



Ventura County Community College District

PURCHASING DEPARTMENT

February 2nd, 2023

Dear Prospective Bidders,

Attached is the bid packet for **Bid 639 Moorpark College Stadium Snack Bar**

A mandatory Job-Walk will begin at 11:30 a.m. Monday, February 13th, 2023. Bidders are to meet at the Moorpark College, Maintenance & Operations Dept., 7075 Campus Rd., Moorpark, CA 93021
For directions call 805-378-1454 or 805-551-4087

Following the job-walk, all further questions are to be emailed to the Purchasing Specialist as listed below.

The Deadline for Questions is 5:00 p.m., Thursday, February 16th, 2023

The Deadline for Proposal Submission is 3:00 p.m., Thursday, February 23, 2023. Bid proposals should be enclosed in a sealed envelope, addressed, and delivered to the Ventura County Community College District Purchasing Department, 761 E Daily Drive, Suite 200, Camarillo, CA, 93010, prior to this time. Each envelope shall bear the Title of the Project, the Project Number and the Name of the Bidder. No electronic proposals shall be accepted. Proposals that arrive after the time set will be returned to the Bidder unopened. It is the responsibility of the Bidder to verify that their proposal has been received by the VCCCD Purchasing Department prior to the opening date. Verification of receipt can be made through the listed Purchasing Specialist.

Prevailing Wage is required. In accordance with Section §1773 of the California Labor Code, the Contractor shall post a copy of the determination prevailing rates of wages at each job site. A copy of these determinations, entitled "PREVAILING WAGE SCALE" is available to any interested party through the internet at: www.dir.ca.gov. The Contractor and any Subcontractor(s) shall not pay less than the specified prevailing rates of wages to all workers employed by them in execution of the contract.

Each Bidder submitting a proposal to complete the work, labor, materials and/or services ("Work") subject to this procurement must be a Department of Industrial Relations registered contractor pursuant to Labor Code 1725.5("DIR Registered Contractor"). A Bidder who is not a DIR Registered Contractor when submitting a proposal for the work is deemed 'not qualified' and the proposal of such a Bidder will be rejected for non-responsiveness. Pursuant to Labor Code 1725.5; all Subcontractors identified in a Bidder's Subcontractor List shall be DIR Registered Contractors. If awarded the Contract for the Work, at all times during performance of the work, the Bidder and all Subcontractors, of any tier shall be DIR Registered Contractors.

Pursuant to Public Contract Code §3300, Bidder must possess a current **B** California Contractors License at the time that the Contract for the Work is awarded.

The award shall be subject to final agreement on terms, conditions, and scope of work between VCCCD and Bidder.

Thank you for your interest in this project. You may contact me with any questions about this project at the email address listed below or by calling 805-652-5561.

Sincerely, Spencer Herson

Purchasing Specialist / Spencer_Herson1@vcccd.edu

761 EAST DAILY DRIVE, SUITE 200, CAMARILLO, CALIFORNIA 93010

VOICE: 805-652-5500 • FAX: 805-652-7700

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VENTURA COUNTY COMMUNITY COLLEGE DISTRICT NOTICE TO CONTRACTOR CALLING FOR BID

NOTICE IS HEREBY GIVEN that the above-named California Community College District, acting by and through its Board of Trustees, hereinafter referred to as “the District”, is calling for bids for **Bid 639, Moorpark College Stadium Snack Bar Project**. Bids will be received at Ventura County Community College District, 761 E Daily Drive, Suite 200, Camarillo, CA 93010, Attn: Purchasing Department up to but no later than 3:00 p.m. on Thursday, 02/23/2023, at which time bids will be opened and publicly read. All bid proposals must be sealed and submitted on forms furnished by the District. Each bid proposal must be accompanied by: (a) the required Bid Security; not less than 10% of the maximum amount of Bid Proposal inclusive of add-on or alternates, (b) Subcontractors List, (c) Non-Collusion Affidavit, and (d) Statement of Bidder’s Qualifications, all of which must be fully executed. Failure to comply shall render such proposal to be “Non Responsive” and rejected. Bid proposals must conform with and be responsive to the bid and contract documents. Copies may be obtained as PDF from the website at <https://purchasing.vcccd.edu/>. Bidders must be prequalified and registered CUPCCAA contractors with VCCCD. To register, visit <https://www.qualitybidders.com/> and fill out the CUPCCAA application.

A mandatory Job-Walk will begin at 11:30 a.m., Monday, 02/13/23. Bidders are to meet at Moorpark College Maintenance & Operations Dept, 7075 Campus Road, Moorpark CA 93021. Pursuant to Public Contract Code §3300, Bidder must possess a current Class B Contractors License at the time that the contract for the work is awarded.

Each Bidder submitting a proposal to complete the work, labor, materials and/or services (“Work”) subject to this procurement must be a Department of Industrial Relations registered contractor pursuant to Labor Code §1725.5 (“DIR Registered Contractor”). A Bidder who is not a DIR Registered Contractor when submitting a proposal for the work is deemed “not qualified” and the proposal of such a Bidder will be rejected for non-responsiveness. Pursuant to Labor Code §1725.5; all Subcontractors identified in a Bidder’s Subcontractor List shall be DIR Registered Contractors. If awarded the Contract for the Work, at all times during performance of the work, the Bidder and all Subcontractors, of any tier shall be DIR Registered Contractors.

In accordance with Section §1770 of the CA Labor Code, the Contractor shall post a copy of the determination prevailing rates of wages at each job site. In accordance with the provisions of CA Public Contract Code §22300, substitution of eligible and equivalent securities for any monies to ensure performance under the contract will be permitted at the request and expense of the Contractor.

The Owner reserves the right to reject any or all bid proposals or to waive any irregularities or informalities in any bid proposal or in the bidding.

Spencer Herson, Purchasing Specialist

Publication Dates: 02/03/23 and 02/07/23

INSTRUCTIONS FOR BIDDERS

Section 00100

1.01 Preparation and Submittal of Bid Proposal

- A. **Bid Proposal Preparation.** All information required by the bid forms must be completely and accurately provided. Numbers shall be stated in both words and figures where so indicated in the bid forms; conflicts between a number stated in words and in figures are governed by the words, except where the figures represent an express, correctly calculated sum. Partially completed Bid Proposals may be deemed non-responsive. Bid Proposals submitted on other than the bid forms included herein shall be deemed non-responsive. Bid Proposals not conforming to these Instructions for Bidders and the Notice to Contractors Calling for Bids (“Call for Bids”) may be deemed non-responsive and rejected. Each Bidder is solely responsible for all costs and expenses incurred by the Bidder in preparing and submitting a Bid Proposal to the District.
- B. **Bid Proposal Submittal.** Bid Proposals shall be submitted at the place designated in the Call for Bids in sealed envelopes bearing on the outside the Bidder’s name and address along with an identification of the Work for which the Bid Proposal is submitted. Bidders are solely responsible for timely submission of Bid Proposals to the District at the place designated in the Call for Bids.
- C. **Date and Time of Bid Proposal Submittal.** A Bid Proposal is considered submitted only if the outer envelope containing the Bid Proposal is stamped by the District’s date/time stamp machine at the place designated for submittal of the Bid Proposal. The date/time stamp is controlling and determinative as to the date and time of the Bidder’s submittal of its Bid Proposal. Bid Proposals received after the date and time specified in the Call for Bids are non-responsive and will be returned to the Bidder unopened.
- D. **Alternate Bid Item(s).** If the Bid Proposal forms do not specifically call for the submittal of alternate bid item(s) and a Bidder submits alternate bid item(s), the District may deem the Bid Proposal to be non-responsive and reject the same. In the event that alternate item(s) are specifically called for in the Bid Proposal forms, any Bid Proposal which does not include bid(s) for the alternate item(s) may result in the Bid Proposal being deemed by the District to be non-responsive and rejected. In the event that bids for alternate item(s) are specifically called for in the Bid Proposal forms, the Bidder is referenced to the provisions of the Contract Documents permitting the District, during performance of the Work of the Contract Documents, to add or delete such alternate item(s) with the cost or credit (inclusive of all direct and indirect costs, supervision, overhead and profit) for such alternate item(s) to be in the amount(s) set forth in the Bidder’s Bid Proposal for such alternate item(s).

- 1.02 Bid Security.** Bid Security shall be in the form of: (a) cash, (b) a certified or cashier’s check made payable to the District or (c) a Bid Bond, in the form and content attached hereto, in favor of the District executed by the Bidder as a principal and an Admitted Surety Insurer under Code of Civil Procedure §§995.120 and 995.311 as surety (the “Bid Security”) in an amount not less than the percentage of the maximum amount of the Bid Proposal. Any Bid Proposal submitted without the required Bid Security is non-responsive and will be rejected.

- 1.03 Signatures.** All bid forms shall be executed by an individual duly authorized to execute the same on behalf of the Bidder.
- 1.04 Modifications.** Changes to the Bid Proposal which are not specifically called for or permitted may result in the District's rejection of the Bid Proposal as being non-responsive. No oral or telephonic modification of any submitted Bid Proposal will be considered. A written modification may be considered only if actually received by the District ten (10) days prior to the scheduled closing time for receipt of Bid Proposals.
- 1.05 Erasures; Inconsistent or Illegible Bid Proposals.** Bid Proposals must not contain any erasures, interlineations or other corrections unless the same are suitably authenticated by affixing in the margin immediately opposite such erasure, inter-lineation or correction the surname(s) of the person(s) signing the Bid Proposal. Any Bid Proposal not conforming to the foregoing may be deemed by the District to be non-responsive. If any Bid Proposal, or portions thereof, is determined by the District to be illegible, ambiguous or inconsistent, the District may reject such a Bid Proposal as being non-responsive.
- 1.06 Examination of Site and Contract Documents.** Each Bidder shall, at its sole cost and expense, inspect the Site to become fully acquainted with the Contract Documents and conditions affecting the Work. The failure of a Bidder to receive or examine any of the Contract Documents or to inspect the Site shall not relieve such Bidder from any obligation with respect to the Bid Proposal, the Contract or the Work required under the Contract Documents. The District assumes no responsibility or liability to any Bidder for, nor shall the District be bound by, any understandings, representations or agreements of the District's agents, employees or officers concerning the Contract Documents, or the Work made prior to execution of the Contract. The submission of a Bid Proposal shall be deemed prima facie evidence of the Bidder's full compliance with the requirements of this section.
- 1.07 Withdrawal of Bid Proposal.** Any Bidder may withdraw its Bid Proposal without penalty by written request received by the District prior to the scheduled closing time for the receipt of Bid Proposals. Requests for withdrawal of bid proposals after scheduled closing time shall be in accordance with Public Contract Code §§5100 et seq.
- 1.08 Documents Required Upon Award of Contract.** The Agreement which the successful Bidder, as Contractor, will be required to execute along with the other documents which will be required to be furnished are included in the Contract Documents and shall be carefully examined by the Bidder.
- 1.09 Interpretation of Drawings, Specifications or Contract Documents.** Any Bidder in doubt as to the true meaning of any part of the Contract Documents or who finds discrepancies, errors or omissions therein; or who finds variances in any of the Contract Documents with applicable rules, regulations, ordinances and/or laws, may submit to the District a written request for an interpretation or correction thereof. It is the sole and exclusive responsibility of the Bidder to submit such request not less than seven (7) calendar days prior to the scheduled closing for the receipt of Bid Proposals. Interpretations or corrections of the Contract Documents will be by written addendum issued by the District, a copy of which will be sent to each Bidder who attends the mandatory pre-bid job walk. No person is authorized to render an oral interpretation or correction of any portion of the Contract Documents to any Bidder, and no Bidder is authorized to rely on any such oral interpretation or correction. Failure to request interpretation or clarification of any portion of the Contract Documents pursuant to the foregoing is a waiver of any discrepancy, defect or conflict therein.

- 1.10 Request for Substitutions Prior to Bid Opening.** Any Bidder may submit Request(s) for Substitution together with all substantiating data, no later than seven (7) calendar days prior to the scheduled closing time for receipt of the Bid Proposals, in accordance with Public Contract Code §3400. The District shall use its best efforts to consider and act upon such Request for Substitution in a timely fashion. Actions taken, if any, concerning the Request for Substitution will be by written addendum issued by the District, a copy of which will be sent to each Bidder who attends the mandatory pre-bid job walk. In the absence of written addendum, the Request for Substitution shall be deemed denied for purposes of the District's evaluation of the Bid Proposals and award of the Contract.
- 1.11 District's Right to Modify Contract Documents.** Before the scheduled closing time for receipt of Bid Proposals, the District may modify the Work, the Contract Documents, or any portion(s) thereof by the issuance of written addenda disseminated to all Bidders who have attended the mandatory pre-bid job walk. If the District issues any addenda, the failure of any Bidder to acknowledge such addenda in its Bid Proposal may render the Bid Proposal non-responsive.
- 1.12 Bidders Interested in More Than One Bid Proposal.** No person, firm, corporation or other entity shall submit or be interested in more than one Bid Proposal for the same Work; provided, however, that a person, firm or corporation that has submitted a sub-proposal to a Bidder or who has quoted prices for materials to a Bidder is not thereby disqualified from submitting a sub-proposal, quoting prices to other Bidders or submitting a Bid Proposal for the proposed Work to the District.
- 1.13 Award of Contract**
- A. Waiver of Irregularities or Informalities.** The District reserves the right to reject any and all Bid Proposals or to waive any irregularities or informalities in any Bid Proposal or in the bidding.
 - B. Award to Lowest Responsive Responsible Bidder.** The award of the Contract, if any, will be to the responsible Bidder submitting the lowest responsive Bid Proposal on the basis of the Base Bid Proposal and accepted bid alternate items, if any.
 - C. Selection of Alternate Bid Items; Basis of Award of Contract.** The selection of Bid Alternates for determination of the lowest Bid Proposal will be based upon the Base Bid Proposal alone or a combination of the Base Bid Proposal and one or more Bid Alternates as selected by the District in accordance with the method for additive or deductive items specified in the bid solicitation.
 - D. Alternate Bid Items Not Included in Award of Contract.** During performance of the Work, it is the District's option to add or delete from the scope of the Work Alternate Bid Items that were not included in the award of Contract. District may elect to have work done at price(s) set forth in the Alternate Bid Items Proposal.
 - E. Responsive Bid Proposal.** A responsive Bid Proposal shall mean a Bid Proposal which conforms, in all material respects, to the Bid and Contract Documents.

