COBBLES (c)	12" to 3"	300 to 75
GRAVEL (g) coarse fine	3" to No. 4 3" to 3/4" 3/4" to No. 4	75 to 4.75 75 to 19 19 to 4.75
SAND coarse medium fine	No. 4 to No. 200 No. 4 to No. 10 No. 10 to No. 40 No. 40 to No. 200	4.75 to 0.075 4.75 to 2.00 2.00 to 0.425 0.425 to 0.075
SILT & CLAY	Below No. 200	Below 0.075

Trace - Less than 5 percent
Few - 5 to 10 percent
Little - 15 to 25 percent
Some - 35 to 45 percent
Mostly - 50 to 100 percent

* Percents as given in ASTM D2488

NOTES:

1. Coarse grained soils containing 5% to 12% fines, use dual classification symbol (ex. SP-SM).
2. If fines classify as CL-ML (4<PI<7), use dual symbol (ex. SC-SM).
3. Silty Clays, use dual symbol (CL-ML).
4. Borderline soils with uncertain classification list both classifications (ex. CL/ML).

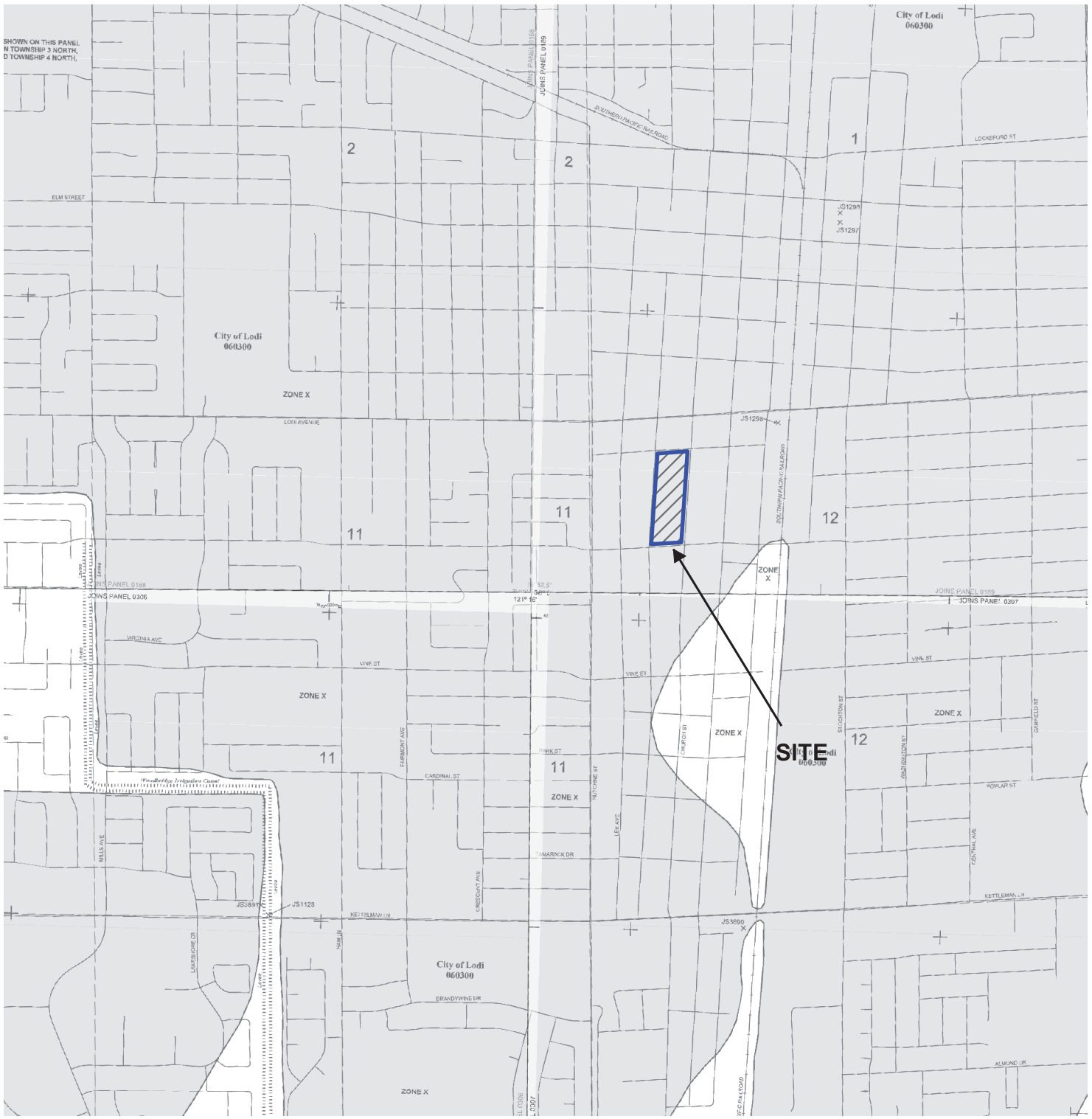
WallaceKuhl & ASSOCIATES

UNIFIED SOIL CLASSIFICATION SYSTEM

CLYDE W. NEEDHAM ELEMENTARY SCHOOL

Lodi, California

FIGURE	16
DRAWN BY	KKP
CHECKED BY	JRY
PROJECT MGR	DRG
DATE	07/19
WKA NO. 12150.01P	



Flood Map provided by FEMA, panels 168,169, 306, and 307of 950. Map numbers 06077C0168F, 06077C0169F, 06077C0306F, and 06077C0307F dated October 16,2012.
Projection: NAD 83, California State Plane, Zone III

Legend

Approximate Site Boundary

Zone X Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood.

N

0 750 1,500

Feet

WallaceKuhl & ASSOCIATES

FEMA FLOOD MAP

CLYDE W. NEEDHAM ELEMENTARY SCHOOL

Lodi, California

FIGURE	17
DRAWN BY	JBV
CHECKED BY	JRY
PROJECT MGR	DRG
DATE	07/19
WKA NO. 12150.01P	

APPENDICES

APPENDIX A
General Project Information, Field and Laboratory Testing Results

APPENDIX A
WKA No. 12150.01P

A. GENERAL INFORMATION

The performance of a geotechnical engineering and geologic hazards study for the proposed Clyde W. Needham Elementary School classroom improvements project, located within the existing Clyde W. Needham Elementary School campus located at 420 South Pleasant Avenue in Lodi, California, was authorized by our client, Lodi Unified School District, on November 8, 2018. Authorization was for a geotechnical engineering and geohazards study as described in our proposal letter dated October 29, 2018, and amended June 11, 2019, sent to our client, Lodi Unified School District, whose mailing address is 1305 East Vine Street, in Lodi, California 95240; telephone (209) 740-2374.

B. FIELD EXPLORATIONS

On June 26, 2019, eight borings (D1 through D8) were drilled at the approximate locations shown on Figure 2 using a CME-75 truck-mounted drill rig, equipped with six-inch-diameter, solid flight augers, and eight-inch-diameter, hollow stem augers, to depths ranging from about 15 to 51½ feet below existing site grades at the locations shown in Figure 2. At various intervals, soil samples were recovered from the borings with a 2½-inch outside diameter (O.D.), 2-inch inside diameter (I.D.), modified California split-spoon sampler or a 2-inch O.D., 1⅜-inch I.D., Standard Penetration Test (SPT) split-spoon sampler. Both samplers were driven by an automatic 140-pound hammer freely falling 30 inches. The number of blows of the hammer required to drive the 18-inch long samplers each six-inch interval were recorded. The sum of the blows required to drive the sampler the lower 12-inch interval, or portion thereof, is designated the penetration resistance or "blow count" for that particular drive. The modified California samples were retained in 2-inch diameter by 6-inch long, thin walled brass tubes contained within the sampler. The SPT samples were retained in plastic zip-lock bags. After recovery, the field representative visually classified the soil recovered in the tubes and plastic bags. After the samples were classified, the ends of the tubes and plastic bags were sealed to preserve the natural moisture contents.

In addition to the drive samples from the borings, representative bulk samples of near-surface soil were collected and retained in plastic bags at the locations, shown in Figure 2. All samples were taken to our laboratory for additional soil classification and selection of samples for testing.

The Logs of Soil Borings containing descriptions of the soils encountered in each boring are presented as Figures 8 through 15. A Legend explaining the Unified Soil Classification System and the symbols used on the logs is contained in Figure 16.

C. LABORATORY TESTING

Selected undisturbed soil samples were tested to determine dry unit weight (ASTM D2937) and natural moisture content (ASTM D2216). The results of these tests are included on the boring logs at the depth each tested sample was obtained.

Two samples of near-surface soil were tested for triaxial shear strength (ASTM D4767). The results of these tests are presented in Figures A1 and A2.

A representative sample of the near-surface soils was subjected to an Expansion Index test (ASTM D4829). The result of this test is presented in Figure A3.

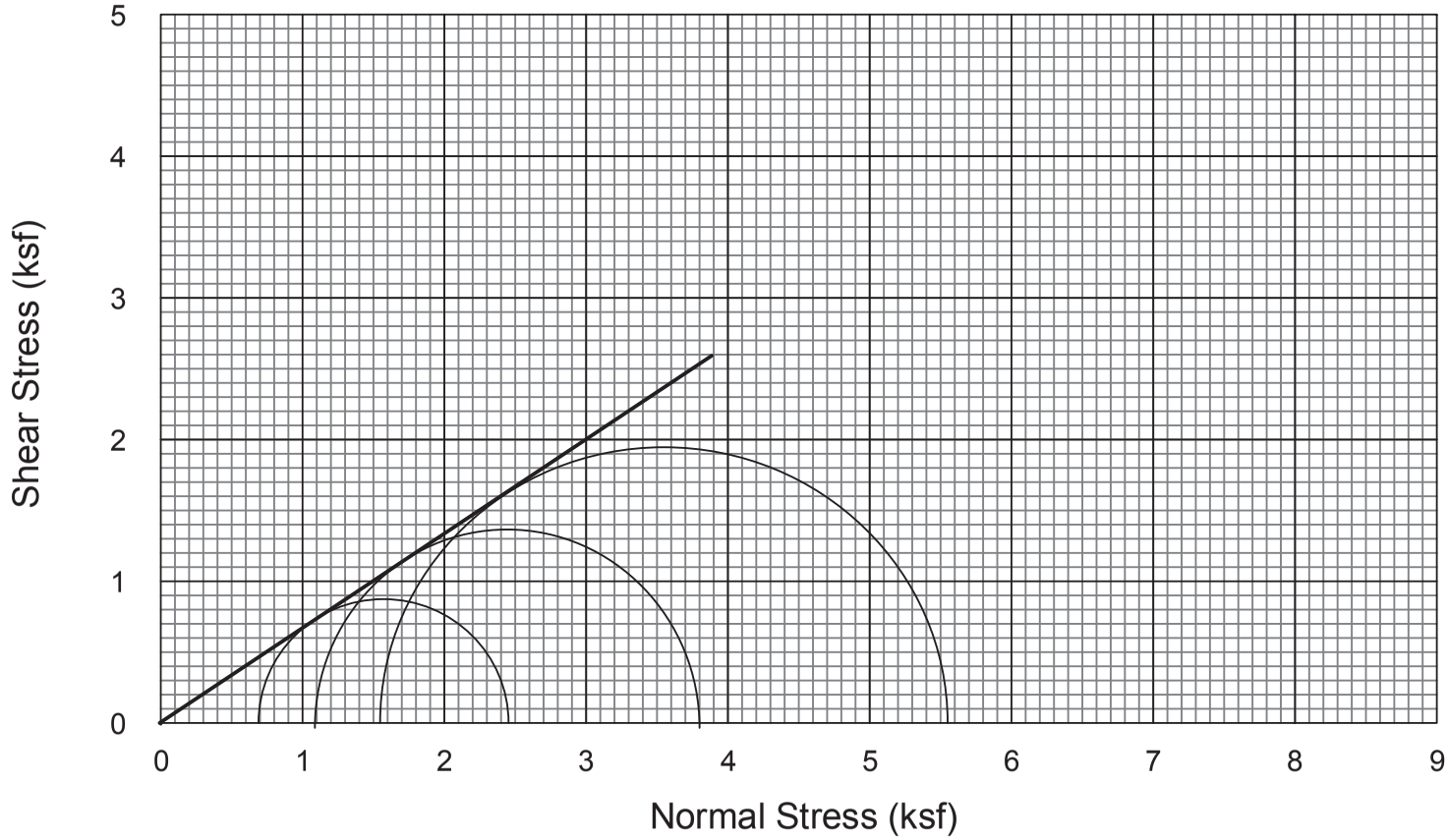
A bulk sample of near-surface soil was subjected to Resistance-value ("R") testing in accordance with California Test 301. The results of the R-value test, which was used in the pavement design, is presented in Figure A4.

Two representative samples of near-surface soil were tested for grain-size distribution (ASTM C136). The results of these tests are presented in Figure A5.

A sample of representative near-surface soil was submitted to Sunland Analytical to determine the soil pH and minimum resistivity (California Test 643), Sulfate concentration (California Test 417 and ASTM D516) and Chloride concentration (California Test 422). The test results are presented in Figures A6 and A7.

TRIAXIAL COMPRESSION TEST

ASTM D4767



SAMPLE NO. : D2-2I

SAMPLE CONDITION : Undisturbed

SAMPLE DESCRIPTION : Dark Brown to brown, silty sand

DRY DENSITY (PCF) : 116
INITIAL MOISTURE (%) : 11.9
FINAL MOISTURE (%) : 14.6

ANGLE OF INTERNAL FRICTION (ø) : 34°
COHESION (PSF) : 0

WallaceKuhl & ASSOCIATES

TRIAXIAL COMPRESSION TEST RESULTS

CLYDE W. NEEDHAM ELEMENTARY SCHOOL

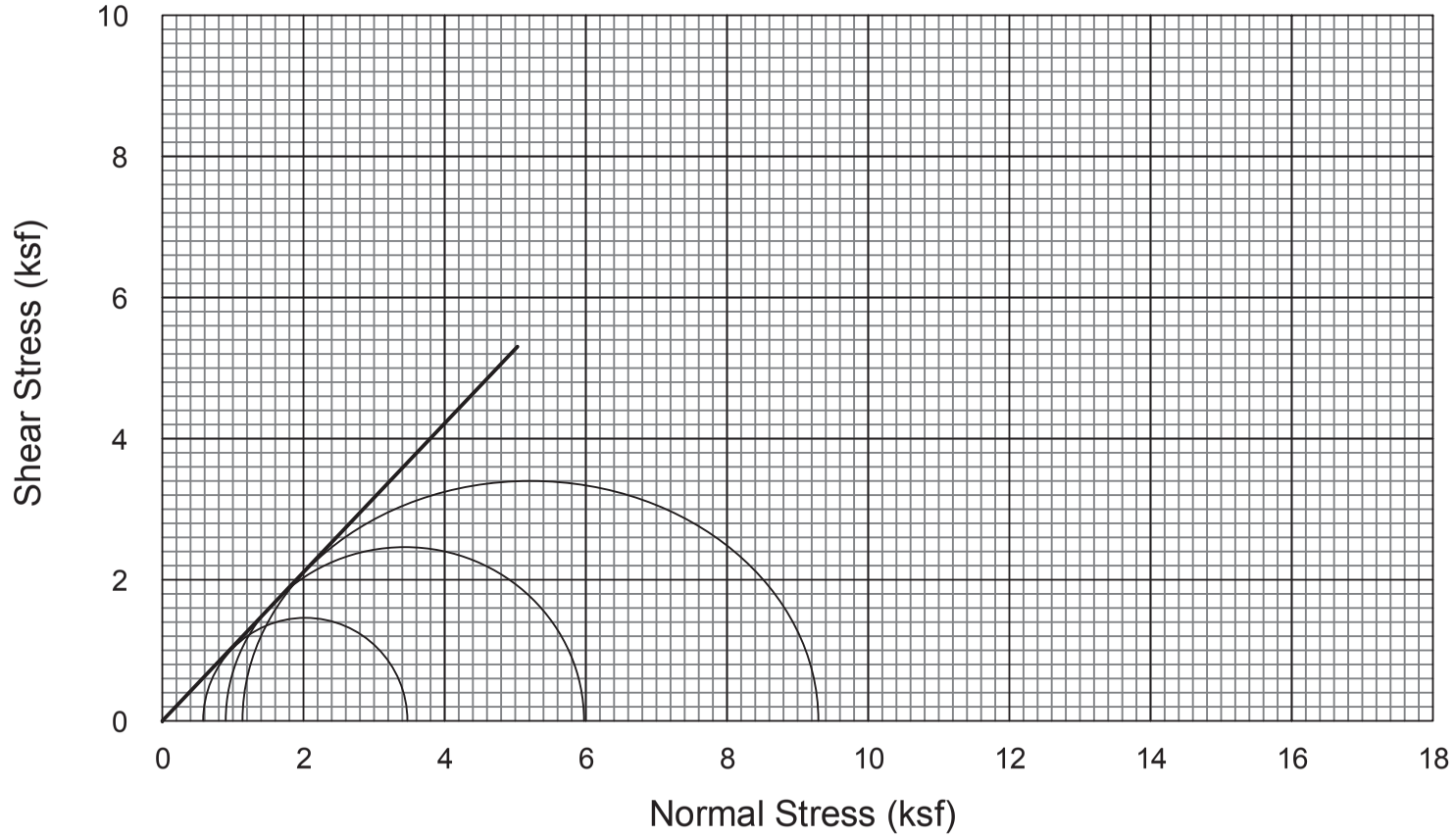
Lodi, California

FIGURE	A1
DRAWN BY	KKP
CHECKED BY	JRY
PROJECT MGR	DRG
DATE	07/19

WKA NO.12150.01P

TRIAXIAL COMPRESSION TEST

ASTM D4767



SAMPLE NO. : D5-2I

SAMPLE CONDITION : Undisturbed

SAMPLE DESCRIPTION : Light brown to brown, silty, fine sand

DRY DENSITY (PCF) : 106
INITIAL MOISTURE (%) : 10.1
FINAL MOISTURE (%) : 18.3

ANGLE OF INTERNAL FRICTION (ø) : 46°
COHESION (PSF) : 0

WallaceKuhl & ASSOCIATES

TRIAXIAL COMPRESSION TEST RESULTS

CLYDE W. NEEDHAM ELEMENTARY SCHOOL

Lodi, California

FIGURE	A2
DRAWN BY	KKP
CHECKED BY	JRY
PROJECT MGR	DRG
DATE	07/19

WKA NO.12150.01P

EXPANSION INDEX TEST RESULTS

ASTM D4829

MATERIAL DESCRIPTION: Light brown, silty, fine sand

LOCATION: D4 (0' - 3')

Sample Depth	Pre-Test Moisture (%)	Post-Test Moisture (%)	Dry Density (pcf)	Expansion Index
0' - 3'	8.4	14.5	117.2	**0**

CLASSIFICATION OF EXPANSIVE SOIL *

EXPANSION INDEX	POTENTIAL EXPANSION
0 - 20	**Very Low**
21 - 50	Low
51 - 90	Medium
91 - 130	High
Above 130	Very High

* From ASTM D4829, Table 1

Wallace Kuhl & ASSOCIATES

EXPANSION INDEX

CLYDE W. NEEDHAM ELEMENTARY SCHOOL

Lodi, California

FIGURE	A3
DRAWN BY	KKP
CHECKED BY	JRY
PROJECT MGR	DRG
DATE	07/19

WKA NO.12150.01P

RESISTANCE VALUE TEST RESULTS

(California Test 301)

MATERIAL DESCRIPTION: Light brown to brown, fine sandy silt

LOCATION: D7 (0'-3')

Specimen No.	Dry Unit Weight (pcf)	Moisture @ Compaction (%)	Exudation Pressure (psi)	Expansion (dial, inches x 1000)	Expansion (psf)	R Value
G	131	8.72	386	15	65	25
I	128	9.43	213	3	13	9
20	128	9.08	294	7	30	15

* R-Value at 300 psi Exudation Pressure: **16**

WallaceKuhl & ASSOCIATES

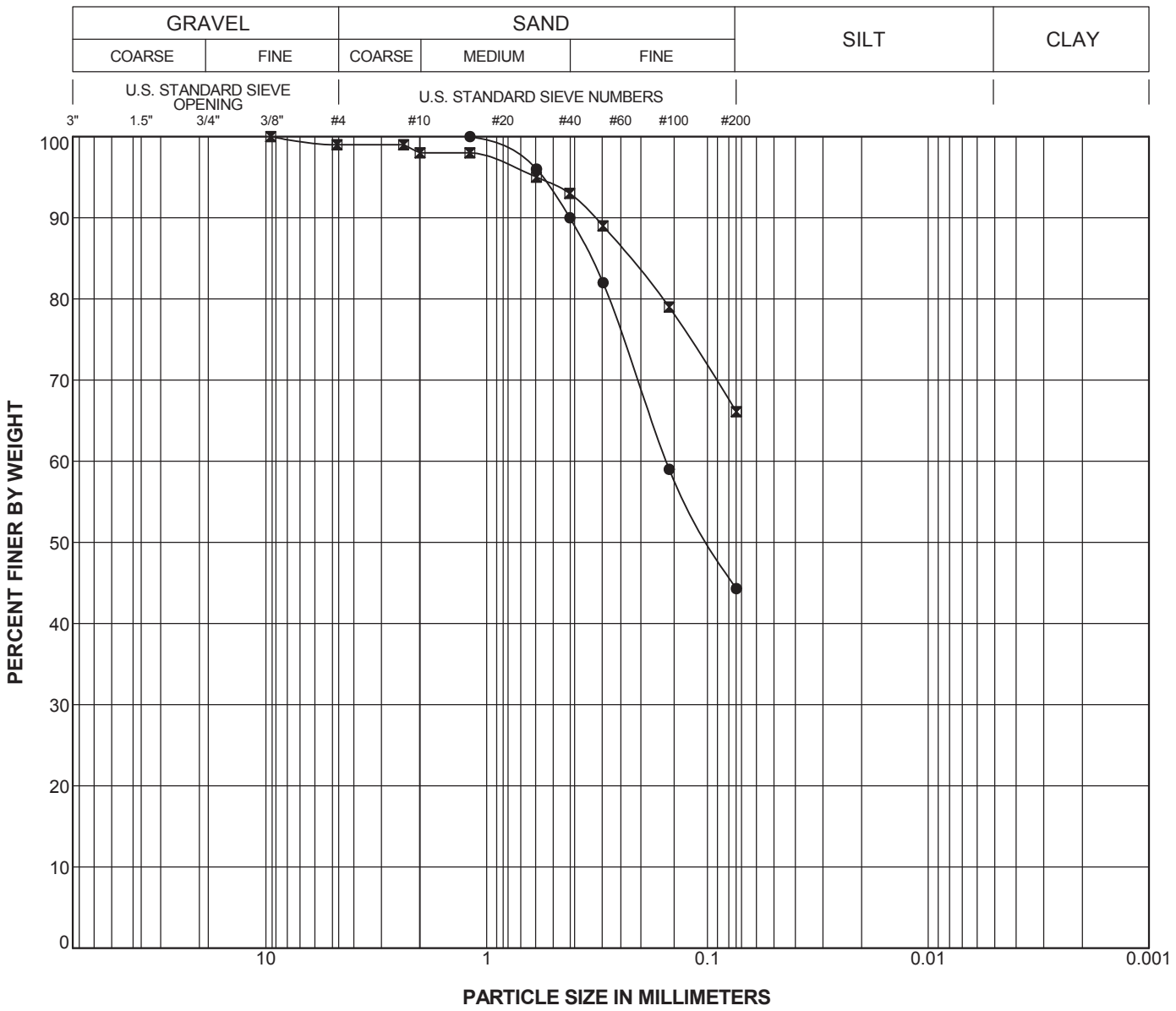
RESISTANCE VALUE TEST RESULTS

CLYDE W. NEEDHAM ELEMENTARY SCHOOL

Lodi, California

FIGURE	A4
DRAWN BY	JBV
CHECKED BY	JRY
PROJECT MGR	DRG
DATE	07/19

WKA NO. 12150.01P



Boring Number	Sample Number	USCS	Depth (feet)	Symbol	LL	PI	Classification
D5	D5-1I	SM	2.0-2.5	●			Light brown to brown, silty, fine SAND
D7	D7-1I	ML	2.0-2.5	⊠			Light brown to brown, fine sandy, SILT

PARTICLE SIZE DISTRIBUTION

Project: Clyde W. Needham Elementary School
WKA No. 12150.01P

FIGURE A5

Wallace Kuhl & ASSOCIATES

GRAIN SIZE 12150.01P - CLYDE W. NEEDHAM ES.GPJ WKA.GDT 7/16/19 2:05 PM

Sunland Analytical
11419 Sunrise Gold Circle, #10
Rancho Cordova, CA 95742
(916) 852-8557

Date Reported 07/10/2019
Date Submitted 07/01/2019

To: Joey Ybarra
Wallace-Kuhl & Assoc.
3050 Industrial Blvd
West Sacramento, CA 95691

From: Gene Oliphant, Ph.D. \ Randy Horney
General Manager \ Lab Manager

The reported analysis was requested for the following location:
Location : 12150.01P Site ID : D1 @ 1-3 FT.
Thank you for your business.

* For future reference to this analysis please use SUN # 79996-167124.

EVALUATION FOR SOIL CORROSION

Soil pH	7.24		
Minimum Resistivity	5.36 ohm-cm (x1000)		
Chloride	1.5 ppm	00.00015	%
Sulfate	10.0 ppm	00.00100	%

METHODS
pH and Min.Resistivity CA DOT Test #643
Sulfate CA DOT Test #417, Chloride CA DOT Test #422m

WallaceKuhl & ASSOCIATES

CORROSION TEST RESULTS
CLYDE W. NEEDHAM ELEMENTARY SCHOOL
Lodi, California

FIGURE	A6
DRAWN BY	KKP
CHECKED BY	JRY
PROJECT MGR	DRG
DATE	07/19
WKA NO. 12150.01P	

Sunland Analytical
11419 Sunrise Gold Circle, #10
Rancho Cordova, CA 95742
(916) 852-8557

Date Reported 07/10/2019
Date Submitted 07/01/2019

To: Joey Ybarra
Wallace-Kuhl & Assoc.
3050 Industrial Blvd
West Sacramento, CA 95691

From: Gene Oliphant, Ph.D. \ Randy Horney
General Manager \ Lab Manager

The reported analysis was requested for the following location:
Location : 12150.01P Site ID : D1 @ 1-3 FT.
Thank you for your business.

* For future reference to this analysis please use SUN # 79996-167125.

Extractable Sulfate in Water

Type of TEST	Result	Units
Sulfate-SO4	12.4	mg/kg

METHODS
ASTM D-516m from sat.paste extract-reported based on dry wt.

WallaceKuhl & ASSOCIATES

CORROSION TEST RESULTS
CLYDE W. NEEDHAM ELEMENTARY SCHOOL
Lodi, California

FIGURE	A7
DRAWN BY	KKP
CHECKED BY	JRY
PROJECT MGR	DRG
DATE	07/19
WKA NO. 12150.01P	

APPENDIX B
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APPENDIX B – REFERENCES

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APPENDIX C
Liquefaction Analysis Results

GeoLogismiki
Geotechnical Engineering Software
Merarhias 56, 621 25 - Serrai, Greece
url: http://www.geologismiki.gr - email: info@geologismiki.gr

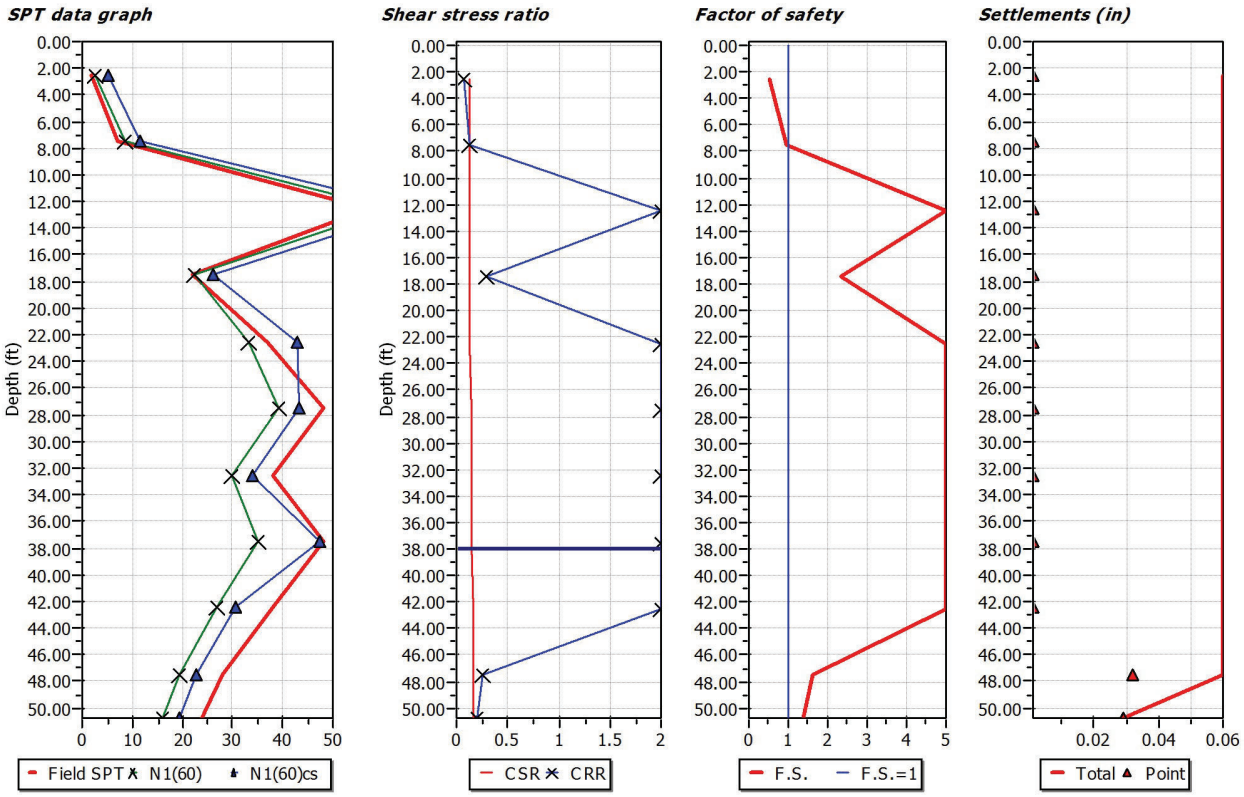
LIQUEFACTION ANALYSIS REPORT

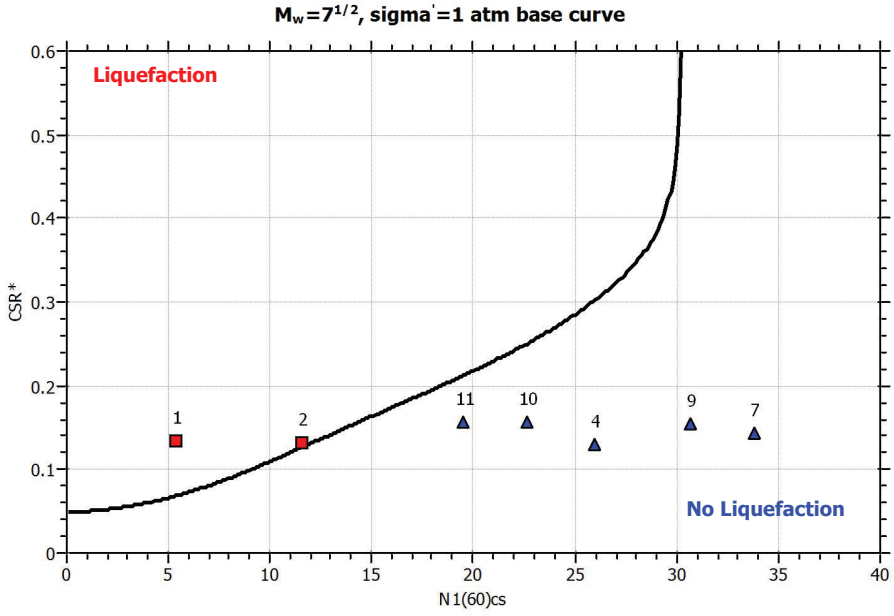
Project title : 12150.01P - Clyde Needham ES

Project subtitle : D1

Input parameters and analysis data

In-situ data type:	Standard Penetration Test	Depth to water table:	38.00 ft
Analysis type:	Deterministic	Earthquake magnitude M_w:	6.24
Analysis method:	NCEER 1998	Peak ground accelaration:	0.33 g
Fines correction method:	Idriss & Seed	User defined F.S.:	1.00





:: Field input data ::

Point ID	Depth (ft)	Field N_{SPT} (blows/feet)	Unit weight (pcf)	Fines content (%)
1	2.50	2.00	120.94	15.00
2	7.50	7.00	120.94	15.00
3	12.50	57.00	120.94	15.00
4	17.50	22.00	120.94	15.00
5	22.50	37.00	120.94	30.00
6	27.50	48.00	120.94	15.00
7	32.50	38.00	120.94	15.00
8	37.50	48.00	120.94	60.00
9	42.50	38.00	120.94	15.00
10	47.50	28.00	120.94	15.00
11	50.75	24.00	120.94	15.00

Depth : Depth from free surface, at which SPT was performed (ft)
Field SPT : SPT blows measured at field (blows/feet)
Unit weight : Bulk unit weight of soil at test depth (pcf)
Fines content : Percentage of fines in soil (%)

:: Cyclic Stress Ratio calculation (CSR fully adjusted and normalized) ::

Point ID	Depth (ft)	Sigma (tsf)	u (tsf)	Sigma' (tsf)	r_d	CSR	MSF	$CSR_{eq,M=7.5}$	K_{sigma}	CSR^*
1	2.50	0.15	0.00	0.15	0.99	0.21	1.60	0.13	1.00	0.13
2	7.50	0.45	0.00	0.45	0.98	0.21	1.60	0.13	1.00	0.13
3	12.50	0.76	0.00	0.76	0.97	0.21	1.60	0.13	1.00	0.13
4	17.50	1.06	0.00	1.06	0.96	0.21	1.60	0.13	1.00	0.13
5	22.50	1.36	0.00	1.36	0.95	0.20	1.60	0.13	0.95	0.13
6	27.50	1.66	0.00	1.66	0.94	0.20	1.60	0.13	0.91	0.14
7	32.50	1.97	0.08	1.89	0.91	0.20	1.60	0.13	0.88	0.14
8	37.50	2.27	0.23	2.03	0.87	0.21	1.60	0.13	0.86	0.15
9	42.50	2.57	0.39	2.18	0.83	0.21	1.60	0.13	0.84	0.16
10	47.50	2.87	0.55	2.33	0.79	0.21	1.60	0.13	0.83	0.16
11	50.75	3.07	0.65	2.42	0.76	0.21	1.60	0.13	0.83	0.16

Depth : Depth from free surface, at which SPT was performed (ft)
Sigma : Total overburden pressure at test point, during earthquake (tsf)
u : Water pressure at test point, during earthquake (tsf)
Sigma' : Effective overburden pressure, during earthquake (tsf)
r_d : Nonlinear shear mass factor
CSR : Cyclic Stress Ratio
MSF : Magnitude Scaling Factor
$CSR_{eq,M=7.5}$ CSR adjusted for M=7.5
K_{sigma} Effective overburden stress factor
CSR^* CSR fully adjusted

:: Cyclic Resistance Ratio calculation $CRR_{7.5}$ ::

Point ID	Field SPT	C_n	C_e	C_b	C_r	C_s	$N_{1(60)}$	DeltaN	$N_{1(60)cs}$	$CRR_{7.5}$
1	2.00	1.70	0.90	1.00	0.75	1.20	2.75	2.63	5.38	0.07
2	7.00	1.52	0.90	1.00	0.75	1.20	8.60	2.91	11.52	0.13
3	57.00	1.18	0.90	1.00	0.85	1.20	61.50	5.46	66.96	2.00
4	22.00	0.99	0.90	1.00	0.95	1.20	22.42	3.58	26.00	0.30
5	37.00	0.88	0.90	1.00	0.95	1.20	33.26	9.84	43.09	2.00
6	48.00	0.79	0.90	1.00	0.95	1.20	39.02	4.38	43.40	2.00
7	38.00	0.73	0.90	1.00	1.00	1.20	29.91	3.94	33.85	2.00
8	48.00	0.68	0.90	1.00	1.00	1.20	35.18	12.04	47.21	2.00
9	38.00	0.66	0.90	1.00	1.00	1.20	26.91	3.79	30.70	2.00
10	28.00	0.64	0.90	1.00	1.00	1.20	19.25	3.42	22.68	0.25
11	24.00	0.63	0.90	1.00	1.00	1.20	16.21	3.28	19.48	0.21

:: Cyclic Resistance Ratio calculation $CRR_{7.5}$ ::

Point ID	Field SPT	C_n	C_e	C_b	C_r	C_s	$N_{1(60)}$	DeltaN	$N_{1(60)cs}$	$CRR_{7.5}$

C_n : Overburden corretion factor
C_e : Energy correction factor
C_b : Borehole diameter correction factor
C_r : Rod length correction factor
C_s : Liner correction factor
$N_{1(60)}$: Corrected N_{SPT}
DeltaN : Addition to corrected N_{SPT} value due to the presence of fines
$N_{1(60)cs}$: Corected $N_{1(60)}$ value for fines
$CRR_{7.5)}$: Cyclic resistance ratio for M=7.5

:: Settlements calculation for saturated sands ::

Point ID	$N_{1(60)}$	N_1	FS_L	e_v (%)	Settle. (in)
1	5.38	4.49	0.51	4.95	0.00
2	11.52	9.60	0.96	3.28	0.00
3	66.96	55.80	5.00	0.00	0.00
4	26.00	21.67	2.35	0.00	0.00
5	43.09	35.91	5.00	0.00	0.00
6	43.40	36.17	5.00	0.00	0.00
7	33.85	28.21	5.00	0.00	0.00
8	47.21	39.34	5.00	0.00	0.00
9	30.70	25.58	5.00	0.00	0.00
10	22.68	18.90	1.60	0.05	0.03
11	19.48	16.24	1.36	0.16	0.03

Total settlement : 0.06

$N_{1,(60)}$: Stress normalized and corrected SPT blow count
N_1: Japanese equivalent corrected value
FS_L: Calculated factor of safety
e_v: Post-liquefaction volumentric strain (%)
Settle.: Calculated settlement (in)

:: Liquefaction potential according to Iwasaki ::

Point ID	F	w_z	I_L
1	0.49	9.62	3.56
2	0.04	8.86	0.60
3	0.00	8.10	0.00
4	0.00	7.33	0.00
5	0.00	6.57	0.00
6	0.00	5.81	0.00
7	0.00	5.05	0.00
8	0.00	4.29	0.00
9	0.00	3.52	0.00
10	0.00	2.76	0.00
11	0.00	2.27	0.00

Overall potential I_L : 4.16

I_L = 0.00 - No liquefaction
I_L between 0.00 and 5 - Liquefaction not probable
I_L between 5 and 15 - Liquefaction probable
I_L > 15 - Liquefaction certain

Needham ES Modular Classroom Project
Responsibility Matrix

Description	Site GC	Modular Contractor	District	Comments
Division 1 - General Requirements				
Temporary Facilites	X			
Temporary Site Fencing	X			For overall site area
Portable Toilets (2 minimum) for Site	X			
Portable Toilets (2 minimum) for Modular		X		
Field Office for Inspector and CM	X			
Temporary Power Service	X			
Gas and electrical utility charges for startup and testing			X	
Temporary Water and Phone	X			
Temporary fire water	X			
Staging area for modular on site		X		
On-site Security	X			If necessary
Division 3 - Concrete				
Building Concrete:				
Foundation Staking		X		
Off-haul Footing Spoils		X		
Footing & Stem Walls or Slab on grade		X		
2" Min. Slurry Rodent barrier		X		If applicable to modular system
Vent Wells/Access Wells		X		Formed and Poured after Panels / Modules are set
Division 5 - Metals				
Handrails		X		Handrails attached to the building and stairs are provided by the modular contractor, all others are provided by the site contractor
Vent well grates & frames		X		top of grate at FF grade and grate ADA compliant
Provide/install gutters on bldgs.		X		
DI Grates	X			
DF Rails on Building		X		
DF Rails at site	X			
Division 8 - Openings				
Doors / Frames		X		
Windows / Frames		X		
Division 9 - Finishes				
Interior and Exterior:				
All finishes		X		
Division 11 - Equipment				
Kitchen Room Equipment		X		
Division 13 - Special Construction				
Modular Buildings:				
All Engineering/Architectural DSA Approval		X		
Manufacturer Buildings/Stairs		X		
Set & Install Buildings		X		
DSA Fees			X	
Health Department Fees			X	
In Plant inspection fee's			X	
Division 23 - Mechanical				
Condensate drain to sanitary sewer finish floor		X		
Energy management system/ HVAC Thermostats		X		Mfg. is Pelican
HVAC Unit		X		
HVAC Ducting & Grills		X		
Data for EMS/HVAC Thermostats		X		Pelican thermostat wired to HVAC units wireless to data IDF.
Division 26 - Electrical				
Electrical Service:				
Trench and conduit to transformer			X	Site electrical bid package
Transformer Pad			X	Site electrical bid package
Trench and conduit to MSB			X	Site electrical bid package
Main switch board			X	Site electrical bid package
Conductors to meter			X	Site electrical bid package

Needham ES Modular Classroom Project
Responsibility Matrix

Description	Site GC	Modular Contractor	District	Comments
Power & Distribution:				
Transformers	X			
Distribution switch boards	X			
Power to buildings	X			Wire feeders
Building electrical sub panels		X		(1) per classroom
Provide conduit/conductor in crawl space to energize modular subpanels and conductor from sub-panel to subpanel interior of building	X			
Connect to building panel including ground rod and ground rod test	X			
Circuit monitoring	X			
Panel ID/Circuit ID Labeling		X		
All electrical within buildings - Less conductors from switchgear to sub-panel and from sub-panel to sub-panel		X		Including breakers within sub panels
Provide/pull conductors from main panel to subpanels	X			
Lighting:				
Site Lighting	X			
All Building Exterior Lighting		X		That are attached to the building (soffit/walls)
Interior Light Programming		X		
Site exterior Light Programming	X			That are not attached to the building
Conduits Connecting Buiding Wings	X			
Interior LED Lights		X		
Exterior LED Lights		X		
Int. Occupancy Sensors/Photo Sensors		X		
Lighting control & integration to classroom lighting control		X		
Division 27 / 28 - Communications and Safety				
Voice/Data/Clocks/TV/Intercom/Security:				
Conduit & Back boxes-in walls		X		stubbed 6" above T-bar
Clock/Speaker and Back Boxes		X		Mfg. is Jive System
Conduit to bldg./ STC Cabinet	X			
STC at Bldg.	X			
Wires/Controls/Devices	X			
IDF cabinet	X			
Door Security Contact Conduit		X		Wiring and devices
Security Devices		X		Wiring and devices
CATV Systems		X		Wiring and devices
J Hooks for wiring in plenums		X		
All low voltage devices, Wifi, Data, Fire, Voice, Alarm, CCTV, Clocks, etc.		X		
All low voltage conduts in ceilings other than Fire systems		X		
Fire Alarm:				
Bldg. Conduit & Back boxes and supports for devices		X		
Conduit to bldg. STC Cabinet	X			
All fire alarm control, and annunciattor panels			X	Campus-wide fire alarm bid package
Power for FACP/FAEP		X		
Terminal Cabinets		X		
Devices/Conductors/Controls		X		
FS Flow & Tamper Switches at building riser		X		
FS Flow & Tamper Switches outside buildings (i.e. bacflow device, PIC, etc.)			X	Campus-wide fire alarm bid package
FS Alarm Bell		X		
Conduit Wire for FS Devices		X		
Connect FS Devices to FA		X		
Fire extinguisher cabinet - Semi recessed		X		
Division 31 / 34 - Site Work				
Earthwork:				
Excavation/backfill/compaction	X			
Spoils offhaul for pad / foundations excavation	X			
Rough grading at building perimeter	X			

Needham ES Modular Classroom Project
Responsibility Matrix

Description	Site GC	Modular Contractor	District	Comments
Finish grade, including slopes to drain (if applicable) within the Bldg. pad area and re- grading after the form work is removed	X			
Import/Export fill	X			
Excavate modular Bldg. foundation pad +/-.1'	X			Excavate 5 ft. horizontally past bldg perimeter. Crawl space grade to be set for 2'-5.5" from finish grade to finish floor per drawings for 18" min. crawlspace
Excavate building/foundation footings		X		
Provide/install engineered fill per soils report	X			if applicable
Asphalt concrete:				
Driveways/parking	X			
Walkways	X			
Striping	X			
Site Concrete:				
Mow strips around building	X			In landscape areas
Site Flat Work and around stairs	X			Slope away from building
Curb & Gutter	X			
Condenser pads on site	X			If applicable
Concrete flat work/area drains at ground floor	X			
Storm Drains:				
Site	X			
Under Bldgs. Foundation Area Drains		X		If applicable
Storm Drains to RWL/Downsouts	X			Within 5' of building
Above grade RWL/Downspout clean-outs	X			
Connect RW/Downspouts to SD (Building)		X		
Provide/install gutters on buildings		X		
Connect Condensate Drain to Drywell	X			If applicable
Drywells	X			If applicable
Gas Service:				
Gase Service to Meter - Trenching			X	New gas service bid package
Gas Service to Meter - Gas Line			X	New gas service bid package
Gas Meter			X	New gas service bid package
Gas Line to Buildings	X			
Gas line within Buildings		X		
Shut Off Valve (SOV) at Buildings	X			
Housekeeping pad for gas meter			X	New gas service bid package
SOV/PRV regulator at Building			X	New gas service bid package
Connect units to SOV		X		
Domestic Water:				
Water Service	X			within 5' of bldg.
Shut Off Valve (SOV) at buildings	X			within 5' of bldg.
Connect to water service		X		
Chlorination and testing - All Lines	X			Including Modular Building
Domestic piping within bldgs.		X		
Sanitary Sewer:				
Sanitary Sewer Service	X			Within 5' of bldg.
Site Point Of Connection (POC)	X			
Clean-outs at POC	X			
Waste manifold under buildings		X		
Connect manifolds to site sewer		X		
Landscaping:				
Irrigation	X			
Planting	X			
Fencing footings and columns	X			
Site Accessoreis/Planters	X			
Fire Service:				
Site Fire Lines & Hydrants	X			
Fire sprinkler system within modular buildings		X		
Fire sprinkler Riser in Building		X		Starting at +6" above finish floor flange from site contractor
Fire sprinkler main connection POC		X		
Fire sprinkler engineering and design including calculations for DSA approval		X		

Needham ES Modular Classroom Project
Responsibility Matrix

Description	Site GC	Modular Contractor	District	Comments
Fire sprinkler from site to building POC	X			Site contractor to bring FS line to point of connection, terminate in crawl space +12" above finish crawl space with flange. After module placement, extend as necessary to +6" above finish floor with flange.
Various				
Bldg. Downspouts		X		
Provide/install gutters on bldgs.		X		
Classroom accessories		X		
Thermostats		X		
Construction Keying		X		
Doors, Door Frames, Door Harware		X		
Permanent/Master Keying		X		
Temporary Lock Cores		X		
Permanent Lock Cores		X		
Door Card Readers				Not applicable
Provide unobstructed truck/crane access to building pads -must support 200 ton crane	X			Maintained by the modular building manufacturer once they start construction activities on-site.
Establish/maintain building corners/surveying	X			
Building floor protection covering		X		
Floor Sealing/Waxing		X		
Window coverings		X		
Appliances		X		Kitchen equipment
Furniture			X	
All blocking needed to install wall mount fixtures, TV's, markerboards, cabinets, etc.		X		
Projection Screens				Not applicable
Bldg mounted exterior hose bibbs (2 min.)		X		
Roof hose bibbs (2 min.)		X		
Building casework and counters		X		
Markerboards		X		
Transport cost to site for modular		X		
Crane (capacity as necessary)		X		
AV Systems		X		
All Interior signage rooms ID and code required		X		Match campus, anticipate 8" x 12"
All Exterior signage rooms ID and code required		X		Match campus, anticipate 8" x 12"
Interactive Visual Display TV			X	Modular contractor installed
Sun Shades				Not applicable
Dust Control	X			
SWPPP	X			
Traffic Control	X			

APPENDIX B
Form of Agreement

See Attached:

- Site Lease
  - Exhibit A: Legal Description of School Site
  - Exhibit B: Description of Project Site
- Facilities Lease
  - Exhibit A: Legal Description of School Site
  - Exhibit B: Description of Project Site
  - Exhibit C: Guaranteed Maximum Price and other Project Cost, Funding and Payment Provisions
  - Exhibit D: General Construction Provisions
  - Exhibit D-1: Special Conditions Provisions
  - Exhibit E: Memorandum of Commencement Date
  - Exhibit F: Construction Schedule
  - Exhibit G: Schedule of Values
- Contract Documents
  - Payment Bond
  - Performance Bond
  - Registered Subcontractors List
  - Hazardous Materials Procedures & Requirements
  - Workers' Compensation Certification
  - Prevailing Wage and Related Labor Requirements Certification
  - Disabled Veteran Business Enterprise Participation Certification
  - Drug-Free Workplace Certification
  - Tobacco-Free Environment Certification
  - Hazardous Materials Certification
  - Lead-Based Materials Certification
  - Imported Materials Certification
  - Criminal Background Investigation/Fingerprinting Certification
  - Roofing Project Certification
  - Skilled and Trained Workforce Certification
  - Escrow Agreement in Lieu of Retention
  - Notice of Award
  - Notice to Proceed with Preconstruction Services
  - Notice of Award After Guaranteed Maximum Price
  - Notice to Proceed with Construction
  - Application and Certificate for Payment
  - Contingency Expenditure Directive
  - Allowance Expenditure Directive
  - Proposed Change Order Form
  - Guarantee Form
  - Agreement and Release of Any and All Claims

SITE LEASE

For all or a portion of the following Site:

Needham Elementary School Modular Classroom Project – Increment II
420 S. Pleasant Ave., Lodi, CA 95240
APN: _____

By and between

Lodi Unified School District
1305 E. Vine Street
Lodi, CA 95240

And

[Developer]
[Address]

Dated as of _____, 20__

SITE LEASE

This site lease ("Site Lease") dated as of _____, 20__ ("Effective Date"), is made and entered into by and between the Lodi Unified School District, a school district duly organized and validly existing under the laws of the State of California, as lessor ("District"), and _____ ("Developer"), a California corporation duly organized and existing under the laws of the State, as lessee (together, the "Parties").

RECITALS

WHEREAS, the District currently owns a parcel of land located at 420 S. Pleasant Ave., Lodi, CA 95240 known as Needham Elementary School, as more particularly described in **Exhibit A** and shown on **Exhibit B** attached hereto and incorporated herein by this reference ("School Site"); and

WHEREAS, the District desires to provide for the development and construction of certain work to be performed on portions of the School Site. That work will include construction of improvements to be known as the Needham Elementary Modular Classroom Project ("Project"); and

WHEREAS, District desires to have the construction of the Project completed and to lease it back, as more particularly described in the facilities lease between the Parties dated as of the Effective Date whereby the Developer agrees to lease the Project Site back to the District and perform the work of the Project ("Facilities Lease"), which Facilities Lease is incorporated herein by this reference; and

WHEREAS, the Governing Board of the District ("Board") has determined that it is in the best interests of the District and for the common benefit of the citizens residing in the District to construct the Project by leasing the Project Site to Developer and by immediately entering into the Facilities Lease under which District will lease back the Project from Developer; and

WHEREAS, the District further determines that it has entered into this Site Lease and the Facilities Lease pursuant to Education Code section 17406 as the best available and most expeditious means for the District to satisfy its substantial need for the facilities to be provided by the Project and to accommodate and educate District students; and

WHEREAS, this Site Lease and Facilities Lease are awarded based on a competitive solicitation process pursuant to Education Code section 17406 and in compliance with the required procedures and guidelines for evaluating the qualifications of proposers adopted and published by the Board to the proposer providing the best value to the school district, taking into consideration the proposer's demonstrated competence and professional qualifications necessary for the satisfactory performance of the services required; and

WHEREAS, the selection of the Developer was conducted in a fair and impartial manner; and

WHEREAS, based on the above findings, the District is authorized under Education Code section 17406 to lease the Project Site to Developer and to have Developer develop and cause the construction of the Project thereon and lease the Project Site back to the District by means of the Facilities Lease, and the Board has duly authorized the execution and delivery of this Site Lease in order to effectuate the foregoing; and

WHEREAS, the Parties have performed all acts, conditions and things required by law to exist, to have happened, and to have been performed prior to and in connection with the execution and entering into this Site Lease, and those conditions precedent do exist, have happened, and have been performed in regular and due time, form, and manner as required by law, and the Parties hereto are now duly authorized to execute and enter into this Site Lease; and

WHEREAS, Developer as lessee is authorized and competent to lease the Project Site from District and to develop and cause the construction of the Project on the Project Site, and has duly authorized the execution and delivery of this Site Lease.

NOW, THEREFORE, in consideration of the promises and of the mutual covenants contained herein, and other valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties hereto do hereby agree as follows:

1. Definitions

Unless the context clearly otherwise requires, all words and phrases defined in the Facilities Lease shall have the same meaning in this Site Lease.

2. Exhibits

The following Exhibits are attached to and by reference incorporated and made a part of this Site Lease.

2.1. Exhibit A - Legal Description of the School Site: The legal description of the real property constituting the School Site.

2.2. Exhibit B - Description of the Project Site: The map or diagram depiction of the Project Site.

3. Lease of the Project Site

The District hereby leases to the Developer, and the Developer hereby leases from the District the Project Site, subject only to Permitted Encumbrances, in accordance with the provisions of this Site Lease, to have and to hold for the term of this Site Lease. This Site Lease shall only take effect if the Facilities Lease is executed by the District and Developer within three (3) days of execution of this Site Lease.

4. Leaseback of the Project Site

The Parties agree that the Project Site will be leased back to the District pursuant to the Facilities Lease for the term thereof.

5. Term

The term of this Site Lease shall commence as of the Effective Date and shall terminate on the last day of the Term of the Facilities Lease, provided the District has paid to the Developer, or its assignee, all payments which may be due under the Facilities Lease, and provided this

Site Lease has not been terminated pursuant to the termination provisions of the Facilities Lease.

6. Payment

In consideration for the lease of the Project Site by the District to the Developer and for other good and valuable consideration, the Developer shall pay One Dollar ($1.00) to the District upon execution of this Site Lease.

7. Termination

7.1. Termination Upon Purchase of Project

If the District exercises its option to purchase the Project pursuant to the Facilities Lease, then this Site Lease shall terminate concurrently with the District's buy out and termination of the Facilities Lease.

7.2. Termination Due to Default by Developer

If Developer defaults pursuant to the provision(s) of the Facilities Lease and the District terminates the Facilities Lease pursuant to the Facilities Lease provision(s) allowing termination, then the Developer shall be deemed to be in default of this Site Lease and this Site Lease shall also terminate at the same time as the Facilities Lease.

7.3. Termination Due to Default by District

If District defaults pursuant to the provision(s) of the Facilities Lease, the Developer, or its assignee, will have the right, for the then remaining term of this Site Lease, to:

7.3.1. Take possession of the Project Site.

7.3.2. If it deems it appropriate, cause appraisal of the Project Site and a study of the then reasonable uses thereof.

7.3.3. Re-let the Project Site; and

7.3.4. Stop all Work associated with the Site Lease.

8. Title to School Site

During the term of this Site Lease, the District shall hold fee title to the School Site, including the Project Site, and nothing in this Site Lease or the Facilities Lease shall change, in any way, the District's ownership interest in the School Site.

9. Improvements

Title to all improvements made on the Project Site during the term hereof shall be held, vest and transfer pursuant to the terms of the Facilities Lease.

10. No Merger

The leaseback of the Project Site by the Developer to the District pursuant to the Facilities Lease shall not effect or result in a merger of the estates of the District in the Project Site, and the Developer shall continue to have a leasehold estate in the Project Site pursuant to this Site Lease throughout the term hereof.

11. Right of Entry

The District reserves the right for any of its duly authorized representatives to enter upon the Project Site at any reasonable time to inspect the same, provided the District follows all safety precautions required by the Developer.

12. Quiet Enjoyment

Subject to any rights the District may have under the Facilities Lease (in the absence of an Event of Default) to possession and enjoyment of the Project Site, the District hereby covenants and agrees that it will not take any action to prevent the Developer from having quiet and peaceable possession and enjoyment of the Project Site during the term hereof and will, at the request of the Developer, to the extent that it may lawfully do so, join in any legal action in which the Developer asserts its right to such possession and enjoyment.

13. Waste

The Developer agrees that at all times that it is in possession of the Project Site, it will not commit, suffer or permit any waste on the Project Site, and that it will not willfully or knowingly use or permit the use of the Project Site for any illegal purpose or act.

14. Further Assurances and Corrective Instruments

The Parties shall, from time to time, execute, acknowledge and deliver, or cause to be executed, acknowledged and delivered, such supplements hereto and such further instruments as may reasonably be required for correcting any inadequate or incorrect description of the Project Site hereby leased or intended so to be or for carrying out the expressed intention of this Site Lease and the Facilities Lease.

15. Representations of the District

The District represents, covenants and warrants to the Developer as follows:

15.1. Due Organization and Existence

The District is a school district, duly organized and existing under the Constitution and laws of the State of California.

15.2. Authorization

The District has the full power and authority to enter into, to execute and to deliver this Site Lease, and to perform all of its duties and obligations hereunder, and has duly authorized the execution of this Site Lease.

15.3. No Violations

To the best of the District's actual knowledge, neither the execution and delivery of this Site Lease nor the Facilities Lease, nor the fulfillment of or compliance with the terms and conditions hereof or thereof, nor the consummation of the transactions contemplated hereby or thereby, conflicts with or results in a breach of the terms, conditions or provisions of any restriction or any agreement or instrument to which the District is now a party or by which the District is bound, or constitutes a default under any of the foregoing, or results in the creation or imposition of any lien, charge or encumbrance whatsoever upon any of the property or assets of the District, or upon the Project Site, except Permitted Encumbrances.

15.4. CEQA Compliance

The District has complied with all assessment requirements imposed upon it by the California Environmental Quality Act (Public Resource Code Section 21000 *et seq.* ("CEQA") in connection with the Project, and no further environmental review of the Project is necessary pursuant to CEQA before the construction of the Project may commence.

15.5. Condemnation Proceedings

15.5.1. District covenants and agrees, but only to the extent that it may lawfully do so, that so long as this Site Lease remains in effect, the District will not seek to exercise the power of eminent domain with respect to the Project so as to cause a full or partial termination of this Site Lease and the Facilities Lease.

15.5.2. If for any reason the foregoing covenant is determined to be unenforceable or in some way invalid, or if District should fail or refuse to abide by such covenant, then, to the extent they may lawfully do so, the Parties agree that the financial interest of Developer shall be as indicated in the Facilities Lease.

15.6. Use and Zoning

To the best of the District's actual knowledge, the Project Site is properly zoned for its intended purpose and the use or activities contemplated by this Site Lease will not conflict with local, state or federal law.

15.7. Taxes

To the best of the District's actual knowledge, all taxes and assessments are paid current and such taxes and assessments will continue to be paid to the extent that the District is not exempt.

16. Representations of the Developer

The Developer represents, covenants and warrants to the District as follows:

16.1. Due Organization and Existence

The Developer is a California company duly organized and existing under the laws of the State of California, has power to enter into this Site Lease and the Facilities Lease; is possessed of full power to lease, leaseback, and hold real and personal property and has duly authorized the execution and delivery of all of the aforesaid agreements.

16.2. Authorization

The Developer has the full power and authority to enter into, to execute and to deliver this Site Lease, and to perform all of its duties and obligations hereunder, and has duly authorized the execution of this Site Lease.

16.3. No Violations

Neither the execution and delivery of this Site Lease or the Facilities Lease, nor the fulfillment of or compliance with the terms and conditions hereof or thereof, nor the consummation of the transactions contemplated hereby or thereby, conflicts with or results in a breach of the terms, conditions or provisions of any restriction or any agreement or instrument to which the Developer is now a party or by which the Developer is bound, or constitutes a default under any of the foregoing, or results in the creation or imposition of any lien, charge or encumbrance whatsoever upon any of the property or assets of the Developer, or upon the Project Site, except for Permitted Encumbrances.

16.4. No Bankruptcy

Developer is not now nor has it ever been in bankruptcy or receivership.

16.5. No Litigation

There is no pending or, to the knowledge of Developer, threatened action or proceeding before any court or administrative agency which will materially adversely affect the ability of Developer to perform its obligations under this Site Lease or the Facilities Lease.

17. Insurance and Indemnity

The Developer and the District shall comply with the insurance requirements and the indemnity requirements as indicated in the Facilities Lease.

18. Assignment and Subleasing

This Site Lease may be assigned and/or the Project Site subleased, as a whole or in part, by the Developer only upon the prior written consent of the District to such assignment or sublease, which shall not be unreasonably withheld.

19. Restrictions on District

The District agrees that it will not mortgage, sell, encumber, assign, transfer or convey the Project Site or any portion thereof during the term of this Site Lease in any way that would interfere with or diminish Developer's interests indicated in this Site Lease.

20. Liens and Further Encumbrances

Developer agrees to keep the Project Site and every part thereof free and clear of any and all encumbrances and/or liens, including without limitation, pledges, charges, encumbrances, claims, mechanic liens and/or other liens for or arising out of or in connection with work or labor done, services performed, or materials or appliances used or furnished for or in connection with the Project Site or the Project. Pursuant to the Facilities Lease, Developer further agrees to pay promptly and fully and discharge any and all claims on which any encumbrance and/or lien may or could be based, and to save and hold District free and harmless from any and all such liens, mortgages, and claims of liens and suits or other proceedings pertaining thereto. This subsection does not apply to Permitted Encumbrances.

21. Notices

All notices, certificates or other communications hereunder shall be sufficiently given and shall be deemed to have been received five (5) days after deposit in the United States mail in registered or certified form with postage fully prepaid or one (1) business day after deposit with an overnight delivery service with proof of actual delivery:

If to District:	**If to Developer:**
Lodi Unified School District 1305 E. Vine Street Lodi, CA 95240 Attn: Leonard Kahn, Chief Business Officer	[Developer] [Address] Attn: [Name, Title]
With a copy to:	**With a copy to:**
Samuel Santana, Esq. Dannis Woliver Kelley 115 Pine Ave, Suite 500 Long Beach, CA 90802	

The Developer and the District, by notice given hereunder, may designate different addresses to which subsequent notices, certificates or other communications will be sent.

22. Binding Effect

This Site Lease shall inure to the benefit of and shall be binding upon the Developer and the District and their respective successors and assigns.

23. No Additional Waiver Implied by One Waiver

In the event any agreement contained in this Site Lease should be breached by either party and thereafter waived by the other party, such waiver shall be limited to the particular breach

so waived and shall not be deemed to waive future compliance with any term hereof or any other breach hereunder.

24. Severability

In the event any provision of this Site Lease shall be held invalid or unenforceable by any court of competent jurisdiction, such holding shall not invalidate or render unenforceable any other provision hereof, unless elimination of such invalid provision materially alters the rights and obligations embodied in this Site Lease or the Facilities Lease.

25. Amendments, Changes and Modifications

Except as to the termination rights of both Parties as indicated in the Facilities Lease, this Site Lease may not be amended, changed, modified, altered or terminated without the written agreement of both Parties hereto.

26. Obligations Absolute

The Developer agrees that the obligations of the Developer are absolute and unconditional and not subject to any charges or setoffs against the District whatsoever.

27. Execution in Counterparts

This Site Lease may be executed in several counterparts, each of which shall be an original and all of which shall constitute one and the same instrument.

28. Developer and District Representatives

Whenever under the provisions of this Site Lease approval by the Developer or the District is required, or the Developer or the District is required to take some action at the request of the other, such approval or such request shall be given for the Developer by the Developer Representative and for the District by the District Representative, and any party hereto shall be authorized to rely upon any such approval or request.

29. Applicable Law

This Site Lease shall be governed by and construed in accordance with the laws of the State of California, and venued in the County within which the School Site is located.

30. Attorney's Fees

If either party brings an action or proceeding involving the School Site or to enforce the terms of this Site Lease or to declare rights hereunder, each party shall bear the cost of its own attorneys' fees.

31. Captions

The captions or headings in this Site Lease are for convenience only and in no way define, limit or describe the scope or intent of any provisions or sections of this Site Lease.

32. Prior Agreements

This Site Lease and the corresponding Facilities Lease collectively contain all of the agreements of the Parties hereto with respect to any matter covered or mentioned in this Site Lease and no prior agreements or understanding pertaining to any such matter shall be effective for any purpose.

33. Further Assurances

Parties shall promptly execute and deliver all documents and instruments reasonably requested to give effect to the provisions of this Site Lease.

34. Recitals Incorporated

The Recitals set forth at the beginning of this Site Lease are hereby incorporated into its terms and provisions by this reference.

35. Time of the Essence

Time is of the essence with respect to each of the terms, covenants, and conditions of this Site Lease.

36. Force Majeure

A party shall be excused from the performance of any obligation imposed in this Site Lease and the exhibits hereto for any period and to the extent that a party is prevented from performing such obligation, in whole or in part, as a result of delays caused by the other party or third parties, a governmental agency or entity, an act of God, war, terrorism, civil disturbance, forces of nature, fire, flood, earthquake, strikes or lockouts, and such non-performance will not be a default hereunder or a grounds for termination of this Site Lease.

37. Interpretation

None of the Parties hereto, nor their respective counsel, shall be deemed the drafters of this Site Lease or the Facilities Lease for purposes of construing the provisions of each. The language in all parts of this Site Lease shall in all cases be construed according to its fair meaning, not strictly for or against any of the Parties hereto.

IN WITNESS WHEREOF, the Parties have caused this Site Lease to be executed by their respective officers who are duly authorized, as of the Effective Date.

ACCEPTED AND AGREED on the date indicated below:

Dated: _____, 20__	Dated: _____, 20__
Lodi Unified School District	[Developer]
By: _____	By: _____
Name: _____	Name: _____
Title: _____	Title:_____

EXHIBIT A

LEGAL DESCRIPTION OF SCHOOL SITE

Attached is the Legal Description for:

Needham Elementary School Modular Classroom Project Increment II of Modular and/or Prefabricated Classroom Buildings.
420 S. Pleasant Ave., Lodi, CA 95240
APN: _____

<INSERT>

EXHIBIT B

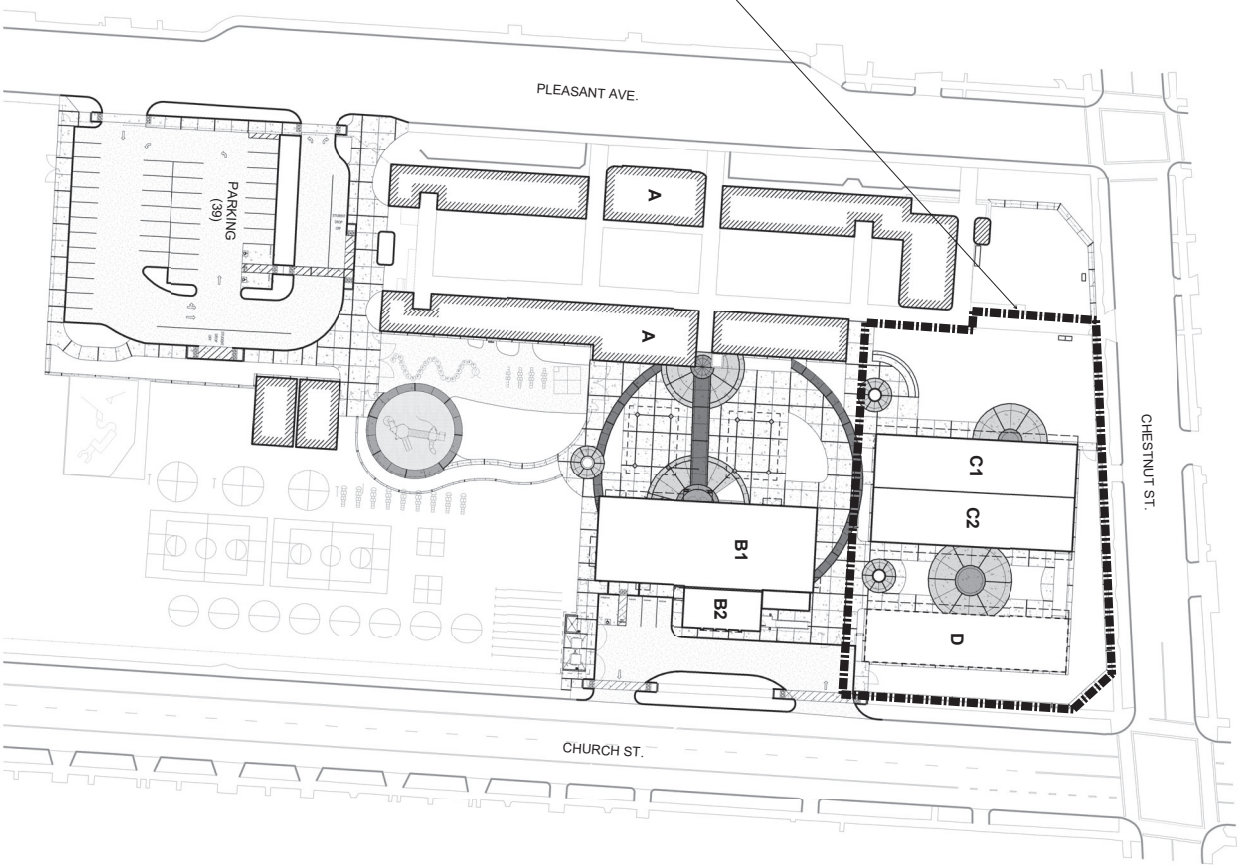
DESCRIPTION OF PROJECT SITE

Attached is a map or diagram showing the location of the School Site that is subject to this Site Lease and upon which Developer will construct the Project.

<INSERT>

EXHIBIT B

AREA OF WORK FOR CLASSROOM PROJECT



1 OVERALL SITE PLAN
1" = 30'-0"

PROJECT NO DATE SHEET	REFERENCE OVERALL SITE PLAN		Revision	NEEDHAM ELEMENTARY SCHOOL - ADDITIONS INCREMENT 2 CLASSROOMS LODI UNIFIED SCHOOL DISTRICT				

FACILITIES LEASE

For all or a portion of the following Site:

Needham Elementary School Modular CLASSROOM Project – Increment II
420 S. Pleasant Ave., Lodi, CA 95240
APN: _____

By and between

Lodi Unified School District
1305 E. Vine Street
Lodi, CA 95240

And

[Developer]
[Address]

Dated as of _____, 20__

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Exhibits A - G

FACILITIES LEASE

This facilities lease ("Facilities Lease"), dated as of _____, 20__ ("Effective Date"), is made and entered into by and between _____ ("Developer"), a California corporation duly organized and existing under the laws of the State of California, as sublessor, and Lodi Unified School District, a school district duly organized and validly existing under the laws of the State of California, as sublessee ("District") (together, the "Parties").

RECITALS

WHEREAS, the District is authorized under Section 17406 of the Education Code of the State of California to lease a site to a developer and to have that developer develop and construct the project on the site and to lease back to the District the site and the completed project; and

WHEREAS, the District desires to provide for the development and construction of certain work to be performed on portions of the School Site ("Project Site") which will include construction of iClassroomovements to be known as the [Name of] Project ("Project"); and

WHEREAS, on the date hereof, the District has leased to Developer, a parcel of land located at [Address], known as [Name of] School, particularly described in **Exhibit A** and shown on **Exhibit B** attached hereto and incorporated herein by reference ("School Site"); and

WHEREAS, District and Developer have executed a site lease at the same time as this Facilities Lease whereby the District is leasing the Project Site to the Developer ("Site Lease"); and

WHEREAS, District has retained [Name of Architect] ("Architect") to prepare plans and specifications for the Project ("Plans and Specifications") and to act as the Design Professional in General Responsible Charge for the Project; and

WHEREAS, the Governing Board of the District ("Board") has determined that it is in the best interests of the District and for the common benefit of the citizens residing in the District to construct the Project by leasing the Project Site to Developer and by simultaneously entering into this Facilities Lease under which the District will lease back the Project Site and the Project from Developer and if necessary, make Lease Payments; and

WHEREAS, the District further acknowledges and agrees that it has entered into the Site Lease and the Facilities Lease pursuant to Education Code Section 17406 as the best available and most expeditious means for the District to satisfy its substantial need for the facilities to be provided by the Project and to accommodate and educate District students and to utilize its facilities proceeds expeditiously; and

WHEREAS, this Site Lease and Facilities Lease are awarded based a competitive solicitation process pursuant to Education Code section 17406 and in compliance with the required procedures and guidelines for evaluating the qualifications of proposers adopted and published by the Board to the proposer providing the best value to the school district, taking into consideration the proposer's demonstrated competence and professional qualifications necessary for the satisfactory performance of the services required; and

WHEREAS, the selection of the Developer was conducted in a fair and impartial manner; and

WHEREAS, Developer has reviewed the Lease Documents; and

WHEREAS, Developer represents that it has the expertise and experience to perform the services set forth in this Facilities Lease; and

WHEREAS, the Parties have performed all acts, conditions and things required by law to exist, to have happened and to have been performed precedent to and in connection with the execution and entering into of this Facilities Lease and all those conditions precedent do exist, have happened and have been performed in regular and due time, form and manner as required by law, and the Parties hereto are now duly authorized to execute and enter into this Facilities Lease; and

WHEREAS, Developer is authorized to lease the Project Site as lessee and to develop the Project and to have the Project constructed on the Project Site and to lease the Project and the Project Site back to the District, and has duly authorized the execution and delivery of this Facilities Lease.

NOW, THEREFORE, in consideration of the above recitals and of the mutual covenants hereinafter contained, the Parties hereto do hereby agree as follows:

1. Definitions

In addition to the terms and entities defined above or in subsequent provisions, and unless the context otherwise requires, the terms defined in this section shall, for all purposes of this Facilities Lease, have the meanings herein specified.

1.1 "**Developer**" or "**Lessor**" means _____, a California corporation, organized and existing under the laws of the State of California, and its successors and assigns.

1.2 "**Developer's Representative**" means the Managing Member of Developer, or any person authorized to act on behalf of Developer under or with respect to this Facilities Lease.

1.3 "**Contract Documents**" are defined in **Exhibit D** to this Facilities Lease.

1.4 "**District**" or "**Lessee**" means the Lodi Unified School District, a school district duly organized and existing under the laws of the State of California.

1.5 "**District Representative**" means the Superintendent of the District, or any other person authorized by the Governing Board of the District to act on behalf of the District under or with respect to this Facilities Lease.

1.6 "**Permitted Encumbrances**" means, as of any particular time:

1.6.1 Liens for general ad valorem taxes and assessments, if any, not then delinquent, or which the District may permit to remain unpaid;

1.6.2 The Site Lease.

1.6.3 This Facilities Lease.

1.6.4 Easements, rights of way, mineral rights, drilling rights and other rights, reservations, covenants, conditions or restrictions which exist of record as of the date of this Facilities Lease.

1.6.5 Easements, rights of way, mineral rights, drilling rights and other rights, reservations, covenants, conditions or restrictions established following the date of recordation of this Facilities Lease and to which Developer and the District consent in writing which will not impair or impede the operation of the Project Site.

2. Exhibits

The following Exhibits are attached to and by reference incorporated and made a part of this Facilities Lease:

2.1 Exhibit A - Legal Description of the School Site: The description of the real property constituting the School Site.

2.2 Exhibit B - Description of the Project Site: The map or diagram depiction of the Project Site.

2.3 Exhibit C - Guaranteed Maximum Price and Other Project Cost, Funding, and Payment Provisions: A detailed description of the Guaranteed Maximum Price and the provisions related to the payment of that amount to the Developer, including Attachment 3, the Schedule of Lease Payments and Payoff Dates and Amounts.

2.4 Exhibit D - General Construction Provisions: The provisions generally describing the Project's construction.

2.5 Exhibit D-1 – Special Conditions Provisions: The provisions describing conditions specific to the Project's construction.

2.6 Exhibit E - Memorandum of Commencement Date: The Memorandum which will memorialize the commencement and expiration dates of the Lease Term.

2.7 Exhibit F - Construction Schedule

2.8 Exhibit G – Schedule of Values

3. Lease of Project and Project Site

3.1 Developer hereby leases the Project and the Project Site to the District, and the District hereby leases said Project and Project Site from Developer upon the terms and conditions set forth in this Facilities Lease.

3.2 The leasing by Developer to the District of the Project Site shall not affect or result in a merger of the District's leasehold estate pursuant to this Facilities Lease and its fee estate as lessor under the Site Lease. Developer shall continue to have and hold a leasehold estate in the Project Site pursuant to the Site Lease throughout the Term thereof and the Term of this Facilities Lease.

3.3 As to the Project Site, this Facilities Lease shall be deemed and constitute a sublease.

4. Term

4.1 Facilities Lease is Legally Binding

This Facilities Lease is legally binding on the Parties upon execution by the Parties and the District Board's approval of this Facilities Lease. The "Term" of this Facilities Lease for the purposes of District's obligation to make Lease Payments shall commence on the earlier of the following two (2) events, whichever occurs first ("Commencement Date"):

4.1.1 The date the District takes beneficial occupancy of the Project; or

4.1.2 The date when Developer delivers possession of the Project to District and when all iClassroomovements to be provided by Developer are determined by the District to be completed as set forth in **Exhibit D** to this Facilities Lease.

Unless earlier terminated pursuant to the provisions of the Contract Documents, the Term of this Facilities Lease for the purposes of District's obligations to make Lease Payments shall terminate [one (1) year] thereafter or upon payment of the final lease payment.

4.2 After Developer has completed construction of the Project and the District has accepted the Project, the Parties shall execute the Memorandum of Commencement Date attached hereto as **Exhibit E** to memorialize the commencement date of the Lease Payments and expiration date of the Term. Notwithstanding this Term, the Parties hereby acknowledge that each has obligations, duties, and rights under this Facilities Lease that exist upon execution of this Facilities Lease and prior to the beginning of the Lease Payment obligations.

4.3 The Term may be extended or shortened upon the occurrence of the earliest of any of the following events, which shall constitute the end of the Term:

4.3.1 An Event of Default by District as defined herein and Developer's election to terminate this Facilities Lease as permitted herein; or

4.3.2 An Event of Default by Developer as defined herein and District's election to terminate this Facilities Lease as permitted herein; or

4.3.3 Consummation of the District's purchase option pursuant to the Guaranteed Maximum Price and Other Project Cost, Funding, and Payment Provisions indicated in **Exhibit C** ("Guaranteed Maximum Price Provisions"); or

4.3.4 A third-party taking of the Project under Eminent Domain, only if the Term is ended as indicated more specifically herein; or

4.3.5 Damage or destruction of the Project, only if the Term is ended as indicated more specifically herein.

5. Payment

In consideration for the lease of the Project Site by the Developer back to the District and for other good and valuable consideration, the District shall make all necessary payments pursuant to the Guaranteed Maximum Price Provisions indicated in **Exhibit C.**

6. Title

6.1 During the Term of this Facilities Lease, the District shall hold fee title to the School Site, including the Project Site, and nothing in this Facilities Lease or the Site Lease shall change, in any way, the District's ownership interest.

6.2 During the Term of this Facilities Lease, Developer shall have a leasehold interest in the Project Site pursuant to the Site Lease.

6.3 During the Term of this Facilities Lease, the Developer shall hold title to the Project iClassroomovements provided by Developer which coClassroomise fixtures, repairs, replacements or modifications thereto.

6.4 If the District exercises its Purchase Option pursuant to the Guaranteed Maximum Price Provisions indicated in **Exhibit C** or if District makes all necessary payments under the Guaranteed Maximum Price Provisions indicated in **Exhibit C**, all right, title and interest of Developer, its assigns and successors in interest in and to the Project and the Project Site shall be transferred to and vested in the District at the end of the Term. Title shall be transferred to and vested in the District hereunder without the necessity for any further instrument of transfer; provided, however, that Developer agrees to execute any instrument requested by District to memorialize the termination of this Facilities Lease and transfer of title to the Project.

7. Quiet Enjoyment

Upon District's possession of the Project, Developer shall thereafter provide the District with quiet use and enjoyment of the Project, and the District shall during the Term peaceably and quietly have and hold and enjoy the Project, without suit, trouble or hindrance from Developer, except as otherwise may be set forth in this Facilities Lease. Developer will, at the request of the District and at Developer's cost, join in any legal action in which the District asserts its right to such possession and enjoyment to the extent Developer may lawfully do so. Notwithstanding the foregoing, Developer shall have the right to inspect the Project and the Project Site as provided herein.

8. Representations of the District

The District represents, covenants and warrants to the Developer as follows:

8.1 Due Organization and Existence

The District is a school district, duly organized and existing under the Constitution and laws of the State of California.

8.2 Authorization

The District has the full power and authority to enter into, to execute and to deliver this Facilities Lease, and to perform all of its duties and obligations hereunder, and has duly authorized the execution of this Facilities Lease.

8.3 No Violations

Neither the execution and delivery of this Facilities Lease nor the Site Lease, nor the fulfillment of or compliance with the terms and conditions hereof or thereof, nor the consummation of the transactions contemplated hereby or thereby, conflicts with or results in a breach of the terms, conditions or provisions of any restriction or any agreement or instrument to which the District is now a party or by which the District is bound, or constitutes a default under any of the foregoing, or results in the creation or imposition of any lien, charge or encumbrance whatsoever upon any of the property or assets of the District, or upon the Project Site, except Permitted Encumbrances.

8.4 Condemnation Proceedings

8.4.1 District covenants and agrees, but only to the extent that it may lawfully do so, that so long as this Facilities Lease remains in effect, the District will not seek to exercise the power of eminent domain with respect to the Project so as to cause a full or partial termination of this Facilities Lease.

8.4.2 If for any reason the foregoing covenant is determined to be unenforceable or in some way invalid, or if District should fail or refuse to abide by such covenant, then, to the extent it may lawfully do so, District agrees that the financial interest of Developer shall be as indicated in this Facilities Lease.

9. Representations of the Developer

The Developer represents, covenants and warrants to the District as follows:

9.1 Due Organization and Existence

The Developer is a California company duly organized and existing under the laws of the State of California, has the power to enter into this Facilities Lease and the Site Lease; is possessed of full power to lease, lease back, and hold real and personal property and has duly authorized the execution and delivery of all of the aforesaid agreements.

9.2 Authorization

Developer has the full power and authority to enter into, to execute and to deliver this Facilities Lease, and to perform all of its duties and obligations hereunder, and has duly authorized the execution of this Facilities Lease.

9.3 No Violations

Neither the execution and delivery of this Facilities Lease and the Site Lease, nor the fulfillment of or compliance with the terms and conditions hereof or thereof, nor the consummation of the transactions contemplated hereby or thereby, conflicts with or

results in a breach of the terms, conditions or provisions of any restriction or any agreement or instrument to which Developer is now a party or by which Developer is bound, or constitutes a default under any of the foregoing, or results in the creation or imposition of any lien, charge or encumbrance whatsoever upon any of the property or assets of Developer, or upon the Project Site, except Permitted Encumbrances.

9.4 No Bankruptcy

Developer is not now nor has it ever been in bankruptcy or receivership.

9.5 No Encumbrances

Developer shall not pledge any District payments of any kind, related to the Site Lease, this Facilities Lease, or in any way derived from the Project Site, and shall not mortgage or encumber the Project Site, except as may be specifically permitted pursuant to the provisions of this Facilities Lease related to Developer's financing the construction of the project.

9.6 Continued Existence

Developer shall not voluntarily commence any act intended to dissolve or terminate the legal existence of Developer, at or before the latest of the following:

9.6.1 Eighteen (18) months following completion of the Project.

9.6.2 One (1) year following expiration or earlier termination of the Term.

9.6.3 After dismissal and final resolution of any and all disputes between the Parties and/or any third-party claims related, in any way, to the Project.

While the lease documents are in effect, Developer shall give District one hundred twenty (120) days written notice prior to dissolving or terminating the legal existence of Developer.

10. Pre-construction Services

10.1 Scope of the Preconstruction Services

Developer shall perform management and coordination services, plan and specification constructability reviews, provide value-engineering reviews and recommendations and other reviews as necessary to verify that the drawings and specifications are clear and reasonably accurate to minimize the need for changes during the construction phase of the project, including but not limited to the following:

10.1.1 General Services

10.1.1.1 Developer shall attend meetings between the Architect, the District, District site personnel, and any other applicable consultants of

the District as required to discuss the Project, including budget, scope and schedule.

10.1.1.2 Developer shall assist the Architect with making formal presentations to the governing board of District. Such assistance is anticipated to include floor plans and elevations necessary for any architectural presentation.

10.1.1.3 Developer shall prepare a rough schedule in a format acceptable to District, and update as necessary.

10.1.1.4 Developer shall prepare and update the components of the Guaranteed Maximum Price and shall be primarily responsible for ensuring that the Project can and is constructed for no more than that amount.

10.1.1.5 While the Architect is anticipated to provide primary assistance, Developer shall assist District with City land use issues.

10.1.1.6 Architect shall act as lead and Developer will assist District and Architect with DSA review, input, and timeframe for same.

10.1.1.7 Architect shall act as lead and Developer will assist with review and comment upon geotechnical / soils investigation and report.

10.1.1.8 Architect shall act as lead and Developer will assist with review and comment upon survey of the Project site.

10.1.2 Review of Design Documents.

10.1.2.1 Review Project design and budget with District and Architect based on the 100% Construction Documents submitted to DSA to:

10.1.2.1.1 Provide recommendations on site use and iClassroomovements, selection of materials, building systems and equipment and methods of Project delivery;

10.1.2.1.2 Provide recommendations on relative feasibility of construction methods, availability of materials and labor, time requirements for procurement, installation and construction of the Project and subparts thereof if requested, and factors relating to cost including, but not limited to, construction costs of alternate designs of materials, preliminary budgets and possible economics that could be achieved through alternate methods or substitutions;

10.1.2.1.3 Provide plan review.

10.1.2.1.4 Value-engineering. Prepare a value-engineering report for District review and approval that:

10.1.2.1.4.1 Details areas of cost saving (e.g. construction processes/procedures, specified materials and equipment, and equipment or other aspects of the design documents that can be modified to reduce costs and/or the time for achieving final completion of the Project and/or to extend life-cycle and/or to reduce maintenance/operations costs, without diminution in the quality of materials/equipment/workmanship, scope or intended purposes of the Project);

10.1.2.1.4.2 Provides detailed estimate for proposed value-engineering items;

10.1.2.1.4.3 Defines methodology or approaches that maximize value; and

10.1.2.1.4.4 Identifies design choices that can be more economically delivered.

10.1.2.1.5 Constructability Review. Prepare detailed interdisciplinary constructability review within Fourteen (14) days of receipt of the plans from the District that:

10.1.2.1.5.1 Ensures construction documents are well coordinated and reviewed for errors;

10.1.2.1.5.2 Identifies to the extent known, construction deficiencies and areas of concern;

10.1.2.1.5.3 Back-checks design drawings for inclusion of modifications; and

10.1.2.1.5.4 Provides the District with written confirmation that:

10.1.2.1.5.4.1 Requirements noted in the design documents prepared for the Project are consistent with and conform to the District's Project requirements and design standards.

10.1.2.1.5.4.2 Various components have been coordinated and are consistent with each other so as to minimize conflicts within or between components of the design documents.

10.1.2.2 Confirm Modifications to Design Drawings. If the District accepts Developer's comments, including the value-engineering and/or constructability review comments, review the design documents to confirm that those comments are properly incorporated into the final design documents.

10.1.3 Budget of Project Costs.

10.1.3.1 At each stage of plan review indicated above, Developer will update and refine the budget of the Guaranteed Maximum Price based on the most recent set of design documents. Developer shall also advise the District and the Architect if it appears that the total construction costs may exceed the Guaranteed Maximum Price established by the District and shall make recommendations for corrective action. Developer will further provide input to the District and Architect relative to value of construction, means and methods for construction, duration of construction of various building methods and constructability.

10.1.3.2 In each budget of the Guaranteed Maximum Price, Developer shall include values of scopes of work subdivided into component parts in sufficient detail to serve as the basis for progress payments during construction. This budget of the Guaranteed Maximum Price shall include, at a minimum, the following information divided into at least the following categories for each site:

10.1.3.2.1 Overhead and profit;

10.1.3.2.2 Supervision;

10.1.3.2.3 General conditions;

10.1.3.2.4 Layout & Mobilization (not more than 1%);

10.1.3.2.5 Submittals, samples, shop drawings (not more than 3%);

10.1.3.2.6 Bonds and insurance (not more than 2%);

10.1.3.2.7 Close-out documentation (not less than 3%);

10.1.3.2.8 Demolition;

10.1.3.2.9 Installation;

10.1.3.2.10 Rough-in;

10.1.3.2.11 Finishes;

10.1.3.2.12 Testing;

10.1.3.2.13 Owner and Maintenance Manuals; and

10.1.3.2.14 Punchlist and acceptance.

10.1.4 Construction Schedule and Phasing Plan

Developer shall prepare a preconstruction schedule to guide the design team through to bid dates. That schedule shall show the multiple phases and interrelations of design, constructability review, and estimating. Developer shall also prepare a full construction schedule for the Project detailing the phasing

and construction activities. Developer shall further investigate, recommend and prepare a schedule for the District's purchase of materials and equipment requiring long lead time procurement, and coordinate the schedule with the early preparation of portions of the Contract Documents by the Architect.

10.1.5 Construction Planning and Bidding

10.1.5.1 For all of Developer's activities relating to construction planning and bidding, Developer shall comply with all applicable legal requirements, including but not limited to those set forth in Education Code section 17406.

10.1.5.2 Consult with District staff in relation to the existing site. Selected developer should make site visits, as needed to review the current site conditions. During this evaluation, Respondent may make recommendations relating to soils investigations and utility locations and capacities, in order to minimize unforeseen conditions.

10.1.5.3 Attend meetings at the Project site with the Architect and the design team as needed.

10.1.5.4 Provide plan review and constructability services with an emphasis on ensuring that the Project can be completed within the established schedule and within the available budget.

10.1.5.5 Provide a detailed analysis of all major Project systems with an emphasis on possible value engineering possibilities.

10.1.5.6 Prepare and distribute specifications and drawings provided by District to facilitate bidding to Developer's subcontractors.

10.1.5.7 Review the drawings and specifications to eliminate areas of conflict and overlapping in the work to be performed by various subcontractors, and with a view to eliminating change order requests by the Architect or subcontractors.

10.1.5.8 Conduct pre-bid conferences. Coordinate with District and the Architect in responding to subcontractor questions or providing clarification to all subcontractors.

10.1.5.9 The Project shall include multiple phases, each phase shall have its own Phase GMP. The Project GMP consists of the total of all Phase GMPs. For each phase, DSA approved plans shall be utilized to receive subcontractor bids and develop the Phase GMP in accordance with the lease-leaseback agreement forms, including the requirement that the Developer engage in competitive bidding for subcontractors for all scopes of work on the Project that constitute more than one half of one percent (0.5%) of the total Phase GMP. The District representative shall be present during the receipt of bids from subcontractors.

10.1.5.10 Each phase GMP shall be presented to the District in the following manner within a three ring binder as well as electronically on an external memory device such as a CD, USB drive, or other comparable device:

10.1.5.10.1 Cover sheet, signed by the developer indicating the GMP dollar amount with a certification, indicating that the GMP is all inclusive per the plans, specifications and addenda (contract documents). Also include certification stating, "Developer hereby certifies that they have reviewed all subcontractor proposals and whether the subcontractor excluded portions of their scope the Developer has included all costs for a complete GMP in accordance with plans, specifications and addenda."

10.1.5.10.2 A bid tabulation sheet indicating the breakdown by subcontractor/trade along with the appropriate general condition amount, other fees (as submitted with the response to the RFQ/P).

10.1.5.10.3 Behind the bid tabulation sheet mentioned in subdivision 10.1.5.5.2 above should be a sheet that indicates what is included in the general conditions, which should match what was submitted in the response to the RFQ/P.

10.1.5.10.4 Copies of all subcontractor bids received divided by trade that corresponds to the final spread sheet with a cover sheet indicating the scope and subcontractors that provided bids as well as those that were asked to bid, but did not submit a proposal. This sheet should have the dollar amounts for each subcontractor that provided a bid with the first column being the proposed subcontractor for that trade.

10.1.5.10.5 Behind subdivision 10.1.5.5.4 above should be the bids for that trade with the proposed subcontractor bid on top and the other subcontractor bids in descending dollar order.

10.1.5.11 Produce detailed construction CPM schedules to be incorporated into the Project documents including identification of the Project critical path and agency approvals.

10.1.5.12 Plan the phases and staging of construction, staging areas, temporary fencing, office trailer placement, access, etc. as required.

10.1.5.13 Any other services that are reasonable and necessary to control the budget and schedule. List those areas where subconsultants will be required and where the Respondent has in-house expertise. Provide resumes of persons providing each of these services and for key personnel assigned to the Project.

10.2 Schedule

Preconstruction services outlined above will commence on the date the District issues a Notice to Proceed with Preconstruction Services for the Agreement, and conclude upon approval of the Amendment to the Lease Agreements by District's Board, or termination of this Agreement by either party per the Agreement's terms. Any extension shall be subject to reasonable approval in writing by the Parties.

10.3 Ownership of Records

It is mutually agreed that all materials prepared by Developer under this Agreement shall become the property of the District and Developer shall have no property right therein whatsoever. Developer hereby assigns to District any copyrights associated with the materials prepared pursuant to the Agreement.

10.4 Open Book Policy

There will be an open book policy with Developer and its construction team. District shall have access to all subcontractor bids, value engineering back-up, contingency breakdown & tracking, and Developer fees.

10.5 Compensation to Developer for Preconstruction Services

District agrees to reimburse Developer in the total amount not to exceed _____DOLLARS ($_____), for the performance of services contemplated by this Agreement. Developer shall be paid monthly for the actual fees and allowed costs and expenses for all time and materials required and expended for work requested and specified by the District as completed. Said amount shall be paid within thirty (30) days upon submittal to and verification by the District of a monthly billing statement showing completion of the tasks for that month on a line item basis. In the event Developer and District enter into the lease/leaseback agreements for the development of the Project, this compensation for services rendered will be included as part of the Guaranteed Maximum Price ("GMP") to be paid to Developer by District.

Developer shall be responsible for any and all costs and expenses incurred by Developer, including but not limited to the costs of hiring sub-consultants, contractors and other professionals, review of the Project's Plans and Specifications, review and preparation of necessary documentation relating to the development of the Project, all travel-related expenses, as well as for meetings with District and its representatives, long distance telephone charges, copying expenses, salaries of Developer staff and employees working on the Project, overhead, and any other reasonable expenses incurred by Developer in performance of the services contemplated by this Agreement.

10.6 Termination before Construction Phase

10.6.1 Before the notice to proceed with the Construction Phase is issued by the District, this Agreement may be terminated at any time without cause by District upon fourteen (14) days written notice to Developer. In the event of such a termination by District, the District shall pay Developer for all undisputed services performed and expenses incurred per this Agreement, supported by documentary evidence, including, but not limited to, payroll records, invoices from third parties retained by Developer pursuant to this Agreement, and expense reports up until the date of notice of termination plus

any sums due Developer for Board-approved extra services. In ascertaining the services actually rendered hereunder up to the date of termination of this Agreement, consideration shall be given to completed work and work in process that would best serve the District if a completed product was presented.

10.6.2 In the event that the Parties do not reach an agreement on the GMP, this Agreement will be terminated at that time. In the event of such a termination, the District shall pay Developer no more than the not to exceed amount in Section 10.5 above.

10.7 Construction Phase

Developer shall not commence any construction work before DSA approval of the Plans and Specifications.

11. Construction of Project

11.1 Construction of Project

11.1.1 Developer agrees to cause the Project to be developed, constructed, and installed in accordance with the terms hereof and the Construction Provisions set forth in **Exhibit D**, including those things reasonably inferred from the Contract Documents as being within the scope of the Project and necessary to produce the stated result even though no mention is made in the Contract Documents.

11.1.2 Contract Time / Construction Schedule

It is hereby understood and agreed that the Contract Time for this Project shall be [TWO HUNDRED SIXTY SIX] (266) calendar days, commencing with the date upon which the Facilities Lease and the Site Lease are fully executed and delivered to both Parties and ending with completion of the Work which will occur no later than August 4, 2021 ("Contract Time"). The Construction Schedule must be approved by the District.

11.1.3 Schedule of Values

The Developer has provided a schedule of values, approved by the District, which will be attached hereto as **Exhibit G** ("Schedule of Values"). The Schedule of Values must be approved by the District.

11.1.4 Liquidated Damages

Time is of the essence for all work Developer must perform to complete the Project. It is hereby understood and agreed that it is and will be difficult and/or impossible to ascertain and determine the actual damage that the District will sustain in the event of and by reason of Developer's delay; therefore, Developer agrees that it shall pay to the District the sum of TBD Dollars ($ TBD) per day as liquidated damages for each and every day's delay beyond the Contract Time.

11.1.4.1 It is hereby understood and agreed that this amount is not a penalty.

11.1.4.2 In the event any portion of the liquidated damages is not paid to the District, the District may deduct that amount from any money due or that may become due the Developer under this Facilities Lease. The District's right to assess liquidated damages is as indicated herein and in **Exhibit D**.

11.1.4.3 The time during which the construction of the Project is delayed for cause as hereinafter specified may extend the time of completion for a reasonable time as the District may grant.

11.1.5 Guaranteed Maximum Price

Developer will cause the Project to be constructed within the GMP as set forth and defined in the GMP provisions in **Exhibit C,** and Developer will not seek additional compensation from District in excess of that amount.

11.1.6 Modifications

If the DSA requires changes to the Contract Documents submitted by District to Developer, and those changes change the construction costs and/or construction time for the Project, then those changed costs or time will be handled as a modification pursuant to the provisions of **Exhibit D**.

12. Maintenance

Following delivery of possession of the Project by Developer to District, the repair, iClassroomovement, replacement and maintenance of the Project and the Project Site shall be at the sole cost and expense and the sole responsibility of the District, subject only to all punch list items and warranties against defects in materials and workmanship of Developer as provided in **Exhibit D**. The District shall pay for or otherwise arrange for the payment of the cost of the repair and replacement of the Project resulting from ordinary wear and tear. The District waives the benefits of subsections 1 and 2 of Section 1932 of the California Civil Code, but such waiver shall not limit any of the rights of the District under the terms of this Facilities Lease.

13. Utilities

Following delivery of possession of the Project by Developer to District, the cost and expenses for all utility services, including, but not limited to, electricity, natural gas, telephone, water, sewer, trash removal, cable television, janitorial service, security, heating, water, internet service, data transmission, and all other utilities of any type shall be paid by District.

14. Taxes and Other Impositions

All ad valorem real property taxes, special taxes, possessory interest taxes, bonds and special lien assessments or other impositions of any kind with respect to the Project, the Project Site and the iClassroomovements thereon, charged to or imposed upon either Developer or the District or their respective interests or estates in the Project, shall at all times be paid by District. In the event any possessory interest tax is levied on Developer, its successors and

assigns, by virtue of this Facilities Lease or the Site Lease, District shall pay such possessory interest tax directly, if possible, or shall reimburse Developer, its successors and assigns for the full amount thereof within forty-five (45) days after presentation of proof of payment by Developer.

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15. Insurance

15.1 Developer's Insurance

The Developer shall comply with the insurance requirements as indicated here and in **Exhibit D.**

15.1.1 Commercial General Liability and Automobile Liability Insurance

15.1.1.1 Developer shall procure and maintain, during the life of the Project, Commercial General Liability Insurance and Automobile Liability Insurance that shall protect Developer, District, its Board Members, employees, agents, Construction Manager(s), Project Manager(s), Project Inspector(s), and Architect(s) from all claims for bodily injury, property damage, personal injury, death, advertising injury, and medical payments arising from, or in connection with, operations under the Project. This coverage shall be provided in a form at least as broad as Insurance Services (ISO) Form CG 00 01 11 88. Developer shall ensure that Products Liability and Completed Operations coverage, Fire Damage Liability coverage, and Automobile Liabaility coverage including owned, non-owned, and hired automobiles, are included within the above policies and at the required limits, or Developer shall procure and maintain these coverages separately.

15.1.1.2 Developer's deductible or self-insured retention for its Commercial General Liability Insurance policy shall not exceed five thousand dollars ($5,000) for deductible or twenty-five thousand dollars ($25,000) for self-insured retention, respectively, unless approved in writing by District.

15.1.1.3 All such policies shall be written on an occurrence form.

15.1.2 Excess Liability Insurance

15.1.2.1 If Developer's underlying policy limits are less than required, subject to 15.1.2.3 below, Developer may procure and maintain, during the life of the Project, an Excess Liability Insurance Policy to meet the policy limit requirements of the required policies in order to satisfy, in aggregate with its underlying policy, the insurance requirements herein.

15.1.2.2 There shall be no gap between the per occurrence amount of any underlying policy and the start of the coverage under the

Excess Liability Insurance Policy. Any Excess Liability Insurance Policy shall protect Developer, District, its Board Members, employees, agents, Construction Manager(s), Project Manager(s), Project Inspector(s), and Architect(s) in amounts and including the provisions as set forth in **Exhibit D** and/or the Supplementary Conditions (if any), and that complies with all requirements for Commercial General Liability and Automobile Liability and Employers' Liability Insurance.

15.1.2.3 The District, in its sole discretion, may accept the Excess Liability Insurance Policy that brings Developer's primary limits to the minimum requirements herein.

15.1.3 Subcontractor

Developer shall require its Subcontractor(s), if any, to procure and maintain Commercial General Liability Insurance, Automobile Liability Insurance, and Excess Liability Insurance (if Subcontractor elects to satisfy, in part, the insurance required herein by procuring and maintaining an Excess Liability Insurance Policy) with minimum limits at least equal to the amount required of the Developer except where smaller minimum limits are permitted as set forth below.

15.1.4 Workers' Compensation and Employers' Liability Insurance

15.1.4.1 In accordance with provisions of section 3700 of the California Labor Code, the Developer and every Subcontractor shall be required to secure the payment of compensation to its employees.

15.1.4.2 Developer shall procure and maintain, during the life of the Project, Workers' Compensation Insurance and Employers' Liability Insurance for all of its employees engaged in work under the Project, on/or at the Site of the Project. This coverage shall cover, at a minimum, medical and surgical treatment, disability benefits, rehabilitation therapy, and survivors' death benefits. Developer shall require its Subcontractor(s), if any, to procure and maintain Workers' Compensation Insurance and Employers' Liability Insurance for all employees of Subcontractor(s). Any class of employee or employees not covered by a Subcontractor's insurance shall be covered by Developer's insurance. If any class of employee or employees engaged in Work on the Project, on or at the Site of the Project, is not protected under the Workers' Compensation Insurance, Developer shall provide, or shall cause a Subcontractor to provide, adequate insurance coverage for the protection of any employee(s) not otherwise protected before any of those employee(s) commence work.

15.1.5 Builder's Risk Insurance: Builder's Risk "All Risk" Insurance

15.1.5.1 Developer shall procure and maintain, during the life of this Contract, Builder's Risk (Course of Construction), or similar first

party property coverage acceptable to the District, issued on a replacement cost value basis. The cost shall be consistent with the total replacement cost of all insurable Work of the Project included within the Contract Documents. Coverage is to insure against all risks of accidental physical loss and shall include without limitation the perils of vandalism and/or malicious mischief (both without any limitation regarding vacancy or occupancy), sprinkler leakage, civil authority, theft, sonic disturbance, earthquake, flood, collapse, wind, rain, dust, fire, war, terrorism, lightning, smoke, and rioting. Coverage shall include debris removal, demolition, increased costs due to enforcement of all applicable ordinances and/or laws in the repair and replacement of damaged and undamaged portions of the property, and reasonable costs for the Architect's and engineering services and expenses required as a result of any insured loss upon the Work and Project, including completed Work and Work in progress, to the full insurable value thereof.

15.1.6 Pollution Liability Insurance

15.1.6.1 Developer shall procure and maintain Pollution Liability Insurance that shall protect Developer, District, Construction Manager(s), Project Inspector(s), and Architect(s) from all claims for bodily injury, property damage, including natural resource damage, cleanup costs, removal, storage, disposal, and/or use of the pollutant arising from operations under this Facilities Lease, and defense, including costs and expenses incurred in the investigation, defense, or settlement of claims. Coverage shall apply to sudden and/or gradual pollution conditions resulting from the escape or release of smoke, vapors, fumes, acids, alkalis, toxic chemicals, liquids, or gases, natural gas, waste materials, or other irritants, contaminants, or pollutants, including asbestos. This coverage shall be provided in a form at least as broad as Insurance Services Offices, Inc. (ISO) Form CG 2415, or Developer shall procure and maintain these coverages separately.

15.1.6.2 Developer warrants that any retroactive date applicable to coverage under the policy shall predate the Effective Date of this Facilities Lease and that continuous coverage will be maintained or an extended reporting or discovery period will be exercised for a period of three (3) years, beginning from the time that the Work under the Contract is completed.

15.1.6.3 If Developer is responsible for removing any pollutants from a site, then Developer shall ensure that Any Auto, including owned, non-owned, and hired, are included within the above policies and at the required limits, to cover its automobile exposure for transporting the pollutants from the site to an approved disposal site. This coverage shall include the Motor Carrier Act Endorsement, MCS 90.

15.1.7 Proof of Carriage of Insurance and Other Requirements Endorsements and Certificates

15.1.7.1 Developer shall not commence Work nor shall it allow any Subcontractor to commence Work on the Project, until Developer and its Subcontractor(s) have procured all required insurance and Developer has delivered in duplicate to the District complete endorsements (or entire insurance policies) and certificates indicating the required coverages have been obtained, and the District has approved these documents.

15.1.7.2 Endorsements, certificates, and insurance policies shall include the following:

15.1.7.2.1 A clause stating the following, or other language acceptable to the District:

"This policy shall not be canceled until notice has been mailed to District, Architect, and Construction Manager stating date of cancellation by the insurance carrier. Date of cancellation may not be less than thirty (30) days after date of mailing notice."

15.1.7.2.2 Language stating in particular those insured, extent of insurance, location and operation to which insurance applies, expiration date, to whom cancellation notice will be sent, and length of notice period.

15.1.7.3 All endorsements, certificates and insurance policies shall state that District, its Board Members, employees and agents, Construction Manager(s), Project Manager(s), Inspector(s) and Architect(s) are named additional insureds under all policies except Workers' Compensation Insurance and Employers' Liability Insurance.

15.1.7.4 Insurance written on a "claims made" basis shall be retroactive to a date that coincides with or precedes Contractor's commencement of Work, including subsequent policies purchased as renewals or replacements. Said policy is to be renewed by the Developer and all Subcontractors for a period of five (5) years following completion of the Work or termination of this Facilities Lease. Such insurance must have the same coverage and limits as the policy that was in effect during the term of this Facilities Lease, and will cover the Developer and all Subcontractors for all claims made.

15.1.7.5 Developer's and Subcontractors' insurance policy(s) shall be primary and non-contributory to any insurance or self-insurance maintained by District, its Board Members, employees and/or agents, the State of California, Construction Manager(s), Project Manager(s), Inspector(s), and/or Architect(s).

15.1.7.6 All endorsements shall waive any right to subrogation against any of the named additional insureds.

15.1.7.7 All policies shall be written on an occurrence form.

15.1.7.8 All of Developer's insurance shall be with insurance companies with an A.M. Best rating of no less than A: XI.

15.1.7.9 The insurance requirements set forth herein shall in no way limit the Developer's liability arising out of or relating to the performance of the Work or related activities.

15.1.7.10 Failure of Developer and/or its Subcontractor(s) to comply with the insurance requirements herein shall be deemed a material breach of the Facilities Lease and constitute a Default by the Developer pursuant to this Facilities Lease.

15.1.8 Insurance Policy Limits

The limits of insurance shall not be less than the following amounts:

COMMERCIAL GENERAL LIABILITY	Product Liability and Completed Operations, Fire Damage Liability – Split Limit	$5,000,000 per occurrence; $10,000,000 in aggregate
AUTOMOBILE LIABILITY – ANY AUTO	Combined Single Limit	$1,000,000
WORKERS COMPENSATION		Statutory limits pursuant to State law
EMPLOYERS' LIABILITY		$1,000,000
BUILDER'S RISK (COURSE OF CONSTRUCTION)		Issued for the value and scope of Work indicated herein.
POLLUTION LIABILITY		$1,000,000 per claim; $2,000,000 aggregate

The limits of insurance for those subcontractors whose subcontract does not exceed One Million Dollars ($1,000,000) shall not be less than the following amounts:

COMMERCIAL GENERAL LIABILITY	Product Liability and Completed Operations, Fire Damage Liability – Split Limit	$2,000,000 per occurrence; $4,000,000 in aggregate
AUTOMOBILE LIABILITY - ANY AUTO	Combined Single Limit	$1,000,000
WORKERS COMPENSATION		Statutory limits pursuant to State law
EMPLOYERS' LIABILITY		$1,000,000

Notwithstanding anything in this Facilities Lease to the contrary, the above insurance requirements may be modified as appropriate for subcontractors, with District's prior written approval.

15.2 District's Insurance

15.2.1 Rental Interruption Insurance

District shall at all times from and after District's acceptance of the Project, for the benefit of District and Developer, as their interests may appear, maintain rental interruption insurance to cover loss, total or partial, of the use of the Project due to damage or destruction, in an amount at least equal to the maximum estimated Lease Payments payable under this Facilities Lease during the current or any future twenty-four (24) month period. This insurance may be maintained as part of or in conjunction with any other insurance coverage carried by the District, and such insurance may be maintained in whole or in part in the form of participation by the District in a joint powers agency or other program providing pooled insurance. This insurance may not be maintained in the form of self-insurance.

15.2.2 Property Insurance

District shall at all times from and after District's acceptance of the Project, carry and maintain in force a policy of property insurance for 100% of the insurable replacement value with no coinsurance penalty, on the Project Site and the Project, together with all iClassroomovements thereon, under a standard "all risk" contract insuring against loss or damage. Developer shall be named as additional insureds or co-insureds thereon by way of endorsement. District shall have the right to procure the required insurance through a joint powers agency or to self-insure against such losses or portion thereof as is deemed prudent by District.

16. Indemnification and Defense

16.1 To the fullest extent permitted by California law, Developer shall indemnify, keep and hold harmless the District, the Architect(s) and Construction Manager(s), their respective consultants, separate contractors, board members, officers, representatives, agents, and employees, in both indivdual and offical capacities ("Indemnitees"), against all suits, claims, injury, damages, losses, and expenses ("Claims"), including but not limited to attorney's fees and costs, caused by, arising out of, resulting from, or incidental to, in whole or in part, the performance of the Work under this Contract by the Developer or its Subcontractors, vendors and/or suppliers. However, the Contractor's indemnification and hold harmless obligation shall be reduced by the proportion of the Indemnitees' and/or Architect's liability to the extent the Claim(s) is/are caused wholly by the active negligence or willful misconduct of the Indemnitees, and/or defects in design furnished by the Architect, as found by a court or arbitrator of competent jurisdiction. This indemnification and hold harmless obligation of the Developer shall not be construed to negate, abridge, or otherwise reduce any right or obligation of indemnity that would otherwise exist or arise as to any Indemnitee or other person described herein. This indemnification and hold harmless obligation includes, but is not limited to, any failure or alleged failure by Developer to comply with any law and/or provision of the Contract Documents in strict accordance with their terms, and without limitation, any failure or alleged failure of Developers obligations regarding any stop payment notice actions or liens, including Civil Wage and Penalty Assessments and/or Orders by the DIR.

16.2 To the furthest extent permitted by California law, Developer shall also defend Indemnitees, at its own expense, including but not limited to attorneys' fees and costs, against all Claims caused by, arising out of, resulting from, or incidental to, in whole or in part, the performance of the Work under this Contract by the Developer, its Subcontractors, vendors, or suppliers. However, the Developer's defense obligation shall be reduced by the proportion of the Indemnitees' and/or Architect's liability to the extent caused by the sole negligence, active negligence, or willful misconduct of the Indemnitees, and/or defects in design furnished by the Architect, as found by a court or arbitrator of competent jurisdiction. The District shall have the right to accept or reject any legal representation that Developer proposes to defend the Indemnitees. If any Indemnitee provides its own defense due to failure to timely respond to tender of defense, rejection of tender of defense, or conflict of interest of proposed counsel, Contractor shall reimburse such Indemnitee for any expenditures. Developer's defense obligation shall not be construed to negate, abridge, or otherwise reduce any right or obligation of defense that would otherwise exist as to any Indemnitee or other person described herein. Developer's defense obligation includes, but is not limited to, any failure or alleged failure by Developer to comply with any provision of law, any failure or alleged failure to timely and properly fulfill all of its obligations under the Contract Documents in strict accordance with their terms, and without limitation, any failure or alleged failure of Developer's obligations regarding any stop payment notice actions or liens, including Civil Wage and Penalty Assessments and/or Orders by the DIR. Developer shall give prompt notice to the District in the event of any Claim(s).

16.3 Without limitation of the provisions herein, if the Developer's obligation to indemnify and hold harmless the Indemnitees or its obligation to defend Indemnitees as provided herein shall be determined to be void or unenforceable, in whole or in part, it is the intention of the Parties that these circumstances shall not otherwise affect the validity or enforceability of the Developer's agreement to indemnify, defend, and hold

harmless the rest of the Indemnitees, as provided herein. Further, the Developer shall be and remain fully liable on its agreements and obligations herein to the fullest extent permitted by law.

16.4 Pursuant to Public Contract Code section 9201, the District shall provide timely notification to Developer of the receipt of any third-party Claim relating to this Contract. The District shall be entitled to recover its reasonable costs incurred in providing said notification.

16.5 In any and all Claims against any of the Indemnitees by any employee of the Developer, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the Developer's indemnification obligation herein shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for the Developer or any Subcontractor under workers' compensation acts, disability benefit acts, or other employee benefit acts.

16.6 The District may retain so much of the moneys due to the Developer as shall be considered necessary, until disposition of any such Claims or until the District, Architect(s) and Construction Manager(s) have received written agreement from the Developer that Developer will unconditionally defend the District, the Architect(s) and Construction Manager(s), their respective officers, agents and employees, and pay any damages due by reason of settlement or judgment.

16.7 The Developer's defense and indemnification obligations hereunder shall survive the completion of Work, including the warranty/guarantee period, and/or the termination of the Contract.

17. Eminent Domain

17.1 Total Taking After Project Delivery

If, following delivery of possession of the Project by Developer to District, all of the Project and the Project Site is taken permanently under the power of eminent domain, the Term shall cease as of the day possession shall be so taken.

17.1.1 The financial interest of Developer shall be limited to the amount of principal payments pursuant to the GMP provisions indicated in **Exhibit C** that are then due or past due together with all remaining and succeeding principal payments pursuant to the GMP provisions indicated in **Exhibit C** for the remainder of the original Term. For example, if all of the Project and the Project Site is taken at the end of the third year of the Term, Developer shall be entitled to receive from the eminent domain award the sum of all principal payments pursuant to the GMP provisions indicated in **Exhibit C** that would have been owing for the fourth year through the end of the Term had there been no taking.

17.1.2 The balance of the award, if any, shall be paid to the District.

17.2 Total Taking Prior to Project Delivery

If all of the Project and the Project Site is taken permanently under the power of eminent domain and the Developer is still performing the work of the Project and has

not yet delivered possession of the Project to District, the Term shall cease as of the day possession shall be so taken. The financial interest of Developer shall be the amount Developer has expended to date for work performed on the Project, subject to documentation reasonably satisfactory to the District.

17.3 Partial Taking

If, following delivery of possession of the Project by Developer to District, less than all of the Project and the Project Site is taken permanently, or if all of the Project and the Project Site or any part thereof is taken temporarily, under the power of eminent domain.

17.3.1 This Facilities Lease shall continue in full force and effect and shall not be terminated by virtue of that partial taking and the Parties waive the benefit of any law to the contrary, and

17.3.2 There shall be a partial abatement of any principal payments pursuant to the GMP provisions indicated in **Exhibit C** as a result of the application of the net proceeds of any eminent domain award to the prepayment of those payments hereunder. The Parties agree to negotiate, in good faith, for an equitable split of the net proceeds of any eminent domain award and a corresponding reduction in the payments required pursuant to the GMP provisions indicated in **Exhibit C**.

18. Damage and Destruction

If, following delivery of possession of all or a portion of the Project by Developer to District, the Project is totally or partially destroyed due to fire, acts of vandalism, flood, storm, earthquake, Acts of God, or other casualty beyond the control of either party hereto, the Term shall end and District shall no longer be required to make any payments required pursuant to the GMP provisions indicated in **Exhibit C** that are then due or past due or any remaining and succeeding principal payments pursuant to the GMP provisions indicated in **Exhibit C** for the remainder of the original Term.

19. Abatement

19.1 If, after the Parties have executed the Memorandum of Commencement Date attached hereto as **Exhibit E,** the Project becomes destroyed or damaged beyond repair, the District may determine its use of the Project abated. Thereafter, the District shall have no obligation to make, nor shall the Developer have the right to demand, the Lease Payments as indicated in the GMP provisions indicated in **Exhibit C** to this Facilities Lease. The Term shall cease at that time.

19.2 The Parties hereby agree that the net proceeds of the District's rental interruption insurance that the District must maintain during the Term, as required herein, shall constitute a special fund for the payment of the Lease Payments indicated in the GMP provisions indicated in **Exhibit C**.

19.3 The District shall as soon as practicable after such event, apply the net proceeds of its insurance policy intended to cover that loss ("Net Proceeds"), either to:

19.3.1 Repair the Project to full use.

19.3.2 Replace the Project, at the District's sole cost and expense, with property of equal or greater value to the Project immediately prior to the time of the destruction or damage, and that replacement, once completed, shall be substituted in this Facilities Lease by appropriate endorsement; or

19.3.3 Exercise the District's purchase option as indicated in the GMP provisions indicated in **Exhibit C** to this Facilities Lease.

19.4 The District shall notify the Developer of which course of action it desires to take within thirty (30) days after the occurrence of the destruction or damage. The Net Proceeds of all insurance payable with respect to the Project shall be available to the District and shall be used to discharge the District's obligations under this Section.

20. Access

20.1 By Developer

Developer shall have the right at all reasonable times to enter upon the Project Site to construct the Project pursuant to this Facilities Lease. Following the acceptance of the Project by District, Developer may enter the Project at reasonable times with advance notice and arrangement with District for purposes of making any repairs required to be made by Developer.

20.2 By District

The District shall have the right to enter upon the Project Site at all times. District shall comply with all safety precautions and procedures required by Developer.

21. Assignment, Subleasing

21.1 Assignment and Subleasing by the District

Any assignment or sublease by District shall be subject to all of the following conditions:

21.1.1 This Facilities Lease and the obligation of the District to make the payments required pursuant to the GMP provisions indicated in **Exhibit C** shall remain obligations of the District; and

21.1.2 The District shall, within thirty (30) days after the delivery thereof, furnish or cause to be furnished to Developer a true and complete copy of any assignment or sublease.

21.2 Assignment by Developer

Developer may assign its right, title and interest in this Facilities Lease, in whole or in part to one or more assignees, only after the written consent of District, which District will not unreasonably withhold. No assignment shall be effective against the District unless and until the District has consented in writing. Notwithstanding anything to the contrary contained in this Facilities Lease, no consent from the District shall be required in connection with any assignment by Developer to a lender for purposes of financing the Project as long as there are not additional costs to the District.

22. Termination, Default And Suspension

22.1 Termination; Lease Terminable Only As Set Forth Herein

22.1.1 Except as otherwise expressly provided in this Facilities Lease, this Facilities Lease shall not terminate, nor shall District have any right to terminate this Facilities Lease or be entitled to the abatement of any necessary payments pursuant to the GMP provisions in **Exhibit C** or any reduction thereof. The obligations hereunder of District shall not be otherwise affected by reason of any damage to or destruction of all or any part of the Project; the taking of the Project or any portion thereof by condemnation or otherwise; the prohibition, limitation or restriction of District's use of the Project; the interference with such use by any private person or contractor; the District's acquisition of the ownership of the Project (other than pursuant to an express provision of this Facilities Lease); any present or future law to the contrary notwithstanding. It is the intention of the Parties hereto that all necessary payments pursuant to the GMP provisions indicated in **Exhibit C** shall continue to be payable in all events, and the obligations of the District hereunder shall continue unaffected unless the requirement to pay or perform the same shall be terminated or modified pursuant to an express provision of this Facilities Lease.

22.1.2 Nothing contained herein shall be deemed a waiver by the District of any rights that it may have to bring a separate action with respect to any Event of Default by Developer hereunder or under any other agreement to recover the costs and expenses associated with that action. The District covenants and agrees that it will remain obligated under this Facilities Lease in accordance with its terms.

22.1.3 Following completion of the Project, the District will not take any action to terminate, rescind or avoid this Facilities Lease, notwithstanding the bankruptcy, insolvency, reorganization, composition, readjustment, liquidation, dissolution, winding-up or other proceeding affecting Developer or any assignee of Developer in any such proceeding, and notwithstanding any action with respect to this Facilities Lease which may be taken by any trustee or receiver of Developer or of any assignee of Developer in any such proceeding or by any court in any such proceeding. Following completion of the Project, except as otherwise expressly provided in this Facilities Lease, District waives all rights now or hereafter conferred by law to quit, terminate or surrender this Facilities Lease or the Project or any part thereof.

22.1.4 District acknowledges that Developer may assign an interest in some or all of the necessary payments pursuant to the GMP provisions indicated in

Exhibit C to a lender in order to obtain financing for the cost of constructing the Project and that the lender may rely on the foregoing covenants and provisions in connection with such financing.

22.2 District's Right to Terminate Developer for Cause

22.2.1 Grounds for Termination

The District, in its sole discretion, without prejudice to any other right or remedy, may terminate the Site Lease and Facilities Lease and/or terminate the Developer's right to perform the work of the Facilities Lease based upon any of the following:

22.2.1.1 Developer refuses or fails to execute the Work or any separable part thereof; or

22.2.1.2 Developer fails to complete said Work within the time specified or any extension thereof; or

22.2.1.3 Developer persistently fails or refused to perform Work or provide material of sufficient quality as to be in compliance with the Facilities Lease; or

22.2.1.4 Prior to completion of the Project, Developer is adjudged a bankrupt, files a petition for relief as a debtor, or a petition is filed against the Developer without its consent, and the petition not dismissed within sixty (60) days; or

22.2.1.5 Prior to the completion of the Project, Developer makes a general assignment for the benefit of its creditors, or a receiver is appointed on account of its insolvency; or

22.2.1.6 Developer persistently or repeatedly refuses and/or fails, except in cases for which extension of time is provided, to supply enough properly skilled workers or proper materials to complete the Work in the time specified; or

22.2.1.7 Developer fails to make prompt payment to Subcontractors, or for material, or for labor; or

22.2.1.8 Developer persistently disregards laws, or ordinances, or instructions of District as indicated in **Exhibit D**, or otherwise in violation of **Exhibit D**; or

22.2.1.9 Developer fails to supply labor, including that of Subcontractors, that is sufficient to prosecute the Work or that can work in harmony with all other elements of labor employed or to be employed on the Work; or

22.2.1.10 Developer or its Subcontractor(s) is/are otherwise in breach, default, or in substantial violation of any provision of this

Facilities Lease, including but not limited to a lapse in licensing or registration.