F. Responsible Bidder. A responsible Bidder is a Bidder who has the capability in all respects to perform fully the requirements of the Contract Documents and the moral and business integrity and reliability that will assure good faith performance. In determining responsibility, the following criteria will be considered: (i) the ability, capacity and skill of the Bidder to perform the Work of the Contract Documents; (ii) whether the Bidder can perform the Work promptly and within the time specified, without delay or interference; (iii) the character, integrity, reputation, judgment, experience and efficiency of the Bidder; (iv) the quality of performance of the Bidder on previous contracts, by way of example only, the following information will be considered: (a) the administrative, consultant or other cost overruns incurred by the District on previous contracts with the Bidder; (b) the Bidder's compliance record with contract general conditions on other projects; (c) the submittal by the Bidder of excessive and/or unsubstantiated extra cost proposals and claims on other projects; (d) the Bidder's record for completion of work within the contract time and the Bidder's compliance with the scheduling and coordination requirements on other projects; (e) the Bidder's demonstrated cooperation with the District and other contractors on previous contracts; (f) whether the work performed and materials furnished on previous contracts was in accordance with the Contract Documents; (v) the previous and existing compliance by the Bidder with laws and ordinances relating to contracts; (vi) the sufficiency of the financial resources and ability of the Bidder to perform the work of the Contract Documents; (vii) the quality, availability and adaptability of the goods or services to the particular use required; (viii) the ability of the Bidder to provide future maintenance and service for the warranty period of the Contract; (ix) whether the Bidder is in arrears on debt or contract or is a defaulter on any surety bond; (x) such other information as may be secured by the District having a bearing on the decision to award the Contract, to include without limitation the ability, experience and commitment of the Bidder to properly and reasonably plan, schedule, coordinate and execute the Work of the Contract Documents and whether the Bidder has ever been debarred from bidding or found ineligible for bidding on any other projects. The ability of a Bidder to provide the required bonds will not of itself demonstrate responsibility of the Bidder. Upon request of the District, Bidder must promptly submit satisfactory evidence of any of the items listed above. The District may reject a Bidder or subcontractor that has failed to complete past Contract work for the District. The District reserves the right to reject any or all bid proposals or to waive any irregularities or informalities in any bid proposal or in the bidding.

G. Participation by Other Public Entities: Other public entities in the State of California may procure items and /or services off this bid under the same terms and conditions stated in this bid.

1.14 Subcontractors

A. Designation of Subcontractors; Subcontractors List. Each Bidder shall submit a list of its proposed Subcontractors for the proposed Work as required by the Subletting and Subcontracting Fair Practices Act (California Public Contract Code §§4100 et seq.) on the form furnished (Section 00215). The District may request that one or more apparent low Bidders provide to the District within twenty-four (24) hours of bid opening the license numbers and value of work for each listed subcontractor submitted by Bidder. Any Bidder's failure to comply with the District's request may deem such Bidder's bid non-responsive and subject to rejection by the District.

B. Work of Subcontractors. The organization or arrangements of the Specifications and Drawings shall not limit the extent of the Work of the Contract Documents. Accordingly, all Bidders are

encouraged to disseminate all of the Specifications, Drawings and other Contract Documents to all persons or entities submitting sub-bids to the Bidder. The omission of any portion or item of Work from the Bid Proposal or from the sub-bidders' sub-bids which is reasonably inferable from the Contract Documents is not a basis for adjustment of the Contract Price or the Contract Time.

- 1.15 Workers' Compensation Insurance.** Pursuant to California Labor Code §3700, the successful Bidder shall secure Workers' Compensation Insurance for its employees engaged in the Work of the Contract. The successful bidder shall sign and deliver to the District the Workers Compensation Insurance certificate provided in Section 00415 prior to performing any of the Work under the Contract.
- 1.16 Bid Security Return.** The Bid Security of three or more low Bidders, the number being solely at the discretion of the District, will be held by the District for ten (10) days after the period for which Bid Proposals must be held open (which is set forth in the Call for Bids) or until posting by the successful Bidder(s) of the bonds, certificates of insurance required and return of executed copies of the Agreement, whichever first occurs, at which time the Bid Security will be returned to them.
- 1.17 Forfeiture of Bid Security.** If the Bidder awarded the Contract fails or refuses to execute the Agreement within seven (7) days from the date of receiving notification that it is the Bidder to whom the Contract has been awarded, the District may declare the Bidder's Bid Security forfeited as damages caused by the failure of the Bidder to enter into the Contract and may thereupon award the Contract for the Work to the responsible Bidder submitting the next lowest responsive Bid Proposal or may call for new bids, in District's sole and exclusive discretion.
- 1.18 Contractor's License.** No Bid Proposal will be considered from a Bidder who, at the time Bid Proposals are opened, is not licensed to perform the Work of the Contract Documents, in accordance with the Contractor's License Law, California Business & Professions Code §§7000 et seq. This requirement is not a mere formality and cannot be waived by the District or its Board of Trustees. The required California Contractor's License classification(s) for the Work is set forth in the Call for Bids. The Contractor will be required to maintain the license(s) through the duration of the Contract. Any questions concerning a Contractor may be referred to the Registrar, Contractors' State License Board, P.O. Box 2600, Sacramento, CA 95826.
- 1.19 Anti-Discrimination.** It is the policy of the District that there be no discrimination against any prospective or active employee engaged in the Work because of race, color, ancestry, national origin, religious creed, sex, age or marital status. All Bidders agree to comply with the District's anti-discrimination policy and all applicable Federal and California anti-discrimination laws including but not limited to the California Fair Employment & Housing Act beginning with California Government Code §§12940 et seq. and California Labor Code §1735. In addition, all Bidders agree to require like compliance by any Subcontractor employed by them on the Work of the Contract.

1.20 Job-Walk

- A. District Conduct of Job-Walk.** The District will conduct a Job Walk at the time and place designated in the Call for Bids. Regardless of whether the Job Walk is or is not designated as being mandatory, the District may, in its sole and exclusive discretion, elect to conduct one or more Job Walks in addition to that set forth in the Call for Bids, in which event the District shall notify all Bidders who have obtained the Contract Documents pursuant to the Call for Bids of any such additional Job Walk. If the District elects to conduct any Job Walk in addition to that set

forth in the Call for Bids, the District shall, in its notice of any such additional Job Walks, indicate whether Bidders' attendance at such additional Job-Walks is/are mandatory; in the event that any such additional Job-Walks is/are designated as being mandatory, the provisions of this section 1.21 shall be deemed to apply to such additional Job-Walks.

- B. Mandatory Job Walk.** If the Job Walk is designated in the Call for Bids as being mandatory, the failure of any Bidder to have its authorized representative present at the Job Walk will be grounds for the District to reject such bid and the Bid Proposal will be returned to the Bidder unopened. Where the Job Walk is mandatory, a Bidder may have more than one authorized representative and/or representatives of its Subcontractors present at the Job Walk; provided, however that attendance by representatives of the Bidder's Subcontractors without attendance by a representative of the Bidder shall not be sufficient to meet the Bidder's obligations hereunder and will be grounds for the District to declare the Bid Proposal of such Bidder to be non-responsive. Notwithstanding any other provisions of the Call for Bids or these Instructions for Bidders, in the event that the Job Walk is designated in the Call for Bids as being mandatory, the District will not consider the Bid Proposal of any Bidder who has obtained the Bid and Contract Documents, pursuant to Call for Bids, after the date and time set forth therein for such mandatory Job Walk; any Bid Proposal submitted by any such Bidder shall be deemed non-responsive, rejected and returned unopened to the Bidder submitting the same.
- C. Non-Mandatory Job Walk.** Unless designated in the Call for Bids as being mandatory, the Job Walk shall be deemed non-mandatory. The failure of any Bidder to have its authorized representative(s) present at such non-mandatory Job Walk shall not be a basis for deeming the Bid Proposal of such Bidder to be non-responsive. The foregoing notwithstanding, all Bidders are encouraged to attend the Job Walk. In the event that the Job Walk is not designated as being mandatory, Bid and Contract Documents may be obtained by a Bidder, on or after the time designated for the Job Walk; in such event, if such Bidder desires a Job Walk to be conducted, it shall be the sole and exclusive responsibility of such Bidder to request, in writing, that the District conduct an additional Job Walk. The District may, in its sole and exclusive discretion, elect to conduct or not conduct such requested Job Walk with consideration of factors such as the time remaining before the scheduled closing time for the receipt of Bid Proposals; the District may condition the conducting of such requested Job Walk upon reimbursement, by the Bidder requesting such Job Walk, of the actual or reasonable costs of the District's personnel and/or the District's agents or representatives in arranging for and conducting such Job Walk. The election of the District not to conduct a Job Walk requested by a Bidder obtaining the Contract Documents after the date and time designated in the Call for Bids for the Job Walk shall not operate to waive, limit or restrict any of the provisions of the Contract Documents, the Bidder's submittal of a Bid Proposal in conformity with the Contract Documents, or if awarded the Contract, performance of the Work and other obligations in strict conformity with the Contract Documents. If the District elects to conduct an additional Job Walk requested by a Bidder who has obtained the Contract Documents after the time designated in the Call for Bids for the Job Walk, the District shall notify all other Bidders who have theretofore obtained the Contract Documents of such requested Job Walk and the date, time and place where such requested Job Walk will be conducted and all such other Bidders may attend such requested additional Job Walk.

- 1.21 Drug Free Workplace Certificate.** In accordance with California Government Code §§8350 et seq., the Drug Free Workplace Act of 1990, the successful Bidder will be required to execute a Drug Free Workplace Certificate concurrently with execution of the Agreement. The successful Bidder will be required to implement and take the affirmative measures outlined in such provisions. Failure of the

successful Bidder to comply with the measures outlined in such provisions may result in penalties, including without limitation, the termination of the Agreement, the suspension of any payment of the Contract Price otherwise due under the Contract Documents and/or debarment of the successful Bidder.

- 1.22 Compliance with Immigration Reform and Control Act of 1986.** The Bidder is solely and exclusively responsible for employment of individuals for the Work of the Contract in conformity with the Immigration Reform and Control Act of 1986, 8 USC §§1101 et seq. ("IRCA"); the successful Bidder shall also require that any person or entity employing labor in connection with any of the Work of the Contract shall so similarly comply with the IRCA.
- 1.23 Notice of Intent to Award Contract.** Following the public opening and reading of Bid Proposals, the District will issue a Notice of Intent to Award the Contract, identifying the Bidder to whom the District intends to award the Contract and the date/time/place of the District's Board of Trustees meeting at which award of the Contract will be considered.
- 1.24 Bid Protest.** Any Bidder submitting a Bid Proposal to the District may file a protest of the District's intent to award the Contract provided that each and all of the following are complied with:
- A. The bid protest is in writing;
 - B. The bid protest is filed and received by the District's Purchasing Department not more than five (5) calendar days following the date of issuance of the District's Notice of Intent to Award the Contract; and
 - C. The written bid protest sets forth, in detail, all grounds for the bid protest, including without limitation all facts, supporting documentation, legal authorities and argument in support of the grounds for the bid protest; any matters not set forth in the written bid protest shall be deemed waived. All factual contentions must be supported by competent, admissible and creditable evidence.

Any bid protest not conforming to the foregoing shall be rejected by the District as invalid. Provided that a bid protest is filed in strict conformity with the foregoing, the District's Purchasing Department or designee, shall review and evaluate the basis of the bid protest. The District's Purchasing Department or designee shall provide the Bidder submitting the bid protest with a written statement concurring with or denying the bid protest. The District's Board of Trustees will render a final determination and disposition of a bid protest by taking action to adopt, modify or reject the disposition of a bid protest as reflected in the written statement of the District's Purchasing Department or designee. Action by the District's Board of Trustees relative to a bid protest shall be final and not subject to appeal or reconsideration by the District, any employee or officer of the District or the District's Board of Trustees. The issuance of a written statement by the Purchasing Department (or designee) and subsequent action by the District's Board of Trustees shall be express conditions precedent to the institution of any legal or equitable proceedings relative to the bidding process, the District's intent to award the Contract, the District's disposition of any bid protest or the District's decision to reject all Bid Proposals. In the event that any such legal or equitable proceedings are instituted and the District is named as a party thereto, the prevailing party(ies) shall recover from the other party(ies), as costs, all attorneys' fees and costs incurred in connection with any such proceeding, including any appeal arising therefrom.