22.2.2 Notification of Termination

22.2.2.1 Upon the occurrence at District's sole determination of any of the above conditions, or upon Developer's failure to perform any material covenant, condition or agreement in this Facilities Lease, District may, without prejudice to any other right or remedy, serve written notice upon Developer and its Surety of District's termination of this Facilities Lease and/or the Developer's right to perform the work of this Facilities Lease. This notice will contain the reasons for termination.

22.2.2.1.1 Unless, within fifteen (15) days after the service of the notice, any and all condition(s) shall cease, and any and all violation(s) shall cease, or arrangement satisfactory to District for the correction of the condition(s) and/or violation(s) be made, this Facilities Lease and the Site Lease shall cease and terminate.

22.2.2.1.2 If the failure stated in the notice cannot be corrected within fifteen (15) days after the service of notice, District may consent to an extension of time, provided Developer instituted and diligently pursued corrective action within the applicable fifteen (15)-day period and until the violation is corrected. Upon District determination, Developer shall not be entitled to receive any further payment until the entire Work is finished.

22.2.2.2 Upon Termination, District may immediately serve written notice of tender upon Surety whereby Surety shall have the right to take over and perform this Facilities Lease only if Surety:

22.2.2.2.1 Within three (3) days after service upon it of the notice of tender, gives District written notice of Surety's intention to take over and perform this Facilities Lease; and

22.2.2.2.2 Commences performance of this Facilities Lease within three (3) days from date of serving of its notice to District.

22.2.2.3 Surety shall not utilize Developer in completing the Project if the District notifies Surety of the District's objection to Developer's further participation in the completion of the Project. Surety expressly agrees that any developer which Surety proposes to fulfill Surety's obligations is subject to District's approval.

22.2.2.4 If Surety fails to notify District or begin performance as indicated herein, District may take over the Work and execute the Work to completion by any method it may deem advisable at the

expense of Developer and/or its Surety. Developer and its Surety shall be liable to District for any excess cost or other damages the District incurs thereby. Time is of the essence in this Facilities Lease. If the District takes over the Work as herein provided, District may, without liability for so doing, take possession of and utilize in completing the Work all materials, appliances, plan, and other property belonging to Developer as may be on the Site of the Work, in bonded storage, or previously paid for.

22.2.3 Effect of Termination

22.2.3.1 If District terminates the Site Lease and the Facilities Lease pursuant to this section, the Project Site and any iClassroomovements built upon the Project Site shall vest in District upon termination of the Site Lease and Facilities Lease, and District shall thereafter be required to pay only the principal amounts then due and owing pursuant to the GMP provisions indicated in **Exhibit C**, less any damages incurred by District due to Developer's default, acts, or omissions.

22.2.3.2 The District shall retain all rights it possesses pursuant to this Facilities Lease including, without limitation.

22.2.3.2.1 The right to assess liquidated damages due because of any project delay; and

22.2.3.2.2 All rights the District holds to demand performance pursuant to the Developer's required performance bond.

22.2.3.3 Developer shall, only if ordered to do so by the District, immediately remove from the Site all or any materials and personal property belonging to Developer that have not been incorporated in the construction of the Work, or which are not in place in the Work. The District retains the right, but not the obligation, to keep and use any materials and personal property belonging to Developer that have not been incorporated in the construction of the Work, or which are not in place in the Work. The Developer and its Surety shall be liable upon the performance bond for all damages caused the District by reason of the Developer's failure to complete the Work under this Facilities Lease.

22.2.3.4 In the event that the District shall perform any portion of, or the whole of the Work, pursuant to the provisions of the General Conditions, the District shall not be liable nor account to the Developer in any way for the time within which, or the manner in which, the Work is performed by the District or for any changes the District may make in the Work or for the money expended by the District in satisfying claims and/or suits and/or other obligations in connection with the Work.

22.2.3.5 In the event that the Site Lease and Facilities Lease are terminated for any reason, no allowances or compensation will be granted for the loss of any anticipated profit by the Developer or any impact or impairment of Developer's bonding capacity.

22.2.3.6 If the expense to the District to finish the Work exceeds the unpaid Guaranteed Maximum Price, Developer and Surety shall pay difference to District within twenty-one (21) days of District's request. District may apply any amounts otherwise due to Developer to this difference.

22.2.3.7 The District shall have the right (but shall have no obligation) to assume and/or assign to a replacement contractor or construction manager, or other third party who is qualified and has sufficient resources to complete the Work, the rights of the Developer under its subcontracts with any or all Subcontractors. In the event of an assumption or assignment by the District, no Subcontractor shall have any claim against the District or third party for Work performed by Subcontractor or other matters arising prior to termination of the Facilities Lease. The District or any third party, as the case may be, shall be liable only for obligations to the Subcontractor arising after assumption or assignment. Should the District so elect, the Developer shall execute and deliver all documents and take all steps, including the legal assignment of its contractual rights, as the District may require, for the purpose of fully vesting in the District the rights and benefits of its Subcontractors under Subcontracts or other obligations or commitments. Developer must include this assignment provision in all of its Facilities Leases with its Subcontractors.

22.2.3.8 All payments due the Developer hereunder shall be subject to a right of offset by the District for expenses, damages, losses, costs, claims, or reimbursements suffered by, or due to, the District as a result of any default, acts, or omissions of the Developer.

22.2.3.9 The foregoing provisions are in addition to and not in limitation of any other rights or remedies available to District.

22.3 Termination of Developer for Convenience

22.3.1 District in its sole discretion may terminate the Facilities Lease upon five (5) days written notice to the Developer. Under a termination for convenience, the District retains the right to all the options available to the District if there is a termination for cause. In case of a termination for convenience, the Developer shall have no claims against the District except:

22.3.1.1 The actual cost for labor, materials, and services performed that is unpaid and adequately documented through timesheets, invoices, receipts, or otherwise; and

22.3.1.2 Five percent (5%) of the total cost of work performed as of the date of termination, or five percent (5%) of the value of the Work yet to be performed, whichever is less. This five percent (5%) amount shall be full compensation for all Developer's and its Subcontractor(s)' mobilization and/or demobilization costs and any anticipated lost profits resulting from termination of the Developer for convenience.

22.4 Developer Remedies Upon District Default

22.4.1 Events of Default by District Defined

The following shall be "Events of Default" of the District under this Facilities Lease. The terms "Event of Default" and "Default," whenever they are used as to the District in the Site Lease or this Facilities Lease, shall only mean one or more of the following events:

22.4.1.1 Failure by the District to pay payments required pursuant to the GMP provisions in **Exhibit C**, and the continuation of this failure for a period of forty-five (45) days.

22.4.1.2 Failure by the District to perform any material covenant, condition or agreement in this Facilities Lease and that failure continues for a period of forty-five (45) days after Developer provides District with written notice specifying that failure and requesting that the failure be remedied; provided, however, if the failure stated in the notice cannot be corrected within the applicable period, Developer shall not withhold its consent to an extension of time if corrective action is instituted by the District within the applicable period and diligently pursued until the default is corrected.

22.4.2 Remedies on District's Default

If there has been an Event of Default on the District's part, the Developer may exercise any and all remedies granted pursuant to this Facilities Lease; provided, however, there shall be no right under any circumstances to accelerate any of the payments required pursuant to the GMP provisions in **Exhibit C** or otherwise declare those payments not then past due to be immediately due and payable.

22.4.2.1 Developer may rescind its leaseback of the Project Site to the District under this Facilities Lease and re-rent the Project Site to another lessee for the remaining Term for no less than the fair market value for leasing the Project Site, which shall be:

22.4.2.1.1 An amount determined by a mutually-agreed upon appraiser; or

22.4.2.1.2 If an appraiser cannot be agreed to, an amount equal to the mean between a District appraisal and a Developer appraisal for the Project Site, both prepared by MAI-certified appraisers.

22.4.2.2 District's obligation to make the payments required pursuant to the GMP provisions indicated in **Exhibit C** shall be:

22.4.2.2.1 Increased by the amount of costs, expenses, and damages incurred by the Developer in re-renting the Project Site; and

22.4.2.2.2 Decreased by the amount of rent Developer receives in re-letting the Project Site.

22.4.2.3 The District agrees that the terms of this Facilities Lease constitute full and sufficient notice of the right of Developer to re-rent the Project Site in the Event of Default without effecting a surrender of this Facilities Lease, and further agrees that no acts of Developer in re-renting as permitted herein shall constitute a surrender or termination of this Facilities Lease, but that, on the contrary, in the event of an Event of Default by the District the right to re-rent the Project Site shall vest in Developer as indicated herein.

22.4.3 District's Continuing Obligation

Unless there has been damage, destruction, a Taking, or the Developer has acted, failed to act, or is in default as indicated above providing District with the right to terminate for cause, the District shall continue to remain liable for the payments required pursuant to the GMP provisions in **Exhibit C** and those amounts shall be payable to Developer at the time and in the manner therein provided.

22.4.4 No Remedy Exclusive

No remedy herein conferred upon or reserved to Developer is intended to be exclusive and every such remedy shall be cumulative and shall be in addition to every other remedy given under this Facilities Lease or now or hereafter existing at law or in equity. No delay or omission to exercise any right or power accruing upon any Default shall impair any such right or power or shall be construed to be a waiver thereof, but any such right and power may be exercised from time to time and as often as may be deemed expedient. In order to entitle Developer to exercise any remedy reserved to it in this article, it shall not be necessary to give any notice, other than such notice as may be required in this Article or by law.

22.5 Emergency Termination Pursuant to Public Contracts Act of 1949

22.5.1 This Facilities Lease is subject to termination as provided by sections 4410 and 4411 of the Government Code of the State of California, being a portion of the Emergency Termination of Public Contracts Act of 1949.

22.5.1.1 Section 4410 of the Government Code states:

In the event a national emergency occurs, and public work, being performed by contract, is stopped, directly or indirectly, because of the freezing or diversion of materials, equipment or labor, as the

result of an order or a proclamation of the President of the United States, or of an order of any federal authority, and the circumstances or conditions are such that it is iClassroomacticable within a reasonable time to proceed with a substantial portion of the work, then the public agency and the contractor may, by written agreement, terminate said contract.

22.5.1.2 Section 4411 of the Government Code states:

Such an agreement shall include the terms and conditions of the termination of the contract and provision for the payment of compensation or money, if any, which either party shall pay to the other or any other person, under the facts and circumstances in the case.

22.5.2 Compensation to the Developer shall be determined at the sole discretion of District on the basis of the reasonable value of the Work done, including preparatory work. As an exception to the foregoing and at the District's discretion, in the case of any fully completed separate item or portion of the Work for which there is a separate previously submitted unit price or item on the accepted schedule of values, that price may control. The District, at its sole discretion, may adopt the Schedule of Values Price as the value of the work done or any portion thereof.

22.6 Suspension of Work

22.6.1 District in its sole discretion may suspend, delay or interrupt the Work in whole or in part for such period of time as the District may determine upon three (3) days written notice to the Developer.

22.6.1.1 An adjustment may be made for changes in the cost of performance of the Work caused by any suspension, delay or interruption. No adjustment shall be made to the extent:

22.6.1.1.1 That performance is, was or would have been so suspended, delayed or interrupted by another cause for which Developer is responsible; or

22.6.1.1.2 That an equitable adjustment is made or denied under another provision of the Site Lease or the Facilities Lease; or

22.6.1.1.3 That the suspension of Work was the direct or indirect result of Developer’s failure to perform any of its obligations hereunder.

22.6.1.2 Any adjustments in cost of performance may have a fixed or percentage fee as provided in the section on Format for Proposed Change Order in **Exhibit D**. This amount shall be full compensation for all Developer’s and its Subcontractor(s)’ changes in the cost of performance of the Facilities Lease caused by any such suspension, delay or interruption.

23. Notices

All notices, certificates or other communications hereunder shall be sufficiently given and shall be deemed to have been received five (5) days after deposit in the United States mail in registered or certified form with postage fully prepaid or one (1) business day after deposit with an overnight delivery service with proof of actual delivery:

If to District:	**If to Developer:**
Lodi Unified School District 1305 E. Vine Street Lodi, CA 95240 Attn: Leonard Kahn, Chief Business Officer	[Developer] [Address] Attn: [Name, Title]

With a copy to:	
Samuel Santana, Esq. Dannis Woliver Kelley 115 Pine Ave, Suite 500 Long Beach, CA 90802	

Developer and District, by notice given hereunder, may designate different addresses to which subsequent notices, certificates or other communications will be sent.

24. Binding Effect

This Facilities Lease shall inure to the benefit of and shall be binding upon Developer and the District and their respective successors, transferees and assigns.

25. No Additional Waiver Implied by One Waiver

In the event any agreement contained in this Facilities Lease should be breached by either party and thereafter waived by the other party, such waiver shall be limited to the particular breach so waived and shall not be deemed to waive any other breach hereunder.

26. Severability

In the event any provision of this Facilities Lease shall be held invalid or unenforceable by any court of competent jurisdiction, that holding shall not invalidate or render unenforceable any other provision hereof, unless elimination of the invalid provision materially alters the rights and obligations embodied in this Facilities Lease or the Site Lease.

27. Amendments, Changes and Modifications

Except as to the termination rights of both Parties as indicated herein, this Facilities Lease may not be amended, changed, modified, altered or terminated without the written agreement of both Parties hereto.

28. Net-Net-Net Lease

This Facilities Lease shall be deemed and construed to be a "net-net-net lease" and the District hereby agrees that all payments it makes pursuant to the GMP provisions in **Exhibit C** shall be an absolute net return to Developer, free and clear of any expenses, charges or set-offs.

29. Execution in Counterparts

This Facilities Lease may be executed in several counterparts, each of which shall be an original and all of which shall constitute one and the same instrument.

30. Developer and District Representatives

Whenever under the provisions of this Facilities Lease the approval of Developer or the District is required, or Developer or the District is required to take some action at the request of the other, the approval or request shall be given for Developer by Developer's Representative and for the District by the District's Representative, and any party hereto shall be authorized to rely upon any such approval or request.

31. Applicable Law

This Facilities Lease shall be governed by and construed in accordance with the laws of the State of California, and venued in the County within which the School Site is located.

32. Attorney's Fees

If either party brings an action or proceeding involving the Property or to enforce the terms of this Facilities Lease or to declare rights hereunder, each party shall bear the cost of its own attorneys' fees.

33. Captions

The captions or headings in this Facilities Lease are for convenience only and in no way define, limit or describe the scope or intent of any provisions or sections of this Facilities Lease.

34. Prior Agreements

This Facilities Lease and the corresponding Site Lease collectively contain all of the agreements of the Parties hereto with respect to any matter covered or mentioned in this Facilities Lease and no prior agreements or understanding pertaining to any matter shall be effective for any purpose.

35. Further Assurances

Parties shall promptly execute and deliver all documents and instruments reasonably requested to give effect to the provisions of this Facilities Lease.

36. Recitals and Exhibits Incorporated

The Recitals set forth at the beginning of this Facilities Lease and the attached Exhibits are hereby incorporated into its terms and provisions by this reference.

37. Time of the Essence

Time is of the essence with respect to each of the terms, covenants, and conditions of this Facilities Lease.

38. Force Majeure

A party shall be excused from the performance of any obligation imposed in this Facilities Lease and the exhibits hereto for any period and to the extent that a party is prevented from performing that obligation, in whole or in part, as a result of delays caused by the other party or third parties, a governmental agency or entity, an act of God, war, terrorism, civil disturbance, forces of nature, fire, flood, earthquake, strikes or lockouts, and that non-performance will not be a default hereunder or a grounds for termination of this Facilities Lease.

39. Interpretation

None of the Parties hereto, nor their respective counsel, shall be deemed the drafters of this Facilities Lease for purposes of construing the provisions thereof. The language in all parts of this Facilities Lease shall in all cases be construed according to its fair meaning, not strictly for or against any of the Parties hereto.

IN WITNESS WHEREOF, the Parties have caused this Facilities Lease to be executed by their respective officers who are duly authorized, as of the Effective Date.

ACCEPTED AND AGREED on the date indicated below:

Dated: _____, 20__	Dated: _____, 20__
Lodi Unified School District	[Developer]
By: _____	By: _____
Name: _____	Name: _____
Title: _____	Title: _____

EXHIBIT A

LEGAL DESCRIPTION OF SCHOOL SITE

Attached is the Legal Description for:

Needham Elementary School Modular Classroom Project – Increment II
420 S. Pleasant Ave., Lodi, CA 95240
APN: _____

<INSERT>

EXHIBIT B

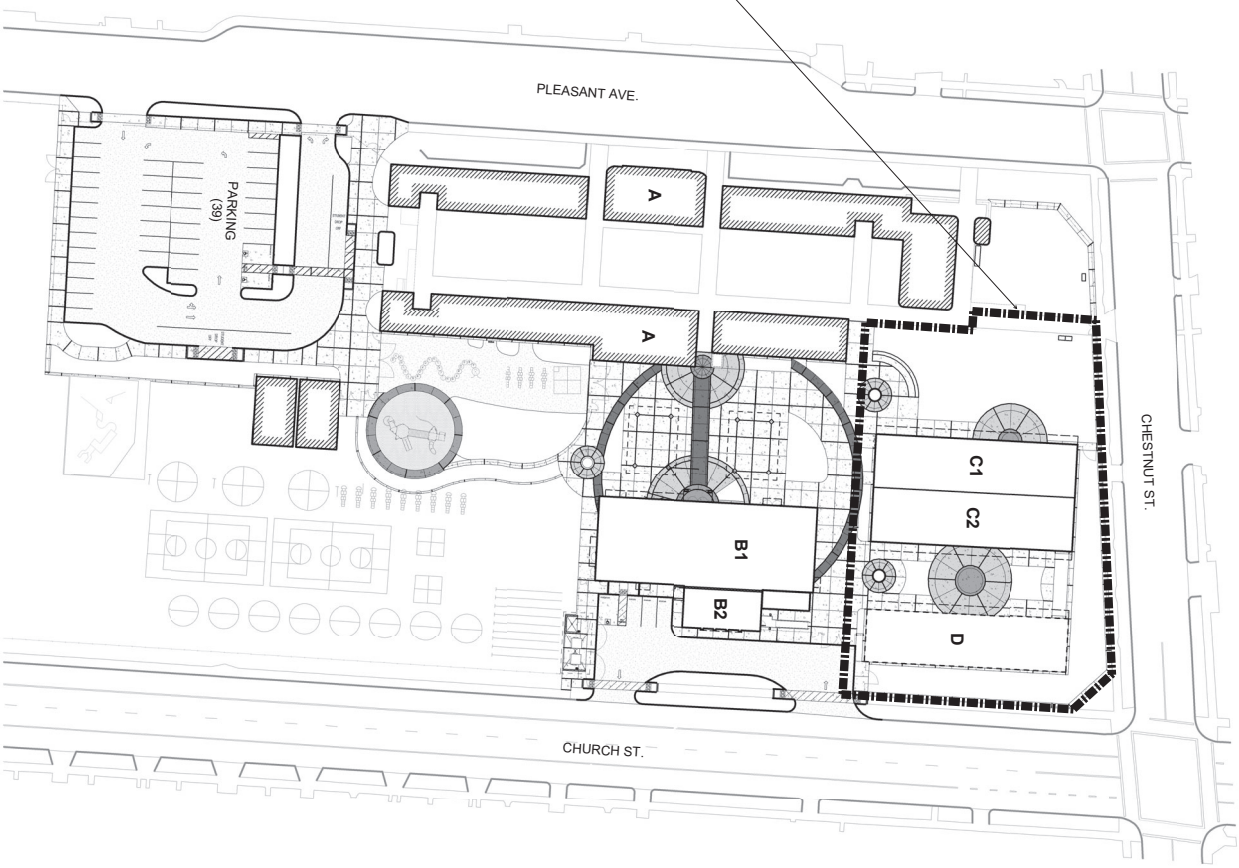
DESCRIPTION OF PROJECT SITE

Attached is a diagram of the School Site that is subject to this Facilities Lease and upon which Developer will construct the Project.

<INSERT>

EXHIBIT B

AREA OF WORK FOR CLASSROOM PROJECT



1 OVERALL SITE PLAN
1" = 30'-0"

PROJECT NO DATE SHEET	REFERENCE OVERALL SITE PLAN		Revision	NEEDHAM ELEMENTARY SCHOOL - ADDITIONS INCREMENT 2 CLASSROOMS LODI UNIFIED SCHOOL DISTRICT				

EXHIBIT C

GUARANTEED MAXIMUM PRICE AND
OTHER PROJECT COST, FUNDING, AND PAYMENT PROVISIONS

Attached are the terms and provisions related to Site Lease payments, the Facilities Lease, the Guaranteed Maximum Price and other related cost, funding, and payment provisions.

EXHIBIT C

GUARANTEED MAXIMUM PRICE AND OTHER PROJECT COST, FUNDING, AND PAYMENT PROVISIONS

1. Site Lease Payments

As indicated in the Site Lease, Developer shall pay One Dollar ($1.00) to the District as consideration for the Site Lease.

2. Guaranteed Maximum Price

Pursuant to the Facilities Lease, Developer will cause the Project to be constructed for an amount to be determined after the Division of the State Architect ("DSA") approves the plans and specification for all phases of the Project ("Guaranteed Maximum Price"). As this Project shall include multiple phases, each phase shall have its own GMP ("Phase GMP"), and the Guaranteed Maximum Price shall consist of the total of all Phase GMPs.

2.1 Cost of the Work

The term Cost of the Work shall mean the costs necessarily incurred in the proper performance of the Work contemplated by the Contract Documents. Such costs shall be at rates no higher than the standard paid at the place of the Project except with the prior consent of the District. The Cost of the Work shall include only the items set forth in this Section 2 and approved by the District.

2.1.1 General Conditions

The General Conditions as set forth in **Attachment 1** hereto shall be included in a progress billing as incurred. Said rates shall include all costs for labor, equipment and materials for the items identified therein which are necessary for the proper management of the Project, and shall include all costs paid or incurred by the Developer for insurance, permits, taxes, and all contributions, assessments and benefits, holidays, vacations, retirement benefits, incentives to the extent contemplated in **Attachment 1**, whether required by law or collective bargaining agreements or otherwise paid or provided by Developer to its employees. The District reserves the right to request changes to the personnel, equipment, or facilities provided as General Conditions as may be necessary or appropriate for the proper management of the Project, in which case, the District shall be entitled to a reduction in the cost of General Conditions based on the rates set forth in **Attachment 1**.

2.1.2 Subcontract Costs

Payments made by the Developer to Subcontractors (inclusive of the Subcontractor's bonding, if required, and insurance costs, which shall be included in the subcontract amount), which payments shall be made in accordance with the requirements of the Contract Documents.

2.1.3 Developer-Performed Work

Costs incurred by the Developer for self-performed work at the direction of District or with the District's prior approval, as follows:

2.1.3.1 Actual costs to the Developer of wages of construction workers, excluding all salaried and/or administrative personnel, directly employed by the Developer to perform the construction of the Work at the site.

2.1.3.2 Wages or salaries and customary benefits, such as sick leave, medical and health benefits, holidays, vacations, incentive programs, and pension plans of the Developer's field supervisory, safety and administrative personnel when stationed at the site or stationed at the Developer's principal office, only for that portion of their time required for the Work.

2.1.3.3 Wages and salaries and customary benefits, such as sick leave, medical and health benefits, holidays, vacations, incentive programs and pension plans of the Developer's supervisory or administrative personnel engaged at factories, workshops or on the road, in expediting the production or transportation of materials or equipment required for the Work, but only for that portion of their time required for the Work.

2.1.3.4 Costs paid or incurred by Developer for taxes, insurance, contributions, assessments required by law or collective bargaining agreements and for personnel not covered by such agreements, and for customary benefits such as sick leave, medical and health benefits, holidays, vacations and pensions, provided such costs are based on wages and salaries included in the Cost of the Work under Subparagraphs 2.1.3.1 through 2.1.3.3.

2.1.3.5 Costs, including transportation and storage, of materials and equipment incorporated in the completed construction, including costs of materials in excess of those actually installed to allow for reasonable waste and spoilage. Unused excess materials, if any, shall become the District's property at the completion of the Work or, at the District's option, shall be sold by the Developer. Any amounts realized from such sales shall be credited to the District as a deduction from the Cost of the Work.

2.1.3.6 Costs, including transportation and storage, installation, maintenance, dismantling and removal of materials, supplies, machinery and equipment not customarily owned by construction workers, that are provided by the Developer at the site and fully consumed in the performance of the Work; and cost (less salvage value) of such items if not fully consumed, whether sold to others or retained by the Developer. Cost for items previously used by the Developer shall mean fair market value.

2.1.3.7 Rental charges for temporary facilities, machinery, equipment, vehicles and vehicle expenses, and hand tools not customarily owned by construction workers that are provided by the Developer at the site, whether rented from the Developer or others, and the costs of transportation, installation, minor repairs and replacements, dismantling and removal thereof and costs of Developer's Project field office, overhead and general expenses including office supplies, parking, office equipment, and software. Rates and quantities of equipment rented shall be subject to the District's prior approval.

2.1.3.8 Costs of removal of debris from the site, daily clean-up costs and dumpster charges not otherwise included in the cost of the subcontracts which exceeds the clean-up provided under the General Conditions.

2.1.3.9 Costs of that portion of the reasonable travel, parking and subsistence expenses of the Developer's personnel incurred while traveling and discharging duties connected with the Work.

2.1.3.10 Costs of materials and equipment suitably stored off the site at a mutually acceptable location, if approved in advance by the District.

2.1.4 Allowances

Because it is impossible at the time of execution of the Facilities Lease to determine the exact cost of performing certain tasks, the Cost of the Work shall include the following Allowances for the Tasks/Work as noted here:

Task/Work	**Allowance Amount**
Unforeseen Conditions	$332,800.00
Total Allowance Amount	

The District shall have sole discretion to authorize all expenditures from the Allowances. The District shall process expenditures from the Allowances in the form of an Allowance Expenditure Directive ("AED"). The Allowances are included in the Guaranteed Maximum Price. Any unused Allowance or unused portion thereof shall be deducted from the Cost of the Work pursuant to **Exhibit D** to this Facilities Lease to the benefit of the District.

2.1.5 Miscellaneous Costs

2.1.5.1 Where not included in the General Conditions, and with the prior approval of District, costs of document reproductions (photocopying and blueprinting expenses), long distance telephone call charges, postage, overnight and parcel delivery charges, telephone

costs including cellular telephone charges, facsimile or other communication service at the Project site, job photos and progress schedules, and reasonable petty cash expenses of the site office. Developer shall consult with District to determine whether District has any vendor relationships that could reduce the cost of these items and use such vendors whenever possible.

2.1.5.2 Sales, use, gross receipts, local business and similar taxes imposed by a governmental authority that are related to the Work.

2.1.5.3 Fees and assessments for permits, plan checks, licenses and inspections for which Developer is required by the Contract Documents to pay including, but not limited to, permanent utility connection charges, street use permit, street use rental, OSHA permit and sidewalk use permit and fees.

2.1.5.4 Fees of laboratories for tests required by the Contract Documents.

2.1.5.5 Deposits lost for causes other than the Developer's or its subcontractors' negligence or failure to fulfill a specific responsibility to the District as set forth in the Contract Documents.

2.1.5.6 Expenses incurred in accordance with the Developer's standard personnel policy for relocation and temporary living allowances of personnel required for the Work if approved in advance by District.

2.1.5.7 Where requested by District, costs or expenses incurred by Developer in performing design services for the design-build systems.

2.1.5.8 Other costs incurred in the performance of the Work if, and to the extent, approved in advance by District.

2.1.5.9 Costs due to emergencies incurred in taking action to prevent threatened damage, injury or loss in case of an emergency affecting the safety of persons and/or property.

2.1.5.10 Provided all other eligible costs have been deducted from the contingency and as part of the calculation of amounts due Developer for Final Payment, costs of repairing and correcting damaged or non-conforming Work executed by the Developer, Subcontractors or suppliers, providing that such damage or non-conforming Work was not caused by negligence or failure to fulfill a specific responsibility of the Developer and only to the extent that the cost of repair or correction is not recovered by the Developer from insurance, sureties, Subcontractors or suppliers.

2.1.6 Excluded Costs

The following items are considered general overhead items and shall not be billed to the District:

2.1.6.1 Salaries and other compensation of the Developer's personnel stationed at Developer's principal office or offices other than the Project Field Office, except as specifically provided in Subparagraphs 2.1.3.2. and 2.1.3.4.

2.1.6.2 Expenses of the Developer's principal office and offices other than the Project Field Office.

2.1.6.3 Overhead and general expenses, except as may be expressly included in this Section 2.

2.1.6.4 The Developer's capital expenses, including interest on the Developer's capital employed for the Work.

2.1.6.5 Costs that would cause the any Phase GMP or Guaranteed Maximum Price (as adjusted by Change Order) to be exceeded.

2.1.7 Developer's Fee

_____ percent (_____%) of the Cost of the Work as described in Section 2.1.

2.1.8 Bonds and Insurance

For insurance and bonds required under this Facilities Lease (exclusive of those required by Subcontractors, which costs are included in the subcontract amounts), that portion of insurance and bond premiums which are directly attributable to this Contract, which shall be calculated at a rate of _____ percent (__%) of the Cost of the Work for insurance and _____ percent (__%) of the Cost of the Work for payment and performance bonds.

2.1.9 Contingency

2.1.9.1 The Guaranteed Maximum Price includes a Contingency of _____ percent (_____%) of the Cost of the Work as described in Section 2.1.1, 2.1.2, and 2.1.3 for potential additional construction costs for unforeseen conditions that occur over the course of construction and/or scope gaps between the subcontract categories of the Work.

2.1.9.2 The Contingency is not intended for such things as scope changes.

2.1.9.3 The Contingency shall not be used without the agreement of the District.

2.1.9.4 The unused portion of the Contingency shall be considered as cost savings and retained by the District at the end of the Project.

2.2 The Guaranteed Maximum Price will consist of the amounts to be identified in **Attachment 2** to this **Exhibit C**. Except as indicated herein for modifications to the Project approved by the District, Developer will not seek additional compensation from District in excess of Guaranteed Maximum Price. District shall pay the Guaranteed Maximum Price to Developer in the form of Tenant Improvement Payments and Lease Payments as indicated herein.

2.3 Total Payment

In no event shall the cumulative total of the Tenant Improvement Payments and the Lease Payments ever exceed the Guaranteed Maximum Price to be defined, as may be modified pursuant to **Exhibit D** to the Facilities Lease.

2.4 Changes to Guaranteed Maximum Price

2.4.1 The Parties acknowledge that the Guaranteed Maximum Price, including all Phase GMPs, is based on the Construction Documents, including the plans and specifications, as identified in **Exhibit D** to the Facilities Lease.

2.4.2 As indicated in the Facilities Lease, the Parties may add to or remove from the project specific scopes of work. Based on these change(s), the Parties may agree to a reduction or increase in the Guaranteed Maximum Price, or any Phase GMPs. If a cost impact of a change is agreed to by the Parties, it shall be paid upon the payment request from the Developer for the work that is the subject of the change in accordance with the provisions of **Exhibit D**. The amount of any change to the Guaranteed Maximum Price and/or Phase GMP shall be calculated in accordance with the provisions of **Exhibit D** to this Facilities Lease.

2.4.3 The Parties agree to reduce the Guaranteed Maximum Price, or Phase GMP as appropriate, for the unused portion of the Developer Contingency, if any.

2.4.4 Cost Savings

Developer shall work cooperatively with Architect, Construction Manager, subcontractors and District, in good faith, to identify appropriate opportunities to reduce the Project costs and promote cost savings. Any identified cost savings from the Guaranteed Maximum Price shall be identified by Developer, and approved in writing by the District. In the event Developer realizes a savings on any aspect of the Project, such savings shall be added to the Contingency and expended consistent with the Contingency. In addition, any portion of Allowance remaining after completion of the Project shall be added to the Contingency. If any cost savings require revisions to the Construction Documents, Developer shall work with the District and Architect with respect to revising the Construction Documents and, if necessary, obtaining the approval of DSA with respect to those revisions. Developer shall be entitled to an adjustment of Contract Time for delay in completion caused by any cost savings adopted by District pursuant to **Exhibit D**, if requested in writing before the approval of the cost savings.

2.4.5 If the District exercises its Purchase Option pursuant to this **Exhibit C**, any reduction in the Guaranteed Maximum Price resulting from that exercise of the Purchase Option, if any, shall be retained in full by the District and shall not be shared with the Developer.

3. Tenant Improvement Payments

Prior to the District's taking delivery or occupancy of the Project, the District shall pay to Developer an amount equal to the Guaranteed Maximum Price as modified pursuant to the terms of the Facilities Lease, including **Exhibit C** and **Exhibit D**, less the Lease Payments ("Tenant Improvement Payments"). The District shall withhold an amount equal to one-third (1/3) of the Loan Amount as indicated in **Attachment 3** to **Exhibit C** from the last three (3) payments to Developer for its Work on the Project. Otherwise, the Tenant Improvement Payments will be processed based on the amount of Work performed according to the Developer's Schedule of Values (**Exhibit G** to the Facilities Lease) and pursuant to the provisions in **Exhibit D** to the Facilities Lease, including withholding for or escrow of retention of five percent (5%) of the Guaranteed Maximum Price. The withholding for the Loan Amount shall be separate form and in addition to withholding for or escrow of retention.

4. Lease Payments

Upon execution of the Memorandum of Commencement Date, the form of which is attached to the Facilities Lease as **Exhibit E**, the District shall commence making lease payments to Developer in accordance with the Schedule attached hereto as **Attachment 3**.

4.1 The Lease Payments shall be consideration for the District's rental, use, and occupancy of the Project and the Project Site and shall be made in monthly installments as indicated in the Schedule of Lease Payments attached hereto as **Attachment 3** for the duration of the lease term of one (1) year, with the first Lease Payment due ninety (90) days after execution of the Memorandum of Commencement Date.

4.2 The District represents that the annual Lease Payment obligation does not surpass the District's annual budget and will not require the District to increase or impose additional taxes or obligations on the public that did not exist prior to the execution of the Facilities Lease.

4.3 Fair Rental Value

District and Developer have agreed and determined that the total Lease Payments constitute adequate consideration for the Facilities Lease and are reasonably equivalent to the fair rental value of the Project. In making such determination, consideration has been given to the obligations of the Parties under the Facilities Lease and Site Lease, the uses and purposes which may be served by the Project and the benefits therefrom which will accrue to the District and the general public.

4.4 Each Lease Payment Constitutes a Current Expense of the District

4.4.1 The District and Developer understand and intend that the obligation of the District to pay Lease Payments and other payments hereunder constitutes a current expense of the District and shall not in any way be construed to be a

debt of the District in contravention of any applicable constitutional or statutory limitation or requirement concerning the creation of indebtedness by the District, nor shall anything contained herein constitute a pledge of the general tax revenues, funds or moneys of the District.

4.4.2 Lease Payments due hereunder shall be payable only from current funds which are budgeted and appropriated or otherwise made legally available for this purpose. This Facilities Lease shall not create an immediate indebtedness for any aggregate payments that may become due hereunder.

4.4.3 The District covenants to take all necessary actions to include the Lease Payments in each of its final approved annual budgets.

4.4.4 The District further covenants to make all necessary appropriations (including any supplemental appropriations) from any source of legally available funds of the District for the actual amount of Lease Payments that come due and payable during the period covered by each such budget. Developer acknowledges that the District has not pledged the full faith and credit of the District, State of California or any state agency or state department to the payment of Lease Payments or any other payments due hereunder. The covenants on the part of District contained in this Facilities Lease constitute duties imposed by law and it shall be the duty of each and every public official of the District to take such action and do such things as are required by law in the performance of the official duty of such officials to enable the District to carry out and perform the covenants and agreements in this Facilities Lease agreed to be carried out and performed by the District.

4.4.5 The Developer cannot, under any circumstances, accelerate the District's payments under the Facilities Lease.

5. District's Purchase Option

5.1 If the District is not then in uncured Default hereunder, the District shall have the option to purchase not less than all of the Project in its "as-is, where-is" condition and terminate this Facilities Lease and Site Lease by paying the balance of the "Loan Amount" identified in **Attachment 3**, which is exclusive of interest that would have otherwise been owed, as of the date the option is exercised ("Option Price"). Said payment shall be made on or before the date on which the District's lease payment would otherwise be due for that month ("Option Date").

5.2 District shall provide to Developer a written notice no less than ten (10) days prior to the Option Date. The notice will include that District is exercising its option to purchase the Project as set forth above on the Option Date. If the District exercises this option, the District shall pay directly to Developer the Option Price on or prior to the Option Date and Developer shall at that time deliver to District an executed Termination Agreement and Quitclaim Deed in recordable form to terminate this Facilities Lease and the Site Lease. District may record all such documents at District's cost and expense.

5.3 Under no circumstances can the first Option Date be on or before ninety (90) days after the Developer completes the Project and the District accepts the Project.

ATTACHMENT 1

GENERAL CONDITIONS COSTS

ATTACHMENT 2

GUARANTEED MAXIMUM PRICE

GMP – Increment II

To be attached.

ATTACHMENT 3

SCHEDULE OF LEASE PAYMENTS

Amortization Schedule

Loan Amount:	$
Interest:	5.00% Annual
Term in Months	12.00
Payment Frequency	Monthly

Payment #	Total Payment	Principal Payment	Interest Payment	Balance
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
Totals				

EXHIBIT D

GENERAL CONSTRUCTION PROVISIONS

Attached are the general construction terms and conditions for the Project.

EXHIBIT D

GENERAL CONSTRUCTION PROVISIONS FOR THE FOLLOWING PROJECT:

NEEDHAM ES MODULAR CLASSROOM PROJECT

BY AND BETWEEN

LODI UNIFIED SCHOOL DISTRICT

AND

[DEVELOPER]

Dated as of _____, 20__

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1. Contract Terms and Definitions

1.1 Definitions

Wherever used in the Contract Documents, the following terms shall have the meanings indicated, which shall be applicable to both the singular and plural thereof:

1.1.1 Adverse Weather. Shall be only weather that satisfies all of the following conditions: (1) unusually severe precipitation, sleet, snow, hail, or extreme temperature or air conditions in excess of the norm for the location and time of year it occurred based on the closest weather station data averaged over the past five years, (2) that is unanticipated and would cause unsafe work conditions and/or is unsuitable for scheduled work that should not be performed during inclement weather (i.e., exterior finishes), and (3) at the Project.

1.1.2 Allowance Expenditure Directive. Written authorization for expenditure of allowance, if any.

1.1.3 Approval, Approved, and/or Accepted. Written authorization, unless stated otherwise.

1.1.4 Architect (or "Design Professional in General Responsible Charge"). The individual, partnership, corporation, joint venture, or any combination thereof, named as Architect, who will have the rights and authority assigned to the Architect in the Contract Documents. The term Architect means the Design Professional in General Responsible Charge as defined in DSA PR 13-02 on this Project or the Architect's authorized representative.

1.1.5 As-Builts. Digitally prepared and reproducible drawings using the web-based ProCore application, or comparable, to be prepared on a monthly basis pursuant to the Contract Documents, that reflect changes made during the performance of the Work, recording differences between the original design of the Work and the Work as constructed since the preceding monthly submittal. See **Record Drawings.**

1.1.6 Change Order. A written order to the Developer authorizing an addition to, deletion from, or revision in the Work, and/or authorizing an adjustment in the Guaranteed Maximum Price or Contract Time.

1.1.7 Claim. A Dispute that remains unresolved at the conclusion of all the applicable Dispute Resolution requirements provided herein.

1.1.8 Completion. The earliest of the date of acceptance by the District or the cessation of labor thereon for a continuous period of sixty (60) days.

1.1.9 Construction Change Directive. A written order prepared and issued by the District, the Construction Manager, and/or the Architect and signed by the District and the Architect, directing a change in the Work.

1.1.10 Construction Manager. The individual, partnership, corporation, joint venture, or any combination thereof, or its authorized representative,

named as such by the District. If no Construction Manager is used on the Project that is the subject of this Contract, then all references to Construction Manager herein shall be read to refer to District.

1.1.11 Construction Schedule. The progress schedule of construction of the Project as provided by Developer and approved by District.

1.1.12 Contract. The agreement between the District and Developer contained in the Contract Documents.

1.1.13 Contract Documents. The Contract Documents consist exclusively of the documents evidencing the agreement of the District and Developer. The Contract Documents consist of the following documents:

1.1.13.1 Non-Collusion Declaration

1.1.13.2 Iran Contracting Act Certification

1.1.13.3 Site Lease

1.1.13.4 Facilities Lease, including Exhibits A-H

1.1.13.4.1 Performance Bond

1.1.13.4.2 Payment Bond (Developer's Labor & Material Bond)

1.1.13.4.3 Registered Subcontractors List

1.1.13.4.4 Hazardous Materials Procedures and Requirements

1.1.13.4.5 Workers' Compensation Certification

1.1.13.4.6 Prevailing Wage Certification

1.1.13.4.7 Disabled Veterans Business Enterprise Participation Certification (if applicable)

1.1.13.4.8 Drug-Free Workplace Certification

1.1.13.4.9 Tobacco-Free Environment Certification

1.1.13.4.10 Hazardous Materials Certification

1.1.13.4.11 Lead-Based Materials Certification (if applicable)

1.1.13.4.12 Imported Materials Certification (if applicable)

1.1.13.4.13 Criminal Background Investigation/Fingerprinting Certification

1.1.13.4.14 Roofing Project Certification (if applicable)

1.1.13.4.15 Skilled and Trained Workforce Certification

1.1.13.4.16 Escrow Agreement for Security Deposits in Lieu of Retention (if used)

1.1.13.4.17 Guarantee Form

1.1.13.4.18 Agreement and Release of Any and All Claims

1.1.13.5 All Plans, Technical Specifications, and Drawings, including the Division of the State Architect approved versions of the foregoing

1.1.13.6 Any and all addenda to any of the above documents

1.1.13.7 Any and all change orders or written modifications to the above documents if approved in writing by the District

1.1.14 Contract Time. The time period stated in the Facilities Lease for the completion of the Work.

1.1.15 Daily Job Report(s). Daily Project reports prepared by the Developer's employee(s) who are present on Site, which shall include the information required herein.

1.1.16 Day(s). Unless otherwise designated, day(s) means calendar day(s).

1.1.17 Department of Industrial Relations (or "DIR"). DIR is responsible, among other things, for labor compliance monitoring and enforcement of California prevailing wage laws and regulations for public works contracts.

1.1.18 Design Professional in General Responsible Charge. See definition of Architect above.

1.1.19 Developer. The person or persons identified in the Facilities Lease as contracting to perform the Work to be done under this Contract, or the legal representative of such a person or persons.

1.1.20 Dispute. A separate demand by Developer for a time extension, or payment of money or damages arising from Work done by or on behalf of the Developer pursuant to the Contract and payment of which is not otherwise expressly provided for or Developer is not otherwise entitled to; or an amount of payment disputed by the District.

1.1.21 District. The public agency or the school district for which the Work is performed. The governing board of the District or its designees will act for the District in all matters pertaining to the Contract. The District may, at any time:

1.1.21.1 Direct the Developer to communicate with or provide notice to the Construction Manager or the Architect on matters for which the Contract Documents indicate the Developer will communicate with or provide notice to the District; and/or

1.1.21.2 Direct the Construction Manager or the Architect to communicate with or direct the Developer on matters for which the Contract Documents indicate the District will communicate with or direct the Developer.

1.1.22 Drawings (or "Plans"). The graphic and pictorial portions of the Contract Documents showing the design, location, scope and dimensions of the Work, generally including plans, elevations, sections, details, schedules, sequence of operation, and diagrams.

1.1.23 DSA. Division of the State Architect.

1.1.24 Force Account Directive. A process that may be used when the District and the Developer cannot agree on a price for a specific portion of work or before the Developer prepares a price for a specific portion of work and whereby the Developer performs the work as indicated herein on a time and materials basis.

1.1.25 Guaranteed Maximum Price. The total monies payable to the Developer under the terms and conditions of the Contract Documents.

1.1.26 Job Cost Reports. Any and all reports or records detailing the costs associated with work performed on or related to the Project that Developer shall maintain for the Project. Specifically, Job Cost Reports shall contain, but are not limited by or to, the following information: a description of the work performed or to be performed on the Project; quantity, if applicable, of work performed (hours, square feet, cubic yards, pounds, etc.) for the Project; Project budget; costs for the Project to date; estimated costs to complete the Project; and expected costs at completion. The Job Cost Reports shall also reflect all Contract cost codes, change orders, elements of non-conforming work, back charges, and additional services.

1.1.27 Labor Commissioner's Office (or "Labor Commissioner"). Also known as the Division of Labor Standards Enforcement ("DLSE"): Division of the DIR responsible for adjudicating wage claims, investigating discrimination and public works complaints, and enforcing Labor Code statutes and Industrial Welfare Commission orders.

1.1.28 Material Safety Data Sheets (or "MSDS"). A form with data regarding the properties for potentially harmful substances handled in the workplace.

1.1.29 Municipal Separate Storm Sewer System (or "MS4"). A system of conveyances used to collect and/or convey storm water, including, without limitation, catch basins, curbs, gutters, ditches, man-made channels, and storm drains.

1.1.30 Plans. See **"Drawings"**.

1.1.31 Premises. The real property on which the Site is located.

1.1.32 Product(s). New material, machinery, components, equipment, fixtures and systems forming the Work, including existing materials or components required and approved by the District for reuse.

1.1.33 Product Data. Illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by the Developer to illustrate a material, product, or system for some portion of the Work.

1.1.34 Project. The planned undertaking as provided for in the Contract Documents.

1.1.35 Project Inspector (or "Inspector"). The individual(s) retained by the District in accordance with title 24 of the California Code of Regulations to monitor and inspect the Project.

1.1.36 Project Labor Agreement (or "PLA"). A prehire collective bargaining agreement in accordance with Public Contract Code section 2500 *et seq*. that establishes terms and conditions of employment for a specific construction project or projects and/or is an agreement described in Section 158(f) of Title 29 of the United States Code.

1.1.37 Program Manager. The individual, partnership, corporation, joint venture, or any combination thereof, or its authorized representative, named as such by the District. If no Program Manager is designated for the Project that is the subject of the Contract Documents, then all references to Program Manager herein shall be read to refer to District.

1.1.38 Proposed Change Order. A Proposed Change Order ("PCO") is a written request prepared by the Developer requesting that the District, the Construction Manager and the Architect issue a Change Order based upon a proposed change to the Work.

1.1.39 Provide. Shall include "provide complete in place," that is, "furnish and install," and "provide complete and functioning as intended in place" unless specifically stated otherwise.

1.1.40 Qualified SWPPP Practitioners ("QSP"). Certified personnel that attended a State Water Resources Control Board sponsored or approved training class and passed the qualifying exam.

1.1.41 Record Drawings. Unless otherwise defined in the Special Conditions, Reproducible drawings (or Plans) prepared pursuant to the requirements of the Contract Documents, that reflect all changes made during the performance of the Work, recording differences between the original design of the Work and the Work as constructed upon completion of the Project. See also **"As-Builts."**

1.1.42 Request for Information ("RFI" or "RFIs"). A written request prepared by the Developer requesting that the Architect provide additional information necessary to clarify or amplify an item in the Contract Documents that the Developer believes is not clearly shown or called for in the Drawings or Specifications or other portions of the Contract Documents, or to address problems that have arisen under field conditions.

1.1.43 Request for Substitution for Specified Item. A request by Developer to substitute an equal or superior material, product, thing, or service for a specific material, product, thing, or service that has been designated in the Contract Documents by a specific brand or trade name.

1.1.44 Safety Orders. Written and/or verbal orders for construction issued by the California Division of Occupational Safety and Health ("Cal/OSHA") or by the United States Occupational Safety and Health Administration ("OSHA").

1.1.45 Safety Plan. Developer's safety plan specifically adapted for the Project. Developer's Safety Plan shall comply with all provisions regarding Project safety, including all applicable provisions in these Construction Provisions.

1.1.46 Samples. Physical examples that illustrate materials, products, equipment, finishes, colors, or workmanship and that, when approved in accordance with the Contract Documents, establish standards by which portions of the Work will be judged.

1.1.47 Shop Drawings. All drawings, prints, diagrams, illustrations, brochures, schedules, and other data that are prepared by the Developer, a subcontractor, manufacturer, supplier, or distributor, that illustrate how specific portions of the Work shall be fabricated or installed.

1.1.48 Site. The Project site as shown on the Drawings.

1.1.49 Specifications. That portion of the Contract Documents, Division 1 through Division 49, and all technical sections, and addenda to all of these, if any, consisting of written descriptions and requirements of a technical nature of materials, equipment, construction methods and systems, standards, and workmanship.

1.1.50 State. The State of California.

1.1.51 Storm Water Pollution Prevention Plan (or "SWPPP"). A document which identifies sources and activities at a particular facility that may contribute pollutants to storm water and contains specific control measures and time frames to prevent or treat such pollutants.

1.1.52 Subcontractor. A contractor and/or supplier who is under contract with the Developer or with any other subcontractor, regardless of tier, to perform a portion of the Work of the Project.

1.1.53 Submittal Schedule. The schedule of submittals as provided by Developer and approved by District.

1.1.54 Surety. The person, firm, or corporation that executes as surety the Developer's Performance Bond and Payment Bond, and must be a California admitted surety insurer as defined in the Code of Civil Procedure section 995.120.

1.1.55 Work. All labor, materials, equipment, components, appliances, supervision, coordination, and services required by, or reasonably inferred from, the Contract Documents, that are necessary for the construction and completion of the Project.

1.2 Laws Concerning the Contract Documents

The Contract is subject to all provisions of the Constitution and laws of California and the United States governing, controlling, or affecting District, or the property, funds, operations, or powers of District, and such provisions are by this reference made a

part hereof. Any provision required by law to be included in this Contract shall be deemed to be inserted.

1.3 No Oral Agreements

No oral agreement or conversation with any officer, agent, or employee of District, either before or after execution of Contract Documents, shall affect or modify any of the terms or obligations contained in any of the documents comprising the Contract Documents.

1.4 No Assignment

Except as specifically permitted in the Facilities Lease, Developer shall not assign the Contract Documents or any part thereof including, without limitation, any services or money to become due hereunder without the prior written consent of the District. Assignment without District's prior written consent shall be null and void. Any assignment of money due or to become due under the Contract Documents shall be subject to a prior lien for services rendered or material supplied for performance of Work called for under the Contract Documents in favor of all persons, firms, or corporations rendering services or supplying material to the extent that claims are filed pursuant to the Civil Code, Code of Civil Procedure, Government Code, Labor Code, and/or Public Contract Code, and shall also be subject to deductions for liquidated damages or withholding of payments as determined by District in accordance with the Contract Documents. Developer shall not assign or transfer in any manner to a Subcontractor or supplier the right to prosecute or maintain an action against the District.

1.5 Notice and Service Thereof

1.5.1 Any notice from one party to the other or otherwise under the Contract Documents shall be in writing and shall be dated and signed by the party giving notice or by a duly authorized representative of that party. Notice shall not be effective for any purpose whatsoever unless served in one of the following manners:

1.5.1.1 If notice is given by personal delivery thereof, it shall be considered delivered on the day of delivery.

1.5.1.2 If notice is given by overnight delivery service, it shall be considered delivered one (1) day after date deposited, as indicated by the delivery service.

1.5.1.3 If notice is given by depositing same in United States mail, enclosed in a sealed envelope, it shall be considered delivered five (5) days after date deposited, as indicated by the postmarked date.

1.5.1.4 If notice is given by registered or certified mail with postage prepaid, return receipt requested, it shall be considered delivered on the day the notice is signed for.

1.6 No Waiver

The failure of District in any one or more instances to insist upon strict performance of any of the terms of the Contract Documents or to exercise any option herein conferred shall not be construed as a waiver or relinquishment to any extent of the right to assert or rely upon any such terms or option on any future occasion. No action or failure to act by the District, Architect, or Construction Manager shall constitute a waiver of any right or duty afforded the District under the Contract Documents, nor shall any action or failure to act constitute an approval of or acquiescence on any breach thereunder, except as may be specifically agreed in writing.

1.7 Substitutions For Specified Items

Developer shall not substitute different items for any items identified in the Contract Documents without prior written approval of the District, unless otherwise provided in the Contract Documents.

1.8 Materials and Work

1.8.1 Except as otherwise specifically stated in the Contract Documents, Developer shall provide and pay for all materials, labor, tools, equipment, transportation, supervision, temporary constructions of every nature, and all other services, management, and facilities of every nature whatsoever necessary to execute and complete the Work, in a good and workmanlike manner, within the Contract Time.

1.8.2 Unless otherwise specified, all materials shall be new and of the best quality of their respective kinds and grades as noted or specified, and workmanship shall be of high quality, and Developer shall use all diligence to inform itself fully as to the required manufacturer's instructions and to comply therewith.

1.8.3 Materials shall be furnished in ample quantities and at such times as to insure uninterrupted progress of Work and shall be stored properly and protected from the elements, theft, vandalism, or other loss or damage as required.

1.8.4 For all materials and equipment specified or indicated in the Drawings and Specifications, the Developer shall provide all labor, materials, equipment, and services necessary for complete assemblies and complete working systems, functioning as intended. Incidental items not indicated on Drawings, nor mentioned in the Specifications, that can legitimately and reasonably be inferred to belong to the Work described, or be necessary in good practice to provide a complete assembly or system, shall be furnished as though itemized here in every detail. In all instances, material and equipment shall be installed in strict accordance with each manufacturer's most recent published recommendations and specifications.

1.8.5 Developer shall, after award of the Project by District and after relevant submittals have been approved, place orders for materials and/or equipment as specified so that delivery of same may be made without delays to the Work.

Developer shall, upon demand from District, present documentary evidence showing that orders have been placed.

1.8.6 In the event of Developer's neglect in complying or failure to comply with the above instructions, District reserves the right, but has no obligation, to place orders for such materials and/or equipment as the District may deem advisable so that the Work may be completed by the date specified in the Facilities Lease, and all expenses incidental to the procuring of said materials and/or equipment shall be paid for by Developer or deducted from payment(s) to Developer.

1.8.7 Developer warrants good title to all material, supplies, and equipment installed or incorporated in Work and agrees upon completion of all Work to deliver the Site to District, together with all improvements and appurtenances constructed or placed thereon by it, and free from any claims, liens, or charges. Developer further agrees that neither it nor any person, firm, or corporation furnishing any materials or labor for any work covered by the Contract Documents shall have any right to lien any portion of the Premises or any improvement or appurtenance thereon, except that Developer may install metering devices or other equipment of utility companies or of political subdivision, title to which is commonly retained by utility company or political subdivision. In the event of installation of any such metering device or equipment, Developer shall advise District as to owner thereof.

1.8.8 Nothing contained in this Article, however, shall defeat or impair the rights of persons furnishing materials or labor under any bond given by Developer for their protection or any rights under any law permitting such protection or any rights under any law permitting such persons to look to funds due Developer in hands of District (e.g., Stop Payment Notices), and this provision shall be inserted in all subcontracts and material contracts and notice of its provisions shall be given to all persons furnishing material for Work when no formal contract is entered into for such material.

1.8.9 Title to new materials and/or equipment for the Work of the Contract Documents and attendant liability for its protection and safety shall remain with Developer until incorporated in the Work of the Contract Documents and accepted by District. No part of any materials and/or equipment shall be removed from its place of storage except for immediate installation in the Work of the Contract Documents. Should the District, in its discretion, allow the Developer to store materials and/or equipment for the Work off-site, Developer will store said materials and/or equipment at a bonded warehouse and with appropriate insurance coverage at no cost to District. Developer shall keep an accurate inventory of all materials and/or equipment in a manner satisfactory to District or its authorized representative and shall, at the District's request, forward it to the District.

2. [Reserved]

3. Architect

3.1 The Architect shall represent the District during the Project and will observe the progress and quality of the Work on behalf of the District. Architect shall have the

authority to act on behalf of District to the extent expressly provided in the Contract Documents and to the extent determined by District. Architect shall have authority to reject materials, workmanship, and/or the Work whenever rejection may be necessary, in Architect's reasonable opinion, to insure the proper execution of the Contract Documents.

3.2 Architect shall, with the District and on behalf of the District, determine the amount, quality, acceptability, and fitness of all parts of the Work, and interpret the Specifications, Drawings, and shall, with the District, interpret all other Contract Documents.

3.3 Architect shall have all authority and responsibility established by law, including title 24 of the California Code of Regulations.

3.4 Developer shall provide District and the Construction Manager with a copy of all written communication between Developer and Architect at the same time as that communication is made to Architect, including, without limitation, all RFIs, correspondence, submittals, claims, and change order requests.

4. Construction Manager

4.1 If a Construction Manager is used on this Project ("Construction Manager" or "CM"), the Construction Manager will provide administration of the Contract Documents on the District's behalf. After execution of the Contract Documents, all correspondence and/or instructions from Developer and/or District shall be forwarded through the Construction Manager. The Construction Manager will not be responsible for and will not have control or charge of construction means, methods, techniques, sequences, or procedures or for safety precautions in connection with the Work, which shall all remain the Developer's responsibility.

4.2 The Construction Manager, however, will have authority to reject materials and/or workmanship not conforming to the Contract Documents, as determined by the District, the Architect, and/or the Project Inspector. The Construction Manager shall also have the authority to require special inspection or testing of any portion of the Work, whether it has been fabricated, installed, or fully completed. Any decision made by the Construction Manager in good faith, shall not give rise to any duty or responsibility of the Construction Manager to: the Developer, any Subcontractor, or their agents, employees, or other persons performing any of the Work. The Construction Manager shall have free access to any or all parts of Work at any time.

4.3 If the District does not use a Construction Manager on this Project, all references to Construction Manager or CM shall be read as District.

5. Inspector, Inspections, and Tests

5.1 Project Inspector

5.1.1 One or more Project Inspector(s), including special Project Inspector(s), as required, will be assigned to the Work by District, in accordance with requirements of title 24, part 1, of the California Code of Regulations, to enforce the building code and monitor compliance with Plans and Specifications for the

Project previously approved by the DSA. Duties of Project Inspector(s) are specifically defined in section 4-342 of said part 1 of title 24.

5.1.2 No Work shall be carried on except with the knowledge and under the inspection of the Project Inspector(s). The Project Inspector(s) shall have free access to any or all parts of Work at any time. Developer shall furnish Project Inspector(s) reasonable opportunities for obtaining such information as may be necessary to keep Project Inspector(s) fully informed respecting progress and manner of work and character of materials, including, but not limited to, submission of form DSA 156 (or the most current version applicable at the time the Work is performed) to the Project Inspector at least 48 hours in advance of the commencement and completion of construction of each and every aspect of the Work. Forms are available on the DSA's website at: http://www.dgs.ca.gov/dsa/Forms.aspx. Inspection of Work shall not relieve Developer from an obligation to fulfill the Contract Documents. Project Inspector(s) and the DSA are authorized to suspend work whenever the Developer and/or its Subcontractor(s) are not complying with the Contract Documents. Any work stoppage by the Project Inspector(s) and/or DSA shall be without liability to the District. Developer shall instruct its Subcontractors and employees accordingly.

5.1.3 If Developer and/or any Subcontractor requests that the Project Inspector(s) perform any inspection off-Site, this shall only be done if it is allowable pursuant to applicable regulations and DSA approval, if the Project Inspector(s) agree to do so, and at the expense of the Developer.

5.2 Tests and Inspections

5.2.1 Tests and Inspections shall comply with title 24, part 1, California Code of Regulations, group 1, article 5, section 4-335, and with the provisions of the Specifications.

5.2.2 The District will select an independent testing laboratory to conduct the tests. Selection of the materials required to be tested shall be by the laboratory or the District's representative and not by the Developer. The Developer shall notify the District's representative a sufficient time in advance of its readiness for required observation or inspection. This notice shall be provided, at a minimum, forty-eight (48) hours prior to the inspection of the material that needs to be tested and, at a minimum, seventy-two (72) hours prior to any special or off-site inspection.

5.2.3 The Developer shall notify the District's representative a sufficient time in advance of the manufacture of material to be supplied under the Contract Documents that must by terms of the Contract Documents be tested so that the District may arrange for the testing of same at the source of supply. This notice shall be provided, at a minimum, seventy-two (72) hours prior to the manufacture of the material that needs to be tested.

5.2.4 Any material shipped by the Developer from the source of supply prior to having satisfactorily passed such testing and inspection or prior to the receipt of notice from said representative that such testing and inspection will not be required, shall not be incorporated into and/or onto the Project.

5.2.5 The District will select the testing laboratory and pay for the costs for all tests and inspections. Developer shall reimburse the District for any and all laboratory costs or other testing costs for any materials found to be not in compliance with the Contract Documents. At the District's discretion, District may elect to deduct laboratory or other testing costs for noncompliant materials from the Guaranteed Maximum Price, and such deduction shall not constitute a withholding.

5.3 Costs for After Hours and/or Off Site Inspections

If the Developer performs Work outside the Inspector's regular working hours, costs of any inspections required outside regular working hours shall be borne by the Developer and may be invoiced to the Developer by the District or the District may deduct those expenses from the next Tenant Improvement Payment.

6. Developer

Developer shall construct and complete, in a good and workmanlike manner, the Work for the Guaranteed Maximum Price including any adjustment(s) to the Guaranteed Maximum Price pursuant to provisions herein regarding changes to the Guaranteed Maximum Price. Except as otherwise noted, Developer shall provide and pay for all labor, materials, equipment, permits (excluding DSA), fees, licenses, facilities, transportation, taxes, bonds and insurance, and services necessary for the proper execution and completion of the Work, except as indicated herein.

6.1 Status of Developer

6.1.1 Developer is and shall at all times be deemed to be an independent contractor and shall be wholly responsible for the manner in which it and its Subcontractors perform the services required of it by the Contract Documents. Nothing herein contained shall be construed as creating the relationship of employer and employee, or principal and agent, between the District, or any of the District's employees or agents, and Developer or any of Developer's Subcontractors, agents or employees. Developer assumes exclusively the responsibility for the acts of its agents and employees as they relate to the services to be provided during the course and scope of their employment. Developer, its Subcontractors, and its agents and employees shall not be entitled to any rights or privileges of District employees. District shall be permitted to monitor the Developer's activities to determine compliance with the terms of the Contract Documents.

6.1.2 As required by law, Developer and all Subcontractors shall be properly licensed and regulated by the Contractors State License Board, 9821 Business Park Drive, Sacramento, California 95827 (Post Office Box 26000, Sacramento, California 95826), http://www.cslb.ca.gov.

6.1.3 As required by law, Developer and all Subcontractors shall be properly registered as public works contractors by the Department of Industrial Relations at
https://efiling.dir.ca.gov/PWCR/ActionServlet?action=displayPWCRegistrationForm or current URL.

6.1.4 Developer represents that it has no existing interest and will not acquire any interest, direct or indirect, which could conflict in any manner or degree with the performance of Work required under this Contract and that no person having any such interest shall be employed by Developer.

6.2 Project Inspection Card(s)

Developer shall verify that forms DSA 152 (or most current version applicable at the time the Work is performed) are issued for the Project prior to the commencement of construction.

6.3 Developer's Supervision

6.3.1 During progress of the Work, Developer shall keep on the Premises, and at all other locations where any Work related to the Contract is being performed, an experienced and competent project manager and construction superintendent who are employees of the Developer, to whom the District does not object and at least one of whom shall be fluent in English, written and verbal.

6.3.2 The project manager and construction superintendent shall both speak fluently the predominant language of the Developer's employees.

6.3.3 Before commencing the Work herein, Developer shall give written notice to District of the name of its project manager and construction superintendent. Neither the Developer's project manager nor construction superintendent shall be changed except with prior written notice to District. If the Developer's project manager and/or construction superintendent proves to be unsatisfactory to Developer, or to District, any of the District's employees, agents, the Construction Manager, or the Architect, Developer shall immediately notify District in writing before any change occurs, but no less than two (2) business days prior. Any replacement of the project manager and/or construction superintendent shall be made promptly and must be satisfactory to the District. The Developer's project manager and construction superintendent shall each represent Developer, and all directions given to Developer's project manager and/or construction superintendent shall be as binding as if given to Developer.

6.3.4 Developer shall give efficient supervision to Work, using its best skill and attention. Developer shall carefully study and compare all Contract Documents, Drawings, Specifications, and other instructions and shall at once report to District, Construction Manager, and Architect any error, inconsistency, or omission that Developer or its employees and Subcontractors may discover, in writing, with a copy to District's Project Inspector(s). Developer shall have responsibility for discovery of errors, inconsistencies, or omissions.

6.3.5 All contractors doing work on the Project will provide their workers with identification badges. These badges will be worn by all members of the contractor's staff who are working in a District facility.

6.3.5.1 Badges must be filled out in full and contain the following information:

6.3.5.1.1 Name of contractor

6.3.5.1.2 Name of employee

6.3.5.1.3 Contractor's address and phone number

6.3.5.2 Badges are to be worn when the Developer or his/her employees are on site and must be visible at all times. Contractors must inform their employees that they are required to allow District employees, the Architect, the Construction Manager, the Program Manager, or the Project Inspector to review the information on the badges upon request.

6.3.5.3 Continued failure to display identification badges as required by this policy may result in the individual being removed from the Project or assessment of fines against the contractor.

6.4 Duty to Provide Fit Workers

6.4.1 Developer and Subcontractor(s) shall at all times enforce strict discipline and good order among their employees and shall not employ any unfit person or anyone not skilled in work assigned to that person. It shall be the responsibility of Developer to ensure compliance with this requirement. District may require Developer to permanently remove unfit persons from Project Site.

6.4.2 Any person in the employ of Developer or Subcontractor(s) whom District may deem incompetent or unfit shall be excluded from working on the Project and shall not again be employed on the Project except with the prior written consent of District.

6.4.3 The Developer shall furnish labor that can work in harmony with all other elements of labor employed or to be employed in the Work.

6.4.4 If Developer intends to make any change in the name or legal nature of the Developer's entity, Developer shall first notify the District in writing prior to making any contemplated change. The District shall determine in writing if Developer's intended change is permissible while performing the Work.

6.5 Field Office

6.5.1 Developer shall provide on the Work Site a temporary office.

6.6 Purchase of Materials and Equipment

The Developer is required to order, obtain, and store materials and equipment sufficiently in advance of its Work at no additional cost or advance payment from District to assure that there will be no delays.

6.7 Documents on Work

6.7.1 Developer shall at all times keep on the Work Site, or at another location as the District may authorize in writing, one legible copy of all Contract

Documents, including Addenda and Change Orders, and Titles 19 and 24 of the California Code of Regulations, the specified edition(s) of the Uniform Building Code, all approved Drawings, Plans, Schedules, and Specifications, and all codes and documents referred to in the Specifications, and made part thereof. These documents shall be kept in good order and available to District, Construction Manager, Architect, Architect's representatives, the Project Inspector(s), and all authorities having jurisdiction. Developer shall be acquainted with and comply with the provisions of these titles as they relate to this Project. (See particularly the duties of Contractor, Title 24, Part 1, California Code of Regulations, Section 4-343.) Developer shall also be acquainted with and comply with all California Code of Regulations provisions relating to conditions on this Project, particularly Titles 8 and 17. Developer shall coordinate with Architect and Construction Manager and shall submit its verified report(s) according to the requirements of Title 24.

6.7.2 Daily Job Reports

6.7.2.1 Developer shall maintain, at a minimum, at least one (1) set of Daily Job Reports on the Project. These must be prepared by the Developer's employee(s) who are present on Site, and must include, at a minimum, the following information:

6.7.2.1.1 A brief description of all Work performed on that day.

6.7.2.1.2 A summary of all other pertinent events and/or occurrences on that day.

6.7.2.1.3 The weather conditions on that day.

6.7.2.1.4 A list of all Subcontractor(s) working on that day, including DIR registration numbers.

6.7.2.1.5 A list of each Developer employee working on that day and the total hours worked for each employee.

6.7.2.1.6 A complete list of all equipment on Site that day, whether in use or not.

6.7.2.1.7 A complete list of all materials, supplies, and equipment delivered on that day.

6.7.2.1.8 A complete list of all inspections and tests performed on that day.

6.7.2.2 Each day Developer shall provide a copy of the previous day's Daily Job Report to the District or the District's Construction Manager.

6.8 Preservation of Records

Developer shall maintain, and District shall have the right to inspect, Developer's financial records for the Project, including, without limitation, Job Cost Reports for the Project in compliance with the criteria set forth herein. The District shall have the right

to examine and audit all Daily Job Reports or other Project records of Developer's project manager(s), project superintendent(s), and/or project foreperson(s), all certified payroll records and/or related documents including, without limitation, Job Cost Reports, payroll, payment, timekeeping and tracking documents; and as it pertains to change orders, all books, estimates, records, contracts, documents, cost data, subcontract job cost reports, and other data of the Developer, any Subcontractor, and/or supplier, including computations and projections related to estimating, negotiating, pricing, or performing the Work or modification, in order to evaluate the accuracy, completeness, and currency of the cost, manpower, coordination, supervision, or pricing data at no additional cost to the District. These documents may be duplicative and/or be in addition to any documents held in escrow by the District. The Developer shall make available at its office at all reasonable times the materials described in this paragraph for the examination, audit, or reproduction until three (3) years after final payment under this Facilities Lease. Notwithstanding the provisions above, Developer shall provide any records requested by any governmental agency, if available, after the time set forth above.

6.9 Integration of Work

6.9.1 Developer shall do all cutting, fitting, patching, and preparation of Work as required to make its several parts come together properly, to fit it to receive or be received by work of other contractors, and to coordinate tolerances to various pieces of work, showing upon, or reasonably implied by, the Drawings and Specifications for the completed structure, and shall conform them as District and/or Architect may direct.

6.9.2 Developer shall make its own layout of lines and elevations and shall be responsible for the accuracy of both Developer's and Subcontractors' work resulting therefrom.

6.9.3 Developer and all Subcontractors shall take all field dimensions required in performance of the Work, and shall verify all dimensions and conditions on the Site. All dimensions affecting proper fabrication and installation of all Work must be verified prior to fabrication by taking field measurements of the true conditions. If there are any discrepancies between dimensions in drawings and existing conditions which will affect the Work, Developer shall bring such discrepancies to the attention of the District and Architect for adjustment before proceeding with the Work.

6.9.4 All costs caused by noncompliant, defective, or delayed Work shall be borne by Developer, inclusive of repair work.

6.9.5 Developer shall not endanger any work performed by it or anyone else by cutting, excavating, or otherwise altering work and shall not cut or alter work of any other contractor except with consent of District.

6.10 Notifications

6.10.1 Developer shall notify the Architect and Project Inspector, in writing, of the commencement of construction of each and every aspect of the Work at least 48 hours in advance by submitting form DSA 156 (or the most current version applicable at the time the Work is performed) to the Project Inspector.

Forms are available on the DSA's website at: http://www.dgs.ca.gov/dsa/Forms.aspx.

6.10.2 Developer shall notify the Architect and Project Inspector, in writing, of the completion of construction of each and every aspect of the Work at least 48 hours in advance by submitting form DSA 156 (or the most current version applicable at the time the Work is performed) to the Project Inspector.

6.11 Obtaining of Permits, Licenses and Registrations

Developer shall secure and pay for any permits (except DSA), licenses, registrations, approvals, and certificates necessary for prosecution of Work, including but not limited to those listed in the Special Conditions, Exhibit D-1, if any, before the date of the commencement of the Work or before the permits, licenses, registrations, approvals and certificates are legally required to continue the Work without interruption. The Developer shall obtain and pay, only when legally required, for all licenses, approvals, registrations, permits, inspections, and inspection certificates required to be obtained from or issued by any authority having jurisdiction over any part of the Work included in the Contract Documents. All final permits, licenses, registrations, approvals and certificates shall be delivered to District before demand is made for final payment. The costs associated with said permits, licenses, registrations, approvals and certificates shall be direct reimbursement items and are not subject to any markup.

6.12 Royalties and Patents

6.12.1 Developer shall obtain and pay, when legally required, all royalties and license fees necessary for prosecution of Work before the earlier of the date of the commencement of the Work or the date the license is legally required to continue the Work without interruption. Developer shall defend suits or claims of infringement of patent, copyright, or other rights and shall hold the District, Construction Manager and the Architect harmless and indemnify them from loss on account thereof except when a particular design, process, or make or model of product is required by the Contract Documents. However, if the Developer has reason to believe that the required design, process, or product is an infringement of a patent or copyright, the Developer shall indemnify and defend the District, Construction Manager and Architect against any loss or damage.

6.12.2 The review by the District, Construction Manager or Architect of any method of construction, invention, appliance, process, article, device, or material of any kind shall be only as to its adequacy for the Work and shall not constitute approve use by the Developer in violation of any patent or other rights of any person or entity.

6.13 Work to Comply With Applicable Laws and Regulations

6.13.1 Developer shall give all notices and comply with the following specific laws, ordinances, rules, and regulations and all other applicable laws, ordinances, rules, and regulations bearing on conduct of Work as indicated and specified, including but not limited to the appropriate statutes and administrative code sections. If Developer observes that Drawings and Specifications are at variance with any applicable laws, ordinances, rules and regulations, or should Developer become aware of the development of

conditions not covered by Contract Documents that may result in finished Work being at variance therewith, Developer shall promptly notify District in writing and any changes deemed necessary by District shall be made as provided in this Exhibit D for changes in Work.

6.13.1.1 National Electrical Safety Code, U. S. Department of Commerce

6.13.1.2 National Board of Fire Underwriters' Regulations

6.13.1.3 International Building Code, latest addition, and the California Code of Regulations, title 24, and other amendments

6.13.1.4 Manual of Accident Prevention in Construction, latest edition, published by A.G.C. of America

6.13.1.5 Industrial Accident Commission's Safety Orders, State of California

6.13.1.6 Regulations of the State Fire Marshall (title 19, California Code of Regulations) and Pertinent Local Fire Safety Codes

6.13.1.7 Americans with Disabilities Act

6.13.1.8 Education Code of the State of California

6.13.1.9 Government Code of the State of California

6.13.1.10 Labor Code of the State of California, division 2, part 7, Public Works and Public Agencies

6.13.1.11 Public Contract Code of the State of California

6.13.1.12 California Art Preservation Act

6.13.1.13 U. S. Copyright Act

6.13.1.14 U. S. Visual Artists Rights Act

6.13.2 Developer shall comply with all applicable mitigation measures, if any, adopted by any public agency with respect to this Project pursuant to the California Environmental Quality Act (Public Resources Code section 21000 et seq.).

6.13.3 If Developer performs any Work that it knew, or through exercise of reasonable care should have known, to be contrary to any applicable laws, ordinance, rules, or regulations, Developer shall bear all costs arising therefrom and arising from the correction of said Work.

6.13.4 Where Specifications or Drawings state that materials, processes, or procedures must be approved by the DSA, State Fire Marshall, or other body or agency, Developer shall use its best efforts to satisfy the requirements of

such bodies or agencies applicable at the time the Work is performed, and as determined by those bodies or agencies.

6.14 Safety/Protection of Persons and Property

6.14.1 The Developer will be solely and completely responsible for conditions of the Work Site, including safety of all persons and property during performance of the Work. This requirement will apply continuously and not be limited to normal working hours.

6.14.2 The wearing of hard hats will be mandatory at all times for all personnel on Site. Developer shall supply sufficient hard hats to properly equip all employees and visitors.

6.14.3 Any construction review of the Developer's performance is not intended to include review of the adequacy of the Developer's safety measures in, on, or near the Work Site.

6.14.4 Implementation and maintenance of safety programs shall be the sole responsibility of the Developer.

6.14.5 The Developer shall furnish to the District a copy of the Developer's safety plan within the time frame indicated in the Contract Documents and specifically adapted for the Project.

6.14.6 Developer shall be responsible for all damages to persons or property that occur as a result of its fault or negligence in connection with the prosecution of the Contract Documents and shall take all necessary measures and be responsible for the proper care and completion and final acceptance by District. All Work shall be solely at Developer's risk.

6.14.7 Developer shall take, and require Subcontractors to take, all necessary precautions for safety of workers on the Project and shall comply with all applicable federal, state, local, and other safety laws, standards, orders, rules, regulations, and building codes to prevent accidents or injury to persons on, about, or adjacent to premises where Work is being performed and to provide a safe and healthful place of employment. Developer shall furnish, erect, and properly maintain at all times, all necessary safety devices, safeguards, construction canopies, signs, nets, barriers, lights, and watchmen for protection of workers and the public and shall post danger signs warning against hazards created by such features in the course of construction.

6.14.8 Hazards Control –Developer shall store volatile wastes in approved covered metal containers and remove them from the Site daily. Developer shall prevent accumulation of wastes that create hazardous conditions. Developer shall provide adequate ventilation during use of volatile or noxious substances.

6.14.9 Developer shall designate a responsible member of its organization on the Project, whose duty shall be to post information regarding protection and obligations of workers and other notices required under occupational safety and health laws, to comply with reporting and other occupational safety

requirements, and to protect the life, safety, and health of workers. Name and position of person so designated shall be reported to District by Developer.

6.14.10 Developer shall correct any violations of safety laws, rules, orders, standards, or regulations. Upon the issuance of a citation or notice of violation by the Division of Occupational Safety and Health, Developer shall correct such violation promptly.

6.14.11 Developer shall comply with any District storm water requirements that are approved by the District and applicable to the Project, at no additional cost to the District.

6.14.12 In an emergency affecting safety of life or of work or of adjoining property, Developer, without special instruction or authorization, shall act, at its discretion, to prevent such threatened loss or injury. Any compensation claimed by Developer on account of emergency work shall be determined by agreement.

6.14.13 All salvage materials will become the property of the Developer and shall be removed from the Site unless otherwise called for in the Contract Documents. However, the District reserves the right to designate certain items of value that shall be turned over to the District unless otherwise directed by District.

6.14.14 All connections to public utilities and/or existing on-site services shall be made and maintained in such a manner as to not interfere with the continuing use of same by the District during the entire progress of the Work.

6.14.15 Developer shall provide such heat, covering, and enclosures as are necessary to protect all Work, materials, equipment, appliances, and tools against damage by weather conditions, such as extreme heat, cold, rain, snow, dry winds, flooding, or dampness.

6.14.16 The Developer shall protect and preserve the Work from all damage or accident, providing any temporary roofs, window and door coverings, boxings, or other construction as required by the Architect. The Developer shall be responsible for existing structures, walks, roads, trees, landscaping, and/or improvements in working areas; and shall provide adequate protection therefor. If temporary removal is necessary of any of the above items, or damage occurs due to the Work, the Developer shall replace same at his expense with same kind, quality, and size of Work or item damaged. This shall include any adjoining property of the District and others.

6.14.17 Developer shall take adequate precautions to protect existing roads, sidewalks, curbs, pavements, utilities, adjoining property, and structures (including, without limitation, protection from settlement or loss of lateral support), and to avoid damage thereto, and repair any damage thereto caused by construction operations.

6.14.18 Developer shall confine apparatus, the storage of materials, and the operations of workers to limits indicated by law, ordinances, permits, or directions of Architect, and shall not interfere with the Work or unreasonably

encumber Premises or overload any structure with materials. Developer shall enforce all instructions of District and Architect regarding signs, advertising, fires, and smoking, and require that all workers comply with all regulations while on Project Site.

6.14.19 Developer, Developer's employees, Subcontractors, Subcontractors' employees, or any person associated with the Work shall conduct themselves in a manner appropriate for a school site. No verbal or physical contact with neighbors, students, and faculty, profanity, or inappropriate attire or behavior will be permitted. District may require Developer to permanently remove non-complying persons from Project Site.

6.14.20 Developer shall take care to prevent disturbing or covering any survey markers, monuments, or other devices marking property boundaries or corners. If such markers are disturbed, Developer shall have a civil engineer, registered as a professional engineer in California, replace them at no cost to District.

6.14.21 In the event that the Developer enters into any agreement with owners of any adjacent property to enter upon the adjacent property for the purpose of performing the Work, Developer shall fully indemnify, defend, and hold harmless each person, entity, firm, or agency that owns or has any interest in adjacent property. The form and content of the agreement of indemnification shall be approved by the District prior to the commencement of any Work on or about the adjacent property. The Developer shall also indemnify the District as provided in the indemnification provision herein. These provisions shall be in addition to any other requirements of the owners of the adjacent property.

6.15 General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities ("General Permit")

6.15.1 Developer acknowledges that all California school districts are obligated to develop and implement the following requirements for the discharge of storm water to surface waters from its construction and land disturbance activities (storm water requirements), without limitation:

6.15.1.1 A Municipal Separate Storm Sewer System (MS4). An MS4 is a system of conveyances used to collect and/or convey storm water, including, without limitation, catch basins, curbs, gutters, ditches, man-made channels, and storm drains.

6.15.1.2 A Storm Water Pollution Prevention Plan ("SWPPP") that contains specific best management practices ("BMPs") and establishes numeric effluent limitations at:

6.15.1.2.1 Sites where the District engages in maintenance (e.g., fueling, cleaning, repairing) or transportation activities.

6.15.1.2.2 Construction sites where:

6.15.1.2.2.1 One (1) or more acres of soil will be disturbed, or

6.15.1.2.2.1.1 The Project is part of a larger common plan of development that disturbs more than one (1) acre of soil.

6.15.2 District shall develop and pay for a SWPPP and Developer shall comply with any District storm water requirements that are approved by the District and applicable to the Project, at no additional cost to the District.

6.15.3 At no additional cost to the District, Developer shall provide a Qualified Storm Water Practitioner who shall be onsite and implement and monitor any and all SWPPP requirements applicable to the Project, including but not limited to:

6.15.3.1 At least forty eight (48) hours prior to a forecasted rain event, implementing the Rain Event Action Plan (REAP) for any rain event requiring implementation of the REAP, including any erosion and sediment control measures needed to protect all exposed portions of the site; and

6.15.3.2 Monitoring any Numeric Action Levels (NALs), if applicable.

6.16 Working Evenings and Weekends

Developer may be required to work increased hours, evenings, and/or weekends at no additional cost to the District. Developer shall give the District forty-eight (48) hours' notice prior to performing any evening and/or weekend work. Developer shall perform all evening and/or weekend work in compliance with all applicable rules, regulations, laws, and local ordinances including, without limitation, all noise and light limitations. Developer shall reimburse the District for any increased or additional Inspector charges as a result of the Developer's increased hours, or evening and/or weekend work.

6.17 Cleaning Up

6.17.1 The Developer shall provide all services, labor, materials, and equipment necessary for protecting and securing the Work, all school occupants, furnishings, equipment, and building structure from damage until its completion and final acceptance by District. Dust barriers shall be provided to isolate dust and dirt from construction operations. At completion of the Work and portions thereof, Developer shall clean to the original state any areas beyond the Work area that become dust laden as a result of the Work. The Developer must erect the necessary warning signs and barricades to ensure the safety of all school occupants. The Developer at all times must maintain good housekeeping practices to reduce the risk of fire damage and must make a fire extinguisher, fire blanket, and/or fire watch, as applicable, available at each location where cutting, braising, soldering, and/or welding is being performed or where there is an increased risk of fire.

6.17.2 Developer at all times shall keep Premises, including property immediately adjacent thereto, free from debris such as waste, rubbish (including personal rubbish of workers, e.g., food wrappers, etc.), and excess materials and equipment caused by the Work. Developer shall not leave debris under, in, or about the Premises (or surrounding property or neighborhood),

but shall promptly remove same from the Premises on a daily basis. If Developer fails to clean up, District may do so and the cost thereof shall be charged to Developer. If the Contract calls for Work on an existing facility, Developer shall also perform specific clean-up on or about the Premises upon request by the District as it deems necessary for the continuing education process. Developer shall comply with all related provisions of the Specifications.

6.17.3 If the Construction Manager, Architect, or District observes the accumulation of trash and debris, the District will give the Developer a 24-hour written notice to mitigate the condition.

6.17.4 Should the Developer fail to perform the required clean-up, or should the clean-up be deemed unsatisfactory by the District, the District will then perform the clean-up. All cost associated with the clean-up work (including all travel, payroll burden, and costs for supervision) will be deducted from the Guaranteed Maximum Price, or District may withhold those amounts from payment(s) to Developer.

7. Subcontractors

7.1 Developer shall provide the District with information for all of Developer's Subcontracts and Subcontractors as indicated in the Developer's Submittals and Schedules Section herein.

7.2 No contractual relationship exists between the District and any Subcontractor, supplier, or sub-subcontractor by reason of the Contract Documents.

7.3 Developer agrees to bind every Subcontractor by terms of the Contract Documents as far as those terms that are applicable to Subcontractor's work including, without limitation, all labor, wage & hour, apprentice and related provisions and requirements. If Developer subcontracts any part of the Work called for by the Contract Documents, Developer shall be as fully responsible to District for acts and omissions of any Subcontractor and of persons either directly or indirectly employed by any Subcontractor, including Subcontractor caused Project delays, as it is for acts and omissions of persons directly employed by Developer. The divisions or sections of the Specifications and/or the arrangements of the drawings are not intended to control the Developer in dividing the Work among Subcontractors or limit the work performed by any trade.

7.4 District's consent to, or approval of, or failure to object to, any Subcontractor under the Contract Documents shall not in any way relieve Developer of any obligations under the Contract Documents and no such consent shall be deemed to waive any provisions of the Contract Documents.

7.5 Developer is directed to familiarize itself with sections 1720 through 1861 of the Labor Code of the State of California, as regards the payment of prevailing wages and related issues, and to comply with all applicable requirements therein including, without limitation, section 1775 and the Developer's and Subcontractors' obligations and liability for violations of prevailing wage law and other applicable laws.

7.6 Developer shall be responsible for the coordination of the trades, Subcontractors, sub-subcontractors, and material or equipment suppliers working on the Project.

7.6.1 Developer is responsible for ensuring that first-tier Subcontractors holding C-4, C-7, C-10, C-16, C-20, C-34, C-36, C-38, C-42, C-43, and/or C-46 licenses, are prequalified by the District to work on the Project pursuant to Public Contract Code section 20111.6.

7.6.2 Developer is responsible for ensuring that all Subcontractors are properly registered as public works contractors by the Department of Industrial Relations.

7.7 Developer is solely responsible for settling any differences between the Developer and its Subcontractor(s) or between Subcontractors.

7.8 Developer must include in all of its subcontracts the assignment provisions indicated in the Termination section of these Construction Provisions.

8. Other Contracts/Contractors

8.1 District reserves the right to let other contracts, and/or to perform work with its own forces, in connection with the Project. Developer shall afford other contractors reasonable opportunity for introduction and storage of their materials and execution of their work and shall properly coordinate and connect Developer's Work with the work of other contractors.

8.2 Developer shall protect the work of any other contractor that Developer encounters while working on the Project.

8.3 If any part of Developer's Work depends for proper execution or results upon work of District or any other contractor, the Developer shall visually inspect, and with reasonable effort, physically inspect all accessible portions of District's or any other contractor's work and, before proceeding with its Work, promptly report to the District in writing any defects in District's or any other contractor's work that render Developer's Work unsuitable for proper execution and results. Developer shall be held accountable for damages to District for District's or any other contractor's work that Developer failed to inspect or should have inspected. Developer's failure to inspect and report shall constitute Developer's acceptance of all District's or any other contractor's work as fit and proper for reception of Developer's Work, except as to defects that may develop in District's or any other contractor's work after execution of Developer's Work and not caused by execution of Developer's Work.

8.4 To ensure proper execution of its subsequent Work, Developer shall measure and inspect Work already in place and shall at once report to the District in writing any discrepancy between that executed Work and the Contract Documents.

8.5 Developer shall ascertain to its own satisfaction the scope of the Project and nature of District's or any other contracts that have been or may be awarded by District in prosecution of the Project to the end that Developer may perform under the Contract in light of the other contracts, if any.

8.6 Nothing herein contained shall be interpreted as granting to Developer exclusive occupancy of the Site, the Premises, or of the Project. Developer shall not cause any unnecessary hindrance or delay to the use and/or school operation(s) of the Premises and/or to District or any other contractor working on the Project. If simultaneous execution of any contract or school operation is likely to cause interference with performance of Developer's obligations under the Contract Documents, Developer shall coordinate with those contractor(s), person(s), and/or entity(s) and shall notify the District of the resolution.

9. Drawings and Specifications

9.1 A complete list of all Drawings that form a part of the Contract Documents are to be found as an index on the Drawings themselves, and/or may be provided to the Developer and/or in the Table of Contents.

9.2 Materials or Work described in words that so applied have a well-known technical or trade meaning shall be deemed to refer to recognized standards, unless noted otherwise.

9.3 Trade Name or Trade Term

It is not the intention of the Contract Documents to go into detailed descriptions of any materials and/or methods commonly known to the trade under "trade name" or "trade term." The mere mention or notation of "trade name" or "trade term" shall be considered a sufficient notice to Developer that it will be required to complete the work so named, complete, finished, and operable, with all its appurtenances, according to the best practices of the trade.

9.4 The naming of any material and/or equipment shall mean furnishing and installing of same, including all incidental and accessory items thereto and/or labor therefor, as per best practices of the trade(s) involved, unless specifically noted otherwise.

9.5 Contract Documents are complementary, and what is called for by one shall be binding as if called for by all. As such, Drawings and Specifications are intended to be fully cooperative and to agree. However, if Developer observes that Drawings and Specifications are in conflict with the Contract Documents, Developer shall promptly notify District and Architect in writing, and any necessary changes shall be made as provided in the Contract Documents.

9.6 Figured dimensions shall be followed in preference to scaled dimensions, and the Developer shall make all additional measurements necessary for the work and shall be responsible for their accuracy. Before ordering any material or doing any work, each Developer shall verify all measurements at the building and shall be responsible for the correctness of same.

9.7 Should any question arise concerning the intent or meaning of the Contract Documents, including the Plans and Specifications, the question shall be submitted to the District for interpretation. If a conflict exists in the Contract Documents, these Construction Provisions shall control over the Facilities Lease, which shall control over the Site Lease, which shall control over Division 1 Documents, which shall control over Division 2 through Division 49 documents, which shall control over figured dimensions,

which shall control over large-scale drawings, which shall control over small-scale drawings. In no case shall a document calling for lower quality and/or quantity of material or workmanship control. However, in the case of discrepancy or ambiguity solely between and among the Drawings and Specifications, the discrepancy or ambiguity shall be resolved in favor of the interpretation that will provide District with the functionally complete and operable Project described in the Drawings and Specifications.

9.8 Drawings and Specifications are intended to comply with all laws, ordinances, rules, and regulations of constituted authorities having jurisdiction, and where referred to in the Contract Documents, the laws, ordinances, rules, and regulations shall be considered as a part of the Contract Documents within the limits specified.

9.9 As required by Section 4-317(c), Part 1, Title 24, CCR: "Should any existing conditions such as deterioration or non-complying construction be discovered which is not covered by the DSA-approved documents wherein the finished work will not comply with Title 24, California Code of Regulations, a construction change document, or a separate set of plans and specifications, detailing and specifying the required repair work shall be submitted to and approved by DSA before proceeding with the repair work."

9.10 Ownership of Drawings

All copies of Plans, Drawings, Designs, Specifications, and copies of other incidental architectural and engineering work, or copies of other Contract Documents furnished by District, are the property of District. They are not to be used by Developer in other work and, with the exception of signed sets of Contract Documents, are to be returned to District on request at completion of Work, or may be used by District as it may require without any additional costs to District. Neither the Developer nor any Subcontractor, or material or equipment supplier shall own or claim a copyright in the Drawings, Specifications, and other documents prepared by the Architect. District hereby grants the Developer, Subcontractors, sub-subcontractors, and material or equipment suppliers a limited license to use applicable portions of the Drawings prepared for the Project in the execution of their Work under the Contract Documents.

10. Developer's Submittals and Schedules

Developer's submittals shall comply with the provisions and requirements of the Specifications including, without limitation Submittals.

10.1 Schedule of Work, Schedule of Submittals, and Schedule of Values.

10.1.1 The Developer shall comply with the construction schedule attached to the Facilities Lease as Exhibit F ("Construction Schedule"). [To be attached when available.]

10.1.2 Developer must provide all schedules both in hard copy and electronically, in a format (e.g. Microsoft Project or Primavera) approved in advance by the District.

10.1.3 The District will review the schedules submitted and the Developer shall make changes and corrections in the schedules as requested by the District and resubmit the schedules until approved by the District.

10.1.4 The District shall have the right at any time to discuss with the Developer revisions to the schedule of values if, in the District's sole opinion, the schedule of values does not accurately reflect the value of the Work performed.

10.1.5 All submittals and schedules must be approved by the District before Developer can rely on them as a basis for payment.

10.1.6 Within TEN (10) calendar days after the date of the Notice to Proceed with Construction (unless otherwise specified in the Specifications), the Developer shall prepare and submit to the District for review, in a form supported by sufficient data to substantiate its accuracy as the District may require:

10.1.6.1 Preliminary Schedule

A preliminary schedule of construction indicating the starting and completion dates of the various stages of the Work, including any information and following any form as may be specified in the Specifications. Once approved by District, this shall become the Construction Schedule. This schedule shall include and identify all tasks that are on the Project's critical path with a specific determination of the start and completion of each critical path task as well as all Contract milestones and each milestone's completion date(s) as may be required by the District.

10.1.6.1.1 The District is not required to approve a preliminary schedule of construction with early completion, i.e., one that shows early completion dates for the Work and/or milestones. Developer shall not be entitled to extra compensation if the District approves a Construction Schedule with an early completion date and Developer completes the Project beyond the date shown in the schedule but within the Contract Time. A Construction Schedule showing the Work completed in less than the Contract Time, the time between the early completion date and the end of the Contract Time shall be Float.

10.1.6.2 Preliminary Schedule of Values

A preliminary schedule of values for all of the Work, which must include quantities and prices of items aggregating the Contract Price and must subdivide the Work into component parts in sufficient detail to serve as the basis for progress payments during construction. Unless the Special Conditions contain different limits, this preliminary schedule of values shall include, at a minimum, the following information and the following structure:

10.1.6.2.1 Divided into at least the following categories:

10.1.6.2.1.1 Overhead and profit

10.1.6.2.1.2 Supervision

10.1.6.2.1.3 General conditions

10.1.6.2.1.4 Layout

10.1.6.2.1.5 Mobilization

10.1.6.2.1.6 Submittals

10.1.6.2.1.7 Bonds and insurance

10.1.6.2.1.8 Close-out/Certification documentation

10.1.6.2.1.9 Demolition

10.1.6.2.1.10 Installation

10.1.6.2.1.11 Rough-in

10.1.6.2.1.12 Finishes

10.1.6.2.1.13 Testing

10.1.6.2.1.14 Punch list and District acceptance

10.1.6.2.2 And also divided by each of the following areas:

10.1.6.2.2.1 Site work

10.1.6.2.2.2 By each building

10.1.6.2.2.3 By each floor

10.1.6.2.3 The preliminary schedule of values shall not provide for values any greater than the following percentages of the Contract value:

10.1.6.2.3.1 Mobilization and layout combined to equal not more than 1%.

10.1.6.2.3.2 Submittals, samples and shop drawings combined to equal not more than 3%.

10.1.6.2.3.3 Bonds and insurance combined to equal not more than 2%.

10.1.6.2.4 Closeout documentation shall have a value in the preliminary schedule of not less than 5%.

10.1.6.2.5 Notwithstanding any provision of the Contract Documents to the contrary, payment of the Developer's overhead, supervision, general conditions costs, and profit, as reflected in the Cost Breakdown, shall be paid based on percentage complete, with the disbursement of Progress Payments and the Final Payment.

10.1.6.2.6 Developer shall certify that the preliminary schedule of values as submitted to the District is accurate and reflects the costs as developed in preparing Developer's bid. For example, without limiting the foregoing, Contractor shall not "front-load" the preliminary schedule of values with dollar amounts greater than the value of activities performed early in the Project.

10.1.6.2.7 The preliminary schedule of values shall be subject to the District's review and approval of the form and content thereof. In the event that the District objects to any portion of the preliminary schedule of values, the District shall notify the Developer, in writing, of the District's objection(s) to the preliminary schedule of values. Within five (5) calendar days of the date of the District's written objection(s), Developer shall submit a revised preliminary schedule of values to the District for review and approval. The foregoing procedure for the preparation, review and approval of the preliminary schedule of values shall continue until the District has approved the entirety of the preliminary schedule of values.

10.1.6.2.8 Once the preliminary schedule of values is approved by the District, this shall become the Schedule of Values. The Schedule of Values shall not be thereafter modified or amended by the Developer without the prior consent and approval of the District, which may be granted or withheld in the sole discretion of the District.

10.1.6.3 Schedule of Values

The Developer shall provide for District review and approval prior to commencement of the Work a schedule of values for all of the Work, which includes quantities and prices of items aggregating the Guaranteed Maximum Price and subdivided into component parts as per specifications. The Schedule of Values shall not be modified or amended by the Developer without the prior consent and approval of the District, which may be granted or withheld in the sole discretion of the District. The District shall have the right at any time to revise the schedule of values if, in the District's sole opinion, the schedule of values does not accurately reflect the value of the Work performed.

10.1.6.4 Preliminary Schedule of Submittals

A preliminary schedule of submittals, including Shop Drawings, Product Data, and Samples submittals. Once approved by District, this shall become the Submittal Schedule. All submittals may be reviewed by District in ProCore and shall be forwarded to the Architect by the date indicated on the approved Submittal Schedule, unless an earlier date is necessary to maintain the Construction Schedule, in which case those submittals shall be forwarded to the District so as not to delay the Construction Schedule. Upon request by the District, Developer shall provide an electronic copy of all submittals to the District. All submittals shall be submitted no later than ninety (90) days after the Notice to Proceed with Construction.

10.1.6.5 Safety Plan

Developer's Safety Plan specifically adapted for the Project shall comply with the following requirements:

10.1.6.5.1 All applicable requirements of California Division of Occupational Safety and Health ("Cal/OSHA") and/or of the United States Occupational Safety and Health Administration ("OSHA").

10.1.6.5.2 All provisions regarding Project safety, including all applicable provisions in these Construction Provisions.

10.1.6.5.3 Developer's Safety Plan shall be in English and in the language(s) of the Developer's and its Subcontractors' employees.

10.1.6.6 Complete Registered Subcontractor List

The name, address, telephone number, facsimile number, California State Contractors License number, classification, DIR registration number, and monetary value of all Subcontracts of any tier for parties furnishing labor, material, or equipment for completion of the Project.

10.2 Monthly Progress Schedule(s)

10.2.1 Developer shall provide Monthly Progress Schedule(s) to the District. A Monthly Progress Schedule shall update the approved Construction Schedule or the last Monthly Progress Schedule, showing all work completed and to be completed as well as updating the Registered Subcontractors List. The monthly Progress Schedule shall be sent as noted below and, if also requested by District, within the timeframe requested by the District and shall be in a format acceptable to the District and contain a written narrative of the progress of work that month and any changes, delays, or events that may affect the work. The process for District approval of the Monthly Progress Schedule shall be the same as the process for approval of the Construction Schedule.

10.2.2 Developer shall submit Monthly Progress Schedule(s) with all payment applications.

10.2.3 Developer must provide all schedules both in hard copy and electronically, in a format (e.g., Microsoft Project or Primavera) approved in advance by the District.

10.2.4 District will review the schedules submitted and Developer shall make changes and corrections in the schedules as requested by the District and resubmit the schedules until approved by the District.

10.2.5 District shall have the right at any time to discuss with the Developer revisions to the schedule of values if, in the District's sole opinion, the schedule of values does not accurately reflect the value of the Work performed.

10.2.6 All submittals and schedules must be approved by the District before Developer can rely on them as a basis for payment. District shall use best efforts to approve all submittals and schedules on or before fourteen (14) days after presentation of the same from Developer, providing there are no extenuating circumstances, and no such approval shall be unreasonably withheld by District.

10.3 Material Safety Data Sheets (MSDS)

Developer is required to ensure Material Safety Data Sheets are available in a readily accessible place at the Work Site for any material requiring a Material Safety Data Sheet per the federal "Hazard Communication" standard, or employees' "right to know" law. The Developer is also required to ensure proper labeling on substances brought onto the job site and that any person working with the material or within the general area of the material is informed of the hazards of the substance and follows proper handling and protection procedures. Two additional copies of the Material Safety Data Sheets shall also be submitted directly to the District.

11. Site Access, Conditions, And Requirements

11.1 Site Investigation

Developer has made a careful investigation of the Site and is familiar with the requirements of the Contract Documents and has accepted the readily observable, existing conditions of the Site.

11.2 Soils Investigation Report

When a soils investigation report obtained from test holes at Site or for the Project is available, that report may be made available to the Developer but shall not be a part of this Contract but shall not alleviate or excuse Developer's obligation to perform its own investigation. Any information obtained from that report or any information given on Drawings as to subsurface soil condition or to elevations of existing grades or elevations of underlying rock is approximate only, is not guaranteed, does not form a part of this Contract, and Developer may not rely thereon. Developer acknowledges that it has made a visual examination of the Site and has made whatever tests Developer deems appropriate to determine underground condition of soil.

11.3 Access to Work

District and its representatives shall at all times have access to Work wherever it is in preparation or progress, including storage and fabrication. Developer shall provide safe and proper facilities for such access so that District's representatives may perform their functions. District shall provide Developer adequate advance notice for access to active construction zones such that Developer may provide for safety measures to District and representatives.

11.4 Layout and Field Engineering

11.4.1 All field engineering required for layout of this Work and establishing grades for earthwork operations shall be furnished by Developer at its expense. This Work shall be done by a qualified, California-registered civil engineer or licensed land surveyor approved in writing by District and Architect. Any required Record and/or As-Built Drawings of Site development shall be prepared by the approved civil engineer or licensed land surveyor.

11.4.2 The Developer shall be responsible for having ascertained pertinent local conditions such as location, accessibility, and general character of the Site and for having satisfied itself as to the conditions under which the Work is to be performed. District shall not be liable for any claim for allowances because of Developer's error or negligence in acquainting itself with the conditions at the Site.

11.4.3 Developer shall protect and preserve established benchmarks and monuments and shall make no changes in locations without the prior written approval of District. Developer shall replace any benchmarks or monuments that are lost or destroyed subsequent to proper notification of District and with District's approval.

11.5 Utilities

Utilities shall be provided as indicated in the Specifications.

11.6 Sanitary Facilities

Sanitary facilities shall be provided as indicated in the Specifications.

11.7 Surveys

Developer shall provide surveys done by a California-licensed civil engineer or licensed land surveyor to determine locations of construction, grading, and site work as required to perform the Work.

11.8 Regional Notification Center

The Developer, except in an emergency, shall contact the appropriate regional notification center at least two (2) days prior to commencing any excavation if the excavation will be conducted in an area or in a private easement that is known, or reasonably should be known, to contain subsurface installations other than the underground facilities owned or operated by the District, and obtain an inquiry identification number from that notification center. No excavation shall be commenced and/or carried out by the Developer unless an inquiry identification number has been

assigned to the Developer or any Subcontractor and the Developer has given the District the identification number. Any damages arising from Developer's failure to make appropriate notification shall be at the sole risk and expense of the Developer. Any delays caused by failure to make appropriate notification shall be at the sole risk of the Developer and shall not be considered for an extension of the Contract Time.

11.9 Existing Utility Lines

11.9.1 Pursuant to Government Code section 4215, District assumes the responsibility for removal, relocation, and protection of main or trunk utility lines and facilities located on the construction Site at the time of commencement of construction under the Contract Documents with respect to any such utility facilities that are not identified in the Plans and Specifications. Developer shall not be assessed for liquidated damages for delay in completion of the Project caused by failure of District or the owner of a utility to provide for removal or relocation of such utility facilities.

11.9.2 Locations of existing utilities provided by District shall not be considered exact, but approximate within a reasonable margin and shall not relieve Developer of its responsibilities to exercise reasonable care and to pay all costs of repair due to Developer's failure to do so. District shall compensate Developer for the costs of locating, repairing damage not due to the failure of Developer to exercise reasonable care, and removing or relocating such utility facilities not indicated in the Plans and Specifications with reasonable accuracy, and for equipment necessarily idle during such work.

11.9.3 No provision herein shall be construed to preclude assessment against Developer for any other delays in completion of the Work. Nothing in this Article shall be deemed to require District to indicate the presence of existing service laterals, appurtenances, or other utility lines, within the exception of main or trunk utility lines. Whenever the presence of these utilities on the Site of the construction Project can be inferred from the presence of other visible facilities, such as buildings, meter junction boxes, on or adjacent to the Site of the construction.

11.9.4 If Developer, while performing Work under this Contract, discovers utility facilities not identified by District in Contract Plans and Specifications, Developer shall immediately notify the District and the utility in writing. In the event Developer fails to immediately provide notice and subsequently causes damage to the utility facilities, the cost of repair for damage to above-mentioned visible facilities shall be borne by the Developer.

11.10 Notification

Developer understands, acknowledges and agrees that the purpose for prompt notification to the District pursuant to these provisions is to allow the District to investigate the condition(s) so that the District shall have the opportunity to decide how the District desires to proceed as a result of the condition(s). Accordingly, failure of Developer to promptly notify the District in writing, pursuant to these provisions, shall constitute Developer's waiver of any claim for damages or delay incurred as a result of the condition(s).

11.11 Hazardous Materials

Developer shall comply with all provisions and requirements of the Contract Documents related to hazardous materials including, without limitation, Hazardous Materials Procedures and Requirements.

11.12 No Signs

Neither the Developer nor any other person or entity shall display any signs not required by law or the Contract Documents at the Site, fences, trailers, offices, or elsewhere on the Site without specific prior written approval of the District.

12. Trenches

12.1 Trenches Greater Than Five Feet

Pursuant to Labor Code section 6705, if the Guaranteed Maximum Price exceeds $25,000 and involves the excavation of any trench or trenches five (5) feet or more in depth, the Developer shall, in advance of excavation, promptly submit to the District and/or a registered civil or structural engineer employed by the District or Architect, a detailed plan showing the design of shoring for protection from the hazard of caving ground during the excavation of such trench or trenches.

12.2 Excavation Safety

If such plan varies from the Shoring System Standards established by the Construction Safety Orders, the plan shall be prepared by a registered civil or structural engineer, but in no case shall such plan be less effective than that required by the Construction Safety Orders. No excavation of such trench or trenches shall be commenced until said plan has been accepted by the District or by the person to whom authority to accept has been delegated by the District.

12.3 No Tort Liability of District

Pursuant to Labor Code section 6705, nothing in this Article shall impose tort liability upon the District or any of its employees.

12.4 No Excavation without Permits

The Developer shall not commence any excavation Work until it has secured all necessary permits including the required CalOSHA excavation/shoring permit. Any permits shall be prominently displayed on the Site prior to the commencement of any excavation.

12.5 Discovery of Hazardous Waste and/or Unusual Conditions

12.5.1 Pursuant to Public Contract Code section 7104, if the Work involves digging trenches or other excavations that extend deeper than four feet below the Surface, the Developer shall promptly, and before the following conditions are disturbed, notify the District, in writing, of any:

12.5.1.1 Material that the Developer believes may be material that is hazardous waste, as defined in section 25117 of the Health and Safety Code, is required to be removed to a Class I, Class II, or Class III disposal site in accordance with provisions of existing law.

12.5.1.2 Subsurface or latent physical conditions at the Site differing from those indicated.

12.5.1.3 Unknown physical conditions at the Project Site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents.

12.5.2 The District shall promptly investigate the conditions, and if it finds that the conditions do materially so differ, or do involve hazardous waste, and cause a decrease or increase in the Developer's cost of, or the time required for, performance of any part of the Work, shall issue a Change Order under the procedures described herein.

12.5.3 In the event that a dispute arises between District and the Developer whether the conditions materially differ or cause a decrease or increase in the Developer's cost of, or time required for, performance of any part of the Work, the Developer shall not be excused from any scheduled completion date provided for by the Contract Documents, but shall proceed with all work to be performed under the Contract Documents. The Developer shall retain any and all rights provided either by the Contract Documents or by law that pertain to the resolution of disputes and protests.

13. Insurance and Bonds

13.1 Developer's Insurance

The Developer shall comply with the insurance requirements as indicated in the Facilities Lease.

13.2 Contract Security – Bonds

13.2.1 Developer shall furnish two surety bonds issued by a California admitted surety insurer as follows:

13.2.1.1 Performance Bond

A bond in an amount at least equal to one hundred percent (100%) of Guaranteed Maximum Price as security for faithful performance of the Contract Documents.

13.2.1.2 Payment Bond

A bond in an amount at least equal to one hundred percent (100%) of the Guaranteed Maximum Price as security for payment of persons performing labor and/or furnishing materials in connection with this Contract.

13.2.2 Cost of bonds shall be included in the Guaranteed Maximum Price.

13.2.3 All bonds related to this Project shall be in the forms set forth in these Contract Documents and shall comply with all requirements of the Contract Documents, including, without limitation, the bond forms.

14. Warranty/Guarantee/Indemnity

14.1 Warranty/Guarantee

14.1.1 The Developer shall obtain and preserve for the benefit of the District, manufacturer's warranties on materials, fixtures, and equipment incorporated into the Work.

14.1.2 In addition to guarantees and warranties required elsewhere, Developer shall, and hereby does guarantee and warrant all Work furnished on the job against all defects for a period of ONE (1) year after the later of the following dates, unless a longer period is provided for in the Contract Documents:

14.1.2.1 The acceptance by the District's governing board of the Work, subject to these General Conditions, or

14.1.2.2 The date that commissioning for the Project, if any, was completed.

14.1.3 If any work is not in compliance with the Drawings and Specifications, Developer shall repair or replace any and all of that Work, together with any other Work that may be displaced in so doing, that may prove defective in workmanship and/or materials within a ONE (1) year period from date of completion as defined above, unless a longer period is provided for in the Contract Documents, without expense whatsoever to District.

14.1.4 In the event of failure of Developer and/or Surety to commence and pursue with diligence said replacements or repairs within ten (10) days after being notified in writing, Developer and Surety hereby acknowledge and agree that District is authorized to proceed to have defects repaired and made good at expense of Developer and/or Surety who hereby agree to pay costs and charges therefore immediately on demand.

14.1.5 If any work is not in compliance with the Drawings and Specifications and if in the opinion of District said defective work creates a dangerous condition or requires immediate correction or attention to prevent further loss to District or to prevent interruption of operations of District, District will attempt to give the notice required above. If Developer or Surety cannot be contacted or neither complies with District's request for correction within a reasonable time as determined by District, District may, notwithstanding the above provision, proceed to make any and all corrections and/or provide attentions the District believes are necessary. The costs of correction or attention shall be charged against Developer and Surety of the guarantees or warranties provided in this Article or elsewhere in this Agreement.

14.1.6 The above provisions do not in any way limit the guarantees or warranties on any items for which a longer guarantee or warranty is specified or on any items for which a manufacturer gives a guarantee or warranty for a longer period. Developer shall furnish to District all appropriate guarantee or warranty certificates as indicated in the Specifications or upon request by District.

14.1.7 Nothing herein shall limit any other rights or remedies available to District.

14.2 Indemnity

Developer shall indemnify the District as indicated in the Facilities Lease.

15. Time

15.1 Notice to Proceed with Construction

15.1.1 District may issue a Notice to Proceed with Construction within ninety (90) days from the date of the Notice of Award after Guaranteed Maximum Price. Once Developer has received the Notice to Proceed with Construction, Developer shall complete the Work within the period of time indicated in the Contract Documents.

15.1.2 In the event that the District desires to postpone issuing the Notice to Proceed with Construction beyond ninety (90) days from the date of the Notice of Award after Guaranteed Maximum Price, it is expressly understood that with reasonable notice to the Developer, the District may postpone issuing the Notice to Proceed with Construction. It is further expressly understood by Developer that Developer shall not be entitled to any claim of additional compensation as a result of the postponement of the issuance of the Notice to Proceed with Construction.

15.1.3 If the Developer believes that a postponement of issuance of the Notice to Proceed with Construction will cause a hardship to Developer, Developer may terminate the Contract. Developer's termination due to a postponement shall be by written notice to District within ten (10) days after receipt by Developer of District's notice of postponement. It is further understood by Developer that in the event that Developer terminates the Contract as a result of postponement by the District, the District shall only be obligated to pay Developer for the Work that Developer had performed at the time of notification of postponement.

15.2 Computation of Time / Adverse Weather

15.2.1 The Developer will only be allowed a time extension for Adverse Weather conditions if requested by Developer in compliance with the time extension request procedures and only if all of the following conditions are met:

15.2.1.1 The weather conditions constitute Adverse Weather, as defined herein;

15.2.1.2 Developer can verify that the Adverse Weather caused delays in excess of five (5) hours of the indicated labor required to complete the scheduled tasks of Work on the day affected by the Adverse Weather;

15.2.1.3 The Developer's crew is dismissed as a result of the Adverse Weather;

15.2.1.4 Said delay adversely affect the critical path in the Construction Schedule; and

15.2.1.5 Exceeds twelve (12) days of delay per year.

15.2.2 If the aforementioned conditions are met, a non-compensable day-for-day extension will only be allowed for those days in excess of those indicated herein.

15.2.3 The Developer shall work seven (7) days per week, if necessary, irrespective of inclement weather, to maintain access and the Construction Schedule, and to protect the Work under construction from the effects of Adverse Weather, all at no further cost to the District.

15.2.4 The Contract Time has been determined with consideration given to the average climate weather conditions prevailing in the County in which the Project is located.

15.3 Hours of Work

15.3.1 Sufficient Forces

Developer and Subcontractors shall continuously furnish sufficient and competent work forces with the required levels of familiarity with the Project and skill, training and experience to ensure the prosecution of the Work in accordance with the Construction Schedule.

15.3.2 Performance During Working Hours

Work shall be performed during regular working hours as permitted by the appropriate governmental agency except that in the event of an emergency, or when required to complete the Work in accordance with job progress, Work may be performed outside of regular working hours with the advance written consent of the District and approval of any required governmental agencies.

15.3.3 No Work during State Testing

Developer shall, at no additional cost to the District and at the District's request, coordinate its Work to not disturb District students including, without limitation, not performing any Work when students at the Site are taking State or Federally-required tests. The District or District's Representative will provide Developer with a schedule of test dates concurrent with the District's issuance of the Notice to Proceed with Construction, or as soon as test dates are made available to the District.

15.4 Progress and Completion

15.4.1 Time of the Essence

Time limits stated in the Contract Documents are of the essence to the Contract Documents. By executing the Facilities Lease, the Developer confirms that the Contract Time is a reasonable period for performing the Work.

15.4.2 No Commencement Without Insurance or Bonds

The Developer shall not commence operations on the Project or elsewhere prior to the effective date of insurance and bonds. The date of commencement of the Work shall not be changed by the effective date of such insurance or bonds. If Developer commences Work without insurance and bonds, all Work is performed at Developer's peril and shall not be compensable until and unless Developer secures bonds and insurance pursuant to the terms of the Contract Documents and subject to District claim for damages.

15.5 Schedule

Developer shall provide to District, Construction Manager, and Architect a schedule in conformance with the Contract Documents and as required in these Construction Provisions.

15.6 Expeditious Completion

The Developer shall proceed expeditiously with adequate forces and shall achieve Completion within the Contract Time.

16. Extensions of Time – Liquidated Damages

16.1 Liquidated Damages

Developer and District hereby agree that the exact amount of damages for failure to complete the Work within the time specified is extremely difficult or impossible to determine. If the Work is not completed within the time specified in the Contract Documents, it is understood that the District will suffer damage. It being impractical and unfeasible to determine the amount of actual damage, it is agreed the Developer shall pay to District as fixed and liquidated damages, and not as a penalty, the amount set forth in the Facilities Lease for each calendar day of delay in Completion. Developer and its Surety shall be liable for the amount thereof pursuant to Government Code section 53069.85.

16.2 Excusable Delay

16.2.1 Developer shall not be charged for liquidated damages because of any delays in completion of Work which are not the fault of Developer or its Subcontractors, including without limitation acts of God as defined in Public Contract Code section 7105, acts of enemy, epidemics, and quarantine restrictions. Developer shall, within five (5) calendar days of beginning of any delay, notify District in writing of causes of delay including documentation and facts explaining the delay and the direct correlation between the cause and

effect. District shall review the facts and extent of any delay and shall grant extension(s) of time for completing Work when, in its judgment, the findings of fact justify an extension. Extension(s) of time shall apply only to that portion of Work affected by delay, and shall not apply to other portions of Work not so affected. An extension of time may only be granted if Developer has timely submitted the Construction Schedule as required herein.

16.2.2 Developer shall notify the District pursuant to the claims provisions in these Construction Provisions of any anticipated delay and its cause. Following submission of a claim, the District may determine whether the delay is to be considered avoidable or unavoidable, how long it continues, and to what extent the prosecution and completion of the Work might be delayed thereby.

16.2.3 In the event the Developer requests an extension of Contract Time for unavoidable delay as set forth in subparagraph 16.2.1, such request shall be submitted in accordance with the provisions in the Contract Documents governing changes in Work. When requesting time, requests must be submitted with full justification and documentation. If the Developer fails to submit justification, it waives its right to a time extension at a later date. Such justification must be based on the official Construction Schedule as updated at the time of occurrence of the delay or execution of Work related to any changes to the Scope of Work. Any claim for delay must include the following information as support, without limitation:

16.2.3.1 The duration of the activity relating to the changes in the Work and the resources (manpower, equipment, material, etc.) required to perform the activities within the stated duration.

16.2.3.2 Specific logical ties to the Contract Schedule for the proposed changes and/or delay showing the activity/activities in the Construction Schedule that are affected by the change and/or delay. In particular, Developer must show an actual impact to the schedule, after making a good faith effort to mitigate the delay by rescheduling the work, by providing an analysis of the schedule ("Schedule Analysis"). Such Schedule Analysis shall describe in detail the cause and effect of the delay and the impact on the critical dates in the Project schedule. (This information must be provided for any portion of any delay of seven (7) days or more.)

16.2.3.3 A recovery schedule must be submitted within twenty (20) calendar days of written notification to the District of causes of delay.

16.3 No Additional Compensation for Delays within Developer's Control

16.3.1 Developer is aware that governmental agencies and utilities, including, without limitation, the Division of the State Architect, the Department of General Services, gas companies, electrical utility companies, water districts, and other agencies may have to approve Developer-prepared drawings or approve a proposed installation. Accordingly, Developer has included in the Guaranteed Maximum Price, time for possible review of its drawings and for reasonable delays and damages that may be caused by such agencies, including without limitation delays due to California Environmental Quality Act

("CEQA") compliance. Thus, Developer is not entitled to make a claim for damages for delays arising from the review of Developer's drawings.

16.3.1.1 Developer shall only be entitled to compensation for delay when all of the following conditions are met:

16.3.1.1.1 The District is responsible for the delay.

16.3.1.1.2 The delay is unreasonable under the circumstances involved.

16.3.1.1.3 The delay could not have been avoided or mitigated by reasonable diligence; and

16.3.1.1.4 Developer timely complies with the claims procedure of the Contract Documents.

16.4 Float or Slack in the Schedule

Float or slack is the amount of time between the early start date and the late start date, or the early finish date and the late finish date, of any of the activities in the schedule. Float or slack is not for the exclusive use of or benefit of either the District or the Developer, but its use shall be determined solely by the District.

17. Changes in the Work

17.1 No Changes without Prior Authorization

17.1.1 There shall be no change whatsoever in the Drawings, Specifications, or in the Work without an executed Change Order or a written Construction Change Directive authorized by the District as herein provided. District shall not be liable for the cost of any extra work or any substitutions, changes, additions, omissions, or deviations from the Drawings and Specifications unless the District's governing board has authorized the same and the cost thereof has been approved in writing by Change Order or Construction Change Directive in advance of the changed Work being performed. No extension of time for performance of the Work shall be allowed hereunder unless a request for such extension is made at the time changes in the Work are ordered, and such time duly adjusted and approved in writing in the Change Order or Construction Change Directive. The provisions of the Contract Documents shall apply to all such changes, additions, and omissions with the same effect as if originally embodied in the Drawings and Specifications.

17.1.2 Developer shall perform immediately all work that has been authorized by a fully executed Change Order or Construction Change Directive. Developer shall be fully responsible for any and all delays and/or expenses caused by Developer's failure to expeditiously perform this Work.

17.1.3 Should any Change Order result in an increase in the Guaranteed Maximum Price or extend the Contract Time, the cost of or length of extension in that Change Order shall be agreed to, in writing, by the District in advance of the work by Developer. In the event that Developer proceeds with any

change in Work without a Change Order executed by the District or Construction Change Directive, Developer waives any claim of additional compensation or time for that additional work. Under no circumstances shall Developer be entitled to any claim of additional compensation or time not expressly requested by Developer in a Proposed Change Order or approved by District in an executed Change Order.

17.1.4 Developer understands, acknowledges, and agrees that the reason for District authorization is so that District may have an opportunity to analyze the Work and decide whether the District shall proceed with the Change Order or alter the Project so that a change in Work becomes unnecessary.

17.2 Architect Authority

The Architect will have authority to order minor changes in the Work not involving any adjustment in the Guaranteed Maximum Price, or an extension of the Contract Time, or a change that is inconsistent with the intent of the Contract Documents. These changes shall be effected by written Change Order, Construction Change Directive, or by Architect's response(s) to RFI(s), or by Architect's Supplemental Instructions ("ASI").

17.3 Change Orders

A Change Order is a written instrument prepared and issued by the District and/or the Architect and signed by the District (as authorized by the District's Board of Education), the Developer, the Architect, and approved by the Project Inspector (if necessary) and DSA (if necessary), stating their agreement regarding all of the following:

17.3.1 A description of a change in the Work.

17.3.1.1 The amount of the adjustment in the Guaranteed Maximum Price, if any; and

17.3.1.2 The extent of the adjustment in the Contract Time, if any.

17.3.2 Changes in Guaranteed Maximum Price

A Change Order Request ("COR") shall include breakdowns pursuant to the provisions herein to validate any change in Guaranteed Maximum Price.

17.3.3 Unknown and/or Unforeseen Conditions

If there is an Allowance, then Developer must submit a Request for Allowance Expenditure Directive, including supporting documentation as described below, to receive authorization for the release of funds from the Allowance. If cost of the unforeseen condition(s) exceed the Allowance, Developer must submit a COR requesting an increase in Guaranteed Maximum Price and/or Contract Time that is based at least partially on Developer's assertion that Developer has encountered unknown and/or unforeseen condition(s) on the Project, then Developer shall base the COR on provable information that, to the District's satisfaction, demonstrates that the unknown and/or unforeseen condition(s) were actually unknown and/or unforeseen and that the condition(s) were

reasonably unknown and/or unforeseen. If not, the District shall deny the COR and the Developer shall complete the Project without any increase in Guaranteed Maximum Price and/or Contract Time based on that COR.

17.4 Proposed Change Order

17.4.1 Definition of Proposed Change Order

A Proposed Change Order ("PCO") is a written request prepared by the Developer requesting that the District and the Architect issue a Change Order based upon a proposed change to the Work, to the Guaranteed Maximum Price, and/or to the Contract Time.

17.4.2 Changes in Guaranteed Maximum Price

A PCO shall include breakdowns and backup documentation pursuant to the provisions herein and sufficient, in the District's judgment, to validate any change in Guaranteed Maximum Price. In no case shall Developer or any of its Subcontractors be permitted to reserve rights for additional compensation for Change Order Work.

17.4.3 Changes in Time

A PCO shall also include any changes in time required to complete the Project. Any additional time requested shall not be the number of days to make the proposed change, but must be based upon the impact to the Construction Schedule as defined in the Contract Documents. Developer shall justify the proposed change in time by submittal of a schedule analysis that accurately shows the impact of the change on the critical path of the Construction Schedule ("Time Impact Analysis"). If Developer fails to request a time extension in a PCO, including the Time Impact Analysis, then the Developer is thereafter precluded from requesting, and waives any right to request, additional time and/or claiming a delay. In no case shall Developer or any of its Subcontractors be permitted to reserve rights for additional time for Change Order Work. A PCO that leaves the amount of time requested blank, or states that such time requested is "to be determined", is not permitted and shall also constitute a waiver of any right to request additional time and/or claim a delay.