1.25 Public Records. All documents included in Bid Proposals become the exclusive property of the District upon submittal to the District. All Bid Proposals and other documents submitted in response to the Call for Bids become a matter of public record, except for information contained in such Bid Proposals deemed to be Trade Secrets (as defined in California Civil Code §3426.1). A Bidder that indiscriminately marks all or most of its Bid Proposal as exempt from disclosure as a public record, whether by the notations of "Trade Secret," "Confidential," "Proprietary," or otherwise, may render the Bid Proposal non-responsive and rejected. The District is not liable or responsible for the disclosure of such records, including those exempt from disclosure if disclosure is deemed required by law, by an order of Court, or which occurs through inadvertence, mistake or negligence on the part of the District or its officers, employees or agents. At such time as Bid Proposals are deemed a matter of public record, pursuant to the above, any Bidder or other party shall be afforded access for inspection and/or copying of such Bid Proposals, by request made to the District in conformity with the California Access to Public Records Act, California Government Code §§6250, et. seq.

1.26 Bidder and Subcontractors DIR Registered Contractor Status.

Bidder Status. In addition to other requirements established herein relating to Bidder qualifications, in order to be deemed “qualified” to submit a proposal for the Work, the Bidder must be a DIR Registered Contractor when submitting a proposal. The proposal of a Bidder who is not a DIR Registered Contractor when the proposal is submitted will be rejected for non-responsiveness.

Listed Subcontractor’s Status. All Subcontractors identified in a Bidder’s Subcontractor List shall be DIR Registered Contractors at the time of submittal of the proposal for the Work. The foregoing notwithstanding, a proposal is not subject to rejection for non-responsiveness when the Subcontractors List accompanying the proposal lists any Subcontractor(s) who is/are not DIR Registered Contractors if the listed subcontractors who are not DIR Registered become DIR Registered prior to the opening of proposals or become DIR Registered within twenty-four (24) hours of the opening of the proposals pursuant to Labor Code 1771.1 (c)(1) or (2). If the Subcontractors List accompanying the proposal lists any Subcontractor(s) who is/are not DIR Registered do not become registered prior to the opening of proposals or become DIR Registered within twenty four (24) hours of the opening of proposals pursuant to Labor Code 1771.1©(1) or (2), such proposal is not subject to rejection for non-responsiveness, provided that if the Bidder submitting the Subcontractors List with non-DIR registered Subcontractors is awarded the Contract for the Work, the Bidder shall request consent of the District to substitute another Subcontractor for the non-DIR Registered Subcontractor pursuant to Labor Code 1771.1(c)(3), without adjustment of the Contract Price or the Contract Time.

Additionally, all contractors and subcontractors must furnish electronic certified payroll records directly to the Labor Commissioner (aka Division of Labor Standards Enforcement). The phase-in timetable for this requirement can be found on the following link at <http://www.cir.ca.gov/Public-Works/SB854.html> (also find all related SB854 related information).

1.27 Prevailing Wage Rates, Employment of Apprentices and Labor Compliance Program.

A. Payment of Prevailing Wage Rates. The Bidder and all potential Subcontractors shall utilize the relevant prevailing wage rate determinations in the PREVAILING WAGE SCALE established by the Director of the Department of Industrial Relations in effect on the first advertisement date of the Notice to Contractors Calling For Bids in preparing the Bid Proposal and all component price quotations. Pursuant to Labor Code §1773.2, copies of these determinations are maintained at the District’s Measure Y offices located at 740 West Woodbury Road, Pasadena, CA 91103, and are available to any interested party upon request. Copies of

rate schedules are also available on the Internet at http://www.dir.ca.gov/DIR/S&R/statistics_research.html.

- B. Apprenticeship Committee Contract Award Information.** Pursuant to Labor Code §1777.5 and Title 8 California Code of Regulations §230, the Contractor and Subcontractors of any tier who are not already approved to train by an apprenticeship program sponsor shall, within ten (10) calendar days of signing the Contract or Subcontract, as applicable, but in any event prior to the first day in which the Contractor or Subcontractor has workers employed on the Project, submit the Public Works Contract Award Information form (DAS form 140 included in Section 00900 of the Contract Specifications) to the appropriate local apprenticeship committees whose geographic area of operation include the area of the Project and who can supply apprentices to the Project. Contractors and Subcontractors must also submit a copy of the forms to the District.
- C. Statement of Employer Fringe Benefit Payments.** Within five (5) calendar days of signing the Contract or Subcontract, as applicable, the Statement of Employer Payments (DSLE Form PW 26 included in Section 00900 of the Specifications) must be completed and submitted to the District by each Contractor and Subcontractor of any tier who pays benefits to a third party trust, plan or fund for health and welfare benefits, vacation funds or makes pension contributions. The form must contain, for each worker classification, the fund or trust name, address, administrator, and amount per hour contributed and frequency of contributions. Training fund contributions must also be reported on this form. See Article 4.21.9 of the Contract General Conditions.
- D. Notice to Subcontractors.** Bidders shall notify all potential Subcontractors submitting price quotations for portions of the Work of the requirements concerning payment of prevailing wage rates, payroll records, hours of work, employment of apprentices and the District's LCP requirements and enforcement procedures set forth in Article 4.21 of Section 00700 (General Conditions) and Section 00900 of the Contract Specifications.

[End Of Section]

BID PROPOSAL

Section 00210

TO: **VENTURA COUNTY COMMUNITY COLLEGE DISTRICT**, a California Community College District, acting by and through its Board of Trustees ("District"), at 761 E. Daily Drive, Suite 200, Camarillo, CA 93010.

FROM:

(Name of Bidder - as listed on license)

(Address)

(City, State, Zip Code)

(Telephone)

(Fax)

(E-Mail Address)

(Name(s) of Bidder's Authorized Representative(s) and Title)

1.01 Bid Proposal

A. Bid Proposal Amount

Pursuant to and in compliance with the Notice to Contractors Calling for Bids, the Instructions for Bidders and the other documents relating thereto, the undersigned Bidder, having reviewed the Instructions for Bidders and all other Contract Documents and upon compliance with all requirements therein with reference to the submittal of this Bid Proposal, hereby proposes and agrees to perform the Contract including, without limitation, all of its component parts; to perform everything required to be performed; to provide and furnish any and all of the labor, materials, tools, equipment, applicable taxes, and services necessary to perform the work of the Contract in strict compliance with the Contract Documents and complete in a workmanlike manner all of the Work required for the Project described as:

Bid 639, Moorpark College Stadium Snack Bar

Base Bid Amount: \$

(Total bid amount in figures)

Dollars

(Total bid amount in words)

B. Acknowledgment of Bid Addenda

In submitting this Bid Proposal, the undersigned Bidder acknowledges receipt of all Bid Addenda issued by or on behalf of the District, as set forth below. The Bidder confirms that this Bid Proposal incorporates and is inclusive of, all items or other matters contained in Bid Addenda.

(initial) **No Addenda Issued**

(initial) **Addenda Nos. _____ received, acknowledged and
incorporated into this Bid Proposal.**

1.02 Rejection of Bid; Holding Open of Bid

It is understood that the District reserves the right to reject this Bid Proposal and that this Bid Proposal shall remain open and not be withdrawn for the period of time specified in the Call for Bids, except as provided by law.

1.03 Documents Comprising Bid Proposal

The undersigned Bidder has submitted as its Bid Proposal the following: Bid Proposal (00210), List of Subcontractors (00215), Non-Collusion Affidavit (00220), Statement of Bidder's Qualifications (00240), Bid Security (Cash, Cashier's Check, Certified Check or Bid Bond (00260) and Verification of DIR Registration.

The Bidder acknowledges that if this Bid Proposal and the foregoing documents are not fully in compliance with applicable requirements set forth in the Call for Bids, the Instructions for Bidders and in each of the foregoing documents, the Bid Proposal may be rejected as non-responsive.

1.04 Award of Contract

It is understood and agreed that if written notice of the acceptance of this Bid Proposal and award of the Contract thereon is mailed or delivered by the District to the undersigned after the opening of Bid Proposals and within the time this Bid Proposal is required to remain open or at any time thereafter before this Bid Proposal is withdrawn, the undersigned will execute and deliver to the District the Agreement in the form attached hereto in accordance with the Bid Proposal as accepted within seven (7) calendar days after notification of acceptance and award. Concurrently with delivery of the executed Agreement to the District, the Bidder awarded the Contract shall deliver to the District: (1) the Labor and Material Payment Bond; (2) the Performance Bond; (3) the Drug-Free Workplace Certificate; (4) Certificates of Insurance evidencing all insurance coverages required to be provided under the Contract Documents; and (5) the Certificate of Workers' Compensation Insurance. The Work under the Contract Documents shall be commenced by the undersigned Bidder, if awarded the Contract, on the date stated in the District's Notice to Proceed issued pursuant to the Contract Documents.

Completion of the Work and all Interim Milestones shall be achieved within the Contract Time and Interim Milestones specified in the Contract Documents.

1.05 Notices

All notices or other correspondence shall be addressed to the District and the Bidder at their respective addresses set forth herein. Notices shall be effective only if in writing and in conformity with the requirements for service of notices set forth in the Contract Documents.

1.06 Contractor's License

The undersigned Bidder is currently and duly licensed in accordance with the California Contractors License Law, California Business & Professions Code §§7000 et seq., under the following:

License Number: _____

Class _____ Expiration Date _____ Class _____ Expiration Date _____

Class _____ Expiration Date _____ Class _____ Expiration Date _____

DIR Registration Number: _____ Expiration Date: _____

By executing this Bid Proposal, the Bidder hereby certifies that: (a) it is duly licensed, in the necessary class(es), for performing the Work of the Contract Documents; (b) that such license shall be in full force and effect throughout the duration of the performance of the Work under the Contract Documents; and (c) that all Subcontractors providing or performing any portion of the Work of the Contract Documents shall be so similarly and appropriately licensed to perform or provide such portion of the Work.

1.07 Designation of Subcontractors

In compliance with the Subletting and Subcontracting Fair Practices Act (California Public Contract Code §§4100, et seq.) and amendments thereof, each Bidder shall set forth in the Subcontractors List: (a) the name and location of the place of business of each Subcontractor who will perform work or labor or render services to the Bidder in or about the construction of the Work to be performed under the Contract Documents in an amount in excess of one-half of one percent (0.5%) of the Bidder's Bid Proposal; and (b) the trade and/or portion of the Work which will be performed by each listed Subcontractor. The Bidder shall list only one Subcontractor for each trade and/or portion of the Work as is defined by the Bidder in its Bid Proposal. If a Bidder fails to list a Subcontractor for a portion of the work in excess of one-half of one percent (0.5%) of the Bidder's Bid Proposal or if the Bidder specifies more than one Subcontractor for the same portion of Work to be performed under the Contract Documents valued in excess of one-half of one percent (0.5%) of the Bidder's Bid Proposal amount, the Bidder shall be deemed to have agreed that it is fully qualified to perform that portion of the Work itself and that it shall perform that portion of the Work.

1.08 Confirmation of Figures

By submitting this Bid Proposal, the Bidder confirms that it has checked all of the above figures and understands that neither the District nor any of its agents, employees or representatives shall be responsible for any errors or omissions on the part of the undersigned Bidder in preparing and submitting this Bid Proposal. All amounts will be entered on the proposal in the written amount and listed in figures. In the event there is a discrepancy between the bidder's written amounts and figures, the written amount will prevail.

1.09 Acknowledgment and Confirmation

The undersigned Bidder acknowledges its receipt, review and understanding of the Drawings, the Specifications and other Contract Documents pertaining to the proposed Work. The undersigned Bidder certifies that the Contract Documents are, in its opinion, adequate, feasible and complete for providing, performing and constructing the Work in a sound and suitable manner for the use specified and intended by the Contract Documents. The undersigned Bidder certifies that it has, or has available, all necessary equipment, personnel, materials, facilities and technical and financial ability to complete the Work for the amount bid herein within the Contract Time and in accordance with the Contract Documents. The undersigned Bidder certifies that its bid amount includes funds sufficient to allow the Bidder to comply with all applicable local, state and federal laws and regulations governing the labor and services to be provided for the performance of the Work of the Contract and shall indemnify, defend and hold District harmless from and against any and all claims, demands, losses, liabilities and damages arising out of or relating to Bidder's failure to comply with applicable law in this regard.

By: _____
(Signature & Date)

(Corporate Seal)

(Typed or Printed Name of Bidder's Authorized Representative)

Title: _____

Date: _____

[End Of Section]

LIST OF SUBCONTRACTORS

Section 00215

1. Licensed Name of Subcontractor	2. Address of Office, Mill or Shop	3. Trade or Portion of Work	4. Subcontractor's License Number	4. DIR Registration Number	5. \$ Value of Work
			Requested by District	Requested by District	Fill out ONLY if requested by District
			Requested by District	Requested by District	Fill out ONLY if requested by District
			Requested by District	Requested by District	Fill out ONLY if requested by District
			Requested by District	Requested by District	Fill out ONLY if requested by District
			Requested by District	Requested by District	Fill out ONLY if requested by District
			Requested by District	Requested by District	Fill out ONLY if requested by District
			Requested by District	Requested by District	Fill out ONLY if requested by District
			Requested by District	Requested by District	Fill out ONLY if requested by District

Name of Vendor: _____ **Authorized Signature:** _____

[Duplicate and attach additional page(s) as required.]

NON-COLLUSION AFFIDAVIT

Section 00220

STATE OF CALIFORNIA

COUNTY OF _____

I, _____ being first duly sworn, depose and say that I am
(Typed or Printed Name)
the _____ of _____,
(Title) (Bidder Name)
the party submitting the foregoing Bid Proposal (the "Bidder"). In connection with the foregoing
Bid Proposal, the undersigned declares, states and certifies that:

- 1.01 The Bid Proposal is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization or corporation.
- 1.02 The Bid Proposal is genuine and not collusive or sham.
- 1.03 The Bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any other bidder or anyone else to put in sham bid, or to refrain from bidding.
- 1.04 The Bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price, or that of any other bidder, or to fix any overhead, profit or cost element of the bid price or that of any other bidder, or to secure any advantage against the public body awarding the contract or of anyone interested in the proposed contract.
- 1.05 All statements contained in the Bid Proposal and related documents are true.
- 1.06 The Bidder has not, directly or indirectly, submitted the bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any person, corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

Executed this _____ day of _____, 2020 at _____
(City, County and State)

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Signature

Address

Name Printed or Typed

City, County and State

() _____
Area Code and Telephone Number

STATEMENT OF BIDDER'S QUALIFICATIONS
Section 00240

1.01 Bidder's Organization

A. Form of entity of Bidder, i.e., corporation, partnership, etc. _____

1. If a corporation, state the following: _____
State of Incorporation: _____
Date of Incorporation: _____
President/Chief Executive Officer: _____
Secretary: _____
Treasure/Chief Financial Officer: _____

2. If a partnership, state the following:
Date of Organization: _____
Type of Partnership (general, limited): _____
Names of all general partners; if any of the general partners are not natural persons, provide the information for each such general partner requested by Paragraphs 1.01.A.1, 1.01.A.2 and 1.01.A.4 as appropriate: _____

3. If a proprietorship, state the following:
Names of all proprietors: _____

4. If a joint venture, state the following: _____
Date of organization: _____
Names of all Joint Venture members. For each Joint Venture member, identify the form of entity and provide the information requested by Paragraphs 1.01.A.1, 1.01.A.2 and 1.01.1.C for each Joint Venture member as appropriate: _____

5. Bidder's form of entity is other than listed above, describe the type of entity or organization and identify all principals or owners of equity in the entity or organization _____

B. Number of years your organization has been in business as a contractor: _____
Organization longevity must also be in compliance with item 1.03 C. Licensing, and have been in business with the advertised classification for a minimum of 5 years. Do you meet this qualification? ____ Yes ____ No

C. Number of years your organization has conducted business under its present name: _____

1. If your organization has conducted business under a name or name style different than your organization's present name, identify all prior name(s) or name style(s): _____

2. For each name or name style identified in Paragraph 1.01.C.1, state the dates during which you conducted business under each name or style: ____

1.02 Financial

A. Attach a current audited, reviewed or compiled Financial Statement for your organization prepared by a Certified Public Accountant licensed under the laws of the State of California utilizing generally accepted accounting practices applied in a consistent manner. The Financial Statement must include a current balance sheet and income statement showing: (i) current assets (i.e., cash, accounts receivable, accrued income, deposits, material inventory, etc.); (ii) net fixed assets; (iii) other assets; (iv) current liabilities (i.e., accounts payable, accrued salaries, accrued payroll taxes, etc.); and (v) other liabilities (i.e., capital, capital stock, earned surplus, retained earnings, etc.).

B. Is the attached Financial Statement for the identical organization as the Bidder?
____ Yes ____ No.

If not, explain the relationship and financial responsibility of the organization whose Financial Statement is provided (i.e., parent/subsidiary, etc.).

1.03 Licensing

A. California Contractors License:

License Number: _____

Expiration Date: _____

Responsible Managing Employee/Officer: _____

License Classification(s): _____

B. Has a claim or other demand ever been made against your organization's California Contractors License Bond? _____ Yes _____ No

If yes, on a separate attachment, state the following: (i) the name, address and telephone number of each person or entity making claim or demand; (ii) the date of each claim or demand; (iii) the circumstances giving rise to each such claim or demand; and (iv) the disposition of each such claim or demand.

C. The District requires a minimum of 5 years of licensed work experience within the Contractor Classification advertised, with no gaps in license coverage or change of company name. State the number of years this company has performed work under the above and advertised classification: _____ years.

D. Has a complaint ever been filed against your organization's California Contractors License with the California Contractors State License Board?
_____ Yes _____ No

If yes, on a separate attachment, state the following for each complaint: (i) the name, address and telephone number of each person or entity making the complaint; (ii) the date of each complaint; (iii) the circumstances giving rise to each such complaint; and (iv) the disposition of each such complaint, including without limitation, any disciplinary or other action imposed or taken by the California Contractors State License Board as a result of any such complaint.

E. Attach to this Statement true and correct copies of the following:

1. Your organization's California Contractors License (the copy must clearly and legibly show: (i) the licensee name; (ii) the expiration date; (iii) the classification(s) of licensure).
2. The Contractors License Bond posted by your organization in connection with your California Contractors License pursuant to California Business & Professions Code §§7071.5 and 7071.6.
3. If your organization's California Contractors License is issued by virtue of the qualification of a responsible managing employee or responsible managing officer, the Qualifiers Bond if required pursuant to California Business & Professions Code §7071.9).

- F. Attach to this statement a copy of the Contractors DIR Registration.
1. Each Bidder submitting a proposal to complete the work, labor, materials and/or services (“Work”) subject to this procurement must be a Department of Industrial Relations registered contractor pursuant to Labor Code 1725.5(“DIR Registered Contractor”).
 2. Pursuant to Labor Code 1725.5; all Subcontractors identified in a Bidder’s Subcontractor List shall be DIR Registered Contractors.
 3. If awarded the Contract for the Work, at all times during performance of the work, the Bidder and all Subcontractors, of any tier shall be DIR Registered Contractors.

1.04 Experience

- A.** List the categories of work your organization typically performs with your own forces: _____

- B.** Claims and lawsuits (if you answer yes to any of the following, you must attach details).
1. Have any lawsuits or other administrative, legal, arbitration or other proceedings, ever been brought or commenced against your organization or any of its principals, officers or equity owners in connection with any construction contract or construction project? _____ Yes _____ No

If so, describe the circumstances, the amount demanded or other relief demand and the disposition of each such lawsuit or other proceeding.
 2. Has your organization ever filed a lawsuit or commenced other administrative, legal or other proceedings in connection with any construction contract or construction project? _____ Yes _____ No

If so, describe the circumstances, the amount demanded or other relief demand and the disposition of each such lawsuit or other proceeding.
 3. Are there any judgments, orders, decrees or arbitration awards pending, outstanding against your organization or any of the officers, directors, employees or principals of your organization? _____ Yes _____ No

If so, describe each such judgment, order, decree or arbitration award and the present status of the satisfaction or discharge thereof.

- C.** On a separate attachment, list all construction projects your organization has in progress and for each project listed, state: (i) a general description of the work performed by your organization on the project; (ii) the dollar value of the work performed or to be performed by your organization; (iii) the owner's name, name of the owner's representative and the address and telephone number of the owner and the owner's representative; (iv) the project architect's name, address, telephone number and contact person; (v) percent presently complete; and (vi) the current scheduled completion date.
- D.** On a separate attachment, list all construction projects completed by your organization in the past five (5) years and for each project identified, state: (i) a general description of the work performed by your organization on the project; (ii) the dollar value of the work performed or to be performed by your organization; (iii) the owner's name, name of the owner's representative and the address and telephone number of the owner and the owner's representative; (iv) the project architect's name, address, telephone number and contact person; (v) percent presently complete; and (vi) the current scheduled completion date.
- E.** Has your organization ever refused to sign a contract awarded to it?
_____Yes _____No
- If so, on a separate attachment, state the following: (i) describe each such contract; (ii) the owner's name, address, telephone number and contact person; and (iii) the circumstances of your refusal to sign such contract.
- F.** Has your organization ever failed to complete a construction contract?
_____Yes _____No
- If so, on a separate attachment, state the following: (i) describe each such contract; (ii) the owner's name, address, telephone number and contact person; and (iii) the circumstances of your failure to complete such contract.
- G.** Has your organization ever been declared in default of a construction contract?
_____Yes _____No
- If so, on a separate attachment, state the following: (i) describe each such contract; (ii) the owner's name, address, telephone number and contact person; and (iii) the circumstances of each such declaration of default.
- H.** Has any construction contract to which your organization is a party been terminated for the convenience of the project owner? _____Yes _____No
- If so, identify the project and project owner along with a description of the circumstances under which the convenience termination occurred.
- I.** Has a claim or other demand ever been asserted against any Bid Bond, Performance Bond, or Payment Bond posted by your organization in connection with any construction contract or your submittal of a bid proposal for a

construction contract? _____Yes _____No

If so, on a separate attachment, state the following: (i) the name, address, telephone number and contact person for each claimant; (ii) the date upon which each such demand or claim was made; and (iii) the disposition of each such demand or claim.

1.05 References (include name, contact person, telephone, email address, fax and address for each reference provided)

- A.** Trade References (three (3) minimum)_____

- B.** Bank References _____

- C.** Public Works Inspectors of Record _____

- D.** Owner references (must have completed at least two (2) Federal, State, K-12 or higher education building projects in the past five (5) years. Please list these two (2) projects and at least one (1) other Owner referenced, preferably another Federal, State, K-12 or higher education project). _____

- E.** Insurance Carriers (General Liability, Auto, and Workers’ Compensation)_____

- F.** Surety Firms (issuing your Bid, Performance and Payment Bonds)_____

1.06 Accuracy and Authority

The undersigned is duly authorized to execute this Statement of Bidders Qualifications under penalty of perjury on behalf of the Bidder. The undersigned warrants and represents that he/she has personal knowledge of each of the responses to this Statement of Bidder's Qualifications and/or that he/she has conducted all necessary and appropriate inquiries to determine the truth, completeness and accuracy of responses to this Statement of Bidder's Qualifications.

The undersigned declares and certifies that the responses to this Statement of Bidder's Qualifications are complete and accurate; there are no omissions of material fact or information that render any response to be false or misleading and there are no misstatements of fact in any of the responses.

Executed this _____ day of _____, 20____ at _____.
(City and State)

I declare under penalty of perjury under California law that the foregoing is true and correct.

(Signature)

(Typed or written name)

[End Of Section]

BID SECURITY BOND

Section 00260

KNOW ALL MEN BY THESE PRESENTS:

That we, _____, as Principal, and _____, as Surety, are held and firmly bound, along with our respective heirs, executors, administrators, successors and assigns, jointly and severally, unto **VENTURA COUNTY COMMUNITY COLLEGE DISTRICT**, hereinafter "Obligee," for payment of the penal sum hereof in lawful money of the United States, as more particularly set forth herein.

THE CONDITION OF THIS OBLIGATION IS SUCH THAT:

WHEREAS, the Principal has submitted the accompanying Bid Proposal for the Work commonly described as **Bid 639 Moorpark College Stadium Snack Bar** and the Bid Proposal must be accompanied by Bid Security.

WHEREAS, subject to the terms of this Bond, the Surety is firmly bound unto the Obligee in the penal sum of **TEN PERCENT (10%)** of the maximum amount of the Bid Proposal submitted by the Principal to the Obligee, as set forth above, inclusive of additive alternate bid items, if any.

NOW, THEREFORE, if the Principal shall not withdraw said Bid Proposal within the period specified therein after the opening of the same, or, if no period be specified, for sixty (60) days after opening of said Bid Proposal; and if the Principal is awarded the Contract, and shall within the period specified therefore, or if no period be specified, within five (5) days after the prescribed forms are presented to him for signature, enter into a written contract with the Obligee, in accordance with the Bid Proposal as accepted, and give such bond(s) with good and sufficient surety or sureties, as may be required, for the faithful performance and proper fulfillment of such Contract and for the payment for labor and materials used for the performance of the Contract, or in the event of the withdrawal of said Bid Proposal within the period specified for the holding open of the Bid Proposal or the failure of the Principal to enter into such Contract and give such bonds within the time specified, if the Principal shall pay the Obligee the difference between the amount specified in said Bid Proposal and the amount for which the Obligee may procure the required Work and/or supplies, if the latter amount be in excess of the former, together with all costs incurred by the Obligee in again calling for Bids or otherwise procuring said Work or supplies, then the above obligation shall be void and of no effect, otherwise to remain in full force and effect.

Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or the Call for Bids, the Work to be performed thereunder, the Drawings or the Specifications accompanying the same, or any other portion of the Contract Documents shall in any way affect its obligations under this Bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of

said Contract, the Call for Bids, the Work, the Drawings or the Specifications, or any other portion of the Contract Documents.

In the event that suit, or other proceeding is brought upon this Bond by the Obligee, the Surety shall pay to the Obligee all costs, expenses and fees incurred by the Obligee in connection therewith, including without limitation, attorneys' fees.

IN WITNESS WHEREOF, the Principal and Surety have executed this instrument this _____ day of _____, 20____ by their duly authorized agents or representatives.

Bidder:

(corporate Seal)

(Principal's Name)

By:_____

(Signature)

(Typed or Printed Name & Title)

(Address)

Surety:

(Corporate Seal)

(Surety's Name)

By:_____

(Signature of Attorney-in-Fact for Surety)

(Typed or Printed Name)

(Address of Surety's Office where Bond is issued)

(Area Code and Telephone Number of Surety)

(Attach Attorney-in-Fact Certificate)

SECTION 00310 AGREEMENT

THIS AGREEMENT is made this _____ day of _____, 20__, in the City of Camarillo, County of Ventura, State of California, by and between VENTURA COUNTY COMMUNITY COLLEGE DISTRICT, a California Community College District, hereinafter called the "District" and _____, hereinafter called the "Contractor", with a principal place of business located at _____.