17.4.4 Unknown and/or Unforeseen Conditions

If Developer submits a PCO requesting an increase in Guaranteed Maximum Price and/or Contract Time that is based at least partially on Developer's assertion that Developer has encountered unknown and/or unforeseen condition(s) on the Project, then Developer shall base the PCO on provable information that, beyond a reasonable doubt and to the District's satisfaction, demonstrates that the unknown and/or unforeseen condition(s) were actually unknown and/or unforeseen. If not, the District shall deny the PCO as unsubstantiated, and the Developer shall complete the Project without any increase in Guaranteed Maximum Price and/or Contract Time based on that PCO.

17.5 Time to Submit Proposed Change Order

Developer shall submit its PCO within five (5) working days of the date Developer discovers, or reasonably should have discovered, the circumstances giving rise to the PCO, unless additional time to submit a PCO is granted in writing by the District. Time is of the essence in Developer's submission of PCOs so that the District can promptly investigate the basis for the PCO. Accordingly, if Developer fails to submit its PCO within this timeframe, Developer waives, releases, and discharges any right to assert or claim any entitlement to an adjustment of the Contract Price and/or Time based on circumstances giving rise to the PCO.

17.6 Proposed Change Order Certification

In submitting a PCO, Developer certifies and affirms that the cost and/or time request is submitted in good faith, that the cost and/or time request is accurate and in accordance with the provisions of the Contract Documents, and the Developer submits the cost and/or request for extension of time recognizing the significant civil penalties and treble damages which follow from making a false claim or presenting a false claim under Government Code section 12650 et seq.

17.7 Format for Proposed Change Order

17.7.1 The format at section 17.7 shall be used as applicable by the District and the Developer (e.g. Change Orders, PCOs) to communicate proposed additions and/or deductions to the Contract, supported by attached documentation.

17.7.2 Labor

Developer shall be compensated for the costs of labor actually and directly utilized in the performance of the Work. Such labor costs shall be limited to field labor for which there is a prevailing wage rate classification. Wage rates for labor shall not exceed the prevailing wage rates in the locality of the Site and shall be in the labor classification(s) necessary for the performance of the Work. Labor costs shall exclude costs incurred by the Developer in preparing estimate(s) of the costs of the change in the Work, in the maintenance of records relating to the costs of the change in the Work, coordination and assembly of materials and information relating to the change in the Work or performance thereof, or the supervision and other overhead and general conditions costs associated with the change in the Work or performance thereof.

17.7.3 Materials

Developer shall be compensated for the costs of materials necessarily and actually used or consumed in connection with the performance of the change in the Work. Costs of materials may include reasonable costs of transportation from a source closest to the Site of the Work and delivery to the Site. If discounts by material suppliers are available for materials necessarily used in the performance of the change in the Work, they shall be credited to the District. If materials necessarily used in the performance of the change in the Work are obtained from a supplier or source owned in whole or in part by the

Developer, compensation therefor shall not exceed the current wholesale price for such materials. If, in the reasonable opinion of the District, the costs asserted by the Developer for materials in connection with any change in the Work are excessive, or if the Developer fails to provide satisfactory evidence of the actual costs of such materials from its supplier or vendor of the same, the costs of such materials and the District's obligation to pay for the same shall be limited to the then lowest wholesale price at which similar materials are available in the quantities required to perform the change in the Work. The District may elect to furnish materials for the change in the Work, in which event the Developer shall not be compensated for the costs of furnishing such materials or any mark-up thereon.

17.7.4 Equipment

As a precondition to the District's duty to pay for Equipment rental or loading and transportation, Developer shall provide satisfactory evidence of the actual costs of Equipment from the supplier, vendor or rental agency of same. Developer shall be compensated for the actual cost of the necessary and direct use of Equipment in the performance of the change in the Work. Use of Equipment in the performance of the change in the Work shall be compensated in increments of fifteen (15) minutes. Rental time for Equipment moved by its own power shall include time required to move the Equipment to the site of the Work from the nearest available rental source of the same. If Equipment is not moved to the Site by its own power, Developer will be compensated for the loading and transportation costs in lieu of rental time. The foregoing notwithstanding, neither moving time or loading and transportation time shall be allowed if the Equipment is used for performance of any portion of the Work other than the change in the Work. Unless prior approval in writing is obtained by the Developer from the Architect, the Project Inspector, the Construction Manager and the District, no costs or compensation shall be allowed for time while Construction Equipment is inoperative, idle or on standby, for any reason. Developer shall not be entitled to an allowance or any other compensation for Equipment or tools used in the performance of a change in the Work where the Equipment or tools have a replacement value of $500.00 or less. Equipment costs claimed by the Developer in connection with the performance of any Work shall not exceed rental rates established by distributors or construction equipment rental agencies in the locality of the Site; any costs asserted which exceed such rental rates shall not be allowed or paid. Unless otherwise specifically approved in writing by the Architect, the Project Inspector, Construction Manager and the District, the allowable rate for the use of Equipment in connection with the Work shall constitute full compensation to the Developer for the cost of rental, fuel, power, oil, lubrication, supplies, necessary attachments, repairs or maintenance of any kind, depreciation, storage, insurance, labor (exclusive of labor costs of the Equipment operator), and any and all other costs incurred by the Developer incidental to the use of the Equipment.

17.7.5 Overhead and Profit.

The phrase "Overhead and Profit" shall include field and office supervisors and assistants, watchperson, use of small tools, consumable, insurance other than

construction bonds and insurance required herein, and general field and home office expenses.

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17.8 Format for Change Order Request and Proposed Change Order

The following format shall be used as applicable by the District and the Developer (e.g. Change Orders, PCO's) to communicate proposed additions and deductions to the Contract Documents, supported by attached documentation. Any spaces left blank will be deemed no change to cost or time.

	SUBCONTRACTOR PERFORMED WORK	**ADD**	**DEDUCT**
(a)	**Material** (attach supplier's invoice or itemized quantity and unit cost plus sales tax)		
(b)	**Add Labor** (attach itemized hours and rates, fully encumbered)		
(c)	**Add Equipment** (attach suppliers' invoice)		
(d)	**Subtotal**		
(e)	**Add Subcontractor's overhead and profit**, not to exceed ten percent (10%) of **Item (d)**		
(f)	**Subtotal**		
(g)	**Add Developer's overhead and profit**, not to exceed five percent (5%) of **Item (f)**		
(h)	**Subtotal**		
(i)	**Add Bond and Insurance**, not to exceed two percent (2%) of **Item (h)**		
(j)	**TOTAL**		
(k)	**Time** (zero unless indicated; "TBD" not permitted)	**__ Calendar Days**	

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	DEVELOPER PERFORMED WORK		
(a)	**Material** (attach supplier's invoice or itemized quantity and unit cost plus sales tax)		
(b)	**Add Labor** (attach itemized hours and rates, fully encumbered)		
(c)	**Add Equipment** (attach suppliers' invoice)		
(d)	**Subtotal**		
(e)	**Add Developer's overhead and profit,** not to exceed fifteen percent (15%) of **Item (d).**		
(f)	**Subtotal**		
(g)	**Add Bond and Insurance**, not to exceed two percent (2%) of **Item (h)**		
(h)	**TOTAL**		
(i)	**Time** (zero unless indicated; "TBD" not permitted)	**__ Calendar Days**	

17.9 Change Order Certification

17.9.1 All Change Orders, CORs, and PCOs must include the following certification by the Developer:

The undersigned Developer approves the foregoing as to the changes, if any, and to the Guaranteed Maximum Price specified for each item and as to the extension of time allowed, if any, for completion of the entire Work as stated herein, and agrees to furnish all labor, materials, and service, and perform all work necessary to complete any additional work specified for the consideration stated herein. Submission of sums which have no basis in fact or which Developer knows are false are at the sole risk of Developer and may be a violation of the False Claims Act set forth under Government Code section 12650 et seq. and U.S. Criminal Code, 18 U.S.C. § 1001. It is understood that the changes herein to the Contract Documents shall only be effective when approved by the governing board of the District.

It is expressly understood that the value of the extra Work or changes expressly includes any and all of the Developer's costs and expenses, both direct and indirect, resulting from additional time required on the Project or resulting from delay to the Project. Developer is not entitled to separately recover amounts for overhead or other indirect costs. Any costs, expenses, damages, or time extensions not included are deemed waived.

17.10 Determination of Change Order Cost

17.10.1 The amount of the increase or decrease in the Guaranteed Maximum Price from a Change Order, if any, shall be determined in one or more of the following ways as applicable to a specific situation and at the District's discretion:

17.10.1.1 District acceptance of a COR or PCO.

17.10.1.2 By amounts contained in Developer's schedule of values, if applicable.

17.10.1.3 By agreement between District and Developer.

17.11 Deductive Change Orders

All deductive Change Order(s) must be prepared pursuant to the provisions herein. Where a portion of the Work is deleted from the Contract, the reasonable value of the deleted work less the value of any new work performed shall be considered the appropriate deduction. The value submitted on the Schedule of Values shall be used to calculate the credit amount unless the bid documentation is being held in escrow as part of the Contract Documents. If Developer offers a proposed amount for a deductive Change Order(s) for work performed, Developer shall include a credit for total profit and overhead less proof of expended costs related to the deleted work with the Change Order(s). Any deviation from this provision shall not be allowed.

17.12 Addition or Deletion of Alternate Bid Item(s)

17.12.1 If a subcontractor's Bid Form and Proposal includes proposal(s) for Alternate Bid Item(s), during Developer's performance of the Work, the District may elect to add or delete any such Alternate Bid Item(s) if not included in the Contract at the time of award. If the District elects to add or delete Alternate Bid Item(s) after Contract award, the cost or credit for such Alternate Bid Item(s) shall be as set forth in the Bid Form and Proposal unless the parties agree to a different price and the Contract Time shall be adjusted by the number of days allocated in the Contract Documents.

17.12.2 For purposes of determining the cost, if any, of any change, addition, or omission to the Work hereunder, all trade discounts, rebates, refunds, and all returns from the sale of surplus materials and equipment shall accrue and be credited to the Developer, and the Developer shall make provisions so that such discounts, rebates, refunds, and returns may be secured, and the amount thereof shall be allowed as a reduction of the Developer's cost in determining the actual cost of construction for purposes of any change, addition, or omission in the Work as provided herein.

17.13 Construction Change Directives

17.13.1 A Construction Change Directive is a written order prepared and issued by the District, the Construction Manager, and/or the Architect and signed by the District and the Architect, directing a change in the Work. The District may, as provided by law, by Construction Change Directive and without

invalidating the Contract, order changes in the Work consisting of additions, deletions, or other revisions. The adjustment to the Guaranteed Maximum Price or Contract Time, if any, is subject to the provision of this section regarding Changes in the Work. If all or a portion of the Project is being funded by funds requiring approval by the State Allocation Board ("SAB"), these revisions may be subject to compensation once approval of same is received and funded by the SAB, and funds are released by the Office of Public School Construction ("OPSC"). Any dispute as to the adjustment of the Guaranteed Maximum Price, if any, of the Construction Change Directive or timing of payment shall be resolved pursuant to the Payment and Claims and Disputes provisions herein.

17.13.2 The District may issue a Construction Change Directive in the absence of agreement on the terms of a Change Order.

17.14 Force Account Directives

17.14.1 When work, for which a definite price has not been agreed upon in advance, is to be paid for on a force account basis, all direct costs necessarily incurred and paid by the Developer for labor, material, and equipment used in the performance of that Work, shall be subject to the approval of the District and compensation will be determined as set forth herein.

17.14.2 The District will issue a Force Account Directive to proceed with the Work on a force account basis, and a not-to-exceed budget will be established by the District.

17.14.3 All requirements regarding direct cost for labor, labor burden, material, equipment, and markups on direct costs for overhead and profit described in this section shall apply to Force Account Directives. However, the District will only pay for actual costs verified in the field by the District or its authorized representative(s) on a daily basis.

17.14.4 The Developer shall be responsible for all costs related to the administration of Force Account Directives. The markup for overheard and profit for Developer modifications shall be full compensation to the Developer to administer Force Account Directives, and Developer shall not be entitled to separately recover additional amounts for overhead and/or profit.

17.14.5 The Developer shall notify the District or its authorized representative(s) at least twenty-four (24) hours prior to proceeding with any of the force account work. Furthermore, the Developer shall notify the District when it has consumed eighty percent (80%) of the budget, and shall not exceed the budget unless specifically authorized in writing by the District. The Developer will not be compensated for force account work in the event that the Developer fails to timely notify the District regarding the commencement of force account work, or exceeding the force account budget.

17.14.6 The Developer shall diligently proceed with the work, and on a daily basis, submit a daily force account report no later than 5:00 p.m. each day on a form supplied by the District. The report shall contain a detailed itemization of the daily labor, material, and equipment used on the force account work

only. The names of the individuals performing the force account work shall be included on the daily force account reports. The type and model of equipment shall be identified and listed. The IOR or District representative will review the information contained in the reports, and sign the reports no later than the next work day, and return a copy of the report to the Developer for its records. The District will not sign, nor will the Developer receive compensation for, work the District cannot verify. The Developer will provide a weekly force account summary indicating the status of each Force Account Directive in terms of percent complete of the not-to-exceed budget and the estimated percent complete of the work

17.14.7 In the event the Developer and the District reach a written agreement on a set cost for the work while the work is proceeding based on a Force Account Directive, the Developer's signed daily force account reports shall be discontinued and all previously signed reports shall be invalid.

17.15 Price Request

17.15.1 Definition of Price Request

A Price Request ("PR") is a written request prepared by the Architect or Construction Manager requesting the Developer submit to the District, the Construction Manager and the Architect an estimate of the effect of a proposed change in the Work on the Guaranteed Maximum Price and the Contract Time.

17.15.2 Scope of Price Request

A Price Request shall contain adequate information, including any necessary Drawings and Specifications, to enable Developer to provide the cost breakdowns required. The Developer shall not be entitled to any additional compensation for preparing a response to a Price Request, whether ultimately accepted or not.

17.16 Accounting Records

With respect to portions of the Work performed by Change Orders and Construction Change Directives, the Developer shall keep and maintain cost-accounting records satisfactory to the District, including, without limitation, Job Cost Reports as provided in these General Conditions, which shall be available to the District on the same terms as any other books and records the Developer is required to maintain under the Contract Documents. Such records shall include without limitation hourly records for Labor and Equipment and itemized records of materials and Equipment used that day in connection with the performance of any Work. All records maintained hereunder shall be subject to inspection, review and/or reproduction by the District, the Construction Manager and the Architect or the Project Inspector upon request. In the event that the Developer fails or refuses, for any reason, to maintain or make available for inspection, review and/or reproduction such records, the District's determination of the extent of adjustment to the Contract Price shall be final, conclusive, dispositive and binding upon Developer.

17.17 Notice Required

If the Developer desires to make a claim for an increase in the Guaranteed Maximum Price, or any extension in the Contract Time for completion, it shall notify the District pursuant to the provisions herein, including the Article on Claims and Disputes. No claim shall be considered unless made in accordance with this subparagraph. Developer shall proceed to execute the Work even though the adjustment may not have been agreed upon. Any change in the Guaranteed Maximum Price or extension of the Contract Time resulting from such claim shall be authorized by a Change Order.

17.18 Applicability to Subcontractors

Any requirements under this Article shall be equally applicable to Change Orders or Construction Change Directives issued to Subcontractors by the Developer to the extent required by the Contract Documents.

17.19 Alteration to Change Order Language

Developer shall not alter Change Orders or reserve time in Change Orders. Change Orders altered in violation of this provision, if in conflict with the terms set forth herein, shall be construed in accordance with the terms set forth herein. Developer shall execute finalized Change Orders and proceed under the provisions herein with proper notice.

17.20 Failure of Developer to Execute Change Order

Developer shall be in default of the Contract Documents if Developer fails to execute a Change Order when the Developer agrees with the addition and/or deletion of the Work in that Change Order.

18. Requests For Information

18.1 Any Request for Information shall reference all applicable Contract Document(s), including Specification section(s), detail(s), page number(s), drawing number(s), and sheet number(s), etc. The Developer shall make suggestions and interpretations of the issue raised by each Request for Information. A Request for Information cannot modify the Guaranteed Maximum Price, Contract Time, or the Contract Documents.

18.2 The Developer may be responsible for any costs incurred for professional services that District may deduct from any amounts owing to the Developer, if a Request for Information requests an interpretation or decision of a matter where the information sought is equally available to the party making the request. District may deduct from and/or invoice Developer for professional services arising therefrom.

19. Payments

19.1 Guaranteed Maximum Price

As compensation for Developer's construction of the Project, the District shall pay Developer pursuant to the terms of Exhibit "C" to the Facilities Lease. This is the total

amount payable by the District to the Developer for performance of the Work under the Contract.

19.2 Applications for Tenant Improvement Payments

19.2.1 Procedure for Applications for Tenant Improvement Payments

19.2.1.1 Not before the fifth (5th) day of each calendar month during the progress of the Work, Developer shall submit to the District and the Architect an itemized Application for Payment for operations completed in accordance with the Schedule of Values. Such application shall be on a form approved by the District and shall be notarized, if required, and supported by the following or each portion thereof unless waived by the District in writing:

19.2.1.1.1 The amount paid to the date of the Application for Payment to the Developer, to all its Subcontractors, and all others furnishing labor, material, or equipment under the Contract Documents.

19.2.1.1.2 The amount being requested under the Application for Payment by the Developer on its own behalf and separately stating the amount requested on behalf of each of the Subcontractors and all others furnishing labor, material, and equipment under the Contract Documents.

19.2.1.1.3 The balance that will be due to each of such entities after said payment is made.

19.2.1.1.4 A certification that the As-Built Drawings and annotated Specifications are current.

19.2.1.1.5 Itemized breakdown of work done for the purpose of requesting partial payment.

19.2.1.1.6 An updated and acceptable construction schedule in conformance with the provisions herein.

19.2.1.1.7 The additions to and subtractions from the Guaranteed Maximum Price and Contract Time.

19.2.1.1.8 A total of the retentions held.

19.2.1.1.9 Material invoices, evidence of equipment purchases, rentals, and other support and details of cost as the District may require from time to time.

19.2.1.1.10 The percentage of completion of the Developer's Work by line item.

19.2.1.1.11 Schedule of Values updated from the preceding Application for Payment.

19.2.1.1.12 A duly completed and executed conditional waiver and release upon Tenant Improvement Payment compliant with Civil Code section 8132 from the Developer and each subcontractor of any tier and supplier to be paid from the current Tenant Improvement Payment.

19.2.1.1.13 A duly completed and executed unconditional waiver and release upon Tenant Improvement Payment compliant with Civil Code section 8134 from the Developer and each subcontractor of any tier and supplier that was paid from the previous Tenant Improvement Payment submitted 60 days prior; and

19.2.1.1.14 A certification by the Developer of the following:

The Developer warrants title to all Work performed as of the date of this payment application and that all such Work has been completed in accordance with the Contract Documents for the Project. The Developer further warrants that all Work performed as of the date of this payment application is free and clear of liens, claims, security interests, or encumbrances in favor of the Developer, Subcontractors, material and equipment suppliers, workers, or other persons or entities making a claim by reason of having provided labor, materials, and equipment relating to the Work, except those of which the District has been informed. Submission of sums which have no basis in fact or which Developer knows are false are at the sole risk of Developer and may be a violation of the False Claims Act set forth under Government Code section 12650 et seq.

19.2.1.1.15 The Developer shall be subject to the False Claims Act set forth in Government Code section 12650 et seq. for information provided with any Application for Tenant Improvement Payments.

19.2.1.1.16 All remaining certified payroll records ("CPR(s)") for each journeyman, apprentice, worker, or other employee employed by the Developer and/or each Subcontractor in connection with the Work for the period of the Application for Payment. As indicated herein, the District shall not make any payment to Developer until:

19.2.1.1.16.1 Developer and/or its Subcontractor(s) provide electronic CPRs weekly for all weeks any journeyman, apprentice, worker or other employee was employed in connection with the Work directly to the DIR, or within ten (10) days of any request by the District or the DIR; and

19.2.1.1.16.2 Any delay in Developer and/or its Subcontractor(s) providing CPRs in a timely manner may directly delay the Developer's payment.

19.2.1.1.17 Applications received after June 20th will not be paid until the second week of July and applications received after December 12th will not be paid until the first week of January.

19.2.2 Prerequisites for Tenant Improvement Payments

19.2.2.1 First Payment Request

The following items, if applicable, must be completed before the District will accept and/or process the Developer's first payment request:

19.2.2.1.1 Installation of the Project sign.

19.2.2.1.2 Installation of field office.

19.2.2.1.3 Installation of temporary facilities and fencing.

19.2.2.1.4 Schedule of Values.

19.2.2.1.5 Developer's Preliminary Construction Schedule for the first ninety (90) days.

19.2.2.1.6 Schedule of unit prices, if applicable.

19.2.2.1.7 Submittal Schedule.

19.2.2.1.8 Receipt by Architect of all submittals due as of the date of the payment application.

19.2.2.1.9 List of Subcontractors, with names, license numbers, telephone numbers, and Scope of Work.

19.2.2.1.10 All bonds and insurance endorsements; and

19.2.2.1.11 Resumes of Developer's project manager, and if applicable, job site secretary, record documents recorder, and job site superintendent.

19.2.3 Subsequent Payment Requests

The District will not process subsequent payment requests until and unless submittals and Shop Drawings necessary to maintain the Project schedule have been submitted to the Architect.

19.2.4 No Waiver of Criteria

Any payments made to Developer where criteria set forth herein have not been met shall not constitute a waiver of said criteria by District. Instead, such payment shall be construed as a good faith effort by District to resolve differences so Developer may pay its Subcontractors and suppliers. Developer agrees that failure to submit such items may constitute a breach of contract by Developer and may subject Developer to termination.

19.3 District's Approval of Application for Payment

19.3.1 Upon receipt of an Application for Payment, The District shall act in accordance with both of the following:

19.3.1.1 Each Application for Payment shall be reviewed by the District as soon as practicable after receipt for the purpose of determining that the Application for Payment is a proper Application for Payment.

19.3.1.2 Any Application for Payment determined not to be a proper Application for Payment suitable for payment shall be returned to the Developer as soon as practicable, but not later than seven (7) days, after receipt. An Application for Payment returned pursuant to this paragraph shall be accompanied by a document setting forth in writing the reasons why the Application for Payment is not proper. The number of days available to the District to make a payment without incurring interest pursuant to this section shall be reduced by the number of days by which the District exceeds this seven-day return requirement.

19.3.2 An Application for Payment shall be considered properly executed if funds are available for payment of the Application for Payment, and payment is not delayed due to an audit inquiry by the financial officer of the District.

19.3.3 The District's review of the Developer's Application for Payment will be based on the District's and the Architect's observations at the Site and the data comprising the Application for Payment that the Work has progressed to the point indicated and that, to the best of the District's and the Architect's knowledge, information, and belief, the quality of the Work is in accordance with the Contract Documents. The foregoing representations are subject to:

19.3.3.1 Observation of the Work for general conformance with the Contract Documents.

19.3.3.2 Results of subsequent tests and inspections.

19.3.3.3 Minor deviations from the Contract Documents correctable prior to completion; and

19.3.3.4 Specific qualifications expressed by the Architect.

19.3.4 District's approval of the certified Application for Payment shall be based on Developer complying with all requirements for a fully complete and valid certified Application for Payment.

19.3.5 Payments to Developer

19.3.5.1 Within thirty (30) days after approval of the Application for Payment, Developer shall be paid a sum equal to ninety-five percent (95%), of the value of the Tenant Improvement Payment (as verified by Architect and Inspector and certified by Developer) up to the last day of the previous month, less the aggregate of previous payments and amount to be withheld. The value of the Work completed shall be

Developer's best estimate. No inaccuracy or error in said estimate shall operate to release the Developer, or any Surety upon any bond, from damages arising from such Work, or from the District's right to enforce each and every provision of the Contract Documents, and the District shall have the right subsequently to correct any error made in any estimate for payment.

19.3.5.2 The Developer may not be entitled to have payment requests processed, or may be entitled to have only partial payment made for Work performed, so long as any direction given by the District concerning the Work, or any portion thereof, remains incomplete.

19.3.6 No Waiver

No payment by District hereunder shall be interpreted so as to imply that District has inspected, approved, or accepted any part of the Work. Notwithstanding any payment, the District may enforce each and every provision of this Contract. The District may correct or require correction of any error subsequent to any payment

19.3.7 Warranty of Title

19.3.7.1 If a lien or a claim based on a stop payment notice of any nature should at any time be filed against the Work or any District property, by any entity that has supplied material or services at the request of the Developer, Developer and Developer's Surety shall promptly, on demand by District and at Developer's and Surety's own expense, take any and all action necessary to cause any such lien or a claim based on a stop payment notice to be released or discharged immediately therefrom.

19.3.7.2 If the Developer fails to furnish to the District within ten (10) calendar days after demand by the District satisfactory evidence that a lien or a claim based on a stop payment notice has been released, discharged, or secured, the District may discharge such indebtedness and deduct the amount required therefor, together with any and all losses, costs, damages, and attorney's fees and expenses incurred or suffered by District from any sum payable to Developer under the Contract.

19.4 Decisions to Withhold Payment

19.4.1 Reasons to Withhold Payment

The District shall withhold payment in whole, or in part, as required by statute. In addition, the District may withhold payment in whole, or in part, to the extent reasonably necessary to protect the District if, in the District's opinion, the representations to the District required herein cannot be made. Payment, in whole, or in part, will be withheld based on the need to protect the District from loss because of, but not limited to, any of the following:

19.4.1.1 Defective Work not remedied within FORTY-EIGHT (48) hours of written notice to Developer.

19.4.1.2 Stop Payment Notices or other liens served upon the District as a result of the Contract.

19.4.1.3 Failure to comply with the requirements of Public Contract Code section 2600 et seq. ("Skilled and Trained Workforce Requirements") or failure to provide to the District a complete, monthly report demonstrating that Developer and its Subcontractors are complying, unless Developer and its subcontractors have agreed to be bound by a Project Labor Agreement as provided in Public Contract Code section 2600 et seq.

19.4.1.3.1 If Developer provides a complete monthly report, then the District shall immediately resume making payments to the Developer, including all previously withheld payments.

19.4.1.3.2 If the monthly report is incomplete due to the failure of a subcontractor to timely submit the required information to Developer, District may withhold 150% of the value of the monthly billing for a subcontractor that failed to timely submit the required information or did not demonstrate compliance

19.4.1.3.2.1 If Developer substitutes a subcontractor pursuant to Chapter 4 (commencing with Section 4100) for failure to demonstrate compliance, and Developer replaces the subcontractor with one that provides an enforceable commitment that a skilled and trained workforce will be used to complete the Project, the District shall immediately resume making payments to the Developer, including all previously withheld payments.

19.4.1.3.3 If the Developer provides a plan to achieve substantial compliance with the Skilled and Trained Workforce Requirements, the District shall immediately resume making payments to the Developer, including all previously withheld payments unless, within a reasonable time, the District rejects the plan as insufficient and explains the reasons for the rejection.

19.4.1.4 Liquidated damages assessed against the Developer.

19.4.1.5 Reasonable doubt that the Work can be completed for the unpaid balance of the Guaranteed Maximum Price or by the Contract Time.

19.4.1.6 Damage to the District or other contractor(s).

19.4.1.7 Unsatisfactory prosecution of the Work by the Developer.

19.4.1.8 Failure to store and properly secure materials.

19.4.1.9 Failure of the Developer to submit, on a timely basis, proper, sufficient, and acceptable documentation required by the Contract Documents, including, without limitation, a Construction Schedule, Schedule of Submittals, Schedule of Values, Monthly Progress Schedules, Shop Drawings, Product Data and samples, Proposed product lists, executed Change Orders, and/or verified reports.

19.4.1.10 Failure of the Developer to maintain As-Built Drawings.

19.4.1.11 Erroneous estimates by the Developer of the value of the Work performed, or other false statements in an Application for Payment.

19.4.1.12 Unauthorized deviations from the Contract Documents.

19.4.1.13 Failure of the Developer to prosecute the Work in a timely manner in compliance with the Construction Schedule, established progress schedules, and/or completion dates.

19.4.1.14 Failure to provide acceptable electronic certified payroll records, as required by the Labor Code, by these Contract Documents or by written request for each journeyman, apprentice, worker, or other employee employed by the Developer and/or by each Subcontractor in connection with the Work for the period of the Application for Payment or if payroll records are delinquent or inadequate.

19.4.1.15 Failure to properly pay prevailing wages as required in Labor Code section 1720 et seq., failure to comply with any other Labor Code requirements, and/or failure to comply with labor compliance monitoring and enforcement by the DIR.

19.4.1.16 Allowing an unregistered subcontractor, as described in Labor Code section 1725.5, to engage in the performance of any work under this Contract.

19.4.1.17 Failure to comply with any, if applicable federal requirements regarding minimum wages, withholding, payrolls and basic records, apprentice and trainee employment requirements, equal employment opportunity requirements, Copeland Act requirements, Davis-Bacon Act and related requirements, Contract Work Hours and Safety Standards Act requirements.

19.4.1.18 Failure to properly maintain or clean up the Site.

19.4.1.19 Failure to timely indemnify, defend, or hold harmless the District.

19.4.1.20 Failure to perform any implementation and/or monitoring required by the General Permit, including without limitation any SWPPP for the Project and/or the imposition of any penalties or fines therefore whether imposed on the District or Developer.

19.4.1.21 Any payments due to the District, including but not limited to payments for failed tests, utilities changes, or permits.

19.4.1.22 Failure to pay any royalty, license or similar fees.

19.4.1.23 Failure to pay Subcontractor(s) or supplier(s) as required by law and Developer's subcontract agreement and by the Contract Documents; and

19.4.1.24 Developer is otherwise in breach, default, or in substantial violation of any provision of the Contract Documents.

19.4.2 Reallocation of Withheld Amounts

19.4.2.1 After prior written notice to Developer with details regarding the District's proposed application of withheld amounts, District may, in its discretion, apply any withheld amount to pay outstanding claims or obligations as defined herein. In so doing, District shall make such payments on behalf of Developer. If any payment is so made by District, then that amount shall be considered a payment made under the Contract Documents by District to Developer and District shall not be liable to Developer for any payment made in good faith. These payments may be made without prior judicial determination of claim or obligation. District will render Developer an accounting of funds disbursed on behalf of Developer.

19.4.2.2 If Developer defaults or neglects to carry out the Work in accordance with the Contract Documents or fails to perform any provision thereof, District may, after FORTY-EIGHT (48) hours' written notice to the Developer and opportunity to commence and pursue cure of default, and, without prejudice to any other remedy, make good such deficiencies. The District shall adjust the total Guaranteed Maximum Price by reducing the amount thereof by the cost of making good such deficiencies. If District deems it inexpedient to correct Work that is damaged, defective, or not done in accordance with the provisions of the Contract Documents, an equitable reduction in the Guaranteed Maximum Price (up to one hundred fifty percent (150%) of the estimated reasonable value of the nonconforming Work) shall be made therefor.

19.4.3 Payment After Cure

When Developer removes the grounds for declining approval, payment shall be made for amounts withheld because of them. No interest shall be paid on any retainage or amounts withheld due to the failure of the Developer to perform in accordance with the terms and conditions of the Contract Documents.

19.5 Subcontractor Payments

19.5.1 Payments to Subcontractors

No later than seven (7) days after receipt of any Tenant Improvement Payment, or pursuant to Business and Professions Code section 7108.5 and Public Contract Code section 7107, the Developer shall pay to each Subcontractor, out of the amount paid to the Developer on account of such Subcontractor's portion of the Work, the amount to which said Subcontractor is entitled. The Developer shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to its Sub-subcontractors in a similar manner.

19.5.2 No Obligation of District for Subcontractor Payment

The District shall have no obligation to pay, or to see to the payment of, money to a Subcontractor except as may otherwise be required by law.

19.5.3 Joint Checks

District shall have the right in its sole discretion, if necessary for the protection of the District, to issue joint checks made payable to the Developer and Subcontractors and/or material or equipment suppliers. The joint check payees shall be responsible for the allocation and disbursement of funds included as part of any such joint payment. In no event shall any joint check payment be construed to create any contract between the District and a Subcontractor of any tier, or a material or equipment supplier, or any obligation from the District to such Subcontractor or a material or equipment supplier or rights in such Subcontractor against the District.

20. Completion of the Work

20.1 Completion

20.1.1 District will accept completion of Project and have the Notice of Completion recorded when the entire Work shall have been completed to the satisfaction of District.

20.1.2 The Work may only be accepted as complete by action of the governing board of the District.

20.1.3 District, at its sole option, may accept completion of Project and have the Notice of Completion recorded when the entire Work shall have been completed to the satisfaction of District, except for minor corrective items, as distinguished from incomplete items. If Developer fails to complete all minor corrective items within fifteen (15) days after the date of the District's acceptance of completion, District shall withhold from the final payment one hundred fifty percent (150%) of an estimate of the amount sufficient to complete the corrective items, as reasonably determined by District, until the item(s) are completed.

20.1.4 At the end of the fifteen (15) day period, if there are any items remaining to be corrected, District may elect to proceed as provided herein related to adjustments to Guaranteed Maximum Price, and/or District's right to perform the Work of the Developer.

20.2 Close-Out/Certification Procedures

20.2.1 Punch List

The Developer shall notify the Architect when Developer considers the Work complete. Upon notification, Architect will prepare a list of minor items to be completed or corrected ("Punch List"). The Developer and/or its Subcontractors shall proceed promptly to complete and correct items on the Punch List. Failure to include an item on Punch List does not alter the responsibility of the Developer to complete all Work in accordance with the Contract Documents.

20.2.2 Close-Out/Certification Requirements

20.2.2.1 Utility Connections

Buildings shall be connected to water, gas, sewer, and electric services, complete and ready for use. Service connections shall be made and existing services reconnected.

20.2.2.2 As-Builts/Record Drawings and Record Specifications

20.2.2.2.1 Developer shall provide exact "as-built" drawings of the Work upon completion of the Project as indicated in the Contract Documents, including but not limited to the Specifications ("As-Built Drawings") as a condition precedent to approval of final payment.

20.2.2.2.2 Developer is liable and responsible for any and all inaccuracies in the As-Built Drawings, even if inaccuracies become evident at a future date.

20.2.2.2.3 Upon completion of the Work and as a condition precedent to approval of final payment, Developer shall obtain the Inspector's approval of the corrected prints and deliver the same to Architect in a form acceptable to the Architect as part of closeout.

20.2.3 Maintenance Manuals

Developer shall prepare all operation and maintenance manuals and date as indicated in the Specifications.

20.2.4 Source Programming

Developer shall provide all source programming for all items in the Project.

20.2.5 Verified Reports

Developer shall completely and accurately fill out and file forms DSA 6-C or DSA 152 (or most current version applicable at the time the Work is performed), as appropriate. Refer to section 4-336 and section 4-343 of Part 1, Title 24 of the California Code of Regulations.

20.3 Final Inspection

20.3.1 Developer shall comply with Punch List procedures as provided herein, and maintain the presence of its District-approved project superintendent and project manager until the Punch List is complete to ensure proper and timely completion of the Punch List. Under no circumstances shall Developer demobilize its forces prior to completion of the Punch List without District's prior written approval. Upon receipt of Developer's written notice that all of the Punch List items have been fully completed and the Work is ready for final inspection and District acceptance, Architect and Project Inspector will inspect the Work and shall submit to Developer and District a final inspection report noting the Work, if any, required in order to complete in accordance with the Contract Documents. Absent unusual circumstances, this report shall consist of the Punch List items not yet satisfactorily completed.

20.3.2 Upon Developer's completion of all items on the Punch List and any other uncompleted portions of the Work, the Developer shall notify the District and Architect, who shall again inspect such Work. If the Architect finds the Work complete and acceptable under the Contract Documents, the Architect will notify Developer, who shall then jointly submit to the Architect and the District its final Application for Payment.

20.3.3 Final Inspection Requirements

20.3.3.1 Before calling for final inspection, Developer shall determine that the following have been performed:

20.3.3.1.1 The Work has been completed.

20.3.3.1.2 All life safety items are completed and in working order.

20.3.3.1.3 Mechanical and electrical Work are complete and tested, fixtures are in place, connected, and ready for tryout.

20.3.3.1.4 Electrical circuits scheduled in panels and disconnect switches labeled.

20.3.3.1.5 Painting and special finishes complete.

20.3.3.1.6 Doors complete with hardware, cleaned of protective film, relieved of sticking or binding, and in working order.

20.3.3.1.7 Tops and bottoms of doors sealed.

20.3.3.1.8 Floors waxed and polished as specified.

20.3.3.1.9 Broken glass replaced and glass cleaned.

20.3.3.1.10 Grounds cleared of Developer's equipment, raked clean of debris, and trash removed from Site.

20.3.3.1.11 Work cleaned, free of stains, scratches, and other foreign matter, damaged and broken material replaced.

20.3.3.1.12 Finished and decorative work shall have marks, dirt, and superfluous labels removed.

20.3.3.1.13 Final cleanup, as provided herein.

20.4 Costs of Multiple Inspections

More than two (2) requests of the District to make a final inspection shall be considered an additional service of District, Architect, Construction Manager, and/or Project Inspector, and all subsequent costs will be invoiced to Developer and if funds are available, withheld from remaining payments.

20.5 Partial Occupancy or Use Prior to Completion

20.5.1 District's Rights to Occupancy

The District may occupy or use any completed or partially completed portion of the Work at any stage, and such occupancy shall not constitute the District's Final Acceptance of any part of the Work. Neither the District's Final Acceptance, the making of Final Payment, any provision in Contract Documents, nor the use or occupancy of the Work, in whole or in part, by District shall constitute acceptance of Work not in accordance with the Contract Documents nor relieve the Developer or the Developer's Performance Bond Surety from liability with respect to any warranties or responsibility for faulty or defective Work or materials, equipment and workmanship incorporated therein. The District and the Developer shall agree in writing to the responsibilities assigned to each of them for payments, security, maintenance, heat, utilities, damage to the Work, insurance, the period for correction of the Work, and the commencement of warranties required by the Contract Documents. Any dispute as to responsibilities shall be resolved pursuant to the Claims and Disputes provisions herein, with the added provision that during the dispute process, the District shall have the right to occupy or use any portion of the Work that it needs or desires to use.

20.5.2 Inspection Prior to Occupancy or Use

Immediately prior to partial occupancy or use, the District, the Developer, and the Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

20.5.3 No Waiver

Unless otherwise agreed upon, partial or entire occupancy or use of a portion or portions of the Work shall not constitute beneficial occupancy or District's acceptance of the Work not complying with the requirements of the Contract Documents.

21. <u>Final Payment and Retention</u>

21.1 Final Payment

Upon receipt of a final Application for Payment from Developer, the Architect will notify the District whether the Work is complete so that joint inspection of the Work can be scheduled. Thereafter, the District shall jointly inspect the Work and either accept the Work as complete or notify the Architect and the Developer in writing of reasons why the Work is not complete. Upon District's acceptance of the Work of the Developer as fully complete (that, absent unusual circumstances, will occur when the Punch List items have been satisfactorily completed), the District shall record a Notice of Completion with the County Recorder, and the Developer shall, upon receipt of final payment from the District, pay the amount due Subcontractors.

21.2 Prerequisites for Final Payment

The following conditions must be fulfilled prior to Final Payment:

21.2.1 A full release of all Stop Payment Notices served in connection with the Work shall be submitted by Developer.

21.2.2 A duly completed and executed conditional waiver and release upon final payment compliant with Civil Code section 8136 from each subcontractor of any tier and supplier to be paid from the final Tenant Improvement Payment.

21.2.3 A duly completed and executed unconditional waiver and release upon Tenant Improvement Payment compliant with Civil Code section 8134 from each subcontractor of any tier and supplier that was paid from the previous Tenant Improvement Payment(s).

21.2.4 A duly completed and executed "AGREEMENT AND RELEASE OF ANY AND ALL CLAIMS" from the Developer.

21.2.5 The Developer shall have made all corrections to the Work that are required to remedy any defects therein, to obtain compliance with the Contract Documents or any requirements of applicable codes and ordinances, or to fulfill any of the orders or directions of District required under the Contract Documents.

21.2.6 Each Subcontractor shall have delivered to the Developer all written guarantees, warranties, applications, and bonds required by the Contract Documents for its portion of the Work.

21.2.7 Developer must have completed all requirements set forth under "Close-Out/Certification Procedures," including, without limitation, submission of an approved set of complete Record Drawings.

21.2.8 Architect shall have issued its written approval that final payment can be made.

21.2.9 The Developer shall have delivered to the District all manuals and materials required by the Contract Documents, which must be approved by the District.

21.2.10 The Developer shall have completed final clean up as provided herein.

21.3 Retention

21.3.1 The retention, less any amounts disputed by the District or that the District has the right to withhold pursuant to provisions herein, shall be paid:

21.3.1.1 After approval by the District of the Architect of the Application and Certificate of Payment.

21.3.1.2 After the satisfaction of the conditions set forth herein.

21.3.1.3 No less than forty-five (45) days after the recording of the Notice of Completion by District; and

21.3.1.4 After receipt of a duly completed and executed unconditional waiver and release upon Final Payment compliant with Civil Code section 8138 from each subcontractor of any tier and supplier that was paid from the Final Payment.

21.3.2 No interest shall be paid on any retention, or on any amounts withheld due to a failure of the Developer to perform, in accordance with the terms and conditions of the Contract Documents, except as provided to the contrary in any Escrow Agreement between the District and the Developer pursuant to Public Contract Code section 22300.

21.4 Substitution of Securities

The District will permit the substitution of securities in accordance with the provisions of Public Contract Code section 22300.

22. Uncovering of Work

If a portion of the Work is covered without Inspector or Architect approval or not in compliance with the Contract Documents, it must, if required in writing by the District, the Project Inspector, or the Architect, be uncovered for the Project Inspector's or the Architect's observation and be corrected, replaced and/or recovered at the Developer's expense without change in the Guaranteed Maximum Price or Contract Time.

23. Nonconforming Work and Correction of Work

23.1 Nonconforming Work

23.1.1 Developer shall promptly remove from Premises all Work identified by District as failing to conform to the Contract Documents whether incorporated or not. Developer shall promptly replace and re-execute its own Work to comply with the Contract Documents without additional expense to the District and shall bear the expense of making good all work of other contractors destroyed or damaged by any removal or replacement pursuant hereto and/or any delays to the District or other contractors caused thereby.

23.1.2 If Developer does not commence to remove Work that District has identified as failing to conform to the Contract Documents within a reasonable time, not to exceed FORTY-EIGHT (48) hours after written notice and complete removal of work within a reasonable time, District may remove it and may store any material at Developer's expense. If Developer does not pay expense(s) of that removal within ten (10) days' time thereafter, District may, upon ten (10) days' written notice, sell any material at auction or at private sale and shall deduct all costs and expenses incurred by the District and/or District may withhold those amounts from payment(s) to Developer.

23.2 Correction of Work

23.2.1 Correction of Rejected Work

Pursuant to the notice provisions herein, the Developer shall promptly correct the Work rejected by the District, the Architect, or the Project Inspector as failing to conform to the requirements of the Contract Documents, whether observed before or after Completion and whether or not fabricated, installed, or completed. The Developer shall bear costs of correcting the rejected Work, including additional testing, inspections, and compensation for the Inspector's or the Architect's services and expenses made necessary thereby.

23.2.2 One-Year Warranty Corrections

If, within one (1) year after the date of Completion of the Work or a designated portion thereof, or after the date for commencement of warranties established hereunder, or by the terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Developer shall correct it promptly after receipt of written notice from the District to do so. This period of one (1) year shall be extended with respect to portions of the Work first performed after Completion by the period of time between Completion and the actual performance of the Work. This obligation hereunder shall survive District's acceptance of the Work under the Contract Documents and termination of the Contract Documents. The District shall give such notice promptly after discovery of the condition.

23.3 District's Right to Perform Work

23.3.1 If the Developer should neglect to prosecute the Work properly or fail to perform any provisions of the Contract Documents, the District, after providing FORTY-EIGHT (48) hours written notice and an opportunity to cure the failure, to the Developer, may, without prejudice to any other remedy it may have, make good such deficiencies and may deduct the cost thereof from the payment then or thereafter due the Developer.

23.3.2 If it is found at any time, before or after completion of the Work, that Developer has varied from the Drawings and/or Specifications, including, but not limited to, variation in material, quality, form, or finish, or in the amount or value of the materials and labor used, District may require at its option:

23.3.2.1 That all such improper Work be removed, remade or replaced, and all work disturbed by these changes be made good by Developer at no additional cost to the District.

23.3.2.2 That the District deduct from any amount due Developer the sum of money equivalent to the difference in value between the work performed and that called for by the Drawings and Specifications; or

23.3.2.3 That the District exercise any other remedy it may have at law or under the Contract Documents, including but not limited to the District hiring its own forces or another contractor to replace the Developer's nonconforming Work, in which case the District shall either issue a deductive Change Order, a Construction Change Directive, or invoice the Developer for the cost of that work. Developer shall pay any invoices within thirty (30) days of receipt of same or District may withhold those amounts from payment(s) to Developer.

24. Termination And Suspension

The Parties' rights to terminate the Project are as indicated in the Facilities Lease. In the event of a termination of the Facilities Lease and notwithstanding any other provision in the Contract Documents, the Surety shall remain liable to all obligees under the Payment Bond and to the District under the Performance Bond for any claim related to the Project.

25. Claims Process

25.1 Performance during Claim Process

Developer and its subcontractors shall continue to perform its Work under the Contract and shall not cause a delay of the Work during any dispute, claim, negotiation, mediation, or arbitration proceeding, except by written agreement by the District.

25.2 Definition of Claim

25.2.1 Pursuant to Public Contract Code section 9204, the term "Claim" means a separate demand by the Developer sent by registered mail or certified mail with return receipt requested, for one or more of the following:

25.2.1.1 A time extension, including without limitation, for relief of damages or penalties for delay assessed by the District under the Contract;

25.2.1.2 Payment by the District of money or damages arising from work done by, or on behalf of, the Developer pursuant to the Contract and payment of which is not otherwise expressly provided for or to which Developer is not otherwise entitled to; or

25.2.1.3 An amount of payment disputed by the District.

25.3 Claims Presentation

25.3.1 If Developer intends to apply for an increase in the Guaranteed Maximum Price or Contract Time for any reason including, without limitation, the acts of District or its agents, Developer shall, within thirty (30) days after the event giving rise to the Claim, give notice of the Claim in writing, including an itemized statement of the details and amounts of its Claim for any increase in the Guaranteed Maximum Price or time requested, including a Schedule Analysis and any and all other documentation substantiating Developer's claimed damages. Otherwise, Developer shall have waived and relinquished its dispute against the District and Developer's claims for compensation or an extension of time shall be forfeited and invalidated.

25.3.2 The Claim shall identify:

25.3.2.1 The issues, events, conditions, circumstances and/or causes giving rise to the dispute;

25.3.2.2 The pertinent dates and/or durations and actual and/or anticipated effects on the Guaranteed Maximum Price, Contract Schedule milestones and/or Contract Time adjustments; and

25.3.2.3 The line-item costs for labor, material, and/or equipment, if applicable; or

25.3.2.4 A request by Developer, if any, to waive the claims procedure under Public Contract Code section 9204 and proceed directly to the commencement of a civil action or binding arbitration.

25.3.3 The Claim shall include the following certification by the Developer:

25.3.3.1 The undersigned Developer certifies under penalty of perjury that the attached dispute is made in good faith; that the supporting data is accurate and complete to the best of my knowledge and belief; that the amount requested accurately reflects the adjustment for which Developer believes the District is liable; and that I am duly authorized to certify the claim on behalf of the Developer.

25.3.3.2 Furthermore, Developer understands that the value of the attached dispute expressly includes any and all of the Developer's costs and expenses, direct and indirect, resulting from the Work performed on the Project, additional time required on the Project and/or resulting from delay to the Project. Any costs, expenses, damages, or time extensions not included are deemed waived.

25.4 Claim Resolution pursuant to Public Contract Code section 9204

25.4.1 STEP 1:

25.4.1.1 Upon receipt of a Claim by registered or certified mail, return receipt requested, including the documents necessary to substantiate it, the District shall conduct a reasonable review of the Claim and, within a period not to exceed 45 days, shall provide the Developer a written statement identifying what portion of the Claim is disputed and what

portion is undisputed. Upon receipt of a Claim, the District and Developer may, by mutual agreement, extend the time period to provide a written statement. If the District needs approval from its governing body to provide the Developer a written statement identifying the disputed portion and the undisputed portion of the Claim, and the governing body does not meet within the 45 days or within the mutually agreed to extension of time following receipt of Claim sent by registered mail or certified mail, return receipt requested, the District shall have up to three (3) days following the next duly publicly noticed meeting of the governing body after the 45-day period, or extension, expires to provide Developer a written statement identifying the disputed portion and the undisputed portion.

25.4.1.1.1 Any payment due on an undisputed portion of the Claim shall be processed and made within 60 days after the District issues its written statement. Amounts not paid in a timely manner as required by this section, section 25.4, shall bear interest at seven percent (7%) per annum.

25.4.1.2 Upon receipt of a Claim, the parties may mutually agree to waive, in writing, mediation and proceed directly to the commencement of a civil action or binding arbitration, as applicable. In this instance, District and Developer must comply with the sections below regarding Public Contract Code section 20104 et seq. and Government Code Claim Act Claims.

25.4.1.3 If the District fails to issue a written statement, or to otherwise meet the time requirements of this section, this shall result in the Claim being deemed rejected in its entirety. A claim that is denied by reason of the District's failure to have responded to a claim, or its failure to otherwise meet the time requirements of this section, shall not constitute an adverse finding with regard to the merits of the claim or the responsibility or qualifications of Developer.

25.4.2 STEP 2:

25.4.2.1 If Developer disputes the District's written response, or if the District fails to respond to a Claim within the time prescribed, Developer may demand in writing an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a demand in writing sent by registered mail or certified mail, return receipt requested, the District shall schedule a meet and confer conference within 30 days for settlement of the dispute. Within 10 business days following the conclusion of the meet and confer conference, if the claim or any portion of the claim remains in dispute, the District shall provide the Developer a written statement identifying the portion of the claim that remains in dispute and the portion that is undisputed.

25.4.2.2 Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the District issues its written statement. Amounts not paid in a timely manner as required by

this section, section 25.4, shall bear interest at seven percent (7%) per annum.

25.4.3 STEP 3:

25.4.3.1 Any disputed portion of the claim, as identified by Developer in writing, shall be submitted to nonbinding mediation, with the District and Developer sharing the associated costs equally. The District and Developer shall mutually agree to a mediator within 10 business days after the disputed portion of the claim has been identified in writing. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator. If mediation is unsuccessful, the parts of the claim remaining in dispute shall be subject to applicable procedures outside this section.

25.4.3.1.1 For purposes of this section, mediation includes any nonbinding process, including, but not limited to, neutral evaluation or a dispute review board, in which an independent third party or board assists the parties in dispute resolution through negotiation or by issuance of an evaluation. Any mediation utilized shall conform to the timeframes in this section.

25.4.3.2 Unless otherwise agreed to by the District and Developer in writing, the mediation conducted pursuant to this section shall excuse any further obligation under Public Contract Code section 20104.4 to mediate after litigation has been commenced.

25.4.4 STEP 4:

25.4.4.1 If mediation under this section does not resolve the parties' dispute, the District may, but does not require arbitration of disputes under private arbitration or the Public Works Contract Arbitration Program.

25.5 Subcontractor Pass-Through Claims

25.5.1 If a subcontractor or a lower tier subcontractor lacks legal standing to assert a claim against a District because privity of contract does not exist, the contractor may present to the District a Claim on behalf of a subcontractor or lower tier subcontractor. A subcontractor may request in writing, either on his or her own behalf or on behalf of a lower tier subcontractor, that Developer present a Claim for work which was performed by the subcontractor or by a lower tier subcontractor on behalf of the subcontractor. The subcontractor requesting that the Claim be presented to the District shall furnish reasonable documentation to support the Claim.

25.5.2 Within 45 days of receipt of this written request from a subcontractor, Developer shall notify the subcontractor in writing as to whether the Developer presented the Claim to the District and, if Developer did not present the Claim,

provide the subcontractor with a statement of the reasons for not having done so.

25.5.3 Developer shall bind all its Subcontractors to the provisions of this section and will hold the District harmless against Claims by Subcontractors.

25.6 Government Code Claim Act Claim

25.6.1 If a Claim, or any portion thereof, remains in dispute upon satisfaction of all applicable Claim Resolution requirements, including those pursuant to Public Contract Code section 9204, the Developer shall comply with all claims presentation requirements as provided in Chapter 1 (commencing with section 900) and Chapter 2 (commencing with section 910) of Part 3 of Division 3.6 of Title 1 of Government Code as a condition precedent to the Developer's right to bring a civil action against the District. For purposes of those provisions, the running of the time within which a claim must be presented to the District shall be tolled from the time the Developer submits its written claim until the time the claim is denied, including any time utilized by any applicable meet and confer process.

25.7 Claim Resolution pursuant to Public Contract Code section 20104 et seq.

25.7.1 In the event of a disagreement between the parties as to performance of the Work, the interpretation of this Contract, or payment or nonpayment for Work performed or not performed, the parties shall attempt to resolve all claims of three hundred seventy-five thousand dollars ($375,000) or less which arise between Developer and District by those procedures set forth in Public Contract Code section 20104 et seq., to the extent applicable.

25.7.1.1 Developer shall file with the District any written Claim, including the documents necessary to substantiate it, upon the application for final payment.

25.7.1.2 For claims of less than fifty thousand dollars ($50,000), the District shall respond in writing within forty-five (45) days of receipt of the Claim or may request in writing within thirty (30) days of receipt of the Claim any additional documentation supporting the claim or relating to defenses or claims the District may have against the Developer.

25.7.1.2.1 If additional information is required, it shall be requested and provided by mutual agreement of the parties.

25.7.1.2.2 District's written response to the documented Claim shall be submitted to the Developer within fifteen (15) days after receipt of the further documentation or within a period of time no greater than that taken by the Developer to produce the additional information, whichever is greater.

25.7.1.3 For claims of over fifty thousand dollars ($50,000) and less than or equal to three hundred seventy-five thousand dollars ($375,000), the District shall respond in writing to all written Claims within sixty (60) days of receipt of the claim, or may request, in writing,

within thirty (30) days of receipt of the Claim any additional documentation supporting the Claim or relating to defenses or claims the District may have against the Developer.

25.7.1.3.1 If additional information is required, it shall be requested and provided upon mutual agreement of the District and the Developer.

25.7.1.3.2 The District's written response to the claim, as further documented, shall be submitted to the Developer within thirty (30) days after receipt of the further documentation, or within a period of time no greater than that taken by the Developer to produce the additional information or requested documentation, whichever is greater.

25.7.1.4 If Developer disputes the District's written response, or the District fails to respond within the time prescribed, Developer may so notify the District, in writing, either within fifteen (15) days of receipt of the District's response or within fifteen (15) days of the District's failure to respond within the time prescribed, respectively, and demand an informal conference to meet and confer for settlement of the issues in dispute. Upon a demand, the District shall schedule a meet and confer conference within thirty (30) days for settlement of the dispute.

25.7.1.5 Following the meet and confer conference, if the claim or any portion of it remains in dispute, the Developer shall file a claim as provided in Chapter 1 (commencing with Section 900) and Chapter 2 (commencing with Section 910) of Part 3 of Division 3.6 of Title 1 of the Government Code. For purposes of those provisions the running of the time within which a claim must be filed shall be tolled from the time the Developer submits its written Claim until the time the Claim is denied, including any period of time utilized by the meet and confer process.

25.7.1.6 For any civil action filed to resolve claims filed pursuant to this section, within sixty (60) days, but no earlier than thirty (30) days, following the filing of responsive pleadings, the court shall submit the matter to nonbinding mediation unless waived by mutual stipulation of both parties. The mediation process shall provide for the selection within fifteen (15) days by both parties of a disinterested third person as mediator, shall be commenced within thirty (30) days of the submittal, and shall be concluded within fifteen (15) days from the commencement of the mediation unless a time requirement is extended upon a good cause showing to the court or by stipulation of both parties. If the parties fail to select a mediator within the 15-day period, any party may petition the court to appoint the mediator.

25.7.1.7 If the matter remains in dispute, the case shall be submitted to judicial arbitration pursuant to Chapter 2.5 (commencing with Section 1141.10) of the Title 3 of Part 3 of the Code of Civil Procedure, notwithstanding Section 1141.11 of that code. The Civil Discovery Act, (commencing with Section 2016) of Chapter 1 of Title 4 of part 4 of the Code of Civil Procedure) shall apply to any proceeding brought under

this subdivision consistent with the rules pertaining to judicial arbitration.

25.7.1.8 The District shall not fail to pay money as to any portion of a Claim which is undisputed except as otherwise provided in the Contract Documents. In any suit filed pursuant to this section, the District shall pay interest at the legal rate on any arbitration award or judgment. Interest shall begin to accrue on the date the suit is filed in a court of law.

25.7.2 Developer shall bind its Subcontractors to the provisions of this Section and will hold the District harmless against disputes by Subcontractors.

25.8 Claim Resolution Non-Applicability

25.8.1 The procedures for dispute and claim resolution set forth in this Article shall not apply to the following:

25.8.1.1 Personal injury, wrongful death or property damage claims.

25.8.1.2 Latent defect or breach of warranty or guarantee to repair.

25.8.1.3 Stop payment notices.

25.8.1.4 District's rights set forth in the Article on Suspension and Termination.

25.8.1.5 Disputes arising out of labor compliance enforcement by the Department of Industrial Relations; or

25.8.1.6 District rights and obligations as a public entity set forth in applicable statutes; provided, however, that penalties imposed against a public entity by statutes, including, but not limited to, Public Contract Code sections 20104.50 and 7107, shall be subject to the Claim Resolution requirements provided in this Article.

25.9 Attorney's Fees

25.9.1 Should litigation be necessary to enforce any terms or provisions of this Agreement, then each party shall bear its own litigation and collection expenses, witness fees, court costs and attorney's fees.

26. State Labor, Wage & Hour, Apprentice, And Related Provisions

26.1 Labor Compliance and Enforcement

Since this Project is subject to labor compliance and enforcement by the Department of Industrial Relations ("DIR"), Developer specifically acknowledges and understands that it shall perform the Work of this Agreement while complying with all the applicable provisions of Division 2, Part 7, Chapter 1, of the Labor Code and Title 8 of the California Code of Regulations, including, without limitation, the requirement that the Developer and all Subcontractors shall timely furnish complete and accurate electronic certified payroll records directly to the DIR. The District may not issue payment if this requirement is not met.

26.2 Wage Rates, Travel, and Subsistence

26.2.1 Pursuant to the provisions of Article 2 (commencing at section 1770), Chapter 1, Part 7, Division 2, of the Labor Code of California, the general prevailing rate of per diem wages and the general prevailing rate for holiday and overtime work in the locality in which this public work is to be performed for each craft, classification, or type of worker needed to execute the Contract Documents are on file at the District's principal office and copies will be made available to any interested party on request. Developer shall obtain and post a copy of these wage rates at the job site.

26.2.2 Holiday and overtime work, when permitted by law, shall be paid for at a rate of at least one and one-half times the above specified rate of per diem wages, unless otherwise specified. The holidays upon which those rates shall be paid need not be specified by the District, but shall be all holidays recognized in the applicable collective bargaining agreement. If the prevailing rate is not based on a collectively bargained rate, the holidays upon which the prevailing rate shall be paid shall be as provided in Section 6700 of the Government Code.

26.2.3 Developer shall pay and shall cause to be paid each worker engaged in Work on the Project not less than the general prevailing rate of per diem wages determined by the Director of the Department of Industrial Relations ("DIR") ("Director"), regardless of any contractual relationship which may be alleged to exist between Developer or any Subcontractor and such workers.

26.2.4 If, prior to execution of the Facilities Lease, the Director determines that there has been a change in any prevailing rate of per diem wages in the locality in which the Work under the Contract Documents is to be performed, such change shall not alter the wage rates in the Contract Documents subsequently awarded.

26.2.5 Pursuant to Labor Code section 1775, Developer shall, as a penalty, forfeit the statutory amount (believed by the District to be currently two hundred dollars ($200) to District for each calendar day, or portion thereof, for each worker paid less than the prevailing rates, determined by the District and/or the Director, for the work or craft in which that worker is employed for any public work done under Contract by Developer or by any Subcontractor under it. The difference between such prevailing wage rates and the amount paid to each worker for each calendar day or portion thereof for which each

worker was paid less than the prevailing wage rate, shall be paid to each worker by Developer.

26.2.6 Any worker employed to perform Work on the Project, which Work is not covered by any classification listed in the general prevailing wage rate of per diem wages determined by the Director, shall be paid not less than the minimum rate of wages specified therein for the classification which most nearly corresponds to Work to be performed by him, and that minimum wage rate shall be retroactive to time of initial employment of the person in that classification.

26.2.7 Pursuant to Labor Code section 1773.1, per diem wages are deemed to include employer payments for health and welfare, pension, vacation, travel time, subsistence pay, and apprenticeship or other training programs authorized by Labor Code section 3093, and similar purposes.

26.2.8 Developer shall post at appropriate conspicuous points on the Project Site a schedule showing all determined minimum wage rates and all authorized deductions, if any, from unpaid wages actually earned. In addition, Developer shall post a sign-in log for all workers and visitors to the Site, a list of all Subcontractors of any tier on the Site, and the required Equal Employment Opportunity poster(s).

26.3 Hours of Work

26.3.1 As provided in Article 3 (commencing at section 1810), Chapter 1, Part 7, Division 2, of the Labor Code, eight (8) hours of labor shall constitute a legal day of work. The time of service of any worker employed at any time by Developer or by any Subcontractor on any subcontract under the Contract Documents upon the Work or upon any part of the Work contemplated by the Contract Documents shall be limited and restricted by Developer to eight (8) hours per day, and forty (40) hours during any one week, except as hereinafter provided. Notwithstanding the provisions hereinabove set forth, Work performed by employees of Developer in excess of eight (8) hours per day and forty (40) hours during any one week, shall be permitted upon this public work upon compensation for all hours worked in excess of eight (8) hours per day at not less than one and one-half times the basic rate of pay.

26.3.2 Developer shall keep and shall cause each Subcontractor to keep an accurate record showing the name of and actual hours worked each calendar day and each calendar week by each worker employed by Developer in connection with the Work or any part of the Work contemplated by the Contract Documents. The record shall be kept open at all reasonable hours to the inspection of District and to the Division of Labor Standards Enforcement of the DIR.

26.3.3 Pursuant to Labor Code section 1813, Developer shall, as a penalty, forfeit the statutory amount (believed by the District to be currently twenty-five dollars ($25)) to the District for each worker employed in the execution of the Contract Documents by Developer or by any Subcontractor for each calendar day during which a worker is required or permitted to work more than eight (8) hours in any one calendar day and forty (40) hours in any one calendar

week in violation of the provisions of Article 3 (commencing at section 1810), Chapter 1, Part 7, Division 2, of the Labor Code.

26.3.4 Any Work necessary to be performed after regular working hours, or on Sundays or other holidays shall be performed without additional expense to the District.

26.4 Payroll Records

26.4.1 Developer shall upload, and shall cause each Subcontractor performing any portion of the Work under this Contract to upload, an accurate and complete certified payroll record ("CPR") electronically using DIR's eCPR System by uploading the CPRs by electronic XML file or entering each record manually using the DIR's iform (or current form) online on a weekly basis and within ten (10) days of any request by the District or Labor Commissioner at http://www.dir.ca.gov/Public-Works/Certified/Payroll-Reporting.html or current application and URL, showing the name, address, social security number, work classification, straight time, and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed by the Developer and/or each Subcontractor in connection with the Work.

26.4.2 The CPRs enumerated hereunder shall be filed directly with the DIR on a weekly basis or to the requesting party, whether the District or DIR, within ten (10) days after receipt of each written request. The CPRs from the Developer and each Subcontractor for each week shall be provided on or before ten (10) days after the end of the Sunday to Saturday conventional week covered by the CPRs. District may not make any payment to Developer until:

26.4.2.1 The Developer and/or its Subcontractor(s) provide CPRs acceptable to the District and DIR.

26.4.2.2 Any delay in Developer and/or its Subcontractor(s) providing CPRs to the District or DIR in a timely manner may directly delay the District's review and/or audit of the CPRs and Developer's payment.

26.4.3 All CPRs shall be available for inspection at all reasonable hours at the principal office of Developer on the following basis:

26.4.3.1 A certified copy of an employee's CPR shall be made available for inspection or furnished to the employee or his/her authorized representative on request.

26.4.3.2 CPRs shall be made available for inspection or furnished upon request or as required by regulation to a representative of the District, Division of Labor Standards Enforcement, Division of Apprenticeship Standards, and/or the DIR.

26.4.3.3 CPRs shall be made available upon request by the public for inspection or copies thereof made; provided, however, that a request by the public shall be made through the District, Division of Apprenticeship Standards, or the Division of Labor Standards

Enforcement. If the requested CPRs have not been provided pursuant to the provisions herein, the requesting party shall, prior to being provided the records, reimburse the costs of preparation by Developer, Subcontractors, and the entity through which the request was made. The public shall not be given access to the records at the principal office of Developer.

26.4.4 Any copy of records made available for inspection as copies and furnished upon request to the public or any public agency by District, Division of Apprenticeship Standards, Division of Labor Standards Enforcement, or DIR shall be marked or obliterated in such a manner as to prevent disclosure of an individual's name, address, and social security number. The name and address of Developer awarded the Project under the Contract Documents or performing under the Contract Documents shall not be marked or obliterated.

26.4.5 Developer shall inform District of the location of the records enumerated hereunder, including the street address, city, and county, and shall, within five (5) working days of a change in location of the records, provide a notice of change of location and address.

26.4.6 In the event of noncompliance with the requirements of this section, Developer shall have ten (10) days in which to comply subsequent to receipt of written notice specifying in what respects Developer must comply with this section. Should noncompliance still be evident after the ten (10) day period, Developer shall, as a penalty, forfeit up to one hundred dollars ($100) to District for each calendar day, or portion thereof, for each worker, until strict compliance is effectuated. Upon the request of the Labor Commissioner, these penalties shall be withheld from Tenant Improvement Payments then due.

26.5 [Reserved]

26.6 Apprentices

26.6.1 Developer acknowledges and agrees that, if the Contract Documents involve a dollar amount greater than or a number of working days greater than that specified in Labor Code section 1777.5, then this Contract is governed by the provisions of Labor Code Section 1777.5 and 29 CFR part 5. It shall be the responsibility of Developer to ensure compliance with this Article and with Labor Code section 1777.5 for all apprenticeship occupations.

26.6.2 Apprentices of any crafts or trades may be employed and, when required by Labor Code section 1777.5, shall be employed provided they are properly registered in full compliance with the provisions of the Labor Code.

26.6.3 Every apprentice shall be paid the standard wage paid to apprentices under the regulations of the craft or trade at which he/she is employed, and shall be employed only at the work of the craft or trade to which she/he is registered.

26.6.4 Only apprentices, as defined in section 3077 of the Labor Code, who are in training under apprenticeship standards and written apprentice agreements under Chapter 4 (commencing at section 3070), Division 3, of the

Labor Code, are eligible to be employed. The employment and training of each apprentice shall be in accordance with the provisions of the apprenticeship standards and apprentice agreements under which he/she is training.

26.6.5 Pursuant to Labor Code section 1777.5, if that section applies to this Contract as indicated above, Developer and any Subcontractors employing workers in any apprenticeable craft or trade in performing any Work under this Contract shall apply to the applicable joint apprenticeship committee for a certificate approving the Developer or Subcontractor under the applicable apprenticeship standards and fixing the ratio of apprentices to journeymen employed in performing the Work.

26.6.6 Pursuant to Labor Code section 1777.5, if that section applies to this Contract as indicated above, Developer and any Subcontractor may be required to make contributions to the apprenticeship program.

26.6.7 If Developer or Subcontractor willfully fails to comply with Labor Code section 1777.5, then, upon a determination of noncompliance by the Administrator of Apprenticeship, it shall:

26.6.7.1 Be denied the right to bid on any subsequent project for one (1) year from the date of such determination.

26.6.7.2 Forfeit, as a penalty, to District the full amount stated in Labor Code section 1777.7. Interpretation and enforcement of these provisions shall be in accordance with the rules and procedures of the California Apprenticeship Council and under the authority of the Chief of the Division of Apprenticeship Standards.

26.6.7.3 Developer and all Subcontractors shall comply with Labor Code section 1777.6, which section forbids certain discriminatory practices in the employment of apprentices.

26.6.7.4 Developer shall become fully acquainted with the law regarding apprentices prior to commencement of the Work. Special attention is directed to sections 1777.5, 1777.6, and 1777.7 of the Labor Code, and Title 8, California Code of Regulations, Section 200 et seq. Questions may be directed to the State Division of Apprenticeship Standards, 455 Golden Gate Avenue, 9th Floor, San Francisco, California 94102.

26.7 Skilled and Trained Workforce

26.7.1 Developer and its subcontractors at every tier hereby provides an enforceable commitment to comply with Public Contract Code section 2600 et seq., which requires use of a skilled and trained workforce to perform all work on the Contract or Project that falls within an apprenticeable occupation in the building and construction trades.

26.7.1.1 "Apprenticeable Occupation" means an occupation for which the Chief of the Division of Apprenticeship Standards of the Department of Industrial Relations ("Chief") had approved an apprenticeship

program pursuant to Section 3075 of the Labor Code before January 1, 2014.

26.7.1.2 "Skilled and Trained Workforce" means a workforce that meets all of the following conditions:

26.7.1.2.1 All of the workers are either skilled journeypersons or apprentices registered in an apprenticeship program approved by the Chief.

26.7.1.2.2 That, for the applicable dates, either (A) the number of the skilled journeypersons employed to perform work on the Contract or Project by the Developer or its subcontractors at every tier are graduates of an apprenticeship program for the applicable occupation that was either approved by the Chief pursuant to Labor Code section 3075 or located outside California and approved for federal purposes pursuant to the apprenticeship regulations adopted by the federal Secretary of Labor, or (B) the hours of work performed by skilled journeypersons who have graduated from an approved apprenticeship program meet at least the percentages set forth in the following chart:

APPLICABLE DATES	% REQUIREMENT	EXCLUDED OCCUPATIONS
1/1/16 – 12/31/17	At least 30%	Teamster – no percentage requirement.
1/1/18 – 12/31/18	At least 40%	Teamster – no percentage requirement. Acoustical installer, bricklayer, carpenter, cement mason, drywall installer or lather, marble mason, finisher, or setter, modular furniture or systems installer, operating engineer, pile driver, plasterer, roofer or waterproofer, stone mason, surveyor, terrazzo worker or finisher, and tile layer, setter, or finisher – at least 30% for each.
1/1/19 – 12/31/19	At least 50%	
1/1/20 – 12/31/20	At least 60%	

26.7.1.2.3 For an apprenticeable occupation in which no apprenticeship program has been approved by the Chief before January 1, 1995, up to one-half of the above graduation percentage requirements set forth in the above chart may be satisfied by skilled journeypersons who commenced working in the apprenticeable occupation before the Chief's approval of an apprenticeship program for that occupation in the county in which the Project is located.

26.7.1.2.4 The contractor or subcontractor need not meet the apprenticeship graduation requirements if:

26.7.1.2.4.1 During a calendar month, the Developer or subcontractor employs skilled journeypersons to perform fewer than 10 hours of work on the Contract or Project; or

26.7.1.2.4.2 The subcontractor was not a listed subcontractor under Public Contract Code section 4104 or a substitute for a listed subcontractor, and the subcontract does not exceed one-half of one percent (0.5%) of the price of the prime contract.

26.7.1.3 "Skilled Journeyperson" means a worker who either:

26.7.1.3.1 Graduated from an apprenticeship program for the applicable occupation that was approved by the Chief or located outside of California and approved for federal purposes pursuant to the apprenticeship regulations adopted by the federal Secretary of Labor; or

26.7.1.3.2 Has at least as many hours of on-the-job experience in the applicable occupation as would be required to graduate from an apprenticeship program for the applicable occupation that is approved by the Chief.

26.7.2 Developer and its subcontractors will demonstrate its compliance with the Skilled and Trained Workforce requirements by either of the following:

26.7.2.1 Provide monthly reports to the District demonstrating that the Developer and its subcontractors are complying with the requirements of Public Contract Code section 2600 et seq., which shall be a public record under California Public Records Act, Government Code section 6250 et seq.; or

26.7.2.2 Provide evidence that Developer and its subcontractors have agreed to be bound by: (1) a project labor agreement entered into by the District that binds all contractors and all its subcontractors at every tier performing work on the Project to use a skilled and trained workforce; (2) the extension or renewal of a project labor agreement entered into by the District prior to January 1, 2017; or (3) a project labor agreement that binds all contractors and all its subcontractors at every tier performing work on the Project to use a skilled and trained workforce.

26.8 Non-Discrimination

26.8.1 Developer herein agrees to comply with the provisions of the California Fair Employment and Housing Act as set forth in part 2.8 of division 3 of the California Government Code, commencing at section 12900; the Federal Civil Rights Act of 1964, as set forth in Public Law 88-352, and all amendments thereto; Executive Order 11246; and all administrative rules and regulations found to be applicable to Developer and Subcontractor.

26.8.2 Special requirements for Federally Assisted Construction Contracts: During the performance of the requirement of the Contract Documents, Developer agrees to incorporate in all subcontracts the provisions set forth in Chapter 60-1.4(b) of Title 41 published in Volume 33 No. 104 of the Federal Register dated May 28, 1968.

26.9 Labor First Aid

Developer shall maintain emergency first aid treatment for Developer's laborers and mechanics on the Project which complies with the Federal Occupational Safety and Health Act of 1970 (29 U.S.C. § 651 et seq.) and the California Occupational Safety and Health Act of 1973 (Lab. Code, § 6300 et seq.; 8 Cal. Code of Regs., § 330 et seq.).

27. [Reserved]

28. Miscellaneous

28.1 Assignment of Antitrust Actions

Although this project may not have been formally bid, the following provisions may apply:

28.1.1 Section 7103.5(b) of the Public Contract Code states:

In entering into a public works contract or subcontract to supply goods, services, or materials pursuant to a public works contract, the contractor or subcontractor offers and agrees to assign to the awarding body all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 (commencing with Section 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to the public works contract or the subcontract. This assignment shall be made and become effective at the time the awarding body tenders final payment to the contractor, without further acknowledgment by the parties.

28.1.2 Section 4552 of the Government Code states in pertinent part:

In submitting a bid to a public purchasing body, the bidder offers and agrees that if the bid is accepted, it will assign to the purchasing body all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 (commencing with Section 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, materials, or services by the bidder for sale to the purchasing body pursuant to the bid. Such assignment shall be made and become effective at the time the purchasing body tenders final payment to the bidder.

28.1.3 Section 4553 of the Government Code states in pertinent part:

If an awarding body or public purchasing body receives, either through judgment or settlement, a monetary recovery for a cause of action assigned under this chapter, the assignor shall be entitled to receive reimbursement for actual legal costs incurred and may, upon demand, recover from the public body any portion of the recovery, including treble damages, attributable to overcharges that were paid by the assignor but were not paid by the public body as part of the bid price, less the expenses incurred in obtaining that portion of the recovery.

28.1.4 Section 4554 of the Government Code states in pertinent part:

Upon demand in writing by the assignor, the assignee shall, within one year from such demand, reassign the cause of action assigned under this part if the assignor has been or may have been injured by the violation of law for which the cause of action arose and (a) the assignee has not been injured thereby, or (b) the assignee declines to file a court action for the cause of action.

28.1.5 Under this Article, "public purchasing body" is District and "bidder" is Developer.

28.2 Excise Taxes

If, under Federal Excise Tax Law, any transaction hereunder constitutes a sale on which a Federal Excise Tax is imposed and the sale is exempt from such Federal Excise Tax because it is a sale to a State or Local Government for its exclusive use, District, upon request, will execute documents necessary to show (1) that District is a political subdivision of the State for the purposes of such exemption, and (2) that the sale is for the exclusive use of District. No Federal Excise Tax for such materials shall be included in any Guaranteed Maximum Price.

28.3 Taxes

Guaranteed Maximum Price is to include any and all applicable sales taxes or other taxes that may be due in accordance with section 7051 et seq. of the Revenue and Taxation Code, Regulation 1521 of the State Board of Equalization or any other tax code that may be applicable.

28.4 Shipments

All shipments must be F.O.B. destination to Site or approved sites, as indicated in the Contract Documents. There must be no charge for containers, packing, unpacking, drayage, or insurance. The total Guaranteed Maximum Price shall be all inclusive (including sales tax) and no additional costs of any type will be considered.

28.5 Compliance with Government Reporting Requirements

If this Contract is subject to federal or other governmental reporting requirements because of federal or other governmental financing in whole or in part for the Project of which it is part, or for any other reason, Developer shall comply with those reporting requirements at the request of the District at no additional cost.

[END OF DOCUMENT]

EXHIBIT D-1

SPECIAL CONDITIONS

Attached are the special terms and conditions for the Project.

EXHIBIT D-1

SPECIAL CONDITIONS

1. Mitigation Measures

Not Used.

2. Owner Controlled Insurance Program

District has elected to implement an Owner Controlled Insurance Program ("OCIP") under the Statewide Educational Wrap Up Program ("SEWUP"). Developer and all Subcontractors shall comply with all terms and conditions of the SEWUP Contractual Provisions attached hereto and incorporated herein.

[SEWUP Contractual Provisions Start on Page 6]

3. Permits, Certificates, Licenses, Fees, Approvals

3.1. Payment for Permits, Certificates, Licenses, Fees, Approvals.

As required in the General Construction Provisions, the Developer shall secure and pay for all permits, licenses and certificates necessary for the prosecution of the Work with the exception of the following:

DSA inspector fees, soils testing, special inspections, and IOR fees.

With respect to the above listed items, Developer shall be responsible for securing such items; however, District will be responsible for payment of these charges or fees, but only for the actual and direct costs (without markup or additional fees). Developer shall notify the District of the amount due with respect to these items and to whom the amount is payable. Developer shall provide the District with an invoice and receipt with respect to such charges or fees. In the alternative, District may pay such costs directly to DSA.

4. Disabled Veterans Business Enterprise

This Project uses or may plan to use funds allocated pursuant to the State of California School Facility Program for the construction and/or modernization of school buildings. Therefore, Section 17076.11 of the Education Code requires the District to have a participation goal for disabled veteran business enterprises ("DVBE") of at least three percent (3%), per year, of the overall dollar amount expended each year by the District on projects that receive state funding and the Developer must submit the Disabled Veteran Business Enterprise Participation Certification to the District with its executed Agreement, identifying the steps Developer took to solicit DVBE participation in conjunction with this Contract.

5. Modernization Projects

5.1. Access.

Access to the school buildings and entry to buildings, classrooms, restrooms, mechanical rooms, electrical rooms, or other rooms, for construction purposes, must be coordinated with District and onsite District personnel before Work is to start.

Unless agreed to otherwise in writing, only a school custodian will be allowed to unlock and lock doors in existing building(s). The custodian will be available only while school is in session. If a custodian is required to arrive before 7:00 a.m. or leave after 3:30 p.m. to accommodate Developer's Work, the overtime wages for the custodian will be paid by the Developer, unless at the discretion of the District, other arrangements are made in advance.

5.2. Master Key.

Upon request, the District may, at its own discretion, provide a master key to the school site for the convenience of the Developer. The Developer agrees to pay all expenses to re-key the entire school site and all other affected District buildings if the master key is lost or stolen, or if any unauthorized party obtains a copy of the key or access to the school.

5.3. Maintaining Services.

The Developer is advised that Work is to be performed in spaces regularly scheduled for instruction. Interruption and/or periods of shutdown of public access, electrical service, water service, lighting, or other utilities shall be only as arranged in advance with the District. Developer shall provide temporary services to all facilities interrupted by Developer's Work.

5.4. Maintaining Utilities.

The Developer shall maintain in operation during duration of Contract, drainage lines, storm drains, sewers, water, gas, electrical, steam, and other utility service lines within working area.

5.5. Confidentiality.

Developer shall maintain the confidentiality of all information, documents, programs, procedures and all other items that Developer encounters while performing the Work. This requirement shall be ongoing and shall survive the expiration or termination of this Contract and specifically includes, without limitation, all student, parent, and employee disciplinary information and health information.

5.6. Work during Instructional Time.

Developer affirms that Work may be performed during ongoing instruction in existing facilities. If so, Developer agrees to cooperate to the best of its ability to minimize any disruption to school operations and any use of school facilities by the public up to, and including, rescheduling specific work activities, at no additional cost to District.

5.7. No Work during Student Testing.

Developer shall, at no additional cost to the District and at the District's request, coordinate its Work to not disturb District students including, without limitation, not performing any Work when students at the Site are taking State or Federally-required tests.

6. Substitution for Specified Items

6.1. Whenever in the Specifications any materials, process, or article is indicated or specified by grade, patent, or proprietary name, or by name of manufacturer, that Specification shall be deemed to be followed by the words "or equal." Developer may, unless otherwise stated, offer any material, process, or article that shall be substantially equal or better in every respect to that so indicated or specified.

6.1.1. If the material, process, or article offered by Developer is not, in the opinion of the District, substantially equal or better in every respect to that specified, then Developer shall furnish the material, process, or article specified in the Specifications without any additional compensation or change order.

6.1.2. This provision shall not be applicable with respect to any material, product, thing or service for which District made findings and gave notice in accordance with Public Contract Code section 3400(c); therefore, Developer shall not be entitled to request a substitution with respect to those materials, products or services.

6.2. A request for a substitution shall be submitted as follows:

6.2.1. Developer shall notify the District in writing of any request for a substitution at least ten (10) days prior to proposal opening as indicated in the Request for Qualifications and Proposals.

6.2.2. Requests for Substitutions after award of the Contract shall be submitted within thirty-five (35) days of the date of the Notice to Proceed with Construction.

6.3. Within 35 days after the date of the Notice to Proceed with Construction, Developer shall provide data substantiating a request for substitution of "an equal" item, including but not limited to the following:

6.3.1. All variations of the proposed substitute from the material specified including, but not limited to, principles of operation, materials, or construction finish, thickness or gauge of materials, dimensions, weight, and tolerances;

6.3.2. Available maintenance, repair or replacement services;

6.3.3. Increases or decreases in operating, maintenance, repair, replacement, and spare parts costs;

6.3.4. Whether or not acceptance of the substitute will require other changes in the Work (or in work performed by the District or others under Contract with the District); and

6.3.5. The time impact on any part of the Work resulting directly or indirectly from acceptance of the proposed substitute.

6.4. No substitutions shall be made until approved, in writing, by the District. The burden of proof as to equality of any material, process, or article shall rest with Developer. The Developer warrants that if substitutes are approved:

6.4.1. The proposed substitute is equal or superior in all respects to that specified, and that such proposed substitute is suitable and fit for the intended

purpose and will perform adequately the function and achieve the results called for by the general design and the Contract Documents;

6.4.2. The Developer provides the same warranties and guarantees for the substitute that would be provided for that specified;

6.4.3. The Developer shall be fully responsible for the installation of the substitute and any changes in the Work required, either directly or indirectly, because of the acceptance of such substitute, with no increase in Contract Price or Contract Time. Incidental changes or extra component parts required to accommodate the substitute will be made by the Developer without a change in the Contract Price or Contract Time;

6.4.4. The Developer shall be responsible for any re-design costs occasioned by District's acceptance and/or approval of any substitute; and

6.4.5. The Developer shall, in the event that a substitute is less costly than that specified, credit the District with one hundred percent (100%) of the net difference between the substitute and the originally specified material. In this event, the Developer agrees to execute a deductive Change Order to reflect that credit.

6.5. In the event Developer furnishes a material, process, or article more expensive than that specified, the difference in the cost of that material, process, or article so furnished shall be borne by Developer.

6.6. In no event shall the District be liable for any increase in Contract Price or Contract Time due to any claimed delay in the evaluation of any proposed substitute or in the acceptance or rejection of any proposed substitute.

6.7. Developer shall be responsible for any costs the District incurs for professional services, DSA fees, or delay to the Project Schedule, if applicable, while DSA reviews changes for the convenience of Developer and/or to accommodate Developer's means and methods. District may deduct those costs from any amounts owing to the Developer for the review of the request for substitution, even if the request for substitution is not approved. District, at its sole discretion, shall deduct from the payments due to and/or invoice Developer for all the professional services and/or DSA fees or delay to the Project Schedule, if applicable, while DSA reviews changes for the convenience of Developer and/or to accommodate Developer's means and methods.

7. Federal Funds

Not Used.

OCIP PROVISIONS FOLLOW:

Exhibit _____

OWNER CONTROLLED INSURANCE PROGRAM (OCIP)

1.1 INTRODUCTION

The District, hereinafter called the "Owner" has elected, at its sole discretion, to implement an Owner Controlled Insurance Program ("OCIP") under the Statewide Educational Wrap Up Program ("SEWUP"). The SEWUP Joint Powers Authority ("JPA") will be providing the OCIP on behalf of the Owner. All terms and conditions of the SEWUP Contractual Provisions will apply during the term of the contract.

The OCIP will be primary to other valid and collectable insurance for the owner and enrolled parties in the program. The SEWUP JPA will provide Workers' Compensation, Employer's Liability, General & Excess Liability, Contractor's Pollution Liability, and Builder's Risk insurance for all Enrolled Contractors (and their Enrolled Subcontractors of every tier) and other designated parties for work performed at the Project Site (hereinafter called "Project"). The Owner agrees to pay all premiums associated with the OCIP, unless otherwise stated in this section and in other contract documents.

Insurance coverage provided under the OCIP is limited in scope and specific to Work performed after the inception date of enrollment into the OCIP. Labor and ongoing operations related to offsite locations are not covered by the OCIP. In addition to any insurance provided by the Owner, all Contractors/Subcontractors will be responsible for providing certain insurance as specified in section 1.7. The Owner recommends that Contractors discuss the OCIP with their insurance agents, brokers or consultants to assure that other proper coverages are maintained, prior to contract acceptance.

Keenan & Associates, hereinafter called "Program Administrator", shall administer the OCIP on behalf of the SEWUP JPA. At all times, all Contractors/Subcontractors, shall (a) cooperate with Owner, Program Administrator, and all OCIP insurers, as applicable, and their respective consultants, agents and representatives, in its or their administration of the OCIP and all other terms and conditions described herein and (b) comply with the terms, conditions, warranties, and subjectivities of the insurance policies provided pursuant to the OCIP, including, without limitation, any and all directives and requirements of Owner's and the OCIP insurers' respective consultants, agents and representatives, including, without limitation, any directive or requirement relating to loss control, and quality control, and the closure to Owner's satisfaction of open items on any and all quality control checklists and inventories.

A. Participation in the OCIP

Participation in the OCIP is mandatory but not automatic. Each Eligible Contractor/Subcontractor must follow the guidelines, as specified in section 1.5.

Enrollment (Definition): An Eligible Contractor/Subcontractor is considered Enrolled once required documents are received, reviewed and processed by the OCIP Program Administrator to the insurer. (See Sections 1.7 and 1.8)

Contractor (Definition): Includes all vendors, suppliers, businesses, persons, or entities and entities which the Owner has engaged directly by contract to perform services relating to the Project.

Subcontractor (Definition): Includes all vendors' suppliers, businesses, and other persons or entities that have been engaged by a Contractor to perform, or assist with the performance of, services relating to the Project.

Eligible (Definition): Includes all Contractors/Subcontractors providing direct labor on the Project, and excludes Ineligible Contractors, as defined below. Temporary labor services and leasing companies are to be treated as Eligible Contractors.

Ineligible (Definition): Ineligible (Definition): It is not the intent to insure (but is not limited to): consultants; suppliers; abatement and/or removal of hazardous materials; vendors; materials dealers; surveyors; consultants; guard services; non-construction janitorial services; and truckers, including

trucking to the Project where delivery is the only scope of work performed; contractors subbing out installation who are not performing labor on the project site; and contractors performing landscape maintenance (though landscape work itself is covered). Ineligible parties are required to ensure that any eligible subcontractors who provide on-site labor comply with the OCIP Enrollment **Any questions regarding a Contractor's status as "Eligible" or "Ineligible" should be referred by written request to Owner and approved by the Program Administrator**

EACH CONTRACTOR/SUBCONTRACTOR MUST INCLUDE THIS DOCUMENT WITH THEIR BID SPECIFICATIONS TO ANY AND ALL SUBCONTRACTORS. Any contractor/subcontractor's failure to comply with the OCIP Administrator and all OCIP requirements shall be considered non-compliant under the contract.

Enrollment of each Contractor's eligible Subcontractors is mandatory. Contractor shall notify Owner and the Program Administrator in writing of the identity of each Subcontractor, and shall cause each Subcontractor to notify the Program Administrator in writing of the identity of each of its Sub-subcontractors, prior to such parties' commencement of their portion of the Work and prior to their entry onto the Project. Subcontractors shall not be deemed enrolled until the Program Administrator and OCIP insurers receive and approve a completed Contract Enrollment Form, for each awarded contract. Enrollment is required prior to commencement of on-site activities but no contractor shall be enrolled sooner than 30 days prior to their start date. Each Subcontractor shall be solely responsible for any and all losses, damages, claims, liabilities, and suits arising out of such Subcontractor's failure to enroll, or delay in enrolling, any of its Subcontractors.

Unless otherwise directed by the Owner, Ineligible Contractors and Subcontractors will be required to maintain their own insurance for both on-site and off-site activities and will be required to participate in the Project Safety Program (See Section 1.16). Minimum Insurance and endorsement requirements are located in Section 1.7 & 1.8.

B. Project Site and Offsite Premises

Coverages provided by the OCIP are **Project Site** specific. The Project Site shall be designated by the Owner. The Project Site consists of any and all projects that are endorsed to this policy, which includes the:

1. Ways and means adjoining the endorsed project site.
2. Adjacent locations to the endorsed projects sites where incidental operations are being performed, excluding permanent locations.

With the exception of 1 and 2 mentioned above, off-site locations, labor and ongoing operations are not covered by the OCIP. It will be the responsibility of each Contractor/Subcontractor to maintain off-site insurance, as identified in Section 1.7, which specifies coverage types and minimum limits. Contractor/Subcontractor will promptly furnish to the Owner, or its designated representative, Certificates of Insurance evidencing that all required insurance is in force.

1.2 PREQUALIFICATION & COST IDENTIFICATION

A. Contractor Pre-Qualification

Pursuant to Government Code Section 4420.5, Bidders must meet certain minimum standards in order to bid on the Owners' Project. The following qualification standards apply to ALL Bidding Contractors at time of bid opening:

1. **Have an average Workers' Compensation Experience Modification Rate (EMR) of 1.25 or less over the last five (5) years.**
2. **Have Zero (0) Serious and Willful violations (Labor Code Section 6300) against them in the past five (5) years**

3. **Provide evidence of an Injury and Illness Prevention Program (IIPP). Evidence is required to be submitted after bid opening and prior to bid award.**

FAILURE TO MEET THESE MINIMUM STANDARDS SHALL DISQUALIFY THE BIDDER.

B. Contractor Insurance Cost Identification

Contractor's base bid shall exclude all costs for insurance coverages provided under the OCIP. If insurance cost is not removed, the bidder may not qualify as the lowest responsive bidder. The Bidder declares under penalty of perjury under California law, that the base bid excludes any costs relating to any insurance coverages afforded under the OCIP and that each subcontractor to the Bidder has similarly excluded costs for any insurance coverage afforded under the OCIP.

C. Change Order Pricing

All Contractors/Subcontractors declare, under penalty of perjury under California law, that the change order is priced to exclude any costs relating to any insurance coverage afforded under the OCIP.

1.3 OWNER-PROVIDED INSURANCE COVERAGES

CONTRACTOR/SUBCONTRACTOR SHOULD REFER TO THE ACTUAL POLICIES FOR DETAILS CONCERNING COVERAGE, EXCLUSIONS, AND LIMITATIONS. IN THE EVENT OF ANY CLAIM OR QUESTION REGARDING COVERAGE PROVIDED BY THE OCIP, THE ORIGINAL POLICIES WILL PREVAIL AS THE SOLE BINDING AGREEMENT. OCIP POLICIES AND PROJECT INSURANCE MANUAL ARE AVAILABLE UPON WRITTEN REQUEST TO THE PROGRAM ADMINISTRATOR.

OCIP coverage applies only to Work performed under the contract at the Project (see Section 1.1, B for definition). All Contractors must provide their own insurance for Automobile Liability and off-site locations, labor, and operations.

Such policies or programs may be amended from time to time, and the terms of such policies or programs, as amended, are incorporated herein by reference.

The Contractors/Subcontractors enrolled in the OCIP agree that the OCIP policies' limits of liability, coverage terms and conditions shall determine the scope of coverage provided by the OCIP. As of March 2018, 100% of the limits are available with an estimated $800 Million in construction values to be insured.

A. Workers' Compensation and Employer's Liability Insurance, will be provided in accordance with applicable state laws, to all Enrolled Contractors/Subcontractors, each as named insured, and issued an individual policy) reflecting the following Limits of Liability:

Workers' Compensation:

- California Statutory Benefits

Employer's Liability:

- $1,000,000 Bodily Injury each Accident
- $1,000,000 Bodily Injury by Disease – Policy Limit
- $1,000,000 Bodily Injury by Disease – Each Employee

1. Deductible: None

2. Exclusions: The known exclusions for this coverage are set forth on the table attached as

KNOWN OCIP POLICY EXLUSIONS	
Workers Compensation	**General Liability**
Bodily Injury Outside US or Canada	Aircraft, Auto or Watercraft
Bodily Injury To Any Member of Flying Crew	Asbestos
Bodily Injury To Person Subject To Federal Workers' Compensation	Certain Exclusions To Medical Payments Coverage
Bodily Injury To Person Subject To Occupational Disease Laws	Certain Exclusions To Personal and Advertising Injury Liability
Contractual Liability	Certified Acts of Terrorism
Employees Knowingly Employed Illegally	Contractual Liability (Limited Coverage Provided)
Employment Related Practices	Employers Liability
Intentional or Aggravated Bodily Injury	Employment Related Practices
Obligations Imposed By Disability Benefits or Any Similar Law	Expected or Intended Injury
Obligations Imposed By Occupational Disease Laws	Exterior Insulation and Finish Systems (EIFS) "Subject to Installation Requ
Obligations Imposed By Unemployment Compensation Laws	Fungi Or Bacteria
Obligations Imposed By Workers' Compensation Laws	Lead
State or Federal Law Violation Fines, Penalties	Mobile Equipment
Builders Risk	Nuclear
Asbestos	Personal and Advertising Bodily Injury
Certain Offsite Property	Pollution
Certain Release, Discharge, Escape, or Dispersal Of Contaminants	Prior Continuous, or Progressively Deteriorating Injury or Damage
Certified Acts of Terrorism (Can be added)	Professional Liability
Cessation of Work	Recall of Products, Work Or Impaired Property
Contractor's Tools, Machinery, Plans, Equipment	Silica or Silica Mixed Dust
Cost of Making Good	Violation of Statutes Governing Collecting, Transmitting Information
Damage To Existing Property (Can be added)	Violation of Statutes Governing Email, Fax, Phone Calls
Damage While Testing Prototype or Used Machinery/Equipment	War
Damages, Fines, Penalties At Government Agency or Court Order	Workers Compensation and Similar Laws
Disappearance or When Revealed By Inventory Shortage Alone	**Contractors Pollution Liability**
Earth Movement (Optional sublimits can be added)	Auto, Aircraft, Vessel Or Rolling Stock
Electrical, Magnetic, or Errors Related To Electronic Records	Claims Between Certain Insured's
Financial Accounts, Instruments, Stamps, Deeds, Precious Material	Contractual Liability
Flood (Optional sublimits can be added)	Damage To Property
Foreign Terrorism	Disposal Sites
Infidelity, Dishonesty, Fraudulent Activity Of Insured	Employment Related Practices
Land, Values of Land, Cut, & Fill etc. Prior to Project Commencement	Fines, Penalties, and Treble Damages
Loss Under Any Manufacturer or Supplier Guarantee/Warranty	Hazardous Materials Facility
Normal Subsidence	Intentional Acts
Nuclear	Nuclear
Offshore Or Barrier Island Property	Other Entities
Property That Stores, Processes, or Handles Radioactive Materials	Pre-Existing Conditions
Rolling Stock, Aircraft, Watercraft	Products
Software Loss, unless results from an Open Peril	Related Entities and Individuals
Standing Timber, Growing Crops, Animals	Transportation Of Pollutants
Vehicles or Equipment Licensed For Highway Use	War
War and Military Action	Workers Compensation and Similar Laws

. This is a summary and may not be exhaustive. The policy language may contain additional exclusionary language, limitations or carve-backs that are not identified on the table. It is the responsibility of the Contractor/Subcontractor to review the policy for the complete details of all exclusions.

3. Policy Term: The master policy effective date is October 1, 2017. The policy term is one year, with automatic one-year renewals until the Project is completed. The policy is intended to remain in effect for duration of the contractor's contractual work. Warranty work and post contract repair work is excluded. Each Contractor/Subcontractor is insured under the policy for the length of its work at the Project.

B. General and Excess Liability Insurance is written on an "Occurrence" form under master liability policies. Certificates of Insurance will be provided to all enrolled Contractors/Subcontractors as named insured, with the total limits of liability reflecting the following:

- $ 75,000,000 Bodily Injury and Property Damage Liability
- $145,000,000 General Aggregate
- $ 75,000,000 Products and Completed Operations
- 10 Years Completed Operations

1. Deductible: None

2. Exclusions: The known exclusions for this coverage are set forth on the table attached as

KNOWN OCIP POLICY EXLUSIONS	
Workers Compensation	**General Liability**
Bodily Injury Outside US or Canada	Aircraft, Auto or Watercraft
Bodily Injury To Any Member of Flying Crew	Asbestos
Bodily Injury To Person Subject To Federal Workers' Compensation	Certain Exclusions To Medical Payments Coverage
Bodily Injury To Person Subject To Occupational Disease Laws	Certain Exclusions To Personal and Advertising Injury Liability
Contractual Liability	Certified Acts of Terrorism
Employees Knowingly Employed Illegally	Contractual Liability (Limited Coverage Provided)
Employment Related Practices	Employers Liability
Intentional or Aggravated Bodily Injury	Employment Related Practices
Obligations Imposed By Disability Benefits or Any Similar Law	Expected or Intended Injury
Obligations Imposed By Occupational Disease Laws	Exterior Insulation and Finish Systems (EIFS) "Subject to Installation Requ
Obligations Imposed By Unemployment Compensation Laws	Fungi Or Bacteria
Obligations Imposed By Workers' Compensation Laws	Lead
State or Federal Law Violation Fines, Penalties	Mobile Equipment
Builders Risk	Nuclear
Asbestos	Personal and Advertising Bodily Injury
Certain Offsite Property	Pollution
Certain Release, Discharge, Escape, or Dispersal Of Contaminants	Prior Continuous, or Progressively Deteriorating Injury or Damage
Certified Acts of Terrorism (Can be added)	Professional Liability
Cessation of Work	Recall of Products, Work Or Impaired Property
Contractor's Tools, Machinery, Plans, Equipment	Silica or Silica Mixed Dust
Cost of Making Good	Violation of Statutes Governing Collecting, Transmitting Information
Damage To Existing Property (Can be added)	Violation of Statutes Governing Email, Fax, Phone Calls
Damage While Testing Prototype or Used Machinery/Equipment	War
Damages, Fines, Penalties At Government Agency or Court Order	Workers Compensation and Similar Laws
Disappearance or When Revealed By Inventory Shortage Alone	**Contractors Pollution Liability**
Earth Movement (Optional sublimits can be added)	Auto, Aircraft, Vessel Or Rolling Stock
Electrical, Magnetic, or Errors Related To Electronic Records	Claims Between Certain Insured's
Financial Accounts, Instruments, Stamps, Deeds, Precious Material	Contractual Liability
Flood (Optional sublimits can be added)	Damage To Property
Foreign Terrorism	Disposal Sites
Infidelity, Dishonesty, Fraudulent Activity Of Insured	Employment Related Practices
Land, Values of Land, Cut, & Fill etc. Prior to Project Commencement	Fines, Penalties, and Treble Damages
Loss Under Any Manufacturer or Supplier Guarantee/Warranty	Hazardous Materials Facility
Normal Subsidence	Intentional Acts
Nuclear	Nuclear
Offshore Or Barrier Island Property	Other Entities
Property That Stores, Processes, or Handles Radioactive Materials	Pre-Existing Conditions
Rolling Stock, Aircraft, Watercraft	Products
Software Loss, unless results from an Open Peril	Related Entities and Individuals
Standing Timber, Growing Crops, Animals	Transportation Of Pollutants
Vehicles or Equipment Licensed For Highway Use	War
War and Military Action	Workers Compensation and Similar Laws

. This is a summary and may not be exhaustive. The policy language may contain additional exclusionary language, limitations or carve-backs that are not identified on the table. It is the responsibility of the Contractor/Subcontractor to review the policy for the complete details of all exclusions.

3. Policy Term:
   a. The master policy effective date is October 1, 2017. The policy is intended to remain in effect for the length of the Project or the policy end date, whichever comes first.
   b. Ten years Products and Completed Operations coverage.

C. Contractor's Pollution Liability, is written on an "Occurrence" form under a master liability policy. Certificates of Insurance will be provided to all enrolled Contractors/Subcontractors, as named insured, reflecting the following Limits of Liability:

- $5,000,000 Per Occurrence / $5,000,000 Policy Aggregate
- Defense costs included within limits

1. $10,000 Deductible per Occurrence
2. Contractor/Subcontractor shall be liable, at its expense; to the extent claims payable are attributable to their acts or omissions and/or the acts or omissions of its Subcontractors of any tier or any other entity or person for whom it may be responsible. The deductible will apply to each occurrence and must be satisfied prior to payment of the loss. The deductible amount shall not be reimbursed by the OCIP Insurance Program or the District.

3. Exclusions: The known exclusions for this coverage are set forth on the table attached as

KNOWN OCIP POLICY EXLUSIONS	
Workers Compensation	**General Liability**
Bodily Injury Outside US or Canada	Aircraft, Auto or Watercraft
Bodily Injury To Any Member of Flying Crew	Asbestos
Bodily Injury To Person Subject To Federal Workers' Compensation	Certain Exclusions To Medical Payments Coverage
Bodily Injury To Person Subject To Occupational Disease Laws	Certain Exclusions To Personal and Advertising Injury Liability
Contractual Liability	Certified Acts of Terrorism
Employees Knowingly Employed Illegally	Contractual Liability (Limited Coverage Provided)
Employment Related Practices	Employers Liability
Intentional or Aggravated Bodily Injury	Employment Related Practices
Obligations Imposed By Disability Benefits or Any Similar Law	Expected or Intended Injury
Obligations Imposed By Occupational Disease Laws	Exterior Insulation and Finish Systems (EIFS) "Subject to Installation Re
Obligations Imposed By Unemployment Compensation Laws	Fungi Or Bacteria
Obligations Imposed By Workers' Compensation Laws	Lead
State or Federal Law Violation Fines, Penalties	Mobile Equipment
Builders Risk	Nuclear
Asbestos	Personal and Advertising Bodily Injury
Certain Offsite Property	Pollution
Certain Release, Discharge, Escape, or Dispersal Of Contaminants	Prior Continuous, or Progressively Deteriorating Injury or Damage
Certified Acts of Terrorism (Can be added)	Professional Liability
Cessation of Work	Recall of Products, Work Or Impaired Property
Contractor's Tools, Machinery, Plans, Equipment	Silica or Silica Mixed Dust
Cost of Making Good	Violation of Statutes Governing Collecting, Transmitting Information
Damage To Existing Property (Can be added)	Violation of Statutes Governing Email, Fax, Phone Calls
Damage While Testing Prototype or Used Machinery/Equipment	War
Damages, Fines, Penalties At Government Agency or Court Order	Workers Compensation and Similar Laws
Disappearance or When Revealed By Inventory Shortage Alone	**Contractors Pollution Liability**
Earth Movement (Optional sublimits can be added)	Auto, Aircraft, Vessel Or Rolling Stock
Electrical, Magnetic, or Errors Related To Electronic Records	Claims Between Certain Insured's
Financial Accounts, Instruments, Stamps, Deeds, Precious Material	Contractual Liability
Flood (Optional sublimits can be added)	Damage To Property
Foreign Terrorism	Disposal Sites
Infidelity, Dishonesty, Fraudulent Activity Of Insured	Employment Related Practices
Land, Values of Land, Cut, & Fill etc. Prior to Project Commencement	Fines, Penalties, and Treble Damages
Loss Under Any Manufacturer or Supplier Guarantee/Warranty	Hazardous Materials Facility
Normal Subsidence	Intentional Acts
Nuclear	Nuclear
Offshore Or Barrier Island Property	Other Entities
Property That Stores, Processes, or Handles Radioactive Materials	Pre-Existing Conditions
Rolling Stock, Aircraft, Watercraft	Products
Software Loss, unless results from an Open Peril	Related Entities and Individuals
Standing Timber, Growing Crops, Animals	Transportation Of Pollutants
Vehicles or Equipment Licensed For Highway Use	War
War and Military Action	Workers Compensation and Similar Laws

. This is a summary and may not be exhaustive. The policy language may contain additional exclusionary language, limitations or carve-backs that are not identified on the table. It is the responsibility of the Contractor/Subcontractor to review the policy for the complete details of all exclusions.

4. Policy Term: The master policy effective date is October 1, 2017. The policy is intended to remain in effect for the length of the Project or the policy end date, whichever comes first.

D. **Builder's Risk** coverage will be in place during the Course of Construction at the Project. Such insurance shall be written on a repair or replacement cost basis, subject to exclusions, sub limits, property limitations and conditions. Such insurance shall include the interests of the Owner as named insured and enrolled Contractors/Subcontractors as additional insured's. The deductible schedule is as follows:

New Construction & Renovation

Deductible	Number of Buildings or Structures per Project	Total Insured Value (TIV)	Construction Class
$5,000 Deductible:	Projects with Single and Multiple Building(s) or Structure(s)	Up to $15M	• Fire Resistive • Non Combustible • Masonry Concrete
	Projects with Multiple Building(s) or Structure(s)	Up to $10M (No single building or structure greater than $10mm in value)	• Joisted Masonry • Hybrid Construction
	Projects with No Vertical Construction (No Buildings or Structures)		• Grading - Site Prep Only No Vertical Construction
$10,000 Deductible:	Projects with Single and Multiple Building(s) or Structure(s)	$15M to $50M	• Fire Resistive • Non Combustible • Masonry Concrete
	Projects with Single Building or Structure	Up to $25M	• Joisted Masonry • Hybrid Construction • Wood Frame
	Projects with Multiple Building(s) or Structure(s)	Up to $10M (No single building or structure greater than $10mm in value)	• Wood Frame
$25,000* Deductible:**	Projects with Single and Multiple Building(s) or Structure(s)	$50M & above	• Fire Resistive • Non Combustible • Masonry Concrete
	Single Building or Structure Projects	$25M & above	• Joisted Masonry • Hybrid Construction • Wood Frame

*** Structural and Non-Structural Renovation Projects with Single and Multiple Building(s) or Structure(s) – Deductibles are as per above categories, except in the event of Water Damage, where the deductible is $25,000.

1. Contractor/Subcontractors shall be responsible for the applicable deductible. The deductible will apply to each occurrence and must be satisfied prior to payment of the loss. The deductible shall not be reimbursed by the OCIP Insurance Program or the District.

2. Exclusions: The known exclusions for this coverage are set forth on the table attached as

KNOWN OCIP POLICY EXLUSIONS	
Workers Compensation	**General Liability**
Bodily Injury Outside US or Canada	Aircraft, Auto or Watercraft
Bodily Injury To Any Member of Flying Crew	Asbestos
Bodily Injury To Person Subject To Federal Workers' Compensation	Certain Exclusions To Medical Payments Coverage
Bodily Injury To Person Subject To Occupational Disease Laws	Certain Exclusions To Personal and Advertising Injury Liability
Contractual Liability	Certified Acts of Terrorism
Employees Knowingly Employed Illegally	Contractual Liability (Limited Coverage Provided)
Employment Related Practices	Employers Liability
Intentional or Aggravated Bodily Injury	Employment Related Practices
Obligations Imposed By Disability Benefits or Any Similar Law	Expected or Intended Injury
Obligations Imposed By Occupational Disease Laws	Exterior Insulation and Finish Systems (EIFS) "Subject to Installation Req
Obligations Imposed By Unemployment Compensation Laws	Fungi Or Bacteria
Obligations Imposed By Workers' Compensation Laws	Lead
State or Federal Law Violation Fines, Penalties	Mobile Equipment
Builders Risk	Nuclear
Asbestos	Personal and Advertising Bodily Injury
Certain Offsite Property	Pollution
Certain Release, Discharge, Escape, or Dispersal Of Contaminants	Prior Continuous, or Progressively Deteriorating Injury or Damage
Certified Acts of Terrorism (Can be added)	Professional Liability
Cessation of Work	Recall of Products, Work Or Impaired Property
Contractor's Tools, Machinery, Plans, Equipment	Silica or Silica Mixed Dust
Cost of Making Good	Violation of Statutes Governing Collecting, Transmitting Information
Damage To Existing Property (Can be added)	Violation of Statutes Governing Email, Fax, Phone Calls
Damage While Testing Prototype or Used Machinery/Equipment	War
Damages, Fines, Penalties At Government Agency or Court Order	Workers Compensation and Similar Laws
Disappearance or When Revealed By Inventory Shortage Alone	**Contractors Pollution Liability**
Earth Movement (Optional sublimits can be added)	Auto, Aircraft, Vessel Or Rolling Stock
Electrical, Magnetic, or Errors Related To Electronic Records	Claims Between Certain Insured's
Financial Accounts, Instruments, Stamps, Deeds, Precious Material	Contractual Liability
Flood (Optional sublimits can be added)	Damage To Property
Foreign Terrorism	Disposal Sites
Infidelity, Dishonesty, Fraudulent Activity Of Insured	Employment Related Practices
Land, Values of Land, Cut, & Fill etc. Prior to Project Commencement	Fines, Penalties, and Treble Damages
Loss Under Any Manufacturer or Supplier Guarantee/Warranty	Hazardous Materials Facility
Normal Subsidence	Intentional Acts
Nuclear	Nuclear
Offshore Or Barrier Island Property	Other Entities
Property That Stores, Processes, or Handles Radioactive Materials	Pre-Existing Conditions
Rolling Stock, Aircraft, Watercraft	Products
Software Loss, unless results from an Open Peril	Related Entities and Individuals
Standing Timber, Growing Crops, Animals	Transportation Of Pollutants
Vehicles or Equipment Licensed For Highway Use	War
War and Military Action	Workers Compensation and Similar Laws

. This is a summary and may not be exhaustive. The policy language may contain additional exclusionary language, limitations or carve-backs that are not identified on the table. It is the responsibility of the Contractor/Subcontractor to review the policy for the complete details of all exclusions.

3. Special Conditions: All wood frame only projects are subject to Protective Safeguards as shown in EXHIBIT C.

4. Policy Term: The policy term is the term of the project.

E. OCIP Policies Establish OCIP Coverage. The insurance coverages, limits of liability, definitions, terms, conditions, exclusions and limitations contemplated in these contractual provisions and the other contract documents are set forth in full in the OCIP insurance policies. The summary descriptions of such policies in these contractual provisions, in the Project Insurance Manual, or in any other contract document or elsewhere are not intended to be complete or to alter or amend any provisions of the actual OCIP policies. To the extent, if any, such descriptions herein or therein conflict with any such insurance policies, the provisions of the actual insurance policies shall govern. To the extent there are any other conflicts between or among the provisions of such insurance policies, these contractual provisions, the contract documents, or the Project Insurance Manual, then in descending order, the insurance policies shall govern, followed by these contractual provisions, the contract, the other contract documents, then the Project Insurance Manual. Contractor/Subcontractor acknowledges that it has had the opportunity to review the insurance policies as provided in section1.3, and that it is relying solely on the provisions set forth in the insurance policies, and not upon any oral or written statement or reference in these contractual provisions, any other contract document, the Project Insurance Manual, or otherwise.

1.4 OCIP CERTIFICATES AND POLICIES

All Enrolled Contractors/Subcontractors will receive Certificates of Insurance for Workers' Compensation, General Liability, Excess Liability and Contractor's Pollution Liability coverages. Each enrolled Contractor/Subcontractor will receive their own Workers' Compensation policy. Program Administrator will provide a copy of the OCIP policies upon written request. Such policies or programs may be amended from time to time and the terms of such policies or programs, as they may be amended, are incorporated herein by reference. Contractors/Subcontractors hereby agree to be bound by the terms of coverage, as contained in such insurance policies and/or self-insurance programs.

1.5 CONTRACTOR/SUBCONTRACTOR RESPONSIBILITIES

Participation in the OCIP is mandatory but not automatic. Each Eligible Contractor /Subcontractor must comply with the following:

A. Contractor Eligibility, see Section1.1, **A** for definition.

B. Enrollment Compliance

An Eligible Contractor/Subcontractor is not enrolled until the Program Administrator and OCIP insurers receive and approve a completed *Contract Enrollment Form* (see EXHIBIT A), for each awarded contract. Enrollment is required prior to commencement of on-site activities but no contractor shall be enrolled sooner than 30 days prior to their start date. Evidence of Insurance for Contractor/Subcontractor-Provided Insurance Coverage (see Sections 1.7 and 1.8) is a requirement and must be submitted with the completed *Contract Enrollment Form*.

Any Contractor/Subcontractor who enrolls in the OCIP after their start date must provide a No-Known-Loss Letter to the Program Administrator, along with the enrollment documentation. Late Enrollment is not guaranteed and must be approved and accepted by the insurance carrier. Upon approval, the Program Administrator will provide evidence of OCIP coverage to the Contractor/Subcontractor, as noted in Section 1.4.

All Contractors/Subcontractors shall cooperate with, and require their Subcontractors to cooperate with, the Owner and the Program Administrator, in regards to the administration and operation of the OCIP.

C. Contractor/Subcontractor Compliance with Other Forms and Procedures

All Enrolled Contractors/Subcontractors are required to complete and submit the following forms:

1. **Project Site Monthly Payroll Report**
   Project Site Monthly Payroll Reports (see EXHIBIT D) must be submitted to the Program Administrator monthly, until the completion of the contract. This report must summarize the unburdened payroll by Workers' Compensation Class Code. Certified payroll is not a requirement of the OCIP and cannot be accepted. If the Project Site Monthly Payroll Report is not submitted to Program Administrator monthly, payment can be withheld until the report is received. Contractor/Subcontractor agrees to keep and maintain accurate and classified records of their payroll for operations at the Project Site. This payroll information is submitted to the OCIP insurer. A carrier audit may be performed using the reported payroll and other supporting documents, as required by the California Workers Compensation Insurance Rating Bureau (WCIRB).

   Workers' Compensation Insurance Rating Bureau Requirements
   Once an Eligible Contractor/Subcontractor is enrolled into the OCIP, a separate Workers' Compensation Policy will be issued to them. All Enrolled Contractors/Subcontractors shall comply with the rules and regulations of the California Workers Compensation Insurance Rating Bureau (WCIRB).

2. **Contractor's Completion Notice**
   Contractor's Completion Notice (see EXHIBIT E) must be submitted to the Program Administrator upon completion of work at the Project, which includes punch list items, but not warranty work. This form evidences all enrolled Contractors'/Subcontractors' actual start and completion dates, per each contract. This information is used to confirm that each Workers' Compensation Policy was issued with correct policy term dates, covering the Contractors/Subcontractors for the duration of their Work at the Project. This information is subsequently submitted to the Workers' Compensation Insurance Rating Bureau (WCIRB).

3. **Project Insurance Manual**
   A Project Insurance Manual will be provided to all awarded Contractors/Subcontractors, which includes a Program Summary, Claims Reporting Instructions, Project Safety Guidelines, necessary forms, and contact information. Copies can be requested from the Program Administrator.

Contractor/Subcontractor Compliance with all aspects of the OCIP

All Contractors/Subcontractors further acknowledge and agree to comply fully and promptly with such safety, loss control, and quality control rules, requirements, and directives as may from time to time be promulgated by Owner, the Program Administrator and/or the OCIP insurers or any of its or their respective consultants, agents, or representatives. Nothing in this document or any other contract document or in the Project Insurance Manual, shall be deemed to render Owner or any of its affiliates of any tier an employer of Contractor/Subcontractor or any of its Subcontractors or any of its or their personnel or employees. Failure to comply will be considered non-performance under the contract.

It is the obligation of each Eligible Contractor/Subcontractor to enroll in the OCIP and to comply with all OCIP requirements set forth in these contractual provisions, in the OCIP insurance policies, in the Project Insurance Manual, and elsewhere in the contract documents. Contractor/Subcontractor shall provide each of its Subcontractors, among other things, with a copy

of the Project Insurance Manual and a copy of these contractual provisions. Contractor/Subcontractor shall require in writing that each enrolling Subcontractor comply with, among other things, the provisions of the OCIP insurance policies, the Project Insurance Manual, and the contract documents. All such requirements shall be included in all subcontracts and sub-subcontracts with eligible parties. The failure of Contractor/Subcontractor or any other party to provide eligible Subcontractors with a copy of this document, the Project Insurance Manual, and/or all other applicable requirements shall not relieve any such Subcontractor of any of the obligations contained therein.

Contractor/Subcontractor shall keep and maintain accurate records and information in accordance with the requirements of the OCIP Insurer(s), the Project Administrator, the Project Insurance Manual, and the contract documents, and shall provide such records and information to Owner, the Program Administrator, and/or the OCIP insurers upon request.

1.6 OCIP DISCLAIMER

The Owner does not warrant or represent that the OCIP coverages constitute an insurance program that completely addresses all the risks of the Contractors/Subcontractors. Prior to the commencement of work under the contract, it is the responsibility of all Contractors/Subcontractors to ensure that the OCIP coverages provided sufficiently address their insurance needs. Any additional insurance coverage purchased will be at Contractor's/Subcontractor's option and sole expense.

1.7 REQUIRED CONTRACTOR/SUBCONTRACTOR PROVIDED INSURANCE COVERAGES

For any work under this contract, and until completion and final acceptance of the work by the Owner, the Contractors/Subcontractors shall, at their own expense, promptly furnish Certificates of Insurance evidencing that coverage is in force and any required Additional Insured Endorsements to the Owner, with a copy to the Program Administrator for the following coverages, before commencing work on the Project.

A. **Automobile Liability Insurance Requirements and Limits Are as Follows:** See Section 1.8 for Certificate Holder and Additional Insured Endorsement specifications. Automobile Liability Insurance must cover all vehicles owned by, hired by, or used on behalf of the Contractors/Subcontractors for both Project Site and off-site operations with the following minimum limits of liability:

Auto Liability Insurance Limits:

Enrolled Contractors/Subcontractors

General/Prime Contractor	Subcontractor	
$2,000,000	$1,000,000	Bodily Injury and Property Damage

Ineligible Contractors/Subcontractors – Not Enrolled

General/Prime Contractor	Subcontractor	
$2,000,000	$1,000,000	Bodily Injury and Property Damage

B. **Workers' Compensation and Employer's Liability Insurance Limits:**

Workers' Compensation –Statutory Benefits - All States
Employer's Liability:
$1,000,000 Bodily Injury each Accident
$1,000,000 Bodily Injury by Disease – Policy Limit

$1,000,000 Bodily Injury by Disease – Each Employee

C. **General Liability Insurance, minimum limits of liability are as follows:**

Eligible Contractors/Subcontractors

General/Prime Contractor	Subcontractor	
$2,000,000	$1,000,000	Bodily Injury and Property Damage
$2,000,000	$1,000,000	Per Occurrence
$2,000,000	$1,000,000	General Aggregate
$2,000,000	$1,000,000	Products/Completed Operations Aggregate
$2,000,000	$1,000,000	Personal/Advertising Injury Aggregate

Ineligible Contractors / Subcontractors – Not Enrolled

General/Prime Contractor	Subcontractor	
$2,000,000	$1,000,000	Bodily Injury and Property Damage
$2,000,000	$1,000,000	Per Occurrence
$2,000,000	$1,000,000	General Aggregate
$2,000,000	$1,000,000	Products/Completed Operations Aggregate
$2,000,000	$1,000,000	Personal/Advertising Injury Aggregate

D. **Professional Liability Insurance**: If Contractor's/Subcontractor's work requires design and/or design-assist services, or Contractor/Subcontractor performs professional services of any kind, Contractor/Subcontractor shall purchase and maintain, at its sole cost and expense, Professional Liability (Errors and Omissions) insurance for all professional services provided. This Professional Liability insurance shall include full prior acts coverage sufficient to cover the services under this agreement, with the following minimum limits of liability:

$1,000,000 per Claim/Annual Aggregate

Deductible or self-insured retention amount must not be greater than $100,000 per claim, including coverage of contractual liability.

Professional Liability Insurance is to be maintained during the term of the contract and for so long as the insurance is reasonably available as provided herein, for a period of ten (10) years after completion of the services.

E. **Environmental and Asbestos Abatement Coverages**: If the Contractor's/Subcontractor's scope of work involves the removal of asbestos, the removal/replacement of underground tanks, or the removal of toxic chemicals and substances, the Contractor/Subcontractor will be required to provide the following minimum limits of liability, for such exposures subject to requirements and approval of the Owner:

$1,000,000 per Claim/Aggregate

F. **Aircraft or Watercraft Liability Insurance:** If any Contractor/Subcontractor requires the use of Aircraft or Watercraft at the Project Site, the Contractor/Subcontractor shall purchase and maintain, or cause the operator of the Aircraft or Watercraft to purchase and maintain, Aircraft or Watercraft liability insurance. This must insure passengers and the General Public against personal injury, bodily injury or property damage arising out of the ownership, maintenance, use or entrustment to others. It includes Aircraft or Watercraft owned or operated by or rented or loaned to any insured. Use includes operation and "loading or unloading". Contractor/Subcontractor will be required to provide

the following minimum limits of liability, for such exposures subject to requirements and approval of the Owner:

$5,000,000 per Claim/Aggregate

1.8 REQUIRED CONTRACTOR/SUBCONTRACTOR CERTIFICATES OF INSURANCE AND ADDITIONAL INSURED ENDORSEMENTS

Certificates of Insurance and Additional Insured Endorsements acceptable to the Owner and Program Administrator must be filed with the Owner within ten (10) days after award of the contract to all Contractors/Subcontractors and prior to commencement of on-site activities.

All required insurance shall be maintained, without interruption, from the date of commencement of on-site activities, until the date of the final payment or expiration of any extended period, as set forth in this agreement. These certificates and additional insured endorsements required by Section 1.7 and 1.8 shall provide not less than thirty (30) days prior written notice to the Owner, with a copy to the Program Administrator, of any material change in the insurance, cancellation, or non-renewal.

Certificates of Insurance, the Project must be identified on the Certificate of Insurance in the "Description of Operations/Locations/Vehicles/Special Items" section. The Certificates of Insurance should name District, as the Certificate Holder, as specified below:

Certificate Holder: LODI USD

c/o Statewide Educational Wrap Up Program (SEWUP)
2355 Crenshaw Blvd., Suite 200
Torrance, CA 90501

Additional Insured Endorsements: The Owner must be specifically named on the Schedule of an Additional Insured Endorsement, under the section titled, "Name of Person or Organization", as specified below:

1. All Contractors/Subcontractors must provide an additional insured endorsement for automobile liability.
2. Ineligible Contractors/Subcontractors must provide an additional insured endorsement on both the Automobile Liability and General Liability policies and a waiver of subrogation on workers' compensation.