WITNESSETH, that the District and the Contractor in consideration of the mutual covenants contained herein agree as follows:

- 1.01 The Work.** Within the Contract Time and for the Contract Price, subject to adjustments thereto pursuant to the Contract Documents, the Contractor shall perform and provide all necessary labor, materials, tools, equipment, utilities, services and transportation to complete in a workmanlike manner all of the Work required in connection with the work of improvement commonly referred to as **Bid 639 Moorpark College Stadium Snack Bar**.

Contractor shall complete all Work covered by the Contract Documents, including without limitation, the Drawings and Specifications prepared by the Architect, and other Contract Documents enumerated in Article 5 below, along with all modifications and addenda thereto issued in accordance with the Contract Documents.

- 1.02 Contract Time.** The Work shall be commenced on the date stated in the District's Notice to Proceed. The Contractor shall achieve Substantial Completion of the Work within 120 consecutive calendar days after the date stated in the District's Notice to Proceed (see Section 1.01 of the Contract Special Conditions and as otherwise provided in the Contract Documents).

The Awarded Bidder must meet with the Facilities, Maintenance and Operations Director within one week of award to schedule work and accommodate any special conditions called out by Campus Director.

- 1.03 Contract Price.** The District shall pay the Contractor as full consideration for the Contractor's full, complete and faithful performance of the Contractor's obligations under the Contract Documents, subject to any additions or deduction as provided for in the Contract Documents, the Contract Price of _____ Dollars \$_____).

The Contract Price is based upon the Contractor's Base Bid Proposal and the following Alternate Bid Items, if any:

The District's payment of the Contract Price shall be in accordance with the Contract Documents.

1.04 Liquidated Damages. In the event of the failure or refusal of the Contractor to achieve Completion of the Work of the Contract Documents within the Contract Time, as adjusted, the Contractor shall be subject to assessment of Liquidated Damages in accordance with the Contract Documents.

1.05 The Contract Documents. The Contract Documents consist of the following:

Notice to Contractors Calling for Bids	Labor and Material Payment Bond
Instructions for Bidders	Performance Bond
Bid Proposal	Certificate of Workers Compensation
Subcontractors List	Drug Free Workplace Certification
Non-Collusion Affidavit	General Conditions
Statement of Bidder's Qualifications	Special Conditions
Bid Bond	Specifications
Agreement	Drawings
Labor Compliance Program	Guarantee
Proof of DIR Registration Per SB 854	

1.06 Award of Contract. The award shall be subject to final agreement on terms, conditions, and scope of work between VCCCD and Bidder.

1.07 Authority to Execute. The individual(s) executing this Agreement on behalf of the Contractor is/are duly and fully authorized to execute this Agreement on behalf of Contractor and to bind the Contractor to each and every term, condition and covenant of the Contract Documents.

IN WITNESS WHEREOF, this Agreement has been duly executed by the District and the Contractor as of the date set forth above.

DISTRICT:

VENTURA COUNTY COMMUNITY
COLLEGE DISTRICT,
a California Community College District

By: _____

Name: Dr. David El Fattal

Title: Vice Chancellor, Business and
Administrative Services

CONTRACTOR:

(Contractor's License Number)

By: _____

Name: _____

Title: _____

[Corporate Seal]

[End Of Section]

LABOR AND MATERIAL PAYMENT BOND

Section 00400

KNOW ALL MEN BY THESE PRESENTS:

That we, _____, as Principal, and _____, as Surety, are held and firmly bound, along with our respective heirs, executors, administrators, successors and assigns, jointly and severally, unto **VENTURA COUNTY COMMUNITY COLLEGE DISTRICT**, hereinafter "Obligee", for payment of the penal sum of _____ Dollars (\$) in lawful money of the United States, as more particularly set forth herein.

THE CONDITION OF THIS OBLIGATION IS SUCH THAT:

WHEREAS, the Obligee, by resolution of its Board of Trustees, has awarded to the Principal a Contract for the Work commonly described as **Bid 639, Moorpark College Stadium Snack Bar**.

WHEREAS, the Principal, on or about _____, 20____, entered into a Contract with the Obligee for performance of the Work; the Agreement and all other Contract Documents set forth therein are incorporated herein and made a part hereof by this reference.

WHEREAS, by the terms of the Contract Documents, the Principal is required to furnish a bond for the prompt, full and faithful payment to any Claimant, as hereinafter defined, for all labor, materials or services used, or reasonably required for use, in the performance of the Work.

NOW THEREFORE, if the Principal shall promptly, fully and faithfully make payment to any Claimant for all labor, materials or services used or reasonably required for use in the performance of the Work, then this obligation shall be void; otherwise, it shall be, and remain, in full force and effect.

The term "Claimant" shall refer to any person, corporation, partnership, proprietorship, or other entity including without limitation, all persons and entities described in California Civil Code §3181, providing or furnishing labor, materials or services used or reasonably required for use in the performance of the Work under the Contract Documents, without regard for whether such labor, materials or services were sold, leased or rented. This Bond shall inure to the benefit of all Claimants so as to give them, or their assigns and successors, a right of action upon this Bond.

In the event that suit is brought on this Bond by any Claimant for amounts due such Claimant for labor, materials or services provided or furnished by such Claimant, the Surety shall pay for the same and reasonable attorneys' fees pursuant to California Civil Code §3250.

The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration, deletion, addition, or any other modification to the terms of the Contract Documents, the Work to be performed thereunder, the Specifications or the Drawings, or any other portion of the Contract Documents, shall in any way limit, restrict or otherwise affect its

obligations under this Bond; the Surety hereby waives notice from the Obligee of any such change, extension of time, alteration, deletion, addition or other modification to the Contract Documents, the Work to be performed under the Contract Documents, the Drawings or the Specifications of any other portion of the Contract Documents.

IN WITNESS WHEREOF, the Principal and Surety have executed this instrument this _____ day of _____, 20____ by their duly authorized agents or representatives.

(Corporate Seal)

(Principal Name)

By: _____
(Signature)

(Typed or Printed Name)

Title: _____

(Corporate Seal)

(Surety Name)

By: _____
(Signature of Attorney-in-Fact for Surety)

(Typed or Printed Name of Attorney-in-Fact)

(Attach Attorney-in-Fact Certificate)

(Address)

(Area Code and Telephone Number of Surety)

[End of Section]

PERFORMANCE BOND

Section 00410

KNOW ALL MEN BY THESE PRESENTS:

That we _____, as Principal, and _____, as Surety, are held and firmly bound, along with our respective heirs, executors, administrators, successors and assigns, jointly and severally, unto **VENTURA COUNTY COMMUNITY COLLEGE DISTRICT**, hereinafter "Obligee", for payment of the penal sum of _____ Dollars (\$) in lawful money of the United States, as more particularly set forth herein.

THE CONDITION OF THIS OBLIGATION IS SUCH THAT:

WHEREAS, the Obligee, by action of its Board of Trustees, has awarded to the Principal a Contract for the Work commonly described as **Bid 639 Moorpark College Stadium Snack Bar**.

WHEREAS, the Principal, on or about _____ 20__, entered into a contract with the Obligee for performance of the Work; the Agreement and all other Contract Documents set forth therein are incorporated herein and made a part hereof by this reference.

WHEREAS, by the terms of the Contract Documents ("Contract"), the Principal is required to furnish a bond ensuring the Principal's prompt, full and faithful performance of the Work of the Contract.

WHEREAS, the Principal and the Surety, jointly and severally, bind themselves, their heirs, executors, administrative, successors and assigns, to the Obligee for the prompt, full and faithful performance of the Contract, which is incorporated herein by this reference.

NOW, THEREFORE, if the Principal shall promptly, fully and faithfully perform each and all of the obligations and things to be done and performed by the Principal in strict accordance with the terms of the Contract as said Contract may be modified or amended from time to time; and if the Principal shall indemnify and save harmless the Obligee and all of its officers, agents and employees from any and all losses, liability and damages, claims, judgments, stop notices, costs, and fees of every description, whether imposed by law or equity, which may be incurred by the Obligee by reason of the failure or default on the part of the Principal in the performance of any or all of the terms or the obligations of the Contract, including all modifications and amendments thereto, and any warranties or guarantees required thereunder; then this obligation shall be void; otherwise, it shall be, and remain, in full force and effect.

In the event the Principal is declared by the Obligee to be in breach or default in the performance of the Contract, then, after written notice from the Obligee to the Surety, as provided for herein, the Surety shall either remedy the default or breach of the Principal or shall take charge of the Work of the Contract and complete the Contract with a Contractor other than the Principal at its own expense; provided, however, that the procedure by which the Surety undertakes to discharge its obligations under this Bond shall be subject to the advance written approval of the Obligee.

If the Surety does not proceed to cure or remedy the Principal's default(s) of its performance of the Contract with reasonable promptness, the Surety shall be deemed to be in default on this Bond fifteen (15) calendar days after receipt of a written notice from Obligor to the Surety demanding that the Surety perform its obligations under this Bond, and the Obligor shall be entitled to enforce any remedy available to Obligor.

Within fifteen (15) calendar days of Obligor's written notice to the Surety of the failure of performance of the Contract by the Principal, it shall be the duty of the Surety to give to the Obligor an unequivocal notice in writing of the Surety's election to remedy the default(s) of the Principal promptly, or to arrange for performance of the Contract promptly by a Contractor other than the Principal, time being of essence to this Bond. In said Notice of Election, the Surety shall state the date of commencement of its cure or remedy of the Principal's default(s) or its performance of the Contract. The Surety's obligations for cure or remedy, include but are not limited to: correction of defective or incomplete work and completion of the Contract, additional legal, design professional and delay costs arising from Surety's actions or failure to act; and liquidated damages, or if no liquidated damages are specified in the Contract, actual damages caused by delayed performance or non-performance by the Principal. The Surety shall give prompt written notice to the Obligor upon completion of the cure or remedy of the Principal's default(s) of its performance of the Contract.

In the event the Surety shall fail to issue its Notice of Election to Obligor within the time provided for herein above, the Obligor may thereafter cause the cure or remedy of the Principal's failure of performance or default or to complete the Work. The Principal and the Surety shall be each jointly and severally liable to the Obligor for all damages and costs sustained by the Obligor as a result of the Principal's failure of performance under the Contract Documents or default in its performance of obligations thereunder, including without limitation the costs of cure or completion exceeding the then remaining balance of the Contract Price.

The Surety, for value received, hereby stipulates and agrees that no change or adjustment of the Contract Time or Contract Price, alterations, deletions, additions or any other modifications to the Contract Documents, or the Work to be performed thereunder, shall in any way limit, restrict, or otherwise affect the obligations of the Surety under this Bond. Surety waives notice of any change or adjustment of the Contract Time or Contract Price, alterations, deletions, additions or any other modifications to the Contract Documents, or the Work to be performed thereunder and agrees to automatically adjust the penal sum of this Bond to reflect any adjustments of the Contract Time or Contract Price which increase the Contract Price.

Principal and Surety agree that if Obligor is required to engage the services of an attorney in connection with enforcement of this Bond, each shall pay Obligor's costs and reasonable attorney's fees incurred, with or without suit, in addition to the above penal sum.

The guarantees contained in this Bond survive Final Completion of the Work called for in the Contract Documents with respect to the obligations and liabilities of the Principal, which survive Final Completion of the Work.

IN WITNESS WHEREOF, the Principal and Surety have executed this instrument this _____ day of _____, 20__ by their duly authorized agents or representatives.

(Corporate Seal)

(Principal Name)

By: _____
(Signature)

(Typed or Printed Name)

Title: _____

(Corporate Seal)

(Surety Name)

By: _____
(Signature of Attorney-in-Fact for Surety)

(Attach Attorney-in-Fact Certificate)

(Typed or Printed Name of Attorney-in-Fact)

(Address)

(Area Code and Telephone Number of Surety)

CERTIFICATE OF WORKERS' COMPENSATION INSURANCE

Section 00415

I, _____ the _____,
(Name) (Title)
of _____, declare, state and certify that:
(Contractor Name)

1.01 I am aware that California Labor Code §3700(a) and (b) 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 in one or more insurers duly authorized to write compensation insurance in this state.
- B. By securing from the Director of Industrial Relations a certificate of consent to self-insure either as an individual employer, or one employer in a group of employers, 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 or her employees."

1.02 I am aware that the provisions of California Labor Code §3700 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 this Contract.

By: _____
(Signature)

(Date)

DRUG-FREE WORKPLACE CERTIFICATION

Section 00417

I, _____ the _____,
(Name) (Title)
of _____, declare, state and certify that:
(Contractor Name)

1.01 I am aware of the provisions and requirements of California Government Code §§8350 et seq., the Drug Free Workplace Act of 1990.

1.02 I am authorized to certify, and do certify, on behalf of Contractor that a drug free workplace will be provided by Contractor 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 Contractor's workplace and specifying actions which will be taken against employees for violation 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. Contractor's policy of maintaining a drug-free workplace;
3. The availability of drug counseling, rehabilitation and employee-assistance programs; and
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 be given a copy of the statement required by subdivision (A), above, and that as a condition of employment by Contractor in connection with the Work of the Contract, the employee agrees to abide by the terms of the statement.

1.03 Contractor agrees to fulfill and discharge all of Contractor's obligations under the terms and requirements of California Government Code §8355 by, inter alia, publishing a statement notifying employees concerning: (a) the prohibition of any controlled substance in the workplace, (b) establishing a drug-free awareness program, and (c) requiring that each employee engaged in the performance of the Work of the Contract be given a copy of the statement required by California Government Code §8355(a) and requiring that the employee agree to abide by the terms of that statement.