LODI USD
c/o Statewide Educational Wrap Up Program (SEWUP)
2355 Crenshaw Blvd., Suite 200
Torrance, CA 90501

1.9 CONTRACTOR/SUBCONTRACTOR INSURANCE FOR PERSONAL PROPERTY AND EQUIPMENT

All Contractors/Subcontractors shall be solely responsible for any loss or damage to their personal property including, without limitation, their tools and equipment, mobile construction equipment, scaffolding, and temporary structures, whether owned, borrowed, used, leased or rented by any Contractor/Subcontractor. Contractors/Subcontractors may at their sole discretion, purchase and maintain insurance or self-insure such equipment and property, and any deductible in relation thereto shall be their sole responsibility. Any insurance, including self-insurance, shall be the Contractors'/Subcontractors' sole source of recovery in the event of a loss.

Any type of insurance or any increase of limits of liability not described in this Section, which the Contractors/Subcontractors require for their own protection or on account of any statute, will be their own responsibility and at their expense.

1.10 ASSIGNMENT OF RETURN PREMIUMS

The Owner will be responsible for the payment of all premiums associated solely with the OCIP and will be the sole recipient of any dividend(s) and/or return premium(s) generated by the OCIP.

1.11 WAIVER OF SUBROGATION AND OWNER INDEMNIFICATION

With respect to their work on the Project:

1. Owner waives all rights of subrogation and recovery against the Contractors/Subcontractors to the extent of any loss or damage, which is insured under the OCIP.
2. Contractors/Subcontractors waive all rights of subrogation and recovery against the Owner and other Contractors/Subcontractors to the extent of any loss or damage, which is insured under the OCIP.
3. The Contractors/Subcontractors are obligated to indemnify the Owner for damages or claims not covered by the OCIP.

1.12 NO RELEASE

The provision of the OCIP, by the Owner, will in no way be interpreted as relieving the Contractors/Subcontractors of any other responsibility or liability under this agreement or any applicable law, statute, regulation, or order.

1.13 OWNER'S RIGHT TO AUDIT

The Contractor/Subcontractor will permit the Owner and/or its representative to examine and/or audit its books, records and insurance policy information. Contractor/Subcontractor will also provide any additional information to the Owner, or it's appointed representatives, as may be required.

1.14 DUTIES IN THE EVENT OF A LOSS

Contractors/Subcontractors are required to report all losses, which include potential losses, promptly to, OCIP insurers and/or Program Administrator. A full description and details of the incurred loss are also required.

The Contractor/Subcontractor shall assist the Owner, its agents, and the Program Administrator, by providing the utmost cooperation in the adjustment of claims arising out of the operations conducted under, or in connection with, the Project and shall cooperate with the Owner's insurers in claims and demands that arise out of the Work and that the insurers are called upon to adjust.

In the event of an accident, it shall be the responsibility of the employing and/or responsible Contractor/Subcontractor to see that injured workers or members of the public are provided immediate medical treatment. All appropriate medical and claim forms must be filed in accordance with the claim procedures developed for this Project by Keenan & Associates, hereinafter called "Program Administrator." This includes notification to the appropriate state authorities, if necessary.

1.15 OCCUPATIONAL SAFETY AND HEALTH COMPLIANCE

All Contractors/Subcontractors are expected to comply with all applicable local, state, and federal occupational safety and health requirements. If additional safety and health requirements are set forth in the contract specifications, all contractors shall comply with these requirements.

It is the responsibility of each Contractor/Subcontractor to maintain an environment free of recognized hazards. All Contractors/Subcontractors shall exercise reasonable care to prevent work-related injuries; property and equipment damage at the Project, as well as minimize risk to the public and third party property.

The Program Administrator shall conduct periodic loss control surveys on behalf of the District. These surveys will focus on evaluating the Contractors'/Subcontractors' efforts to minimize loss, assist in identifying loss exposures, and to recommend appropriate corrective measures. The Program Administrator is a resource to supplement the safety and loss prevention activity of Contractors/Subcontractors. Its loss control survey activities or other activities of the Program Administrator and/or OCIP insurers do not in any way relieve the Contractors/Subcontractors of their responsibilities for Project safety.

1.16 PROJECT SAFETY PROGRAM

In addition, local, state, and federal occupational safety and health laws, the following standards apply to all Enrolled and Non-Enrolled Contractors/Subcontractors.

A. Safety Orientation

1. Contractor/Subcontractor employees shall be provided with a project specific safety orientation prior the start of the project. At a minimum, the orientation will address the following items:
    a. The District's site safety requirements.
    b. Site specific safety hazards and protective measures for these hazards.
    c. Emergency telephone numbers and procedures.
    d. Local medical clinic/hospital information within the Medical Provider Network (MPN).

B. Program Management

1. Each Contractor/Subcontractors shall have the following safety programs:
    a. Injury and Illness Prevention Plans
    b. Hazard Communication Programs
    c. Heat Illness Prevention Plans
2. Each Contractor/Subcontractor shall have an onsite competent person responsible for occupational safety and health.

C. Mandatory 6' Fall Protection

1. Contractor/Subcontractor employees shall be protected from fall exposures of 6 feet or greater. Activities include but are not limited to:
    a. Steel erection
    b. Roofing
    c. Framing
    d. Decking
    e. Scaffold work
    f. Work performed from ladders
2. A safety monitor as means of fall protection is prohibited.
3. Ladder jacks, lean-to, and prop-scaffolds are prohibited.
4. Contractor/Subcontractors are required to provide training to their employees who might be exposed to a fall hazard prior to the exposure or upon hiring. This training shall be documented and available for review.
5. Methods of fall protection include but are not limited to the following:
    a. Railings
    b. Covers for Floor, Roof, and Wall Openings
    c. Personal Fall Arrest Systems, Personal Fall Restraint Systems, and Positioning Devices
    d. Controlled Access Zones
6. The design and construction of railings shall conform to the Cal/OSHA Construction Safety Orders.
7. The minimum parapet height allowed for fall protection is 42 inches or greater.

8. Covers used to cover floor, roof, and wall openings shall be secured in place to prevent accidental removal or displacement and shall be marked in accordance in accordance with Cal/OSHA Construction Safety Orders.

9. Covers used to cover floor and roof openings shall be capable of safely supporting the greater of 400 pounds or twice the weight of the employees, equipment and materials that may be imposed on any one square foot area of the cover at any time.

10. Controlled access zones shall be defined by a control line or other means that restricts access. Each line shall have a minimum breaking strength of 200 pounds. Signs shall be posted to warn unauthorized employees to stay out of the controlled access zone.

11. Control lines shall consist of ropes, wires, tapes, or equivalent materials. Control lines shall be erected and supported in accordance with Cal/OSHA Construction Safety Orders.

D. Site Safety

According to industry practices, it is the responsibility of contractors of all tiers to exercise reasonable care to prevent work-related injuries; property and equipment damage at the project site, as well as minimize risk to the third-party persons and property. Contractors/Subcontractors of all tiers shall be expected to comply with the following safety and loss control requirements:

1. All Subcontractors shall identify their contact person(s) to the General or Prime Contractor.

2. All Contractors/Subcontractors shall follow District procedures for dealing with the media.

3. All construction employees shall wear clothing suitable for the weather and work conditions. At a minimum, this shall be short sleeved shirts, long pants, and leather or other protective work shoes or boots.

4. Alcohol is prohibited on District property always.

5. Contractors/Subcontractors will be required to respond to all District complaints about objectionable levels of dust or noise and will be required to provide prompt and appropriate abatement.

6. Construction personnel cannot enter District grounds other than the construction site unless accompanied by District personnel, and are allowed only "incidental" contact with students. Violations of these requirements by any construction employee will result in a mandatory background check of that employee – including fingerprinting – as required by state law.

7. All prime contractors must attend the site-specific pre-construction meeting.

8. No sexual reference or preference shall be permitted on any piece of clothing or the hardhat. Any employee observed disregarding this policy shall be removed from the job site until further notice.

9. All Contractors/Subcontractors shall control the break time activities of the employees to assure the cleanup of all soda cans, food wrappers, plastic bottles, or food containers from the break area. Such areas shall be cleaned immediately after the break and all waste placed in trash receptacles. No glass containers are permitted on the site.

10. Theft or willful damage to any property of the District, student, or other contractors will be prosecuted fully.

11. All Contractors/Subcontractors will advise non-English speaking employees in their native language either in a written format or via an interpreter of these policies.

E. Crane Safety

1. In accordance with Title 8, California Code of Regulations, section 5006.1, employers shall only permit operators who have a valid certificate (license) of competency to operate cranes. The operator shall have his license on his person, readily available for review.

2. All cranes used in lifting service, exceeding 3 tons rated capacity, and their accessory gear shall not be used until the employer has ascertained that such equipment has been certificated in accordance with Cal/OSHA as evidenced by current and valid documents. Certificates (annual and quadrennial) attesting to current compliance with testing and examination standards shall be maintained, readily available for each crane.

3. The contractor shall provide an erection plan and procedure for erection of trusses and beams over 25 feet long. The erection plan and procedure shall be prepared by a civil engineer currently registered in California. This plan and procedure shall be followed and kept available on the job site.

F. Return to Work:

1. The District and OCIP Carrier are committed to working with all Enrolled Contractors and Subcontractors to promote the successful & timely return to work of injured employees following a work-related injury. The purpose of this policy is to ensure that Enrolled Contractor/Subcontractor employees who temporarily cannot return to their normal duties due to job-related injury or illness, but can safely perform transitional duties while recovering is offered appropriate transitional duties for a limited time only.
    a. Each Enrolled Contractor/Subcontractor will cooperate with the OCIP Carrier to facilitate the return to work of any injured employee capable of safely performing transitional duties.
    b. When the employee is released to transitional duties, it is the Enrolled Contractor/Subcontractor's responsibility to facilitate the injured employee's return to work.
    c. The Enrolled Contractor/Subcontractor is expected to accommodate the injured employee and facilitate the return to work.
    d. It will be the responsibility of the Insurance Carrier's Adjuster to maintain communication with the treating physician and the Enrolled Contractor/Subcontractor to facilitate the prompt return of an employee to full work status.

1.17 OWNER'S INSURANCE OBLIGATIONS; CONTRACTORS'/SUBCONTRACTORS' OBLIGATIONS; REPRESENTATIONS, WARRANTIES AND DISCLAIMERS

(a) Owner assumes no obligation to provide insurance other than that summarily described in these Contractual Provisions, in the Project Insurance Manual, and in the OCIP insurance policies. Contractor/Subcontractor shall review the OCIP coverages, limits of liability, and insurance policies to satisfy themselves that the coverages offered thereby meet its needs. Nothing contained herein shall be deemed to place any responsibility on Owner, and Owner disclaims any responsibility, for ensuring that the insurance provided by the OCIP is sufficient for the conduct of Contractor's/Subcontractor's business or performance of the Work, including, without limitation, the adequacy of the limits of liability provided by, and as to all other terms, conditions and exclusions of, the OCIP insurance policies. The furnishing of insurance by Owner through the OCIP shall in no way relieve or limit or be construed to relieve or limit Contractor/Subcontractor of any responsibility, liability or obligation imposed by the contract, the contract documents, the Project Insurance Manual, the OCIP insurance policies, or by law, including, without limitation, all indemnification obligations on the part of Contractor/Subcontractor.

(b) By enrolling in the OCIP, Contractor/Subcontractor acknowledge that (i) the limits of liability of the OCIP insurance policies are shared by all insured parties under the OCIP; (ii) Owner is not an insurer or in the business of insurance and is not an agent, broker, partner or guarantor of Contractor/Subcontractor or any of the insurance companies providing coverage under the OCIP (the "OCIP insurers"); and (iii) Owner is not responsible for (a) the availability, adequacy, or exhaustion of the limits of the OCIP, (b) the present or future solvency of any of the OCIP insurers or (c) any claims or disputes by, between or among Owner, Contractor/Subcontractor and any of the OCIP insurers, including, without limitation, claims or disputes arising out of any the OCIP insurers' payment or nonpayment of claims or losses, or such insurers' contractual or extra-contractual duties, including, without limitation, defense and/or indemnity obligations. Any type of insurance coverage or limits of liability not provided by the OCIP which Contractor/Subcontractor desires for its own protection, or which is required by applicable laws or regulations, shall be its sole responsibility and expense and shall not be included in its compensation for the Work. If Contractor/Subcontractor believes that additional limits of liability beyond those provided by the OCIP would be prudent for its protection, it agrees to investigate and procure such additional limits of liability for itself at its sole cost.

(c) By enrolling in the OCIP, Contractor/Subcontractor represents and warrants that it has had the opportunity to read and analyze (and to obtain professional assistance to read and analyze) a copy of the OCIP insurance policies and understand the contents thereof. Any reference in these contractual provisions, in the Project Insurance Manual, or elsewhere in any contract document as to amount, nature, type or extent of coverage provided under the OCIP and/or potential applicability to any potential claim or loss is for reference only and Contractor/Subcontractor represents and warrants that it has not relied upon any such reference or any other oral or written statement by or on behalf of Owner, the Project Administrator, or any of its or their agents, employees or representatives, but solely upon its own independent review and analysis of the OCIP insurance policies in formulating any understanding and/or belief as to amount, nature, type or extent of any coverage, conditions, extensions, or limits of liability provided by and as to all other terms of the OCIP insurance policies and/or their potential applicability to any claim or loss or their sufficiency for the conduct of Contractor's/Subcontractor's business or performance under the contract documents. To the extent that Contractor/Subcontractor deems it prudent to secure and maintain additional, supplemental, excess, or wholly independent insurance or liability associated with its Work on the Project or otherwise, it shall be responsible to do so at its sole expense.

(d) Contractor/Subcontractor hereby releases Owner, the Program Administrator and their respective representatives, agents, directors, officers, employees, partners, shareholders, members, affiliates of every tier, successors, and assigns from any and all claims and liabilities arising out of or relating to acts, errors, omissions or negligence (i) in the design, selection, placement, adequacy, amount, limits, scope and nature of insurance coverage afforded by the OCIP, (ii) in the selection, performance and present and future solvency of the OCIP insurers, and (iii) in the implementation and administration of the OCIP. Contractor/Subcontractor shall make its own determinations regarding such matters and expressly waives all rights and benefits conferred upon it by the provisions of California Civil Code Section 1542, which provides:

"A general release does not extend to claims which the creditor did not know or suspect to exist in his or her favor at the time of executing the release, which if known by him or her must have materially affected his or her settlement with the debtor."

Contractor/Subcontractor expressly acknowledges that the foregoing waiver of the provisions of Section 1542 was separately bargained for, and expressly agrees that the release provision shall be given full force and effect, including, without limitation, as to unknown or unsuspected claims, demands, liabilities and causes of action, if any may exist or arise. This release provision shall survive the completion of the Work and the expiration or other termination of the Agreement.

1.18 JOINT DEFENSE OF CLAIMS AND SUITS AGAINST MORE THAN ONE INSURED

(a) If a claim, demand, suit, or other proceeding ("Claim") is brought against more than one insured under the OCIP, Owner and Contractor/Subcontractor recognize the common interest of all OCIP insureds in jointly defending that Claim. To the fullest extent permitted by law, and absent a material, current, actual, unwaivable conflict of interest mandating the appointment of separate counsel under applicable law, Owner and Contractor/Subcontractor insured under the OCIP (i) shall be defended by the same counsel and by the same consultants and experts selected by Owner and/or the OCIP insurers at its or their sole discretion, regardless of whether the defense under the OCIP is provided subject to a reservation of rights issued by any OCIP insurer, and (ii) waive their respective rights to independent counsel as to any and all such Claims. This waiver is deemed to be continuing. Contractor/Subcontractor agrees to execute such other documents as are required to effectuate this waiver and fulfill the purpose of this Section 1.18.

(b) In defense of Claims arising under the OCIP, information shared with counsel engaged to defend the insureds (" Defense Counsel") will be protected from disclosure and shall remain privileged even after the termination of the OCIP and/or the completion of the Project. Contractor/Subcontractor agrees not to disclose to any person or entity, other than to Owner and to Defense Counsel, any confidential information obtained in the defense or pursuit of Claims covered, or potentially covered, under the OCIP. Any such confidential information shall only be used in matters that arise directly pursuant to such OCIP Claims. However, disclosures of such confidential information may be made (i) upon written approval from Defense Counsel or (ii) where required by court order or by applicable law.

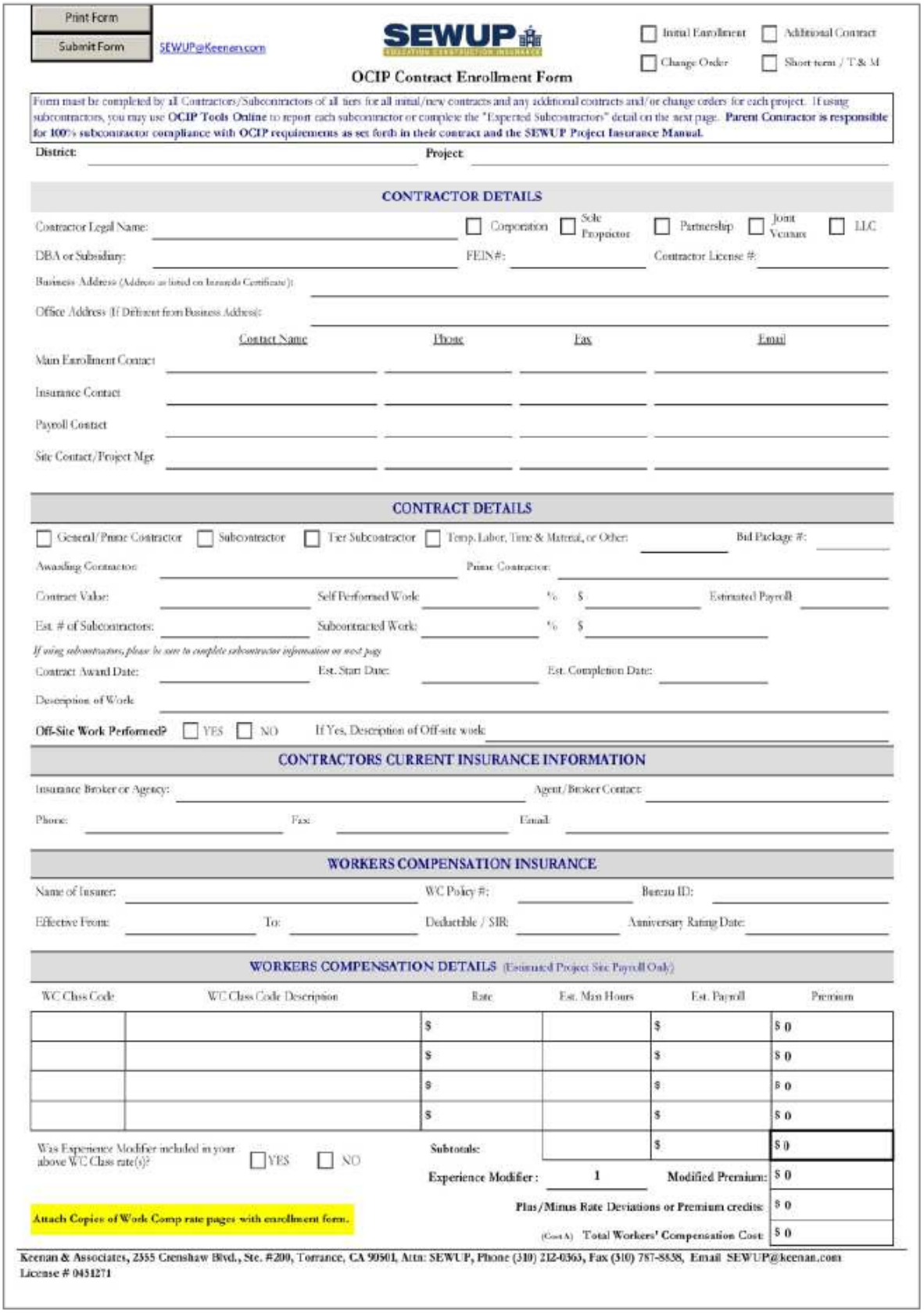
(c) Nothing in this Section 1.18 shall preclude Contractor/Subcontractors from engaging counsel of its choice, at its sole expense, to associate in the defense of any such Claim.

1.19 Duty of Care

Nothing contained in the OCIP insurance policies, the contract, these contractual provisions, any other contract document, or the Project Insurance Manual shall relieve Contractor/Subcontractor of its obligations to exercise due care in the performance of its duties in connection with the Work and to complete the Work in strict compliance with the contract documents.

NOTE: THE OWNER AND PROGRAM ADMINISTRATOR MUST APPROVE CHANGES TO ANY OCIP REQUIREMENT OR PROCEDURE. NO CONTRACTOR OR SUBCONTRACTOR HAS THE AUTHORITY TO AMEND THE OCIP REQUIREMENTS.

EXHIBIT A



Print Form | Submit Form | SEWUP@Keenan.com

SEWUP EDUCATION CONSTRUCTION INSURANCE

☐ Initial Enrollment ☐ Additional Contract ☐ Change Order ☐ Short-term / T & M

OCIP Contract Enrollment Form

Form must be completed by all Contractors/Subcontractors of all tiers for all initial/new contracts and any additional contracts and/or change orders for each project. If using subcontractors, you may use **OCIP Tools Online** to report each subcontractor or complete the "Expected Subcontractors" detail on the next page. **Parent Contractor is responsible for 100% subcontractor compliance with OCIP requirements as set forth in their contract and the SEWUP Project Insurance Manual.**

District: _____ Project: _____

CONTRACTOR DETAILS

Contractor Legal Name: _____ ☐ Corporation ☐ Sole Proprietor ☐ Partnership ☐ Joint Venture ☐ LLC

DBA or Subsidiary: _____ FEIN#: _____ Contractor License #: _____

Business Address (Address as listed on Insurance Certificate): _____

Office Address (If Different from Business Address): _____

	Contact Name	Phone	Fax	Email
Main Enrollment Contact				
Insurance Contact				
Payroll Contact				
Site Contact/Project Mgr.				

CONTRACT DETAILS

☐ General/Prime Contractor ☐ Subcontractor ☐ Tier Subcontractor ☐ Temp. Labor, Time & Material, or Other: _____ Bid Package #: _____

Awarding Contractor: _____ Prime Contractor: _____

Contract Value: _____ Self Performed Work: _____ % $ _____ Estimated Payroll: _____

Est. # of Subcontractors: _____ Subcontracted Work: _____ % $ _____

If using subcontractors, please be sure to complete subcontractor information on next page

Contract Award Date: _____ Est. Start Date: _____ Est. Completion Date: _____

Description of Work: _____

Off-Site Work Performed? ☐ YES ☐ NO If Yes, Description of Off-site work: _____

CONTRACTORS CURRENT INSURANCE INFORMATION

Insurance Broker or Agency: _____ Agent/Broker Contact: _____

Phone: _____ Fax: _____ Email: _____

WORKERS COMPENSATION INSURANCE

Name of Insurer: _____ WC Policy #: _____ Bureau ID: _____

Effective From: _____ To: _____ Deductible / SIR: _____ Anniversary Rating Date: _____

WORKERS COMPENSATION DETAILS (Estimated Project Site Payroll Only)

WC Class Code	WC Class Code Description	Rate	Est. Man Hours	Est. Payroll	Premium
		$		$	$ 0
		$		$	$ 0
		$		$	$ 0
		$		$	$ 0
		Subtotals:		$	$ 0

Was Experience Modifier included in your above WC Class rate(s)? ☐ YES ☐ NO

Experience Modifier: 1 Modified Premium: $ 0

Plus/Minus Rate Deviations or Premium credits: $ 0

(Cost A) Total Workers' Compensation Cost: $ 0

Attach Copies of Work Comp rate pages with enrollment form.

Keenan & Associates, 2355 Crenshaw Blvd., Ste. #200, Torrance, CA 90501, Attn: SEWUP, Phone (310) 212-0363, Fax (310) 787-8838, Email SEWUP@keenan.com
License # 0451271

SEWUP

OCIP Contract Enrollment Form

GENERAL & EXCESS LIABILITY INSURANCE

General Liablity Insurer: ____________ General Liability Policy #: ____________

General Liability Effective From: ________ To: ________ General Liability Deductible: ________ or, Retention: ________

Excess Liability Insurer: ____________ Excess Liability Policy #: ________ Effective From: ________ To: ________

GENERAL & EXCESS LIABILITY INSURANCE DETAILS (Include Values related to this project contract)

Coverage	Classification Description	Based on Payroll, Receipts or Other	Rate	Per $100 / $1000 or Other	Total Value (Payroll, receipts, or Other)	Liability Premium
General Liability	1.		$	$	$	$
	2.		$	$	$	$
Excess/Umbrella Liability			$	$	$	$
					(Cost B) Total Liability Cost:	$

Attach copies of GL and XL declarations and rate pages with enrollment form.

TOTAL INSURANCE COST

(Cost C) Margin Factor (Apply your Mark-Up Against Current Cost): $

(Cost A + B + C) Total Insurance Cost: $

EXPECTED SUBCONTRACTORS *(If needed, please attach additional sheets including all information requested below.)*

Company Name: ____________ Contractor License #: ________ Est. Contract Value: ________

Scope of Work: ____________ Est. Start Date: ________ Est. Completion Date: ________

Contact: ________ Phone: ________ Fax: ________ Email: ________

Company Name: ____________ Contractor License #: ________ Est. Contract Value: ________

Scope of Work: ____________ Est. Start Date: ________ Est. Completion Date: ________

Contact: ________ Phone: ________ Fax: ________ Email: ________

Company Name: ____________ Contractor License #: ________ Est. Contract Value: ________

Scope of Work: ____________ Est. Start Date: ________ Est. Completion Date: ________

Contact: ________ Phone: ________ Fax: ________ Email: ________

Company Name: ____________ Contractor License #: ________ Est. Contract Value: ________

Scope of Work: ____________ Est. Start Date: ________ Est. Completion Date: ________

Contact: ________ Phone: ________ Fax: ________ Email: ________

Company Name: ____________ Contractor License #: ________ Est. Contract Value: ________

Scope of Work: ____________ Est. Start Date: ________ Est. Completion Date: ________

Contact: ________ Phone: ________ Fax: ________ Email: ________

I DECLARE UNDER PENALTY OF PERJURY, UNDER THE LAWS OF THE STATE OF CALIFORNIA, THAT:

1. THE INFORMATION CONTAINED IN THIS DOCUMENT IS TRUE AND CORRECT.
2. I HEREBY UNDERSTAND THAT ENROLLMENT IS CONTINGENT UPON RECEIPT AND ACCEPTANCE OF THIS FORM AND ANY APPLICABLE CERTIFICATES OF INSURANCE. SHOULD I SUBMIT AN INCOMPLETE FORM, KEENAN'S SEWUP DEPARTMENT WILL CONTACT ME AND MY FIRM WILL NOT BE ENROLLED UNTIL I PROVIDE ALL NECESSARY INFORMATION IN ITS ENTIRETY.
3. I HAVE READ AND UNDERSTAND THE INFORMATION CONTAINED IN THE BID SPECIFICATIONS REGARDING THE INSURANCE COVERAGES PROVIDED THROUGH THE OCIP. MY FIRM UNDERSTANDS AND ACCEPTS THE INSURANCE PROVIDED UNDER THIS OCIP.
4. MY FIRM AGREES TO COMPLY WITH THE REQUIREMENTS OF THE OCIP AND FOLLOW THE ADMINISTRATIVE PROCEDURES AS OUTLINED IN THE BID SPECIFICATIONS

Signature: ____________ Title: ____________ Date: ____________

Keenan & Associates, 2355 Crenshaw Blvd., Ste. #200, Torrance, CA 90501, Attn: SEWUP, Phone (310) 212-0363, Fax (310) 787-8838, Email SEWUP@keenan.com
License # 0451271

EXHIBIT B

KNOWN OCIP POLICY EXLUSIONS	
Workers Compensation	**General Liability**
Bodily Injury Outside US or Canada	Aircraft, Auto or Watercraft
Bodily Injury To Any Member of Flying Crew	Asbestos
Bodily Injury To Person Subject To Federal Workers' Compensation	Certain Exclusions To Medical Payments Coverage
Bodily Injury To Person Subject To Occupational Disease Laws	Certain Exclusions To Personal and Advertising Injury Liability
Contractual Liability	Certified Acts of Terrorism
Employees Knowingly Employed Illegally	Contractual Liability (Limited Coverage Provided)
Employment Related Practices	Employers Liability
Intentional or Aggravated Bodily Injury	Employment Related Practices
Obligations Imposed By Disability Benefits or Any Similar Law	Expected or Intended Injury
Obligations Imposed By Occupational Disease Laws	Exterior Insulation and Finish Systems (EIFS) "Subject to Installation Requirements"
Obligations Imposed By Unemployment Compensation Laws	Fungi Or Bacteria
Obligations Imposed By Workers' Compensation Laws	Lead
State or Federal Law Violation Fines, Penalties	Mobile Equipment
Builders Risk	Nuclear
Asbestos	Personal and Advertising Bodily Injury
Certain Offsite Property	Pollution
Certain Release, Discharge, Escape, or Dispersal Of Contaminants	Prior Continuous, or Progressively Deteriorating Injury or Damage
Certified Acts of Terrorism (Can be added)	Professional Liability
Cessation of Work	Recall of Products, Work Or Impaired Property
Contractor's Tools, Machinery, Plans, Equipment	Silica or Silica Mixed Dust
Cost of Making Good	Violation of Statutes Governing Collecting, Transmitting Information
Damage To Existing Property (Can be added)	Violation of Statutes Governing Email, Fax, Phone Calls
Damage While Testing Prototype or Used Machinery/Equipment	War
Damages, Fines, Penalties At Government Agency or Court Order	Workers Compensation and Similar Laws
Disappearance or When Revealed By Inventory Shortage Alone	**Contractors Pollution Liability**
Earth Movement (Optional sublimits can be added)	Auto, Aircraft, Vessel Or Rolling Stock
Electrical, Magnetic, or Errors Related To Electronic Records	Claims Between Certain Insured's
Financial Accounts, Instruments, Stamps, Deeds, Precious Material	Contractual Liability
Flood (Optional sublimits can be added)	Damage To Property
Foreign Terrorism	Disposal Sites
Infidelity, Dishonesty, Fraudulent Activity Of Insured	Employment Related Practices
Land, Values of Land, Cut, & Fill etc. Prior to Project Commencement	Fines, Penalties, and Treble Damages
Loss Under Any Manufacturer or Supplier Guarantee/Warranty	Hazardous Materials Facility
Normal Subsidence	Intentional Acts
Nuclear	Nuclear
Offshore Or Barrier Island Property	Other Entities
Property That Stores, Processes, or Handles Radioactive Materials	Pre-Existing Conditions
Rolling Stock, Aircraft, Watercraft	Products
Software Loss, unless results from an Open Peril	Related Entities and Individuals
Standing Timber, Growing Crops, Animals	Transportation Of Pollutants
Vehicles or Equipment Licensed For Highway Use	War
War and Military Action	Workers Compensation and Similar Laws

EXHIBIT C

PROTECTIVE SAFEGUARDS

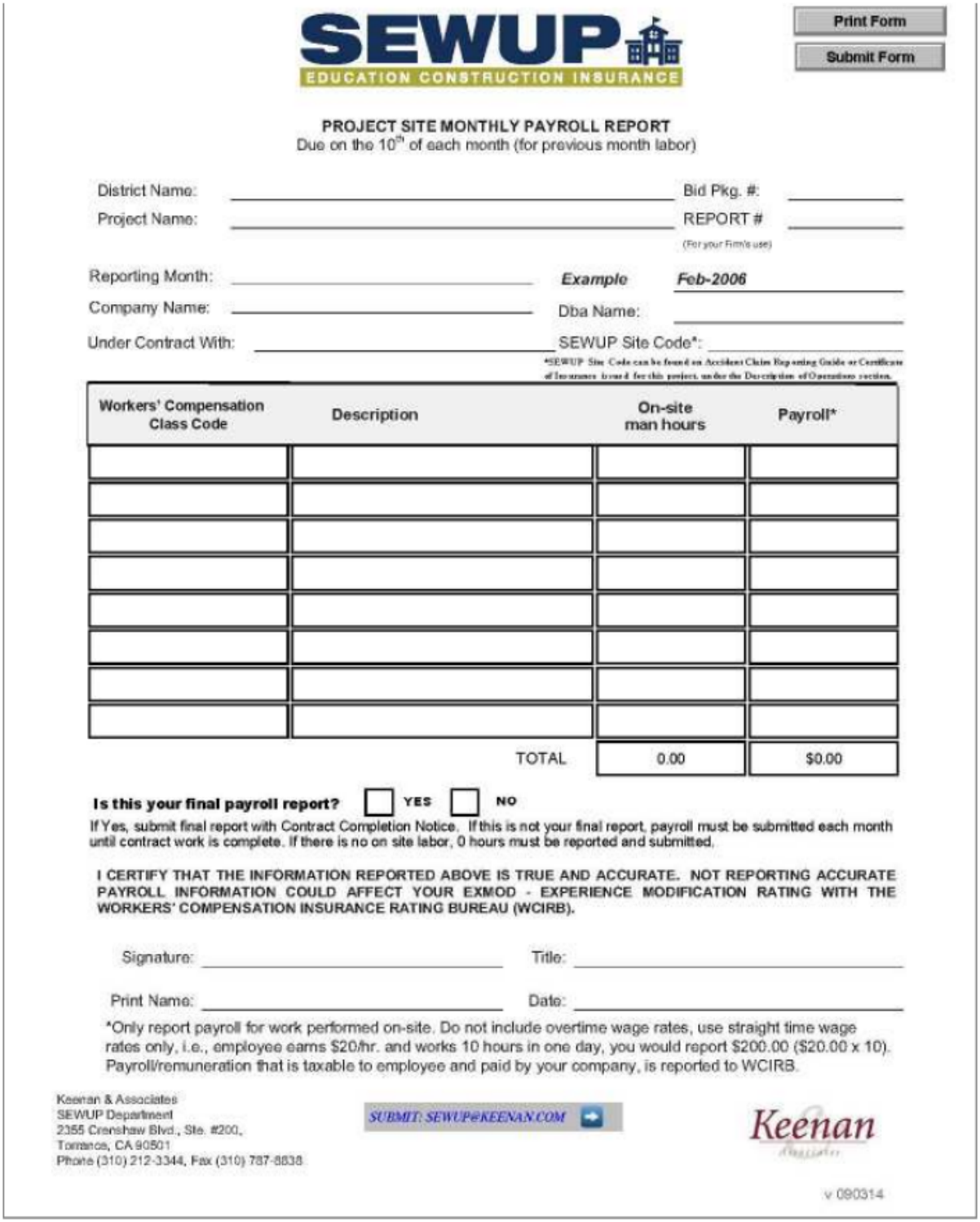
APPLICABLE TO 'WOOD FRAME' PROJECTS ONLY:

The Builders Risk Policy will not pay for LOSS caused by or resulting from exposures, if the applicable protective safeguards are not maintained during the Builders Risk Policy term of INSURED PROJECT.

As a condition precedent to fire, theft, vandalism, and malicious mischief coverage provided by the Builders Risk Policy, the following protective safeguards will be maintained at every INSURED PROJECT site of Wood Frame construction insured by the Builders Risk Policy..

1. **Fencing - The entire INSURED PROJECT** site shall be surrounded with a six foot chain link fence suitably anchored in the ground and placed a reasonable distance from the insured property. Gates through the chain link fence shall be securely locked during non-working hours.
2. **Lighting - The entire INSURED PROJECT** site shall be illuminated from sunset to sunrise, each day.

EXHIBIT D



Print Form

Submit Form

SEWUP
EDUCATION CONSTRUCTION INSURANCE

PROJECT SITE MONTHLY PAYROLL REPORT
Due on the 10th of each month (for previous month labor)

District Name: _____ Bid Pkg. #: _____

Project Name: _____ REPORT # _____
(For your Firm's use)

Reporting Month: _____ *Example* *Feb-2006*

Company Name: _____ Dba Name: _____

Under Contract With: _____ SEWUP Site Code*: _____

*SEWUP Site Code can be found on Accident Claim Reporting Guide or Certificate of Insurance issued for this project, under the Description of Operations section.

Workers' Compensation Class Code	Description	On-site man hours	Payroll*
	TOTAL	0.00	$0.00

Is this your final payroll report? ☐ YES ☐ NO

If Yes, submit final report with Contract Completion Notice. If this is not your final report, payroll must be submitted each month until contract work is complete. If there is no on site labor, 0 hours must be reported and submitted.

I CERTIFY THAT THE INFORMATION REPORTED ABOVE IS TRUE AND ACCURATE. NOT REPORTING ACCURATE PAYROLL INFORMATION COULD AFFECT YOUR EXMOD - EXPERIENCE MODIFICATION RATING WITH THE WORKERS' COMPENSATION INSURANCE RATING BUREAU (WCIRB).

Signature: _____ Title: _____

Print Name: _____ Date: _____

*Only report payroll for work performed on-site. Do not include overtime wage rates, use straight time wage rates only, i.e., employee earns $20/hr. and works 10 hours in one day, you would report $200.00 ($20.00 x 10). Payroll/remuneration that is taxable to employee and paid by your company, is reported to WCIRB.

Keenan & Associates
SEWUP Department
2355 Crenshaw Blvd., Ste. #200,
Torrance, CA 90501
Phone (310) 212-3344, Fax (310) 787-8838

SUBMIT: SEWUP@KEENAN.COM

Keenan & Associates

v 090314

EXHIBIT E

Save Form | Submit Form

Sewup@keenan.com

SEWUP
EDUCATION CONSTRUCTION INSURANCE

Contractor's Completion Notice

District Name _____

Project Name _____

IMPORTANT NOTIFICATION – PLEASE READ

Contractor and Subcontractor agrees to complete this form and return to Keenan & Associates upon completion or termination of work activities under this contract. Please include, with this form, any supporting documents for final contact value (if different from initial contract value).

Contractor/Subcontractor Legal Name: _____

Contractor/Subcontractor dba Name: _____

Address: _____

Site Location Code/
Contract Number: _____

Initial Contract Value: $_____ Final Contract Value: $ _____

Start Date on Site: _____ Last Day on Site*: _____

**This would include work performed on final closeout or punch-list items and should not include warranty work.*

Parent Contractor
(Company Name): _____

Parent Contractor
Contact Name (Print): _____ Title: _____

Signature
(Parent Contractor): _____ Date: _____

Contractor/Subcontractor
Contact Name (Print): _____ Title: _____

Signature
(Contractor/Subcontractor): _____ Date: _____

Keenan & Associates
SEWUP Department
2355 Crenshaw Blvd., Ste. #200,
Phone (310) 212-3344, Fax (310) 787-8636
Sewup@keenan.com
www.sewup.org

License No. 0451271

Keenan & Associates

EXHIBIT E

MEMORANDUM OF COMMENCEMENT DATE

This MEMORANDUM OF COMMENCEMENT DATE is dated _____, 20__, and is made by and between _____ ("Developer"), as Lessor, and the Lodi Unified School District ("District"), as Lessee.

1. Developer and District have previously entered into a Facilities Lease dated as of _____, 20__, (the "Lease") for the leasing by Developer to District of the Project Site and Project in Lodi, California, referenced in the Lease.

2. District hereby confirms the following:

A. That all construction of the Project required to be performed pursuant to the Facilities Lease has been completed by Developer in all respects;

B. That District has accepted and entered into possession of the Project and now occupies same; and

C. That the term for the Lease Payments under the Facilities Lease commenced on _____, 20__ and will expire at 11:59 P.M. on _____, 20__.

THIS MEMORANDUM OF COMMENCEMENT DATE IS ACCEPTED AND AGREED on the date indicated below:

Dated: _____ __ , 20__	Dated: _____ __ , 20__
Lodi Unified School District	[Developer]
By: _____	By: _____
Name: _____	Name: _____
Title: _____	Title: _____

EXHIBIT F

CONSTRUCTION SCHEDULE

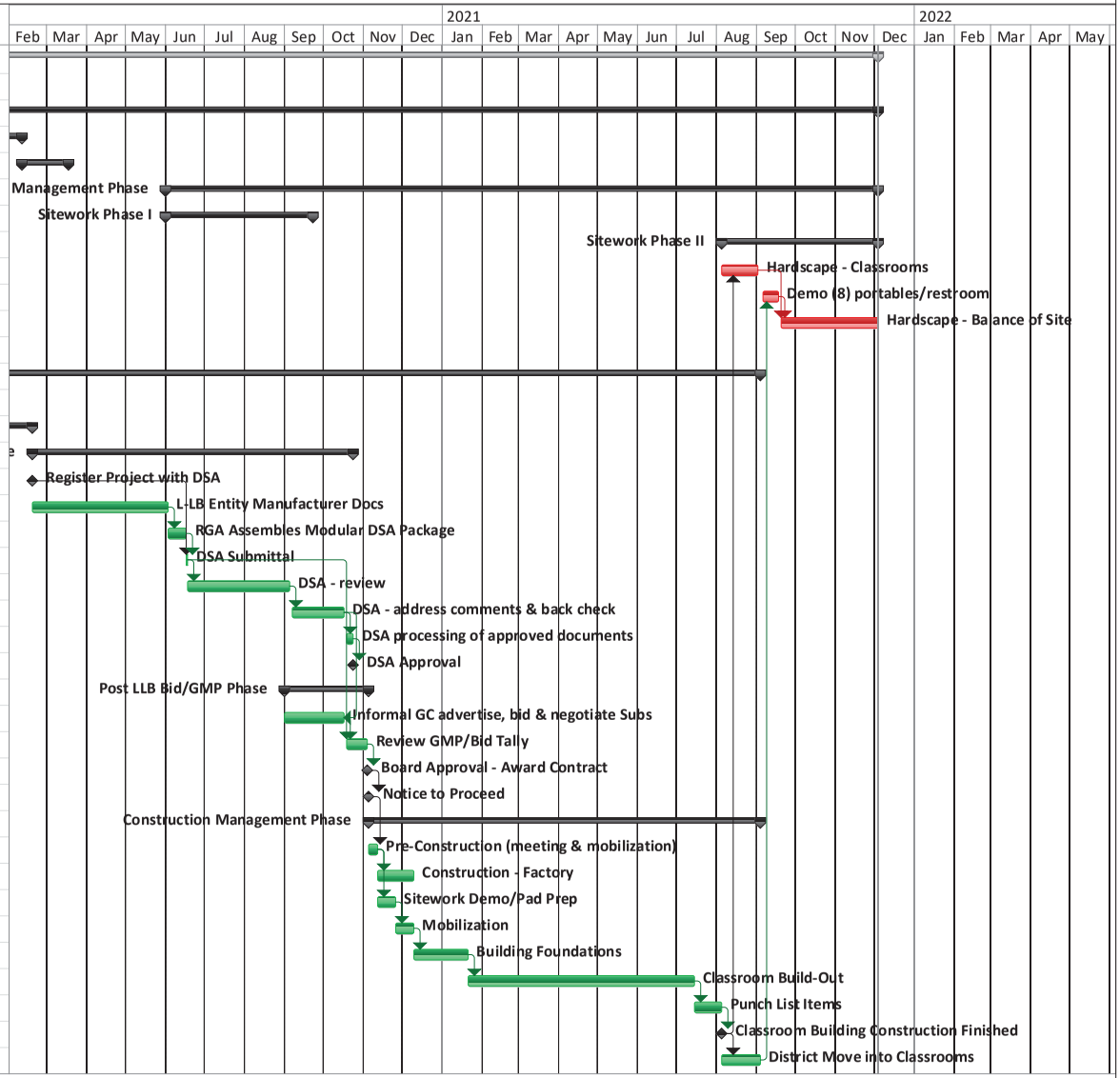
Attached is a detailed Project Construction Schedule with a duration no longer than the Contract Time, and with specific milestones that Developer shall meet.

[To Be Attached.]

EXHIBIT F
CONSTRUCTION SCHEDULE

Wed 11/13/19

ID	Task Name	Duration	Start	Finish
0	**NEEDHAM ES MASTER PROJECT SCHEDULE**	**607 days**	**Thu 8/8/19**	**Fri 12/3/21**
1				
2	**SITEWORK (PHASE I/II) - INCREMENT I**	**607 days**	**Thu 8/8/19**	**Fri 12/3/21**
3	**Design Phase**	**133 days**	**Thu 8/8/19**	**Mon 2/10/20**
7	**Bid and Award Phase (Hard Bid)**	**26 days**	**Tue 2/11/20**	**Tue 3/17/20**
10	**Construction Management Phase**	**395 days**	**Mon 6/1/20**	**Fri 12/3/21**
11	Sitework Phase I	82 days	Mon 6/1/20	Tue 9/22/20
15	Sitework Phase II	87 days	Thu 8/5/21	Fri 12/3/21
16	Hardscape - Classrooms	20 days	Thu 8/5/21	Wed 9/1/21
17	Demo (8) portables/restroom	10 days	Mon 9/6/21	Fri 9/17/21
18	Hardscape - Balance of Site	55 days	Mon 9/20/21	Fri 12/3/21
19				
20	**MODULAR CLASSROOMS - INCREMENT II**	**542 days**	**Thu 8/8/19**	**Fri 9/3/21**
21	**Design Phase**	**59 days**	**Thu 8/8/19**	**Tue 10/29/19**
25	**Lease-Lease Back Schedule of Events**	**115 days**	**Wed 9/11/19**	**Tue 2/18/20**
39	**Agency Review and Approval Phase**	**178 days**	**Tue 2/18/20**	**Fri 10/23/20**
40	Register Project with DSA	0 days	Tue 2/18/20	Tue 2/18/20
41	L-LB Entity Manufacturer Docs	75 days	Wed 2/19/20	Tue 6/2/20
42	RGA Assembles Modular DSA Package	10 days	Wed 6/3/20	Tue 6/16/20
43	DSA Submittal	1 day	Wed 6/17/20	Wed 6/17/20
44	DSA - review	57 days	Thu 6/18/20	Fri 9/4/20
45	DSA - address comments & back check	30 days	Mon 9/7/20	Fri 10/16/20
46	DSA processing of approved documents	5 days	Mon 10/19/20	Fri 10/23/20
47	DSA Approval	0 days	Fri 10/23/20	Fri 10/23/20
48	**Post LLB Bid/GMP Phase**	**47 days**	**Tue 9/1/20**	**Wed 11/4/20**
49	Informal GC advertise, bid & negotiate Subs	34 days	Tue 9/1/20	Fri 10/16/20
50	Review GMP/Bid Tally	12 days	Mon 10/19/20	Tue 11/3/20
51	Board Approval - Award Contract	0 days	Tue 11/3/20	Tue 11/3/20
52	Notice to Proceed	0 days	Wed 11/4/20	Wed 11/4/20
53	**Construction Management Phase**	**217 days**	**Thu 11/5/20**	**Fri 9/3/21**
54	Pre-Construction (meeting & mobilization)	5 days	Thu 11/5/20	Wed 11/11/20
55	Construction - Factory	20 days	Thu 11/12/20	Wed 12/9/20
56	Sitework Demo/Pad Prep	10 days	Thu 11/12/20	Wed 11/25/20
57	Mobilization	10 days	Thu 11/26/20	Wed 12/9/20
58	Building Foundations	30 days	Thu 12/10/20	Wed 1/20/21
59	Classroom Build-Out	125 days	Thu 1/21/21	Wed 7/14/21
60	Punch List Items	15 days	Thu 7/15/21	Wed 8/4/21
61	Classroom Building Construction Finished	0 days	Wed 8/4/21	Wed 8/4/21
62	District Move into Classrooms	22 days	Thu 8/5/21	Fri 9/3/21



LODI UNIFIED SCHOOL DISTRICT
#0917-8217-5 NEEDHAM ES MODULAR CLASSROOM PROJECT INCREMENT II
EXHIBIT F TO FACILITIES LEASE

EXHIBIT G

SCHEDULE OF VALUES

Attached is a detailed Schedule of Values that complies with the requirements of the Construction Provisions (Exhibit "D") and that has been approved by the District.

[TBD]

CONTRACT DOCUMENTS

For all or a portion of the following Site:

Needham Elementary School Modular Classroom Project – Increment II
420 S. Pleasant Ave., Lodi, CA 95240
APN: _____

By and between

Lodi Unified School District
1305 E. Vine Street
Lodi, CA 95240

And

[Developer]
[Address]

Dated as of _____, 20__

PAYMENT BOND
Developer's Labor & Material Bond
(100% of Contract Price)

KNOW ALL PERSONS BY THESE PRESENTS:

WHEREAS, the governing board ("Board") of the Lodi Unified School District, ("District") and _____ ("Principal") have entered into a contract for the furnishing of all materials and labor, services and transportation, necessary, convenient, and proper to perform the following project:

_____ Project

("Project" or "Contract") which Contract dated _____, 20__, and all of the Contract Documents attached to or forming a part of the Contract, are hereby referred to and made a part hereof; and

WHEREAS, pursuant to law and the Contract, the Principal is required, before entering upon the performance of the work, to file a good and sufficient bond with the body by which the Contract is awarded in an amount equal to one hundred percent (100%) of the Contract price, to secure the claims to which reference is made in sections 9000 through 9510 and 9550 through 9566 of the Civil Code, and division 2, part 7, of the Labor Code.

NOW, THEREFORE, the Principal and_____
_____ ("Surety")
are held and firmly bound unto all laborers, material men, and other persons referred to in said statutes in the sum of _____
Dollars ($_____), lawful money of the United States, being a sum not less than the total amount payable by the terms of Contract, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, or assigns, jointly and severally, by these presents.

The condition of this obligation is that if the Principal or any of his or its subcontractors, of the heirs, executors, administrators, successors, or assigns of any, all, or either of them shall fail to pay for any labor, materials, provisions, provender, or other supplies, used in, upon, for or about the performance of the work contracted to be done, or for any work or labor thereon of any kind, or for amounts required to be deducted, withheld, and paid over to the Employment Development Department from the wages of employees of the Principal or any of his or its subcontractors of any tier under Section 13020 of the Unemployment Insurance Code with respect to such work or labor, that the Surety will pay the same in an amount not exceeding the amount herein above set forth, and also in case suit is brought upon this bond, will pay a reasonable attorney's fee to be awarded and fixed by the Court, and to be taxed as costs and to be included in the judgment therein rendered.

It is hereby expressly stipulated and agreed that this bond shall inure to the benefit of any and all persons, companies, and corporations entitled to file claims under section 9100 of the Civil Code, so as to give a right of action to them or their assigns in any suit brought upon this bond.

Should the condition of this bond be fully performed, then this obligation shall become null and void; otherwise it shall be and remain in full force and affect.

And the Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of Contract or the specifications accompanying the same shall in any manner affect its obligations on this bond, and it does hereby waive notice of any such change, extension, alteration, or addition.

IN WITNESS WHEREOF, two (2) identical counterparts of this instrument, each of which shall for all purposes be deemed an original thereof, have been duly executed by the Principal and Surety above named, on the _____ day of _____, 20___.

Principal	Surety
By	By
	Name of California Agent of Surety
	Address of California Agent of Surety
	Telephone No. of California Agent of Surety

Developer must attach a Notarial Acknowledgment for all Surety's signatures and a Power of Attorney and Certificate of Authority for Surety. The California Department of Insurance must authorize the Surety to be an admitted surety insurer.

END OF DOCUMENT

PERFORMANCE BOND
(100% of Contract Price)

KNOW ALL PERSONS BY THESE PRESENTS:

WHEREAS, the governing board ("Board") of the Lodi Unified School District, ("District") and _____ ("Principal") have entered into a contract for the furnishing of all materials and labor, services and transportation, necessary, convenient, and proper to perform the following project:

Needham ES Modular Classroom Project – Increment II

("Project" or "Contract") which Contract dated _____, 20__, and all of the Contract Documents attached to or forming a part of the Contract, are hereby referred to and made a part hereof; and

WHEREAS, said Principal is required under the terms of the Contract to furnish a bond for the faithful performance of the Contract.

NOW, THEREFORE, the Principal and _____ _____ ("Surety") are held and firmly bound unto the Board of the District in the penal sum of

_____

Dollars ($_____), lawful money of the United States, for the payment of which sum well and truly to be made we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally, firmly by these presents, to:

- Promptly perform all the work required to complete the Project; and
- Pay to the District all damages the District incurs as a result of the Principal's failure to perform all the Work required to complete the Project.

Or, at the District's sole discretion and election, the Surety shall obtain a bid or bids for completing the Contract in accordance with its terms and conditions, and upon determination by the District of the lowest responsible bidder, arrange for a contract between such bidder and the District and make available as Work progresses sufficient funds to pay the cost of completion less the "balance of the Contract Price," and to pay and perform all obligations of Principals under the Contract, including, without limitation, all obligations with respect to warranties, guarantees and the payment of liquidated damages. The term "balance of the Contract Price," as used in this paragraph, shall mean the total amount payable to Principal by the District under the Contract and any modifications thereto, less the amount previously paid by the District to the Principal, less any withholdings by the District allowed under the Contract. District shall not be required or obligated to accept a tender of a completion contractor from the Surety for any or no reason.

The condition of the obligation is such that, if the above bounden Principal, his or its heirs, executors, administrators, successors, or assigns, shall in all things stand to and abide by, and well and truly keep and perform the covenants, conditions, and agreements in the Contract and any alteration thereof made as therein provided, on his or its part to be kept and performed at the time

and in the intent and meaning, including all contractual guarantees and warrantees of materials and workmanship, and shall indemnify and save harmless the District, its trustees, officers and agents, as therein stipulated, then this obligation shall become null and void, otherwise it shall be and remain in full force and virtue.

Surety expressly agrees that the District may reject any contractor or subcontractor proposed by Surety to fulfill its obligations in the event of default by the Principal. Surety shall not utilize Principal in completing the Work nor shall Surety accept a Bid from Principal for completion of the Work if the District declares the Principal to be in default and notifies Surety of the District's objection to Principal's further participation in the completion of the Work.

As a condition precedent to the satisfactory completion of the Contract, the above obligation shall hold good for a period equal to the warranty and/or guarantee period of the Contract, during which time Surety's obligation shall continue if Developer shall fail to make full, complete, and satisfactory repair and replacements and totally protect the District from loss or damage resulting from or caused by defective materials or faulty workmanship. The obligations of Surety hereunder shall continue so long as any obligation of Developer remains. Nothing herein shall limit the District's rights or the Developer or Surety's obligations under the Contract, law or equity, including, but not limited to, California Code of Civil Procedure section 337.15.

The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the contract or to the work to be performed thereunder or the specifications accompanying the same shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration, or addition to the terms of the Contract or to the work or to the specifications.

IN WITNESS WHEREOF, two (2) identical counterparts of this instrument, each of which shall for all purposes be deemed an original thereof, have been duly executed by the Principal and Surety above named, on the _____ day of _____, 20___.

Principal	Surety
By	By
	Name of California Agent of Surety
	Address of California Agent of Surety
	Telephone No. of California Agent of Surety

Developer must attach a Notarial Acknowledgment for all Surety's signatures and a Power of Attorney and Certificate of Authority for Surety. The California Department of Insurance must authorize the Surety to be an admitted surety insurer.

END OF DOCUMENT

REGISTERED SUBCONTRACTORS LIST
(Labor Code Section 1771.1)

PROJECT: Needham ES Modular Classroom Project – Increment II

Date Submitted (for Updates): _____

Developer acknowledges and agrees that it must clearly set forth below the name and Department of Industrial Relations (DIR) registration number of each subcontractor **for all tiers** who will perform work or labor or render service to Developer or its subcontractors in or about the construction of the Work **at least two (2) weeks before the subcontractor is scheduled to perform work**. This document is to be updated as all tiers of subcontractors are identified.

Developer acknowledges and agrees that, if Developer fails to list as to any subcontractor of any tier who performs any portion of Work, the Contract is subject is subject to cancellation and the Developer will be subjected to penalty under applicable law.

If further space is required for the list of proposed subcontractors, attach additional copies of page 2 showing the required information, as indicated below.

Subcontractor Name: _____

DIR Registration #: _____

Portion of Work: _____

Subcontractor Name: _____

DIR Registration #: _____

Portion of Work: _____

Subcontractor Name: _____

DIR Registration #: _____

Portion of Work: _____

Subcontractor Name: _____

DIR Registration #: _____

Portion of Work: _____

Subcontractor Name: _____

DIR Registration #: _____

Portion of Work: _____

Subcontractor Name: ____

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Subcontractor Name: ____

DIR Registration #: ____

Portion of Work: ____

Subcontractor Name: ____

DIR Registration #: ____

Portion of Work: ____

Subcontractor Name: ____

DIR Registration #: ____

Portion of Work: ____

Date: ________________________________

Proper Name of Developer: ________________________________

Signature: ________________________________

Print Name: ________________________________

Title: _____

END OF DOCUMENT

HAZARDOUS MATERIALS
PROCEDURES & REQUIREMENTS

1. Summary

This document includes information applicable to hazardous materials and hazardous waste abatement.

2. Notice of Hazardous Waste or Materials

a. Developer shall give notice in writing to the District, the Construction Manager, and the Architect promptly, before any of the following materials are disturbed, and in no event later than twenty-four (24) hours after first observance, of any:

(1) Material that Developer believes may be a material that is hazardous waste or hazardous material, as defined in section 25117 of the Health and Safety Code, that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with provisions of existing law;

(2) Other material that may present a substantial danger to persons or property exposed thereto in connection with Work at the site.

b. Developer's written notice shall indicate whether the hazardous waste or material was shown or indicated in the Contract Documents to be within the scope of Work, and whether the materials were brought to the site by Developer, its Subcontractors, suppliers, or anyone else for whom Developer is responsible. As used in this section the term "hazardous materials" shall include, without limitation, asbestos, lead, Polychlorinated biphenyl (PCB), petroleum and related hydrocarbons, and radioactive material.

c. In response to Developer's written notice, the District shall investigate the identified conditions.

d. If the District determines that conditions do not involve hazardous materials or that no change in terms of Contract is justified, the District shall so notify Developer in writing, stating reasons. If the District and Developer cannot agree on whether conditions justify an adjustment in Contract Price or Contract Time, or on the extent of any adjustment, Developer shall proceed with the Work as directed by the District.

e. If after receipt of notice from the District, Developer does not agree to resume Work based on a reasonable belief it is unsafe, or does not agree to resume Work under special conditions, then District may order such portion of Work that is in connection with such hazardous condition or such affected area to be deleted from the Work, or performed by others, or District may invoke its rights to terminate the Contract in whole or in part. District will determine entitlement to or the amount or extent of an adjustment, if any, in Contract Price or Contract Time as a result of deleting such portion of Work, or performing the Work by others.

f. If Developer stops Work in connection with any hazardous condition and in any area affected thereby, Developer shall immediately redeploy its workers, equipment, and materials, as necessary, to other portions of the Work to minimize delay and disruption.

3. **Additional Warranties and Representations**

a. Developer represents and warrants that it, its employees, and its subcontractors and their employees, shall at all times have the required levels of familiarity with the Site and the Work, training, and ability to comply fully with all applicable laws and contractual requirements for safe and expeditious performance of the Work, including whatever training is or may be required regarding the activities to be performed (including, but not limited to, all training required to address adequately the actual or potential dangers of Contract performance).

b. Developer represents and warrants that it, its employees, and its subcontractors and their employees, shall at all times have and maintain in good standing any and all certifications and licenses required by applicable federal, state, and other governmental and quasi-governmental requirements applicable to the Work.

c. Developer represents and warrants that it has studied carefully all requirements of the Specifications regarding procedures for demolition, hazardous waste abatement, or safety practices, specified in the Contract, and prior to submitting its bid, has either (a) verified to its satisfaction that the specified procedures are adequate and sufficient to achieve the results intended by the Contract Documents, or (b) by way of approved "or equal" request or request for clarification and written Addenda, secured changes to the specified procedures sufficient to achieve the results intended by the Contract Documents. Developer accepts the risk that any specified procedure will result in a completed Project in full compliance with the Contract Documents.

4. **Monitoring and Testing**

a. District reserves the right, in its sole discretion, to conduct air monitoring, earth monitoring, Work monitoring, and any other tests (in addition to testing required under the agreement or applicable law), to monitor Contract requirements of safe and statutorily compliant work methods and (where applicable) safe re-entry level air standards under state and federal law upon completion of the job, and compliance of the work with periodic and final inspection by public and quasi-public entities having jurisdiction.

b. Developer acknowledges that District has the right to perform, or cause to be performed, various activities and tests including, but not limited to, pre-abatement, during abatement, and post-abatement air monitoring, that District shall have no obligation to perform said activities and tests, and that a portion of said activities and tests may take place prior to the completion of the Work by Developer. In the event District elects to perform these activities and tests, Developer shall afford District ample access to the Site

and all areas of the Work as may be necessary for the performance of these activities and tests. Developer will include the potential impact of these activities or tests by District in the Contract Price and the Scheduled Completion Date.

c. Notwithstanding District's rights granted by this paragraph, Developer may retain its own industrial hygiene consultant at Developer's own expense and may collect samples and may perform tests including, but not limited to, pre-abatement, during abatement, and post-abatement personal air monitoring, and District reserves the right to request documentation of all such activities and tests performed by Developer relating to the Work and Developer shall immediately provide that documentation upon request.

5. **Compliance with Laws**

a. Developer shall perform safe, expeditious, and orderly work in accordance with the best practices and the highest standards in the hazardous waste abatement, removal, and disposal industry, the applicable law, and the Contract Documents, including, but not limited to, all responsibilities relating to the preparation and return of waste shipment records, all requirements of the law, delivering of all requisite notices, and obtaining all necessary governmental and quasi-governmental approvals.

b. Developer represents that it is familiar with and shall comply with all laws applicable to the Work or completed Work including, but not limited to, all federal, state, and local laws, statutes, standards, rules, regulations, and ordinances applicable to the Work relating to:

(1) The protection of the public health, welfare and environment;

(2) Storage, handling, or use of asbestos, PCB, lead, petroleum based products, radioactive material, or other hazardous materials;

(3) The generation, processing, treatment, storage, transport, disposal, destruction, or other management of asbestos, PCB, lead, petroleum, radioactive material, or hazardous waste materials or other waste materials of any kind; and

(4) The protection of environmentally sensitive areas such as wetlands and coastal areas.

6. **Disposal**

a. Developer has the sole responsibility for determining current waste storage, handling, transportation, and disposal regulations for the job Site and for each waste disposal facility. Developer must comply fully at its sole cost and expense with these regulations and any applicable law. District may, but is not obligated to, require submittals with this information for it to review consistent with the Contract Documents.

b. Developer shall develop and implement a system acceptable to District to track hazardous waste from the Site to disposal, including appropriate "Hazardous Waste Manifests" on the EPA form, so that District may track the volume of waste it put in each landfill and receive from each landfill a certificate of receipt.

c. Developer shall provide District with the name and address of each waste disposal facility prior to any disposal, and District shall have the express right to reject any proposed disposal facility. Developer shall not use any disposal facility to which District has objected. Developer shall document actual disposal or destruction of waste at a designated facility by completing a disposal certificate or certificate of destruction forwarding the original to the District.

7. **Permits**

a. Before performing any of the Work, and at such other times as may be required by applicable law, Developer shall deliver all requisite notices and obtain the approval of all governmental and quasi-governmental authorities having jurisdiction over the Work. Developer shall submit evidence satisfactory to District that it and any disposal facility:

(1) have obtained all required permits, approvals, and the like in a timely manner both prior to commencement of the Work and thereafter as and when required by applicable law; and

(2) are in compliance with all such permits, approvals and the regulations.

For example, before commencing any work in connection with the Work involving asbestos-containing materials, or PCBs, or other hazardous materials subject to regulation, Developer agrees to provide the required notice of intent to renovate or demolish to the appropriate state or federal agency having jurisdiction, by certified mail, return receipt requested, or by some other method of transmittal for which a return receipt is obtained, and to send a copy of that notice to District. Developer shall not conduct any Work involving asbestos-containing materials or PCBs unless Developer has first confirmed that the appropriate agency having jurisdiction is in receipt of the required notification. All permits, licenses, and bonds that are required by governmental or quasi-governmental authorities, and all fees, deposits, tap fees, offsite easements, and asbestos and PCB disposal facilities expenses necessary for the prosecution of the Work, shall be procured and paid for by Developer. Developer shall give all notices and comply with the all applicable laws bearing on the conduct of the Work as drawn and specified. If Developer observes or reasonably should have observed that Plans and Specifications and other Contract Documents are at variance therewith, it shall be responsible for promptly notifying District in writing of such fact. If Developer performs any Work contrary to applicable laws, it shall bear all costs arising therefrom.

b. In the case of any permits or notices held in District's name or of necessity to be made in District's name, District shall cooperate with Developer in securing the permit or giving the notice, but the Developer shall prepare for District review and execution upon approval, all necessary applications, notices, and other materials.

8. **Indemnification**

To the fullest extent permitted by law, the indemnities and limitations of liability expressed throughout the Contract Documents apply with equal force and effect to any claims or liabilities imposed or existing by virtue of the removal, abatement, and disposal of hazardous waste. This includes, but is not limited to, liabilities connected to the selection and use of a waste disposal facility, a waste transporter, personal injury, property damage, loss of use of property, damage to the environment or natural resources, or "disposal" and "release" of materials associated with the Work (as defined in 42 U.S.C. § 960l *et seq*.).

9. **Termination**

District shall have an absolute right to terminate for default immediately without notice and without an opportunity to cure should Developer knowingly or recklessly commit a material breach of the terms of the Contract Documents, or any applicable law, on any matter involving the exposure of persons or property to hazardous waste. However, if the breach of contract exposing persons or property to hazardous waste is due solely to an ordinary, unintentional, and non-reckless failure to exercise reasonable care, then the procedures for termination for cause shall apply without modification.

END OF DOCUMENT

WORKERS' COMPENSATION CERTIFICATION

Labor Code section 3700, in relevant part, provides:

> Every employer except the State shall secure the payment of compensation in one or more of the following ways:
>
> a. By being insured against liability to pay compensation by one or more insurers duly authorized to write compensation insurance in this state; and/or
>
> b. By securing from the Director of Industrial Relations a certificate of consent to self-insure, which may be given upon furnishing proof satisfactory to the Director of Industrial Relations of ability to self-insure and to pay any compensation that may become due to his employees.

I am aware of the provisions of section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the Work of this Contract.

Date: _____

Proper Name of Developer: _____

Signature: _____

Print Name: _____

Title: _____

(In accordance with Labor Code sections 1860 and 1861, the above certificate must be signed and filed with the awarding body prior to performing any Work under this Contract.)

END OF DOCUMENT

PREVAILING WAGE AND
RELATED LABOR REQUIREMENTS CERTIFICATION

I hereby certify that I will conform to the State of California Public Works Contract requirements regarding prevailing wages, benefits, on-site audits with 48-hours' notice, payroll records, and apprentice and trainee employment requirements, for all Work on the above Project including, without limitation, labor compliance monitoring and enforcement by the Department of Industrial Relations.

Date: _____

Name of Developer: _____

Signature: _____

Print Name: _____

Title: _____

END OF DOCUMENT

DISABLED VETERAN BUSINESS
ENTERPRISE PARTICIPATION CERTIFICATION

GENERAL INSTRUCTIONS

Section 17076.11 of the Education Code requires school districts using, or planning to use, funds allocated pursuant to the State of California School Facility Program ("Program") for the construction and/or modernization of school buildings to have a participation goal for disabled veteran business enterprises ("DVBE") of at least three percent (3%) per year of the overall dollar amount expended each year by the school district on projects that receive state funding. Therefore, lowest responsive responsible bidder awarded the Contract must submit this document to the District with its executed Agreement, identifying the steps Developer took to solicit DVBE participation in conjunction with this Contract. Do not submit this form with your bids.

– Method of Compliance with DVBE Participation Goals. Check the appropriate box to indicate your method of committing the contract dollar amount.

YOUR BUSINESS ENTERPRISE IS:	**AND YOU WILL**	**AND YOU WILL**
☐ Disabled veteran owned and your forces will perform at least 3% of this Contract	Include a copy of your DVBE letter from Office of Small Business and Disabled Veterans Business Enterprise Services ("OSB")*	Complete Part 1 of this form and the Certification
☐ Disabled veteran owned but is unable to perform 3% of this Contract with your forces	Use DVBE subcontractors /suppliers to bring the Contract participation to at least 3%	Include a copy of each DVBE's letter from OSB (including yours, if applicable), and complete Part 1 of this form and the certification
☐ **NOT** disabled veteran owned	Use DVBE subcontractors /suppliers for at least 3% of this Contract	
☐ Unable to meet the required participation goals	Complete all of this Certification form	

* A DVBE letter from OSB is obtained from the participating DVBE.

You must complete the following table to show the dollar amount of DVBE participation:

	TOTAL CONTRACT PRICE
A. Prime Bidder, if DVBE (own participation)	$
DVBE Subcontractor or Supplier	
Subtotal (A & B)	
Non-DVBE	
Total Bid	

– Contacts. To identify DVBE subcontractors/suppliers for participation in your contract, you must contact each of the following categories. You should contact several DVBE organizations.

CATEGORY	**TELEPHONE NUMBER**	**DATE CONTACTED**	**PERSON CONTACTED**
The District, if any			*
OSB, which publishes a list of DVBE's; Internet Address: http://www.dgs.ca.gov/osbcr	(916) 323-5478 (916) 322-5060		*
DVBE Organization (List)			*

*Write "recorded message" in this column, if applicable.

– Advertisement. You must advertise for DVBE participation in both a trade and focus paper. List the advertisement you place to solicit DVBE participation. Advertisements should be published at least fourteen (14) days prior to bid/proposal opening; if you cannot advertise fourteen (14) days prior, advertisements should be published as soon as possible. Advertisements must include that your firm is seeking DVBE participation, the project name and location, and you firm's name, your contact person, and telephone number. Attach copies of advertisements to this form.

FOCUS/TRADE PAPER NAME	**CHECK ONE**		**DATE OF ADVERTISEMENT**
	TRADE	**FOCUS**	

– DVBE Solicitations. List DVBE subcontractors/suppliers that were invited to bid. Use the following instructions to complete the remainder of this section (read the three columns as a sentence from left to right). If you need additional space to list DVBE solicitations, please use a separate page and attach to this form.

IF THE DVBE…..	**THEN…..**	**AND…..**
was selected to participate	Check "yes" in the "SELECTED" column	include a copy of their DVBE letter(s) from OSB
was **NOT** selected to participate	Check "NO" in the "SELECTED" column	state why in the "REASON NOT SELECTED" column
did not respond to your solicitation	Check the "NO RESPONSE" column.	

DISABLED VETERANS BUSINESS ENTERPRISES CONTACTED	**SELECTED**		**REASON NOT SELECTED**	**NO RESPONSE**
	YES	**NO**		

A copy of this form must be retained by you and may be subject to a future audit.

CERTIFICATION

I, _____ certify that I am the Developer's _____ and that I have made a diligent effort to ascertain the facts with regard to the representations made herein.

Date: _____

Name of Developer: _____

Signature: _____

Print Name: _____

Title: _____

END OF DOCUMENT

DRUG-FREE WORKPLACE CERTIFICATION

This Drug-Free Workplace Certification form is required from the successful Bidder pursuant to Government Code section 8350 et seq., the Drug-Free Workplace Act of 1990. The Drug-Free Workplace Act of 1990 requires that every person or organization awarded a contract or grant for the procurement of any property or service from any state agency must certify that it will provide a drug-free workplace by doing certain specified acts. In addition, the Act provides that each contract or grant awarded by a state agency may be subject to suspension of payments or termination of the contract or grant, and the contractor or grantee may be subject to debarment from future contracting, if the contracting agency determines that specified acts have occurred.

The District is not a "state agency" as defined in the applicable section(s) of the Government Code, but the District is a local agency and public school district under California law and requires all contractors on District projects to comply with the provisions and requirements of Government Code section 8350 et seq., the Drug-Free Workplace Act of 1990.

Developer shall certify that it will provide a drug-free workplace by doing all of the following:

a. Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance is prohibited in the person's or organization's workplace and specifying actions which will be taken against employees for violations of the prohibition.

b. Establishing a drug-free awareness program to inform employees about all of the following:

   (1) The dangers of drug abuse in the workplace.

   (2) The person's or organization's policy of maintaining a drug-free workplace.

   (3) The availability of drug counseling, rehabilitation, and employee-assistance programs.

   (4) The penalties that may be imposed upon employees for drug abuse violations.

c. Requiring that each employee engaged in the performance of the contract or grant be given a copy of the statement required above, and that, as a condition of employment on the contract or grant, the employee agrees to abide by the terms of the statement.

I, the undersigned, agree to fulfill the terms and requirements of Government Code section 8355 listed above and will publish a statement notifying employees concerning (a) the prohibition of controlled substance at the workplace, (b) establishing a drug-free awareness program, and (c) requiring that each employee engaged in the performance of the Contract

be given a copy of the statement required by section 8355(a), and requiring that the employee agree to abide by the terms of that statement.

I also understand that if the District determines that I have either (a) made a false certification herein, or (b) violated this certification by failing to carry out the requirements of section 8355, that the Contract awarded herein is subject to termination, suspension of payments, or both. I further understand that, should I violate the terms of the Drug-Free Workplace Act of 1990, I may be subject to debarment in accordance with the requirements of the aforementioned Act.

I acknowledge that I am aware of the provisions of Government Code section 8350 et seq. and hereby certify that I will adhere to the requirements of the Drug-Free Workplace Act of 1990.

Date: _____

Proper Name of Developer: _____

Signature: _____

Print Name: _____

Title: _____

END OF DOCUMENT

TOBACCO-FREE ENVIRONMENT CERTIFICATION

Pursuant to, without limitation, 20 U.S.C. section 6083, Labor Code section 6400 et seq., Health & Safety Code section 104350 et seq., and District Board policies, all District sites, including the Project site, are tobacco-free environments. Smoking and the use of tobacco products by all persons is prohibited on or in District property. District property includes school buildings, school grounds, school-owned vehicles and vehicles owned by others while on District property.

I acknowledge that I am aware of the District's policy regarding tobacco-free environments at District sites, including the Project site and hereby certify that I will adhere to the requirements of that policy and not permit any of my firm's employees, agents, subcontractors, or my firm's subcontractors' employees or agents, to use tobacco and/or smoke on the Project site.

Date: _____

Proper Name of Developer: _____

Signature: _____

Print Name: _____

Title: _____

END OF DOCUMENT

HAZARDOUS MATERIALS CERTIFICATION

Developer hereby certifies that no asbestos, or asbestos-containing materials, polychlorinated biphenyl (PCB), or any material listed by the federal or state Environmental Protection Agency or federal or state health agencies as a hazardous material, or any other material defined as being hazardous under federal or state laws, rules, or regulations ("New Hazardous Material"), shall be furnished, installed, or incorporated in any way into the Project or in any tools, devices, clothing, or equipment used to affect any portion of Developer's work on the Project for District.

Developer further certifies that it has instructed its employees with respect to the above-mentioned standards, hazards, risks, and liabilities.

Asbestos and/or asbestos-containing material shall be defined as all items containing but not limited to chrysotile, crocidolite, amosite, anthophyllite, tremolite, and actinolite. Any or all material containing greater than one-tenth of one percent (0.1%) asbestos shall be defined as asbestos-containing material.

Any disputes involving the question of whether or not material is New Hazardous Material shall be settled by electron microscopy or other appropriate and recognized testing procedure, at the District's determination. The costs of any such tests shall be paid by Developer if the material is found to be New Hazardous Material.

All Work or materials found to be New Hazardous Material or Work or material installed with equipment containing New Hazardous Material will be immediately rejected and this Work will be removed at Developer's expense at no additional cost to the District.

Developer has read and understood the document titled Hazardous Materials Procedures & Requirements, and shall comply with all the provisions outlined therein.

Date: _____

Proper Name of Developer: _____

Signature: _____

Print Name: _____

Title: _____

END OF DOCUMENT

LEAD-BASED MATERIALS CERTIFICATION

This certification provides notice to the Developer that:

(1) Developer's work may disturb lead-containing building materials.

(2) Developer shall notify the District if any work may result in the disturbance of lead-containing building materials.

(3) Developer shall comply with the Renovation, Repair and Painting Rule, if lead-based paint is disturbed in a six-square-foot or greater area indoors or a 20-square-foot or greater area outdoors.

1. Lead as a Health Hazard

Lead poisoning is recognized as a serious environmental health hazard facing children today. Even at low levels of exposure, much lower than previously believed, lead can impair the development of a child's central nervous system, causing learning disabilities, and leading to serious behavioral problems. Lead enters the environment as tiny lead particles and lead dust disburses when paint chips, chalks, peels, wears away over time, or is otherwise disturbed. Ingestion of lead dust is the most common pathway of childhood poisoning; lead dust gets on a child's hands and toys and then into a child's mouth through common hand-to-mouth activity. Exposures may result from construction or remodeling activities that disturb lead paint, from ordinary wear and tear of windows and doors, or from friction on other surfaces.

Ordinary construction and renovation or repainting activities carried out without lead-safe work practices can disturb lead-based paint and create significant hazards. Improper removal practices, such as dry scraping, sanding, or water blasting painted surfaces, are likely to generate high volumes of lead dust.

Because the Developer and its employees will be providing services for the District, and because the Developer's work may disturb lead-containing building materials, DEVELOPER IS HEREBY NOTIFIED of the potential presence of lead-containing materials located within certain buildings utilized by the District. All school buildings built prior to 1978 are presumed to contain some lead-based paint until sampling proves otherwise.

2. Overview of California Law

Education Code section 32240 et seq. is known as the Lead-Safe Schools Protection Act. Under this act, the Department of Health Services is to conduct a sample survey of schools in the State of California for the purpose of developing risk factors to predict lead contamination in public schools. (Ed. Code, § 32241.)

Any school that undertakes any action to abate existing risk factors for lead is required to utilize trained and state-certified contractors, inspectors, and workers. (Ed. Code, § 32243, subd. (b).) Moreover, lead-based paint, lead plumbing, and solders, or other potential sources of lead contamination, shall not be utilized in the construction of any new school facility or the modernization or renovation of any existing school facility. (Ed. Code, § 32244.)

Both the Federal Occupational Safety and Health Administration ("Fed/OSHA") and the California Division of Occupational Safety and Health ("Cal/OSHA") have implemented safety orders applicable to all construction work where a contractor's employee may be occupationally exposed to lead.

The OSHA Regulations apply to all construction work where a contractor's employee may be occupationally exposed to lead. The OSHA Regulations contain specific and detailed requirements imposed on contractors subject to those regulations. The OSHA Regulations define construction work as work for construction, alteration, and/or repair, including painting and decorating. Regulated work includes, but is not limited to, the following:

a. Demolition or salvage of structures where lead or materials containing lead are present;

b. Removal or encapsulation of materials containing lead;

c. New construction, alteration, repair, or renovation of structures, substrates, or portions thereof, that contain lead, or materials containing lead;

d. Installation of products containing lead;

e. Lead contamination/emergency cleanup;

f. Transportation, disposal, storage, or containment of lead or materials containing lead on the site or location at which construction activities are performed; and

g. Maintenance operations associated with the construction activities described in the subsection.

Because it is assumed by the District that all painted surfaces (interior as well as exterior) within the District contain some level of lead, it is imperative that the Developer, its workers and subcontractors fully and adequately comply with all applicable laws, rules and regulations governing lead-based materials (including title 8, California Code of Regulations, section 1532.1).

Developer shall notify the District if any Work may result in the disturbance of lead-containing building materials. Any and all Work that may result in the disturbance of lead-containing building materials shall be coordinated through the District. A signed copy of this Certification shall be on file prior to beginning Work on the Project, along with all current insurance certificates.

3. <u>Renovation, Repair and Painting Rule, Section 402(c)(3) of the Toxic Substances Control Act</u>

The EPA requires lead safe work practices to reduce exposure to lead hazards created by renovation, repair and painting activities that disturb lead-based paint. Pursuant to the Renovation, Repair and Painting Rule (RRP), renovations in homes, childcare facilities, and schools built prior to 1978 must be conducted by certified renovations firms, using renovators with training by a EPA-accredited training provider, and fully and adequately complying with all applicable laws, rules and regulations governing lead-based materials, including those rules and regulations appearing within title 40 of the Code of Federal Regulations as part 745 (40 CFR 745).

The RRP requirements apply to all contractors who disturb lead-based paint in a six-square-foot or greater area indoors or a 20-square-foot or greater area outdoors. If a DPH-certified inspector or risk assessor determines that a home constructed before 1978 is lead-free, the federal certification is not required for anyone working on that particular building.

4. Developer's Liability

If the Developer fails to comply with any applicable laws, rules, or regulations, and that failure results in a site or worker contamination, the Developer will be held solely responsible for all costs involved in any required corrective actions, and shall defend, indemnify, and hold harmless the District, pursuant to the indemnification provisions of the Contract, for all damages and other claims arising therefrom.

If lead disturbance is anticipated in the Work, only persons with appropriate accreditation, registrations, licenses, and training shall conduct this Work.

It shall be the responsibility of the Developer to properly dispose of any and all waste products, including, but not limited to, paint chips, any collected residue, or any other visual material that may occur from the prepping of any painted surface. It will be the responsibility of the Developer to provide the proper disposal of any hazardous waste by a certified hazardous waste hauler. This company shall be registered with the Department of Transportation (DOT) and shall be able to issue a current manifest number upon transporting any hazardous material from any school site within the District.

The Developer shall provide the District with any sample results prior to beginning Work, during the Work, and after the completion of the Work. The District may request to examine, prior to the commencement of the Work, the lead training records of each employee of the Developer.

THE DEVELOPER HEREBY ACKNOWLEDGES, UNDER PENALTY OF PERJURY, THAT IT:

1. HAS RECEIVED NOTIFICATION OF POTENTIAL LEAD-BASED MATERIALS ON THE OWNER'S PROPERTY;

2. IS KNOWLEDGEABLE REGARDING AND WILL COMPLY WITH ALL APPLICABLE LAWS, RULES, AND REGULATIONS GOVERNING WORK WITH, AND DISPOSAL, OF LEAD.

THE UNDERSIGNED WARRANTS THAT HE/SHE HAS THE AUTHORITY TO SIGN ON BEHALF OF AND BIND THE DEVELOPER. THE DISTRICT MAY REQUIRE PROOF OF SUCH AUTHORITY.

Date: _____

Proper Name of Developer: _____

Signature: _____

Print Name: _____

Title: _____

END OF DOCUMENT

IMPORTED MATERIALS CERTIFICATION

This form shall be executed by all entities that, in any way, provide or deliver and/or supply any soils, aggregate, or related materials ("Fill") to the Project Site and shall be provided to the District at least ten (10) days before delivery. All Fill shall satisfy all requirements of any environmental review of the Project performed pursuant to the statutes and guidelines of the California Environmental Quality Act, section 21000 et seq. of the Public Resources Code ("CEQA"), and all requirements of section 17210 et seq. of the Education Code, including requirements for a Phase I environmental assessment acceptable to the State of California Department of Education and Department of Toxic Substances Control.

Certification of: □ Delivery Firm/Transporter □ Supplier □ Manufacturer
□ Wholesaler □ Broker □ Retailer
□ Distributor □ Other _____

Type of Entity □ Corporation □ General Partnership
□ Limited Partnership □ Limited Liability Company
□ Sole Proprietorship □ Other _____

Name of firm ("Firm"): _____

Mailing address: _____

Addresses of branch office used for this Project: _____

If subsidiary, name and address of parent company: _____

_____

By my signature below, I hereby certify that I am aware of section 25260 of the Health and Safety Code and the sections referenced therein regarding the definition of hazardous material. I further certify on behalf of the Firm that all soils, aggregates, or related materials provided, delivered, and/or supplied or that will be provided, delivered, and/or supplied by this Firm to the Project Site are free of any and all hazardous material as defined in section 25260 of the Health and Safety Code. I further certify that I am authorized to make this certification on behalf of the Firm.

Date: _____

Proper Name of Firm: _____

Signature: _____

Print Name: _____

Title: _____

END OF DOCUMENT

CRIMINAL BACKGROUND INVESTIGATION/FINGERPRINTING CERTIFICATION

The undersigned does hereby certify to the governing board of the District as follows:

That I am a representative of the Developer currently under contract with the District; that I am familiar with the facts herein certified; and that I am authorized and qualified to execute this certificate on behalf of Developer.

Developer certifies that it has taken at least one of the following actions with respect to the construction Project that is the subject of the Contract (check all that apply):

☐ The Developer is a sole proprietor and intends to comply with the fingerprinting requirements of Education Code section 45125.1(k) with respect to all Developer's employees who may have contact with District pupils in the course of providing services pursuant to the Contract, and hereby agrees to the District's preparation and submission of fingerprints such that the California Department of Justice may determine that none of those employees has been convicted of a felony, as that term is defined in Education Code section 45122.1. No work shall commence until such determination by DOJ has been made.

As an authorized District official, I am familiar with the facts herein certified, and am authorized to execute this certificate on behalf of the District and undertake to prepare and submit Developer's fingerprints as if he or she was an employee of the District.

Date: _____

District Representative's Name and Title: _____

District Representative's Signature: _____

☐ The Developer, who is not a sole proprietor, has complied with the fingerprinting requirements of Education Code section 45125.1 with respect to all Developer's employees and all of its Subcontractors' employees who may have contact with District pupils in the course of providing services pursuant to the Contract, and the California Department of Justice has determined that none of those employees has been convicted of a felony, as that term is defined in Education Code section 45122.1. A complete and accurate list of Developer's employees and of all of its subcontractors' employees who may come in contact with District pupils during the course and scope of the Contract is attached hereto; and/or

☐ Pursuant to Education Code section 45125.2, Developer has installed or will install, prior to commencement of Work, a physical barrier at the Work Site, that will limit contact between Developer's employees and District pupils at all times; and/or

☐ Pursuant to Education Code section 45125.2, Developer certifies that all employees will be under the continual supervision of, and monitored by, an employee of the Developer who the California Department of Justice has ascertained, or as described below, will ascertain, has not been convicted of a violent or serious felony. The name and title of the employee who will be supervising Developer's and its subcontractors' employees is:

Name: _____

Title: _____

NOTE: If the Developer is a sole proprietor, and elects the above option, Developer must have the above-named employee's fingerprints prepared and submitted by the District, in

accordance with Education Code section 45125.1(k). No work shall commence until such determination by DOJ has been made.

As an authorized District official, I am familiar with the facts herein certified, and am authorized to execute this certificate on behalf of the District and undertake to prepare and submit Developer's fingerprints as if he or she was an employee of the District.

Date: _____

District Representative's Name and Title: _____

District Representative's Signature: _____

☐ *The Work on the Contract is either (i) at an unoccupied school site and no employee and/or subcontractor or supplier of any tier of the Contract shall come in contact with the District pupils or (ii) Developer's employees or any subcontractor or supplier of any tier of the Contract will have only limited contact, if any, with District pupils and the District will take appropriate steps to protect the safety of any pupils that may come in contact with Consultant's employees, subcontractors or suppliers so that the fingerprinting and criminal background investigation requirements of Education Code section 45125.1 shall not apply to Developer under the Contract.*

As an authorized District official, I am familiar with the facts herein certified, and am authorized to execute this certificate on behalf of the District.

Date: _____

District Representative's Name and Title: _____

District Representative's Signature: _____

Developer's responsibility for background clearance extends to all of its employees, Subcontractors, and employees of Subcontractors coming into contact with District pupils regardless of whether they are designated as employees or acting as independent contractors of the Developer.

Date: _____

Proper Name of Developer: _____

Signature: _____

Print Name: _____

Title: _____

END OF DOCUMENT

ROOFING PROJECT CERTIFICATION

This form shall be executed by all contractors, materials manufacturers, or vendors involved in a bid or proposal for the repair or replacement of a roof of a public school building where the project is either for repair of more than 25% of the roof or that has a total cost more than $21,000 ("roofing project") and submitted to the District when the award is made.

Certification of: □ Contractor □ Materials Manufacturer
□ Vendor □ Other _____

I, _____, _____, certify that I have not
[Name] [Name of Firm]
offered, given, or agreed to give, received, accepted, or agreed to accept, any gift, contribution, or any financial incentive whatsoever to or from any person in connection with the roofing project contract. As used in this certification, "person" means any natural person, business, partnership, corporation, union, committee, club, or other organization, entity, or group of individuals.

Furthermore, I, _____, _____, certify that
[Name] [Name of Firm]
I do not have, and throughout the duration of the contract, I will not have, any financial relationship in connection with the performance of this contract with any architect, engineer, roofing consultant, materials manufacturer, distributor, or vendor that is not disclosed below.

I, _____, _____, have the following
[Name] [Name of Firm]
financial relationships with an architect, engineer, roofing consultant, materials manufacturer, distributor, or vendor, or other person in connection with the following roofing project contract (provide Name and Address of Building, and Contract Date and Number):

_____

_____

_____

_____

_____

_____

_____

_____

By my signature below, I hereby certify that, to the best of my knowledge, the contents of this disclosure are true, or are believed to be true. I further certify on behalf of the Firm that I am aware of section 3000 et seq. of the California Public Contract Code, and the sections referenced therein regarding the penalties for providing false information or failing to disclose a financial relationship in this disclosure. I further certify that I am authorized to make this certification on behalf of the Firm.

Date: _____

Proper Name of Firm: _____

Signature: _____

Print Name: _____

Title: _____

END OF DOCUMENT

SKILLED AND TRAINED WORKFORCE CERTIFICATION

The undersigned does hereby certify to the governing board of the District as follows:

That I am a representative of the Developer currently performing work on the Project; that I am familiar with the facts herein certified; and that I am authorized and qualified to execute this certificate on behalf of Developer.

That Developer and its subcontractors at every tier will use a Skilled and Trained Workforce to perform all work on the Contract or Project that falls within an apprenticeable occupation in the building and construction trades in accordance with Public Contract Code section 2600 et seq.

"Apprenticeable occupation" means an occupation for which the Chief of the Division of Apprenticeship Standards of the Department of Industrial Relations ("Chief") had approved an apprenticeship program pursuant to Section 3075 of the Labor Code before January 1, 2014.

"Skilled and Trained Workforce" means a workforce that meets all of the following conditions:

1. All of the workers are either skilled journeypersons or apprentices registered in an apprenticeship program approved by the Chief.

2. The percentage of either (A) skilled journeypersons employed by the Developer or subcontractor to perform work on the Contract or Project who are graduates of an apprenticeship program for the applicable occupation, or (B) hours of work performed by skilled journeypersons employed by Developer or subcontractor to perform work on the Contract or Project who are graduates of an apprenticeship program for the applicable occupation, is at least equal to the percentages set forth in the following chart for the applicable month:

APPLICABLE DATES	% REQUIREMENT	EXCLUDED OCCUPATIONS
1/1/2016 – 12/31/2017	At least 30%	Teamster – 0%.
1/1/2018 – 12/31/2018	At least 40%	Teamster – 0%. Acoustical installer, bricklayer, carpenter, cement mason, drywall installer or lather, marble mason, finisher, or setter, modular furniture or systems installer, operating engineer, pile driver, plasterer, roofer or waterproofer, stone mason, surveyor, terrazzo worker or finisher, and tile layer, setter, or finisher – At least 30% for each trade.
1/1/2019 – 12/31/2019	At least 50%	
1/1/2020 – 12/31/2020	At least 60%	

3. For an apprenticeable occupation in which no apprenticeship program has been approved by the Chief before January 1, 1995, up to one-half of the above graduation percentage requirements set forth in the above chart may be satisfied by skilled journeypersons who commenced working in the apprenticeable occupation before the Chief's approval of an apprenticeship program for that occupation in the county in which the Project is located.

4. The contractor or subcontractor need not meet the apprenticeship graduation requirements if:

    a. During a calendar month, the Developer or subcontractor employs skilled journeypersons to perform fewer than 10 hours of work on the Contract or Project; or

    b. The subcontractor was not a listed subcontractor under Public Contract Code section 4104 or a substitute for a listed subcontractor and the subcontract does not exceed one-half of 1 percent of the price of the prime contract.

That Developer and its subcontractors will demonstrate its compliance with the Skilled and Trained Workforce requirements by either of the following methods (check what applies):

☐ Using the form attached hereto, provide monthly reports to the District from the Developer and its subcontractors demonstrating that they are complying with the requirements of Public Contract Code section 2600 et seq., which shall be a public record under California Public Records Act, Government Code section 6250 et seq.; or

☐ Provide evidence that Developer and its subcontractors have agreed to be bound by: (1) a project labor agreement entered into by the District that binds all contractors and all its subcontractors at every tier performing work on the Project to use a skilled and trained workforce; (2) the extension or renewal of a project labor agreement entered into by the District prior to January 1, 2017; or (3) a project labor agreement that binds all contractors and all its subcontractors at every tier performing work on the Project to use a skilled and trained workforce.

I hereby certify that I am aware of the provisions of section 17407.5 of the Education Code and sections 2600 through 2602 of the Public Contract Code and will comply with such provisions during the performance of the Work of this Contract and will bind all of my subcontractors at every tier, with the exception of the subcontractors identified in Public Contract Code section 2602, to comply with such provisions.

Date: _____

Proper Name of Developer: _____

Signature: _____

Print Name: _____

Title: _____

SKILLED AND TRAINED WORKFORCE
MONTHLY REPORT
(COVER PAGE)

NAME OF PROJECT: Needham ES Modular Classroom Project – Increment II

NAME OF CONTRACTOR: _____

FOR THE MONTH OF: _____, 20_____

The undersigned hereby certifies that all the workers employed by the above-referenced contractor performing work in an apprenticeable occupation in the building and construction trades on the Project are either skilled journeypersons or apprentices registered in an apprenticeship program approved by the Chief of the Division of Apprenticeship Standards of the Department of Industrial Relations.

The undersigned further certifies that the percentage of either (A) skilled journeypersons employed by the above-referenced contractor to perform work on the Project who are graduates of an apprenticeship program for the applicable occupation, or (B) hours of work performed by skilled journeypersons employed by the above-referenced contractor to perform work on the Project who are graduates of an apprenticeship program for the applicable occupation, is at least equal to the apprenticeship graduation percentage required by Public Contract Code section 2601 for the particular calendar month.

The undersigned has demonstrated compliance with the apprenticeship graduation percentage by completing the accompanying Worksheet(s). A true and correct Worksheet for each apprenticeable occupation in the building and construction trades utilized by the above-referenced contractor for the particular calendar month is attached hereto, **totaling _____ attached page(s)**.

I certify under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Date: _____

Signature: _____

Print Name: _____

Title: _____

SKILLED AND TRAINED WORKFORCE
MONTHLY REPORT
(WORKSHEET)

NAME OF PROJECT: Needham ES Modular Classroom Project – Increment II

NAME OF CONTRACTOR: _____

FOR THE MONTH OF: _____ 20__

Page ____ of ____ (Duplicate as needed. Submit a separate Worksheet for each apprenticeable occupation in the building and construction trades utilized by contractor.)

***Apprenticeable occupation: _____.**

A. If above-identified occupation is *acoustical installer, bricklayer, carpenter, cement mason, drywall installer or lather, marble mason, finisher, or setter, modular furniture or systems installer, operating engineer, pile driver, plasterer, roofer or waterproofer, stone mason, surveyor, terrazzo worker or finisher, and tile layer, setter, or finisher*, the apprenticeship graduation percentage requirement is at least 30 percent.

B. If the above-identified occupation is any other apprenticeable occupation, *excluding teamsters and occupations listed in subparagraph A, above*, the apprenticeship graduation percentage requirement is at least at least 30 percent in 2017, 40 percent in 2018, 50 percent in 2019, 60 percent in 2020.

Demonstrate compliance for the above-identified occupation by either Number of Skilled Journeypersons or Number of Hours of Work Performed by Skilled Journeypersons. Check and complete the method of compliance that applies:

☐ **Number of Skilled Journeypersons**:

1. Number of skilled journeypersons performing work in the apprenticeable occupation: _____
2. Number of skilled journeypersons who are graduates of an apprenticeship program for the applicable occupation: _____

Percentage of skilled journeypersons who are graduates of an apprenticeship program for the applicable occupation (divide line 2 by line 1): _____ %

☐ **Number of Hours of Work Performed by Skilled Journeypersons**:

1. Number of hours of work performed by skilled journeypersons in the apprenticeable occupation: _____
2. Number of hours of work performed by skilled journeypersons who are graduates of an apprenticeship program for the applicable occupation: _____

Percentage of hours of work performed by skilled journeypersons who are graduates of an apprenticeship program for the applicable occupation (divide line 2 by line 1): _____ %

*This Worksheet incorporates by reference all definitions in Public Contract Code section 2601, including, without limitation, the definitions of "apprenticeable occupation," "graduate of an apprenticeship program," and "skilled journeypersons."

END OF DOCUMENT

ESCROW AGREEMENT IN LIEU OF RETENTION
Public Contact Code Section 22300

This Escrow Agreement ("Escrow Agreement") is made and entered into this _____ day of _____, 20___, by and between the Lodi Unified School District ("District"), whose address is 1305 E. Vine Street, Lodi, CA 95240, and _____ ("Developer"), whose address is _____, and _____ _____ ("Escrow Agent"), a state or federally chartered bank in the state of California, whose address is _____ _____.

For the consideration hereinafter set forth, District, Developer, and Escrow Agent agree as follows:

1. Pursuant to section 22300 of Public Contract Code of the State of California, which is hereby incorporated by reference, Developer has the following two (2) options:

   ☐ Deposit securities with Escrow Agent as a substitute for retention earnings required to be withheld by District pursuant to the Construction Contract No.___ entered into between District and Developer for the _____ Project, in the amount of _____ Dollars ($_____), dated _____, 20__, (the "Contract"); **or**

   ☐ On written request of Developer, District shall make payments of the retention earnings for the above referenced Contract directly to Escrow Agent.

   When Developer deposits the securities as a substitute for Contract earnings (first option), Escrow Agent shall notify District within ten (10) calendar days of the deposit. The market value of the securities at the time of substitution and at all times from substitution until the termination of the Escrow Agreement shall be at least equal to the cash amount then required to be withheld as retention under terms of Contract between District and Developer.

   Securities shall be held in name of Lodi Unified School District, and shall designate Developer as beneficial owner.

2. District shall make progress payments to Developer for those funds which otherwise would be withheld from progress payments pursuant to Contract provisions, provided that Escrow Agent holds securities in form and amount specified above.

3. When District makes payment of retention earned directly to Escrow Agent, Escrow Agent shall hold them for the benefit of Developer until the time that the escrow created under this Escrow Agreement is terminated. Developer may direct the investment of the payments into securities. All terms and conditions of this Escrow Agreement and the rights and responsibilities of the Parties shall be equally applicable and binding when District pays Escrow Agent directly.

4. Developer shall be responsible for paying all fees for the expenses incurred by Escrow Agent in administering the Escrow Account, and all expenses of District. The District will charge Developer $_____ for each of District's deposits to the

escrow account. These expenses and payment terms shall be determined by District, Developer, and Escrow Agent.

5. Interest earned on securities or money market accounts held in escrow and all interest earned on that interest shall be for sole account of Developer and shall be subject to withdrawal by Developer at any time and from time to time without notice to District.

6. Developer shall have the right to withdraw all or any part of the principal in the Escrow Account only by written notice to Escrow Agent accompanied by written authorization from District to Escrow Agent that District consents to withdrawal of amount sought to be withdrawn by Developer.

7. District shall have the right to draw upon the securities and/or withdraw amounts from the Escrow Account in the event of default by Developer. Upon seven (7) days' written notice to Escrow Agent from District of the default, if applicable, Escrow Agent shall immediately convert the securities to cash and shall distribute the cash as instructed by District.

8. Upon receipt of written notification from District certifying that the Contract is final and complete, and that Developer has complied with all requirements and procedures applicable to the Contract, Escrow Agent shall release to Developer all securities and interest on deposit less escrow fees and charges of the Escrow Account. The escrow shall be closed immediately upon disbursement of all monies and securities on deposit and payments of fees and charges.

9. Escrow Agent shall rely on written notifications from District and Developer pursuant to Paragraphs 5 through 8, inclusive, of this Escrow Agreement and District and Developer shall hold Escrow Agent harmless from Escrow Agent's release and disbursement of securities and interest as set forth above.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

10. Names of persons who are authorized to give written notice or to receive written notice on behalf of District and on behalf of Developer in connection with the foregoing, and exemplars of their respective signatures are as follows:

On behalf of District:

Title

Name

Signature

Address

On behalf of Developer:

Title

Name

Signature

Address

On behalf of Escrow Agent:

Title

Name

Signature

Address

At the time that the Escrow Account is opened, District and Developer shall deliver to Escrow Agent a fully executed copy of this Agreement.

IN WITNESS WHEREOF, the parties have executed this Agreement by their proper officers on the date first set forth above.

On behalf of District:

Title

Name

Signature

Address

On behalf of Developer:

Title

Name

Signature

Address

END OF DOCUMENT

NOTICE OF AWARD

DATED: _____ 20__

TO: _____ ("Developer")
[ADDRESS]

PROJECT: Needham ES Modular Classroom Project – Increment II

CONTRACT NO.: _____ between the Lodi Unified School District ("District") and Developer ("Contract").

Developer has been awarded the above-referenced Contract on _____, 20__, by act of the District's Board.

The Developer shall execute and submit to District the following documents by no later than 5:00 p.m. on the **SEVENTH (7th)** calendar day following the date of this Notice of Award.

1.1 Site Lease.

1.2 Facilities Lease.

1.3 Insurance Certificates and Endorsements as required.

1.4 Registered Subcontractors List (Initial List): Include any designated Subcontractors of any tier from Developer's proposal. To be amended/supplemented following Subcontractor bidding.

1.5 Workers' Compensation Certification.

1.6 Prevailing Wage and Related Labor Requirements Certification.

1.7 Drug-Free Workplace Certification.

1.8 Tobacco-Free Environment Certification.

1.9 Hazardous Materials Certification.

1.10 Lead-Based Materials Certification.

1.11 Imported Materials Certification.

1.12 Criminal Background Investigation/Fingerprinting Certification.

1.13 Roofing Project Certification.

1.14 Skilled and Trained Workforce Certification.

1.15 Escrow Agreement in Lieu of Retention (if used).

After Developer's timely compliance with those conditions, District will return a fully signed counterpart of the Contract and may then issue the Notice to Proceed with Preconstruction Services for the Project.

LODI UNIFIED SCHOOL DISTRICT

BY: _____

NAME: _____

TITLE: _____

END OF DOCUMENT

NOTICE TO PROCEED WITH PRECONSTRUCTION SERVICES

DATED: _____ 20__

TO: _____ ("Developer")
[ADDRESS]

PROJECT: Needham ES Modular Classroom Project – Increment II

CONTRACT NO.: _____ between the Lodi Unified School District ("District") and Developer ("Contract").

Developer is hereby notified that the Contract Time under the above Contract will commence to run on _____, 20___. By that date, Developer is to start performing its preconstruction services for the Project.

Preconstruction services will conclude upon approval of the Amendment to the Facilities Lease by District's Board, or termination of this Contract by either party per the Contract's terms.

No work for which a contractor is required to be licensed in accordance with the Business and Professions Code and for which Division of the State Architect (DSA) approval is required can be performed before receipt of DSA approval.

Developer shall not commence construction of the Project until the Notice to Proceed with Construction is issued by District following approval of the Amendment to the Facilities Lease by District's Board.

Thank you. We look forward to a very successful Project.

LODI UNIFIED SCHOOL DISTRICT

BY: _____

NAME: _____

TITLE: _____

END OF DOCUMENT

NOTICE OF AWARD AFTER GUARANTEED MAXIMUM PRICE

DATED: _____ 20__

TO: _____ ("Developer")
[ADDRESS]

PROJECT: Needham ES Modular Classroom Project – Increment II

CONTRACT NO.: _____ between the Lodi Unified School District ("District") and Developer ("Contract").

Amendment No. 1 to the Facilities Lease for the above-referenced Contract has been approved on _____, 20__, by act of the District's Board. The Guaranteed Maximum Price (GMP) for the Project is _____ Dollars ($_____).

Developer shall fully execute the following documents on the forms provided in the Contract Documents as indicated on the forms and submit the same to District by no later than 5:00 p.m. on the **SEVENTH (7th)** calendar day following the date of this Notice of Amendment.

1.1 Performance Bond (100% of GMP).

1.2 Payment Bond (Contractor's Labor & Material Bond) (100% of GMP).

1.3 Disabled Veterans Business Enterprise Certification.

After Developer's timely compliance with those conditions, District may then issue the Notice to Proceed with Construction for the Project.

LODI UNIFIED SCHOOL DISTRICT

BY: _____

NAME: _____

TITLE: _____

END OF DOCUMENT

NOTICE TO PROCEED WITH CONSTRUCTION

DATED: _____ 20__

TO: _____ ("Developer")

[ADDRESS]

PROJECT: Needham ES Modular Classroom Project – Increment II

CONTRACT NO.: _____ between the Lodi Unified School District ("District") and Developer ("Contract").

Developer is hereby notified that the construction phase of the Project will commence on ___ _____, 20___. In accordance with the Contract, Developer shall complete the Work by no later than _____, 20___.

Developer must submit the following documents by 5:00 p.m. on the **TENTH (10th)** calendar day following the date of this Notice to Proceed with Construction, and in no event later than the **FIRST (1st)** day on which Developer has workers employed on the construction phase of the Project:

1.1 Developer's preliminary schedule of construction.

1.2 Developer's preliminary schedule of values for all of the Work.

1.3 Developer's preliminary schedule of submittals, including Shop Drawings, Product Data, and Samples submittals

1.4 Developer's Safety Plan specifically adapted for the Project.

1.5 A complete list subcontractors of any and all tiers, including the name, address, telephone number, facsimile number, California State Contractors License number, classification, DIR registration number, and monetary value of all subcontracts for parties furnishing labor, material, or equipment for completion of the Project.

Thank you. We look forward to a very successful Project.

LODI UNIFIED SCHOOL DISTRICT

BY: _____

NAME: _____

TITLE: _____

END OF DOCUMENT

APPLICATION AND CERTIFICATE FOR PAYMENT

TO:	PROJECT:	APPLICATION NO:	Distribution to:
		INVOICE NO:	☐ OWNER
			☐ ARCHITECT
		PERIOD TO:	☐ CONTRACTOR
	JOB:		☐ INSPECTOR OF RECORD
FROM:	ARCHITECT:		☐ 3RD PARTY INSPECTOR
		PROJECT NO:	☐ DISBURSEMENT AGENCY
		DSA FILE NO:	
		CONTRACT DATE:	

CONTRACTOR'S APPLICATION FOR PAYMENT

Application is made for Payment as shown below, in connection with the Contract Continuation Sheet, is attached.

1. ORIGINAL CONTRACT SUM $_____
2. Net change by Change Orders $_____
3. CONTRACT SUM TO DATE $_____
4. TOTAL COMPLETED & STORED TO DATE $_____
5. Lease Payment (1/3 of Total Lease Payments for last 3 pay applications) $_____
6. Total TI Payments Earned: (Line 4 less Line 5) $_____
7. Retainage:
   a. 5% of Total TI Payment $_____
8. TOTAL EARNED LESS Lease Payment & Retainage (Line 6 less Line 7) $_____
9. LESS PREVIOUS APPLICATIONS FOR PAYMENT $_____
10. CURRENT PAYMENT DUE $_____
11. Balance to Finish, Plus Lease Pmt & Retainage (Line 3 less Line 8) $_____

CHANGE ORDER SUMMARY	ADDITIONS	DEDUCTIONS
Total changes approved in previous months by Owner		
Total approved this month		
NET CHANGES by Change Orders		

The undersigned Contractor certifies that to the best of the Contractor's knowledge, information and belief the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by the Contractor for Work for which previous Certificates for Payment were issued and payments received from the Owner, and that current payment shown herein is now due. We certify that the Surety for this project has been notified of the amount of this request.
CONTRACTOR:

By:_____ Date:_____
[NAME, TITLE]

Notary Public: _____ My Commission Expires: _____
Name: _____

ARCHITECT'S CERTIFICATE FOR PAYMENT

RECOMMENDED FOR CERTIFICATION

By:_____ Date:_____
NAME:

In accordance with the Contract Documents, based on on-site observations and the data comprising the above application, the Architect certifies to the Owner that to the best of the Architect's knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

AMOUNT CERTIFIED $_____
(Attach explanation if amount certified differs from the amount applied. Initial all figures on this Application and on the Continuation Sheet that are changed to conform with the amount certified.)
ARCHITECT:

By:_____ Date:_____
This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or Contractor under this Contract.

California All-Purpose Certificate of Acknowledgment

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA)
) ss.
COUNTY OF _____)

On _____, before me, _____, Notary Public, personally appeared _____, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

Witness my hand and official seal.

Signature of Notary Public:_____ (Seal)

CONTINGENCY EXPENDITURE DIRECTIVE FORM

Lodi Unified School District
1305 E. Vine Street
Lodi, CA 95240

CONTINGENCY EXPENDITURE DIRECTIVE NO.:

CONTINGENCY EXPENDITURE DIRECTIVE

Project:
Building Project:
Bid No.:

Date:
DSA File No.:
DSA Appl. No.:

The following parties agree to the terms of this Contingency Expenditure Directive ("CED"):

Owner: Lodi Unified School District
1305 E. Vine Street
Lodi, CA 95240

Developer:

Reference	**Description**	**Contingency Authorized for Expenditure**	**Days Ext.**
Request for CED # Requested by: Performed by: Reason:	[Description of unforeseen item relating to Work] [Requester] [Performer] [Reason]	$	
Request for CED # Requested by: Performed by: Reason:	[Description of unforeseen item relating to Work] [Requester] [Performer] [Reason]	$	
Request for CED # Requested by: Performed by: Reason:	[Description of unforeseen item relating to Work] [Requester] [Performer] [Reason]	$	

Contract time will be adjusted as follows: Previous Completion Date: __[DATE]__ _____[#]_____ Calendar Days Extension (zero days unless otherwise indicated) Current Completion Date: __[DATE]__	Total Contract Contingency Amount:	$
	Amount of Previously Approved Contingency Expenditure Directive(s):	$
	Amount of this Contingency Expenditure Directive:	$

The undersigned Developer approves the foregoing release of contingency for completion of each specified item, and as to the extension of time allowed, if any, for completion of the entire work as stated therein, and agrees to furnish all labor, materials and services and perform all work necessary to complete any additional work specified for the consideration stated therein ("Work"). Submission of sums which have no basis in fact or which Developer knows are false are at the sole risk of Developer and may be a violation of the False Claims Act set forth under Government Code section 12650, et seq.

This Contingency Expenditure Directive must be signed by an authorized District representative.

It is expressly understood that the authorized contingency expenditure and time, if any, granted herein represent a full accord and satisfaction for any and all time and cost impacts of the items herein, and Developer waives any and all further compensation or time extension based on the items herein. The value of the extra work or changes expressly includes any and all of the Developer's costs and expenses, and its subcontractors, both direct and indirect, resulting from additional time required on the project or resulting from delay to the project. Any costs, expenses, damages or time extensions not included are deemed waived.

Signatures:

District:		Developer:	
_____	_____	_____	_____
[Name]	Date	[Name]	Date
Architect:		Project Inspector:	
_____	_____	_____	_____
[Name]	Date	[Name]	Date

END OF DOCUMENT

ALLOWANCE EXPENDITURE DIRECTIVE FORM

Lodi Unified School District
1305 E. Vine Street
Lodi, CA 95240

ALLOWANCE EXPENDITURE DIRECTIVE NO.:

ALLOWANCE EXPENDITURE DIRECTIVE

Project: Building Project
Bid No.:

Date:
DSA File No.:
DSA Appl. No.:

The following parties agree to the terms of this Allowance Expenditure Directive ("AED"):

Owner: Lodi Unified School District
1305 E. Vine Street
Lodi, CA 95240

Developer:

Reference	**Description**	**Allowance Authorized for Expenditure**	**Days Ext.**
Request for AED # Requested by: Performed by: Reason:	[Description of unforeseen item relating to Work] [Requester] [Performer] [Reason]	$	
Request for AED # Requested by: Performed by: Reason:	[Description of unforeseen item relating to Work] [Requester] [Performer] [Reason]	$	
Request for AED # Requested by: Performed by: Reason:	[Description of unforeseen item relating to Work] [Requester] [Performer] [Reason]	$	

Contract time will be adjusted as follows: Previous Completion Date: __[DATE]__ _____[#]_____ Calendar Days Extension (zero days unless otherwise indicated) Current Completion Date: __[DATE]__	Total Contract Allowance Amount:	$
	Amount of Previously Approved Allowance Expenditure Directive(s):	$
	Amount of this Allowance Expenditure Directive:	$

The undersigned Developer approves the foregoing release of allowance for completion of each specified item, and as to the extension of time allowed, if any, for completion of the entire work as stated therein, and agrees to furnish all labor, materials and services and perform all work necessary to complete any additional work specified for the consideration stated therein ("Work"). Submission of sums which have no basis in fact or which Developer knows are false are at the sole risk of Developer and may be a violation of the False Claims Act set forth under Government Code section 12650, et seq.

This Allowance Expenditure Directive must be signed by an authorized District representative.

It is expressly understood that the authorized allowance expenditure and time, if any, granted herein represent a full accord and satisfaction for any and all time and cost impacts of the items herein, and Developer waives any and all further compensation or time extension based on the items herein. The value of the extra work or changes expressly includes any and all of the Developer's costs and expenses, and its subcontractors, both direct and indirect, resulting from additional time required on the project or resulting from delay to the project. Any costs, expenses, damages or time extensions not included are deemed waived.

Signatures:

District:		Developer:	
_____	_____	_____	_____
[Name]	Date	[Name]	Date
Architect:		Project Inspector:	
_____	_____	_____	_____
[Name]	Date	[Name]	Date

END OF DOCUMENT

PROPOSED CHANGE ORDER FORM

Lodi Unified School District
1305 E. Vine Street
Lodi, CA 95240

PCO NO.:

Project:
Bid No.:
RFI #:

Date:
DSA File No.:
DSA Appl. No.:

Developer hereby submits for District's review and evaluation this Proposed Change Order ("PCO"), submitted in accordance with and subject to the terms of the Contract Documents, including Sections 17.7 and 17.8 of the General Conditions. Any spaces left blank below are deemed no change to cost or time.

Developer understands and acknowledges that documentation supporting Developer's PCO must be attached and included for District review and evaluation. Developer further understands and acknowledges that failure to include documentation sufficient to, in District's discretion, support some or all of the PCO, shall result in a rejected PCO.

	WORK PERFORMED OTHER THAN BY DEVELOPER	**ADD**	**DEDUCT**
	Material (attach suppliers' invoice or itemized quantity and unit cost plus sales tax)		
	Add Labor (attach itemized hours and rates, fully encumbered)		
	Add Equipment (attach suppliers' invoice)		
	Subtotal		
	Add overhead and profit for any and all tiers of Subcontractor, the total not to exceed ten percent (10%) of Item (d)		
	Subtotal		
	Add Overhead and Profit for Developer, not to exceed five percent (5%) of Item (f)		
	Subtotal		
	Add Bond and Insurance, not to exceed one and a half percent (1.5%) of Item (h)		
	TOTAL		
	Time (zero unless indicated; "TBD" not permitted)	**___ Calendar Days**	

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	WORK PERFORMED BY DEVELOPER	**ADD**	**DEDUCT**
(a)	**Material** (attach itemized quantity and unit cost plus sales tax)		
	Add Labor (attach itemized hours and rates, fully encumbered)		
	Add Equipment (attach suppliers' invoice)		
	Subtotal		
	Add Overhead and Profit for Developer, not to exceed fifteen percent (15%) of Item (d)		
	Subtotal		
	Add Bond and Insurance, not to exceed one and a half percent (1.5%) of Item (f)		
	TOTAL		
	Time (zero unless indicated; "TBD" not permitted)	**___ Calendar Days**	

The undersigned Developer approves the foregoing as to the changes, if any, to the Contract Price specified for each item, and as to the extension of time allowed, if any, for completion of the entire Work as stated herein, and agrees to furnish all labor, materials, and service, and perform all work necessary to complete any additional work specified for the consideration stated herein. Submission of sums which have no basis in fact or which Developer knows are false are at the sole risk of Developer and may be a violation of the False Claims Act set forth under Government Code section 12650 *et seq*. It is understood that the changes herein to the Contract shall only be effective when approved by the governing board of the District.

It is expressly understood that the value of the extra Work or changes expressly includes any and all of the Developer's costs and expenses, direct and indirect, resulting from additional time required on the Project or resulting from delay to the Project. Developer is not entitled to separately recover amounts for overhead or other indirect costs. Any costs, expenses, damages, or time extensions not included are deemed waived.

SUBMITTED BY:

Developer:

_____ _____
Date

END OF DOCUMENT

GUARANTEE FORM

_____ ("Contractor") hereby agrees that the _____ ("Work" of Contractor) which Contractor has installed for the Lodi Unified School District ("District") for the following project:

Needham ES Modular Classroom Project – Increment II

("Project" or "Contract") has been performed in accordance with the requirements of the Contract Documents and that the Work as installed will fulfill the requirements of the Contract Documents.

The undersigned agrees to repair or replace any or all of such Work that may prove to be defective in workmanship or material together with any other adjacent Work that may be displaced in connection with such replacement within a period of _____ year(s) from the date of completion as defined in Public Contract Code section 7107, subdivision (c), ordinary wear and tear and unusual abuse or neglect excepted. The date of completion is _____, 20___.

In the event of the undersigned's failure to comply with the above-mentioned conditions within a reasonable period of time, as determined by the District, but not later than seven (7) days after being notified in writing by the District, the undersigned authorizes the District to proceed to have said defects repaired and made good at the expense of the undersigned. The undersigned shall pay the costs and charges therefor upon demand.

Date: _____

Name of Contractor: _____

Signature: _____

Print Name: _____

Title: _____

Representatives to be contacted for service subject to terms of Contract:

Name: _____

Address: _____

Phone NO.: _____

END OF DOCUMENT

AGREEMENT AND RELEASE OF ANY AND ALL CLAIMS

THIS AGREEMENT AND RELEASE OF CLAIMS ("Agreement and Release") IS MADE AND ENTERED INTO THIS _____ DAY OF _____, 20___ by and between the Lodi Unified School District ("District") and _____ ("Developer"), whose place of business is _____.

RECITALS:

WHEREAS, District and Developer entered into a Facilities Lease and Site Lease for the following project: Needham ES Modular Classroom Project – Increment II ("Contract" or "Project") in the County of San Joaquin County, California.

WHEREAS, The Work under the Contract was completed on _____, 20___ and a Notice of Completion was recorded with the County Recorder on _____, 20___.

NOW, THEREFORE, it is mutually agreed between District and Developer as follows:

AGREEMENT

1. Developer will only be assessed liquidated damages as detailed below:

Original Guaranteed Maximum Price	$_____
Modified Guaranteed Maximum Price	$_____
Payment to Date	$_____
Liquidated Damages	$_____
Payment Due Developer	$_____

2. Subject to the provisions hereof, District shall forthwith pay to Developer the undisputed sum of _____ Dollars ($_____) under the Contract for Tenant Improvement Payments, less any amounts represented by any notice to withhold funds on file with District as of the date of such payment.

3. Developer acknowledges and hereby agrees that there are no unresolved or outstanding claims in dispute against District arising from the performance of work under the Contract, except for the claims described in Paragraph 4 and continuing obligations described in Paragraph 6. It is the intention of the parties in executing this Agreement and Release that this Agreement and Release shall be effective as a full, final and general release of all claims, demands, actions, causes of action, obligations, costs, expenses, damages, losses and liabilities of Developer against District and all of its respective agents, employees, trustees, inspectors, assignees, consultants and transferees, except for the Lease Payments under the Contract, any Disputed Claim that may be set forth in Paragraph 4 and the continuing obligations described in Paragraph 6 hereof.

4. The following claims are disputed (hereinafter, the "Disputed Claims") and are specifically excluded from the operation of this Agreement and Release:

Claim No.	Description of Claim	Amount of Claim	Date Claim Submitted
_____	_____	$_____	_____
_____	_____	$_____	_____
_____	_____	$_____	_____
_____	_____	$_____	_____

[If further space is required, attach additional sheets showing the required information.]

5. Consistent with California Public Contract Code section 7100, Developer hereby agrees that, in consideration of the payment set forth in Paragraph 2 hereof, Developer hereby releases and forever discharges District, all its agents, employees, inspectors, assignees, and transferees from any and all liability, claims, demands, actions, or causes of action of whatever kind or nature arising out of or in any way concerned with the Work under the Contract, except for the Lease Payments.

6. Guarantees and warranties for the Work, duty to defend, indemnify and hold harmless the District, and any other continuing obligation of Developer, shall remain in full force and effect as specified in the Contract Documents.

7. Except as provided for specifically herein, Developer hereby waives the provisions of California Civil Code section 1542 which provides as follows:

> A GENERAL RELEASE DOES NOT EXTEND TO CLAIMS THAT THE CREDITOR OR RELEASING PARTY DOES NOT KNOW OR SUSPECT TO EXIST IN HIS OR HER FAVOR AT THE TIME OF EXECUTING THE RELEASE AND THAT, IF KNOWN BY HIM OR HER, WOULD HAVE MATERIALLY AFFECTED HIS OR HER SETTLEMENT WITH THE DEBTOR OR RELEASED PARTY.

8. The provisions of this Agreement and Release are contractual in nature and not mere recitals and shall be considered independent and severable. If any such provision or any part thereof shall be at any time held invalid in whole or in part under any federal, state, county, municipal, or other law, ruling, or regulations, then such provision, or part thereof, shall remain in force and effect to the extent permitted by law, and the remaining provisions of this Agreement and Release shall also remain in full force and effect, and shall be enforceable.

9. All rights of District shall survive completion of the Work or termination of Contract, and execution of this Release.

* * * CAUTION: THIS IS A RELEASE - READ BEFORE EXECUTING * * *

LODI UNIFIED SCHOOL DISTRICT

Signature: _____

Print Name: _____

Title: _____

DEVELOPER:

Signature: _____

Print Name: _____

Title: _____

END OF DOCUMENT

APPENDIX C-1

NON-COLLUSION DECLARATION
(Public Contract Code Section 7106)

The undersigned declares:

I am the _____ of _____, the party making the foregoing bid.
[Title] [Name of Firm]

The bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The bid is genuine and not collusive or sham. The bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid. The bidder has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or to refrain from bidding. The bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder. All statements contained in the bid are true. The bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on _____,
[Date]

at _____, _____.
[City] [State]

Date: _____

Proper Name of Bidder: _____

Signature: _____

Print Name: _____

Title: _____

END OF DOCUMENT

APPENDIX C-2

IRAN CONTRACTING ACT CERTIFICATION
(Public Contract Code Sections 2202-2208)

Prior to bidding on or submitting a proposal for a contract for goods or services of $1,000,000 or more, the bidder/proposer must submit this certification pursuant to Public Contract Code section 2204.

The bidder/proposer must complete **ONLY ONE** of the following two options. To complete OPTION 1, check the corresponding box **and** complete the certification below. To complete OPTION 2, check the corresponding box, complete the certification below, and attach documentation demonstrating the exemption approval.

☐ **OPTION 1.** Bidder/Proposer is not on the current list of persons engaged in investment activities in Iran created by the California Department of General Services ("DGS") pursuant to Public Contract Code section 2203(b), and we are not a financial institution extending twenty million dollars ($20,000,000) or more in credit to another person, for 45 days or more, if that other person will use the credit to provide goods or services in the energy sector in Iran and is identified on the current list of persons engaged in investment activities in Iran created by DGS.

☐ **OPTION 2.** Bidder/Proposer has received a written exemption from the certification requirement pursuant to Public Contract Code sections 2203(c) and (d). *A copy of the written documentation demonstrating the exemption approval is included with our bid/proposal.*

CERTIFICATION:

I, the official named below, CERTIFY UNDER PENALTY OF PERJURY, that I am duly authorized to legally bind the bidder/proposer to the OPTION selected above. This certification is made under the laws of the State of California.

Vendor Name/Financial Institution (Printed)	*Federal ID Number (or n/a)*
By (Authorized Signature)	
Printed Name and Title of Person Signing	*Date Executed*

END OF DOCUMENT