- 1.04 Contractor and I understand that if the District determines that Contractor has either: (a) made a false certification herein, or (b) violated this certification by failing to carry out and to implement the requirements of California Government Code §8355, the Contract awarded herein is subject to termination, suspension of payments, or both. Contractor and I further understand that, should Contractor violate the terms of the Drug-Free Workplace Act of 1990, Contractor may be subject to debarment in accordance with the provisions of California Government Code §§8350, et seq.
- 1.05 Contractor and I acknowledge that Contractor and I are aware of the provisions of California Government Code §§8350, et seq. and hereby certify that Contractor and I will adhere to, fulfill, satisfy and discharge all provisions of and obligations under the Drug-Free Workplace Act of 1990.

I declare under penalty of perjury under the laws of the State of California that all of the foregoing is true and correct.

Executed at _____ this _____ day of _____, 20____
(City and State)

(Signature)

(Typed or Printed Name)

GUARANTEE

Section 00420

(Contractor's Name) hereby unconditionally guarantees that the work performed under and pursuant to the Ventura County Community College District (District) project known as the **Bid 639 Moorpark College Stadium Snack Bar**. ("Project") has been done in strict accordance with the requirements of the Contract and therefore further guarantees the work of the contract to be and remain free of defects in workmanship and materials for a period of one (1) year from the date of completion of the contract, unless a longer guarantee period is called for by the Contract Documents, in which case the terms of the longer guarantee shall govern. The Contractor hereby agrees to repair or replace any and all work, together with any other work which may have been damaged or displaced in so doing, that may prove to be not in accordance with the requirements of the Contract or that may be defective in its workmanship or materials within the guarantee period specified, without any expense whatsoever to the District, ordinary wear and tear and unusual abuse and neglect only excepted. The Contractor has provided contract bonds which will remain in full force and effect during the guarantee period.

The Contractor further agrees that within ten (10) calendar days after being notified in writing by the District of any work not in accordance with the requirements of the contract or any defects in the work, he will commence and prosecute with due diligence all work necessary to fulfill the terms of this guarantee, and to complete the work within a reasonable period of time. In the event he fails to so comply, he does hereby authorize the District to proceed to have such work done at the Contractor's expense and he will pay the cost thereof upon demand. The District shall be entitled to all costs, including reasonable attorneys' fees, necessarily incurred upon the Contractor's refusal to pay the above costs.

Notwithstanding the foregoing paragraph, in the event of an emergency constituting an immediate hazard to the health or safety of the employees of the District, or its property or licensees, the District may undertake at the Contractor's expense without prior notice, all work necessary to correct such hazardous condition when it was caused by the work of the Contractor not being in accordance with the requirements of this contract, or being defective, and to charge the same to the Contractor as specified in the preceding paragraph.

The guarantee set forth herein is not intended by the parties, nor shall it be construed, as in any way limiting or reducing the District's rights to enforce all terms of the contract referenced herein above or the time for enforcement thereof. This guarantee is provided in addition to, and not in lieu of, the District's rights on such contract.

Contractor's Signature: _____ Date: _____

Subcontractor's Signature _____ Date: _____

Representative to be contacted for services:

Name: _____

Address: _____

Phone No.: _____ Fax No.: _____

Email.: _____

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GENERAL CONDITIONS

ARTICLE 1: DEFINITIONS; GENERAL

1.1 Architect.

The Architect is the person or entity identified as such in the Agreement; references to the "Architect" includes the Architect's authorized representative and his, her or its successor(s).

1.2 Construction Equipment

"Construction Equipment" is equipment utilized for the performance of any portion of the Work, but which is not incorporated into the Work.

1.3 Contract Documents

The Contract Documents consist of the Agreement between the District and the Contractor, Conditions of the Contract (whether General, Special or otherwise), Drawings, Specifications, including addenda thereto issued prior to execution of the Agreement and any other documents listed in the Agreement. The Contract Documents shall include modifications issued after execution of the Agreement. The Contract Documents form the Contract for Construction.

1.4 Contract Document Terms

The term "provide" means "provide complete in place" or to "furnish and install" such item. Unless otherwise provided in the Contract Documents, the terms "approved;" "directed;" "satisfactory;" "accepted;" "acceptable;" "proper;" "required;" "necessary" and "equal" shall mean as approved, directed, satisfactory, accepted, acceptable, proper, required, necessary and equal, in the opinion of the District, its agents or representatives. The term "typical" as used in the Drawings shall require the installation or furnishing of such item(s) of the Work designated as "typical" in all other similar areas; Work in such other areas shall conform to that shown as "typical" or as reasonably inferable therefrom.

1.5 Contractor

The Contractor is the person or entity identified as such in the Agreement; references to "Contractor" include the Contractor's authorized representative.

1.6 Contractor's Superintendent

The Contractor's Superintendent is the individual employed by the Contractor whose principal responsibility shall be the supervision and coordination of the Work; the Contractor's Superintendent shall not perform routine construction labor.

1.7 Days

Unless otherwise expressly stated, references to "days" in the Contract Documents shall be deemed to be calendar days.

1.8 Deferred Approval Items

Deferred approval items are those items that shall not be started until detailed plans, specifications, and engineering calculations have been accepted and signed by the Architect or Engineer.

1.9 District

The "District" refers to **Ventura County Community College District** and its authorized representatives, including the Project Manager, the District's Board of Trustees and the District's officers, employees, agents and representatives.

1.10 District's Inspector

The District's Inspector is the individual designated and employed by the District in accordance with the requirements of Title 24 of the California Code of Regulations. The District's Inspector shall be authorized to act on behalf of the District as provided for in the Contract Documents and in Title 24 of the California Code of Regulations, as the same may be amended from time to time.

1.11 Division of State Architect ("DSA")

The DSA is the California Division of the State Architect including without limitation the DSA's Office of Construction Services, Office of Design Services and the Office of Regulation Services; references to the DSA in the Contract Documents shall mean the DSA, its offices and its authorized employees and agents. The authority of the DSA over the Work and the performance thereof shall be as set forth in the Contract Documents and Title 24 of the California Code of Regulations.

1.12 Drawings and Specifications

The Drawings are the graphic and pictorial portions of the Contract Documents, wherever located and whenever issued, showing generally, the design, location and dimensions of the Work and may include without limitation, plans, elevations, sections, details, schedules, notes or diagrams. The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, construction systems, standards, criteria and workmanship for the Work and related services. The Drawings and Specifications are intended to delineate and describe the Work and its component parts so as to permit skilled and competent contractors to bid upon the Work and prosecute the same to completion.

1.13 Intent and Correlation of Contract Documents

1.13.1 Work of the Contract Documents

The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary and what is required by one shall be as binding as if required by all. Performance by the Contractor shall be required to the extent consistent with the Contract Documents and reasonably inferable therefrom as being necessary to produce the intended results. Organization of the Specifications into divisions, sections or articles, and the arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade. Where any portion of the Contract Documents is silent and information appears elsewhere in the Contract Documents, such other portions of the Contract Documents shall control. Work not particularly detailed, marked or specified shall be the same as similar parts that are detailed, marked or specified.

1.13.2 Technical Terms

Unless otherwise stated in the Contract Documents, words or terms, which have, well-

known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

1.13.3 Conflict in Contract Documents

The Contract Documents are intended to be fully cooperative and to agree. If Contractor observes any conflict, inconsistency or ambiguity, Contractor shall promptly notify the District and the Architect in writing of such conflict, inconsistency or ambiguity prior to commencement of affected Work. If a conflict, inconsistency or ambiguity arises, the following order or precedence shall generally apply, provided, however, that the order of precedence shall not be so rigidly interpreted as to create an absurd or costly result: Special Conditions shall take precedence over General Conditions, Specifications shall take precedence over Drawings and shall govern as to materials, workmanship and installation procedures. Plans identify the scope and location of the Work. With regard to Drawings, figures govern over scaled dimensions, larger details govern over general drawings, addenda and change order drawings govern over contract drawings, contract drawings govern over standard drawings.

1.14 Material Supplier

A Material Supplier is any person or entity who only furnishes materials, equipment or supplies for the Work without fabricating, installing or consuming them in the Work.

1.15 Project

The Project is the total construction of which the Work performed by the Contractor under the Contract Documents may be the whole or a part of the Project and which may include construction by the District or by separate contractors.

1.16 Project Manager

The Project Manager, if any, is the individual or entity designated as such in the Special Conditions. The Project Manager is an independent contractor retained by the District and shall be authorized and empowered to act on behalf of the District. The removal or replacement of the designated Project Manager shall not result in adjustment of the Contract Price or the Contract Time or otherwise affect, limit or restrict Contractor's obligations hereunder.

1.17 Record Documents

The Record Documents are a set of the Drawings and Specifications marked by the Contractor during the performance of the Work to indicate completely and accurately the actual as-built condition of the Work. The Record Documents shall be sufficient for a capable and qualified draftsman to modify the Drawings to reflect and indicate the Work actually in place at Final Completion of the Work.

1.18 Shop Drawings; Samples; Product Data (“Submittals”)

Shop Drawings are diagrams, schedules and other data specially prepared for the Work by the Contractor or a Subcontractor of any tier, manufacturer, Material Supplier, or distributor to illustrate some portion of the Work. Samples are physical examples of materials, equipment or workmanship forming a part of, or to be incorporated into the Work. Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work. Shop Drawings, Samples and Product Data prepared or furnished by the Contractor or any of its Subcontractors or Material Suppliers are collectively referred to as “Submittals”.

1.19 Site

The Site is the physical area designated in the Contract Documents for Contractor's performance, construction and installation of the Work.

1.20 Subcontractors; Sub-Subcontractors

A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work. "Subcontractor" does not include a separate contractor to the District or subcontractors of any separate contractor. A Sub-Subcontractor is a person or entity of any tier, who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site.

1.21 Special Conditions

If made a part of the Contract Documents, Special Conditions are special or supplemental provisions, not otherwise provided for in the Agreement or the General Conditions.

1.22 Surety. The Surety is the person or entity that executes, as surety, the Contractor's Labor and Material Payment Bond and/or Performance Bond or other bonds provided by the Contractor.

1.23 Work

The "Work" is the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment or services provided or to be provided by the Contractor to fulfill the Contractor's obligations under the Contract Documents. The Work may constitute the whole or a part of the Project.

ARTICLE 2: DISTRICT

2.1 Information Required of District

2.1.1 Surveys; Site Information

District may provide information concerning physical characteristics of the Site. Information not provided by the District concerning physical characteristics of the Site, which is required, shall be obtained by Contractor without adjustment to the Contract Price or the Contract Time.

2.1.2 Drawings and Specifications

All of the Drawings and the Specifications shall remain the property of the District; the Contractor shall not use the Drawings or the Specifications in connection with any other work of improvement other than the Work of the Project.

2.1.3 Furnishing of Information

Information or services to be provided by the District under the Contract Documents shall be furnished by the District with reasonable promptness to avoid delay in the orderly progress of the Work. Information about existing conditions furnished by the District under the Contract Documents is obtained from sources believed to be reliable, but the District neither guarantees nor warrants that such information is complete and accurate. The Contractor shall verify all information provided by the District. To the extent that the Contract Documents depict existing conditions on or about the Site, or the Work involves the renovation, removal or remodeling of existing improvements, or the Work involves

any tie-in or other connection with any existing improvements, the conditions and/or existing improvements depicted in the Contract Documents are as they are believed to exist.

2.2 District's Right to Stop the Work

In addition to the District's right to suspend the Work or terminate the Contract pursuant to the Contract Documents, the District may, by written order, direct the Contractor to stop the Work, or any portion thereof, until the cause for such stop work order has been eliminated, if the Contractor: (i) fails to correct Work which is not in conformity and in accordance with the requirements of the Contract Documents, or (ii) otherwise fails to carry out the Work in conformity and accordance with the Contract Documents. The right of the District to stop the Work hereunder shall not be deemed a duty on the part of the District to exercise such right for the benefit of the Contractor or any other person or entity, nor shall the District's exercise of such right waive or limit the exercise of any other right or remedy of the District under the Contract Documents or at law.

2.3 Partial Occupancy or Use

2.3.1 District's Right to Partial Occupancy

The District may occupy or use any completed or partially completed portion of the Work, provided that the District and the Contractor have accepted, in writing, the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, utilities, damage to the Work, insurance and the period for correction of the Work and commencement of warranties required by the Contract Documents for such portion of the Work partially used or occupied by the District. If the Contractor and the District are unable to agree upon the matters set forth above, the District may nevertheless use or occupy any portion of the Work, with the responsibility for such matters subject to resolution in accordance with the Contract Documents. Immediately prior to such partial occupancy or use of the Work, or portions thereof, the District, the District's Inspector, the Contractor and the Architect shall jointly inspect the portions of the Work to be occupied or to be used to determine and record the condition of the Work. The District's use or occupancy of the Work or portions thereof pursuant to the preceding shall not be deemed "completion" of the Work as that term is used in Public Contract Code §7107.

2.3.2 No Acceptance of Defective or Nonconforming Work

Unless otherwise expressly agreed upon by the District and the Contractor, the District's partial occupancy or use of the Work or any portion thereof, shall not constitute the District's acceptance of the Work not complying with the requirements of the Contract Documents or which is otherwise defective.

2.4 The District's Inspector

In addition to the authority and rights of the District's Inspector as provided for elsewhere in the Contract Documents, all of the Work shall be performed under the observation of the District's Inspector in accordance with the provisions of Title 24 of the California Code of Regulations. The District's Inspector shall have access to all parts of the Work at any time, wherever located, including shop inspections, and whether partially or completely fabricated, manufactured, furnished or installed. The performance of the duties of the District's Inspector under the Contract Documents shall not relieve or limit the Contractor's performance of its obligations under the

ARTICLE 3: ARCHITECT

3.1 Architect's Administration of the Contract

3.1.1 Administration of Contract

The Architect will provide administration of the Contract as described in the Contract Documents, and will be one of the District's representatives during construction until the time that Final Payment is due the Contractor. The Architect will advise and consult with the District, the Project Manager and the District's Inspector with respect to the administration of the Contract and the Work. The Architect shall have the responsibilities and powers established by law, including Title 24 of the California Code of Regulations.

3.1.2 Periodic Site Inspections

The Architect will visit the Site at intervals appropriate to the stage of construction to become generally familiar with the progress and quality of the completed Work and to determine, in general, if the Work is being performed in a manner indicating that the Work, when completed, will be in accordance with the Contract Documents. The Architect will not be required to make exhaustive or continuous Site inspections to check quality or quantity of the Work. On the basis of Site observations as an architect, the Architect will keep the District informed of the progress of the Work, and will endeavor to guard the District against defects and deficiencies in the Work.

3.1.3 Contractor Responsibility for Construction Means, Methods and Sequences

The Architect will not have control over or charge of and will not be responsible for construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, these being solely the Contractor's responsibility. The Architect will not have control over or charge of and will not be responsible for acts or omissions of the Contractor, Subcontractors, or their agents or employees, or of any other persons performing portions of the Work.

3.1.4 Verification of Applications for Payment

In accordance with Article 8 hereof, the Architect will review the Contractor's Applications for Progress Payments and for Final Payment, verify the extent of Work performed and the amount properly due the Contractor on such Application for Payment.

3.1.5 Rejection of Work

The Architect is authorized to reject Work which is defective or does not conform to the requirements of the Contract Documents. Whenever the Architect considers it necessary or advisable, additional inspections or testing of the Work may be conducted, whether or not such Work is fabricated, installed or completed. Neither this authority of the Architect nor a decision made in good faith by the Architect to exercise or not to exercise such authority shall give rise to a duty or responsibility to the Contractor, Subcontractors, Material Suppliers, their agents or employees, or other persons performing portions of the Work.

3.1.6 Architect's Review of Submittals

The Architect will review and approve or take other appropriate action upon the Contractor's Submittals, but only for the limited purpose of checking for conformance with the design concept expressed in the Contract Documents. Review of Submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's Submittals shall not relieve the Contractor of its obligations under the Contract Documents. The Architect's review of Submittals shall not constitute approval of safety measures, programs or precautions or, unless otherwise specifically stated by the Architect, of any construction means, methods, techniques, sequences or procedures. The Architect's approval of a specific item in a Submittal shall not indicate approval of an assembly of which the item is a component. The Architect's review and return of Submittals will normally require a minimum of twenty one (21) days from date of receipt of complete submittal. Deferred approval submittals indicated in the Contract Documents require additional time for processing and review of all submittals.

3.1.7 Changes to the Work; Change Orders

The Architect will prepare Change Orders and may authorize minor changes in the Work in accordance with Article 9.9 hereof.

3.1.8 Completion

The Architect will conduct observations to determine the date(s) of interim milestones, if any, and the dates of Substantial and Final Completion. The Architect will verify that the Contractor has complied with all requirements of the Contract Documents and is entitled to receipt of Final Payment.

3.1.9 Interpretation of Contract Documents

The Architect will interpret and decide matters concerning the requirements of the Contract Documents on written request of either the District or the Contractor, or as deemed necessary. The Architect's response to such requests will be made in writing with reasonable promptness and within the time limits specified in the Contract Documents. Interpretations and decisions of the Architect will be consistent with the intent of and reasonably inferable from the Contract Documents and will be in writing or in the form of drawings with transmittal letter. When making such interpretations and decisions, the Architect will endeavor to secure faithful performance by both the District and the Contractor, will not show partiality to either and will not be liable for results of interpretations or decisions so rendered in good faith. The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.

ARTICLE 4: THE CONTRACTOR

4.1 Communications

All communications regarding the Work, the performance thereof or the Contract Documents shall be in writing; oral communications, unless reduced to writing, are not binding on the parties. Communications between the Contractor and the District shall be through the Project Manager. Communications between separate contractors, if any, shall be through the Project Manager. Contractor shall make all written communications concerning the Project available to the District

upon request.

4.2 Contractor Review of Contract Documents

4.2.1 Examination of Contract Documents

The Contractor shall carefully study and compare the Contract Documents with each other and with information furnished by the District pursuant to the Contract Documents and shall at once report to the District any errors, inconsistencies or omissions discovered. If the Contractor performs any Work knowing, or with reasonable diligence should have known that, it involves an error, inconsistency or omission in the Contract Documents without prior written notice to the District of the same, the Contractor shall assume full responsibility for such performance and shall bear all attributable costs for correction of the same.

4.2.2 Field Measurements

Prior to commencement of the Work, or portions thereof, the Contractor shall take field measurements and verify field conditions at the Site and shall carefully compare such field measurements and conditions and other information known to the Contractor with information provided in the Contract Documents. Errors, inconsistencies or omissions discovered shall be reported to the District at once.

4.2.3 Dimensions; Layouts and Field Engineering

Dimensions indicated in the Drawings are intended for reference only. The Contractor shall be solely responsible for dimensioning and coordinating the Work of the Contract Documents. All field engineering required for laying out the Work and/or establishing grades for earthwork operations shall be by the Contractor at its expense. Any field engineering or other engineering to be provided or performed by the Contractor under the Contract Documents and required or necessary for the proper execution or installation of the Work shall be provided and performed by an engineer duly registered under the laws of the State of California in the engineering discipline for such portion of the Work.

4.2.4 Request for Information

If the Contractor encounters any condition which the Contractor believes, in good faith and with reasonable basis, is the result of an ambiguity, conflict, error or omission in the Contract Documents (collectively “the Conditions”), it shall be the affirmative obligation of the Contractor to timely notify the District, in writing, of the Conditions encountered and to request information from the District necessary to address and resolve any such Conditions before proceeding with any portion of the Work affected or which may be affected by such Conditions. If the Contractor fails to timely notify the District in writing of any Conditions encountered and the Contractor proceeds to perform any portion of the Work containing or affected by such Conditions, the Contractor shall bear all costs associated with or required to correct, remove, or otherwise remedy any portion of the Work affected thereby without adjustment of the Contract Time or the Contract Price. The Contract Time shall not be subject to adjustment in the event that the Contractor fails to timely request information from the Architect. The Architect's responses to any such Contractor request for information shall be provided within five (5) days. The foregoing provisions notwithstanding, in the event that the Architect reasonably determines that any of Contractor's request(s) for information: (i) does not reflect adequate or competent

supervision or coordination by the Contractor or any Subcontractor; or (ii) does not reflect the Contractor's adequate or competent knowledge of the requirements of the Work or the Contract Documents; or (iii) is not justified for any other reason, Contractor shall be liable to the District for all costs incurred by the District associated with the processing, reviewing, evaluating and responding to any such request for information, including without limitation, fees of the Architect and any other design consultant to the Architect or the District.

4.2.5 Work in Accordance With Contract Documents

The Contractor shall perform all of the Work in strict conformity with the Contract Documents and approved Submittals.

4.3 Site Investigation; Subsurface Conditions

4.3.1 Contractor Investigation

The Contractor shall be responsible for, and by executing the Agreement acknowledges, that it has carefully examined the Site and has taken all steps it deems reasonably necessary to ascertain all conditions which may affect the Work, or the cost thereof, including, without limitation, conditions bearing upon transportation, disposal, handling or storage of materials; availability of labor or utilities; access to the Site; and the physical conditions and the character of equipment, materials, labor and services necessary to perform the Work. Any failure of the Contractor to do so will not relieve it from the responsibility for fully and completely performing all Work without adjustment to the Contract Price or the Contract Time. The District assumes no responsibility to the Contractor for any understandings or representations concerning conditions or characteristics of the Site, or the Work, made by any of its officers, employees or agents prior to the execution of the Agreement, unless such understandings or representations are expressly set forth in the Agreement.

4.3.2 Subsurface Data

By executing the Agreement, the Contractor acknowledges that it has examined the subsurface data available and satisfied itself as to the character, quality and quantity of surface and subsurface materials, including without limitation, obstacles which may be encountered in performance of the Work, insofar as this information is reasonably ascertainable from an inspection of the Site, review of available subsurface data and analysis of information furnished by the District under the Contract Documents. Subsurface data or other soils investigation report provided by the District hereunder are not a part of the Contract Documents. Information contained in such data or report regarding subsurface conditions, elevations of existing grades, or below grade elevations are approximate only and is neither guaranteed nor warranted by the District to be complete and accurate. The Contractor shall examine all subsurface data to make its own independent interpretation of the subsurface conditions and acknowledges that its bid is based upon its own opinion of the conditions which may be encountered. The District assumes no responsibility for any conclusions or interpretations made by Contractor on the basis of available subsurface data or other information furnished by District under the Contract Documents.

4.3.3 Subsurface Conditions

4.3.3.1 Procedures

If the Work under the Contract Documents involves digging trenches or other excavations that extend deeper than four feet below the surface, the Contractor shall promptly and before the following conditions are disturbed, notify the District's Inspector, in writing, of any: (i) material that the Contractor believes may be material that is hazardous waste, as defined in California Health and Safety Code §25117, that is required to be removed to a Class I or Class II or Class III disposal site in accordance with provisions of existing law; (ii) subsurface or latent physical conditions at the site differing from those indicated; or (iii) unknown physical conditions at the site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in the Work or the character provided for in the Contract Documents. If upon notice to the District of the conditions described above and upon the District's investigation thereof, the District determines that the conditions so materially differ or involve such hazardous materials which require an adjustment to the Contract Price or the Contract Time, the District shall issue a Change Order in accordance with Article 9 hereof. In accordance with California Public Contract Code §7104, any dispute arising between the Contractor and the District as to any of the conditions listed in (i), (ii) or (iii) above, shall not excuse the Contractor from the completion of the Work within the Contract Time and the Contractor shall proceed with all Work to be performed under the Contract Documents. The District reserves the right to terminate the Contract pursuant to Article 15.2 hereof should the District determine not to proceed because of any condition described in (i), (ii) or (iii) above.

4.3.3.2 Trenching

For all excavations in excess of five (5) feet involving an estimated expenditure in excess of \$25,000, Contractor shall submit to the District for acceptance a detailed Drawing showing the design of shoring, bracing, sloping or other provisions to be made for the protection of workmen from the hazard of caving ground. If such design varies from the standards established by the Construction Safety Orders of the California Division of Industrial Safety, the Drawing shall be prepared by a registered civil or structural engineer. None of the aforementioned trenching shall be started before Contractor receives notification of acceptance from the District. Contractor shall comply with all other applicable requirements of California Labor Code §6705, and as therein provided, no provisions of that Section or this Section shall be construed to impose tort liability upon the District. In any event, Contractor shall not commence any excavation work until it has secured all necessary permits including the required CAL OSHA excavation/shoring permit. Any permits shall be prominently displayed on the Project premises prior to commencement of any excavation.

4.4 Supervision and Construction Procedures

4.4.1 Supervision of the Work

The Contractor shall supervise and direct performance of the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract Documents, unless Contract Documents give other specific instructions concerning these matters. The Contractor shall be responsible for inspection of completed or partially completed portions of Work to determine that such portions are in proper condition to receive subsequent Work.

4.4.2 Responsibility for the Work; Coordination of the Work

The Contractor shall be responsible to the District for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and all other persons performing any portion of the Work under a contract with the Contractor. The Contractor shall not be relieved of the obligation to perform the Work in accordance with the Contract Documents either by activities or duties of the Project Manager, District's Inspector or the Architect in the Architect's administration of the Contract, or by tests, inspections or approvals required or performed by persons other than the Contractor. The Contractor shall be responsible for all necessary or appropriate coordination of the Work and component parts thereof so that Substantial Completion of the Work will be achieved within the Contract Time and the Work will be completed for the Contract Price. The coordination of the Work is a material obligation of the Contractor hereunder and shall include without limitation, conducting regular coordination meetings with its Subcontractors and Material Suppliers, sequencing the operations of Subcontractors and Material Suppliers, and adapting its planned means, methods and sequences of construction operations as necessary to accommodate field or changed conditions at the Site.

4.4.3 Surveys

The Contractor shall prepare or cause to be prepared all detailed surveys necessary for performance of the Work. The Contractor shall be responsible for the establishment, location, maintenance and preservation of benchmarks, reference points and stakes for the Work, the cost of which shall be included within the Contract Price. The Contractor shall be solely responsible for all loss or costs resulting from the loss, destruction, disturbance or damage of benchmarks, reference points or stakes.

4.4.4 Construction Utilities

The Contractor shall arrange for the furnishing of and shall pay the costs of all utility services, including, without limitation, electricity, water, gas and telephone necessary for performance of the Work and the Contractor's obligations under the Contract Documents. The Contractor shall furnish and install necessary or appropriate temporary distributions of utilities, including meters, to the Site. Any such temporary distributions shall be removed by the Contractor upon completion of the Work. The costs of all such utility services, including the installation and removal of temporary distributions thereof, shall be borne by the Contractor and included in the Contract Price.

4.4.5 Existing Utilities; Removal, Relocation and Protection

In accordance with California Government Code §4215, the District shall assume the responsibility for the timely removal, relocation, or protection of existing main or trunkline utility facilities located on the Site which are not identified in the Drawings, Specifications or other Contract Documents. Contractor shall be compensated for the costs of locating, repairing damage not due to the Contractor's failure to exercise reasonable care, and removing or relocating such utility facilities not indicated in the Drawings, Specifications and other Contract Documents with reasonable accuracy, and for equipment on the Site necessarily idled during such work. Contractor shall not be assessed Liquidated Damages for delay in completion of the Work when such delay is caused by the failure of the District or the utility district to provide for removal or relocation of such utility facilities. Nothing in this Article 4.4.5 shall be deemed to require the District to indicate the presence of existing service laterals or appurtenances whenever the presence of such utilities on the Site can be inferred from the presence of other visible facilities, such as buildings, meters and junction boxes, on or adjacent to the Site. If the Contractor encounters utility facilities not identified by the District in the Drawings, Specifications, or other Contract Documents, the Contractor shall immediately notify, in writing, the District and the utility owner. In the event that such utility facilities are owned by a public utility, the public utility shall have the sole discretion to perform repairs or relocation work or permit the Contractor to do such repairs or relocation work at a price determined in accordance with Article 9 of these General Conditions.

4.5 Labor and Materials

4.5.1 Payment for Labor, Materials and Services

Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, applicable taxes, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated in the Work.

4.5.2 Employee Discipline and Skills

The Contractor shall enforce strict discipline and good order among the Contractor's employees, the employees of any Subcontractor of any tier, and all other persons performing any part of the Work at the Site. The Contractor shall not permit employment of unfit persons or persons not skilled in tasks assigned to them. The Contractor shall dismiss from its project employees and direct any Subcontractor of any tier to dismiss from their employment on the project any person deemed by the District to be unfit or incompetent to perform Work and thereafter, the Contractor shall not employ nor permit the employment of such person for performance of any part of the Work without the prior written consent of the District, which consent may be withheld in the reasonable discretion of the District.

4.5.3 Contractor's Superintendent and Project Manager

The Contractor shall employ a competent superintendent, project manager and all necessary assistants who shall be in attendance at the Site at all times during performance of the Work. The Contractor's communications relating to the Work or the Contract Documents shall be through the Contractor's superintendent and/or project manager. The superintendent shall represent the Contractor at the Site and communications given to the superintendent shall be binding as if given to the Contractor. The Contractor shall dismiss

from the project the superintendent , project manager or any of his/her assistants if they are deemed, in the sole reasonable judgment of the District, to be unfit, incompetent or incapable of performing the functions assigned to them. In such event, the District shall have the right to approve of the replacement superintendent, project manager or assistant.

4.5.4 Prohibition on Harassment

4.5.4.1 District's Policy Prohibiting Harassment

The District is committed to providing a campus and workplace free of sexual harassment and harassment based on factors such as race, color religion, national origin, ancestry, age, medical condition, marital status, disability or veteran status. Harassment includes without limitation, verbal, physical or visual conduct which creates an intimidating, offensive or hostile environment such as racial slurs; ethnic jokes; posting of offensive statements, posters or cartoons or similar conduct. Sexual harassment includes without limitation the solicitation of sexual favors, unwelcome sexual advances, or other verbal, visual or physical conduct of a sexual nature.

4.5.4.2 Contractor's Adoption of Anti-Harassment Policy

Contractor shall adopt and implement all appropriate and necessary policies prohibiting any form of discrimination in the workplace, including without limitation harassment on the basis of any classification protected under local, state or federal law, regulation or policy. Contractor shall take all reasonable steps to prevent harassment from occurring, including without limitation affirmatively raising the subject of harassment among its employees, expressing strong disapproval of any form of harassment, developing appropriate sanctions, informing employees of their right to raise and how to raise the issue of harassment and informing complainants of the outcome of an investigation into a harassment claim. Contractor shall require that any Subcontractor or Sub-subcontractor performing any portion of the Work to adopt and implement policies in conformity with this Article 4.5.4.

4.5.4.3 Prohibition on Harassment at the Site

Contractor shall not permit any person, whether employed by Contractor, a Subcontractor, Sub-subcontractor, or any other person or entity, performing any Work at or about the Site to engage in any prohibited form of harassment. Any such person engaging in a prohibited form of harassment directed to any individual performing or providing any portion of the Work at or about the Site shall be subject to appropriate sanctions in accordance with the anti-harassment policy adopted and implemented pursuant to Article 4.5.4.2 above. Any person performing or providing Work on or about the Site who engages in a prohibited form of harassment directed to any student, faculty member or staff of the District or directed to any other person on or about the Site shall be subject to immediate removal and shall be prohibited thereafter from providing or performing any portion of the Work. Upon the District's receipt of any notice or complaint that any person employed directly or indirectly by Contractor in performing or providing the Work has engaged in a prohibited form of harassment, the District will promptly undertake an investigation of such notice or complaint. In the event

that the District, after such investigation, reasonably determines that a prohibited form of harassment has occurred, the District shall promptly notify the Contractor of the same and direct that the person engaging in such conduct be immediately removed from the Site. Unless the District's determination that a prohibited form of harassment has occurred is grossly negligent or without reasonable cause, the District shall have no liability for directing the removal of any person determined to have engaged in a prohibited form of harassment nor shall the Contract Price or the Contract Time be adjusted on account thereof. Contractor and the Surety shall defend, indemnify and hold harmless the District and its employees, officers, Board of Trustees, agents, and representatives from any and all claims, liabilities, judgments, awards, actions or causes of actions, including without limitation, attorneys' fees, which arise out of, or pertain in any manner to: (i) the assertion by any person dismissed from performing or providing work at the direction of the District pursuant to this Article 4.5.4.3; or (ii) the assertion by any person that any person directly or indirectly under the employment or direction of the Contractor has engaged in a prohibited form of harassment directed to or affecting such person. The obligations of the Contractor and the Surety under the preceding sentence are in addition to, and not in lieu of, any other obligation of defense, indemnity and hold harmless whether arising under the Contract Documents, at law or otherwise; these obligations survive completion of the Work or the termination of the Contract.

4.6 Taxes

The Contractor shall pay, without adjustment of the Contract Price, all sales, consumer, use and other taxes for the Work or portions thereof provided by the Contractor under the Contract Documents.

4.7 Permits, Fees and Notices; Compliance with Laws

4.7.1 Payment of Permits, Fees

Unless otherwise provided in the Contract Documents, the Contractor shall secure, pay for, and include in the Contract Price the building permits, other permits, governmental fees, licenses and inspections necessary or required for the proper execution and completion of the Work.

4.7.2 Compliance with Laws

The Contractor shall comply with and give notices required by laws, ordinances, rules, regulations and other orders of public authorities bearing on performance of the Work.

4.7.3 Notice of Variation from Laws

If the Contractor knows, or has reason to believe, that any portion of the Contract Documents are at variance with applicable laws, statutes, ordinances, building codes, regulations or rules, the Contractor shall promptly notify the District, in writing, of the same. If the Contractor performs Work knowing, or with reasonable diligence should have known, it to be contrary to laws, statutes, ordinances, building codes, rules or regulations applicable to the Work without such notice to the District, the Contractor shall assume full responsibility for such Work and shall bear the attributable costs arising or associated therefrom, including without limitation, the removal, replacement or correction

of the same.

4.8 Submittals

4.8.1 Purpose of Submittals

Shop Drawings, Product Data, Samples and similar submittals (collectively “Submittals”) are not Contract Documents. The purpose for submission of Submittals is to demonstrate, for those portions of the Work for which Submittals are required, the manner in which the Contractor proposes to provide or incorporate such item of the Work in conformity with the information given and the design concept expressed in the Contract Documents.

4.8.2 Contractor's Submittals

4.8.2.1 Prompt Submittals

The Contractor shall review, confirm and submit to the Architect with the number of copies of Submittals within the timeframes required by the Contract Documents. Contractor's submission of Submittals in conformity with the Submittal Schedule is a material consideration of the Contract. In the event that the District reasonably determines that all or any portion of any Submittal fails to comply with the requirements of the Contract Documents and/or such Submittals are not otherwise complete and accurate so as to require re-submission more than one (1) time, Contractor shall bear all costs associated with the review and approval of such resubmitted Submittals; provided that such costs are in addition to, and not in lieu of, any liquidated damages imposed under the Contract Documents for Contractor's delayed submission of Submittals. Submittals not required by the Contract Documents may be returned without action. No adjustment to the Contract Time or the Contract Price shall be granted to the Contractor on account of its failure to make timely submission of any Submittals.

4.8.2.2 Approval of Contractor's Confirmation of Submittals

All Submittals prepared by Subcontractors, of any tier, Material Suppliers, manufacturers or distributors shall bear the written approval of the Contractor thereto prior to submission to the Architect for review. Any Submittal not bearing the Contractor's written approval shall be subject to return to the Contractor for re-submittal in conformity herewith, with the same being deemed to not have been submitted. Any delay, impact or cost associated therewith shall be the sole and exclusive responsibility of the Contractor without adjustment of the Contract Time or the Contract Price.

4.8.2.3 Verification of Submittal Information

By approving and submitting Submittals, the Contractor represents to the District and Architect that the Contractor has determined and verified materials, field measurements, field construction criteria, catalog numbers and similar data related thereto and has checked and coordinated the information contained within such Submittals with the requirements of the Work and of the Contract Documents.

4.8.2.4 Information Included in Submittals

All Submittals shall be accompanied by a written transmittal or other writing by

the Contractor providing an identification of the portion of the Drawings or the Specifications pertaining to the Submittal, with each Submittal numbered consecutively for ease of reference along with the following information: (i) date of submission; (ii) project name; (iii) name of submitting Subcontractor; and (iv) if applicable, the revision number. The foregoing information is in addition to, and not in lieu of, any other information required for the Architect's review, evaluation and approval of the Contractor's Submittals.

4.8.2.5 Contractor Responsibility for Deviations

The Contractor shall not be relieved of responsibility for correcting deviations from the requirements of the Contract Documents by the Architect's approval of Submittals unless the Contractor has specifically informed the Architect in writing of such deviation at the time of submission of the Submittal and the District has given written approval to the specific deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Submittals by the Architect's approval thereof.

4.8.2.6 No Performance of Work without Approval

The Contractor shall perform no portion of the Work requiring the Architect's review and approval of Submittals until the Architect has completed its review and granted its approval of such Submittal. The Contractor shall not perform any portion of the Work forming a part of a Submittal or which is affected by a related Submittal until the entirety of the Submittal or other related Submittal has been fully approved.

4.8.3 Architect Review of Submittals

The purpose of the Architect's review of Submittals and the time for the Architect's return of Submittals to the Contractor shall be as set forth elsewhere in the Contract Documents, including without limitation, Article 3.1.6 of the General Conditions. If the Architect returns a Submittal as rejected or requiring correction(s) and re-submission, the Contractor, so as not to delay the progress of the Work, shall promptly thereafter resubmit a Submittal conforming to the requirements of the Contract Documents; the resubmitted Submittal shall indicate the portions thereof modified in order to obtain the Architect's approval. When professional certification of performance criteria of materials, systems or equipment is required by the Contract Documents, the Architect shall be entitled to rely upon the accuracy and completeness of such calculations and certifications accompanying Submittals. The Architect's review of the Submittals is for the limited purposes described in the Contract Documents.

4.8.4 Deferred Approval Items

In the event that any portion of the Work is designated in the Contract Documents as a "Deferred Approval" item, Contractor shall be solely and exclusively responsible for the preparation of Submittals for such item(s) in a timely manner so as not to delay or hinder the completion of the Work within the Contract Time.

4.9 Materials and Equipment

4.9.1 Specified Materials, Equipment

Except as otherwise provided, references in the Contract Documents to any specific article, device, equipment, product, material, fixture, patented process, form, method or type of construction, by name, make, trade name, or catalog number, with or without the words "or equal" shall be deemed to establish a minimum standard of quality or performance, and shall not be construed as limiting competition.

4.9.2 Approval of or Equal, Substitutions or Alternatives

The Contractor may propose to furnish alternatives or substitutes for a particular item specified in the Contract Documents, provided that the Contractor provides advance written notice to the District of such proposed or equal, substitution or alternative and certifies to the District that the quality, performance capability, functionality and appearance of the proposed alternative or substitute will meet or exceed the quality, performance capability, functionality, and appearance of the item or process specified, and must demonstrate to the District that the use of the substitution or alternative is appropriate and will not delay completion of the Work or result in an increase to the Contract Price. The Contractor shall submit all data to the District to permit the Architect's proper evaluation of the proposed substitution or alternative. The Contractor shall not provide, furnish or install any substitution or alternative without the District's prior approval of the same; any alternative or substitution installed or incorporated into the Work without first obtaining the District's approval of the same shall be subject to removal pursuant to Article 12 hereof. The District's decision shall be final regarding the approval or disapproval of the Contractor's proposed substitutions or alternatives. The District's approval of any Contractor-proposed substitution shall be in accordance with Change Order procedures set forth in Article 9 and as otherwise specified in the Contract Documents.

4.9.3 Placement of Material and Equipment Orders

Contractor shall, after award of the Contract, promptly and timely place all orders for materials and/or equipment necessary for completion of the Work so that delivery of the same shall be made without delay or interruption to the timely completion of the Work. Contractor shall require that any Subcontractor of any tier performing any portion of the Work similarly place orders for all materials and/or equipment to be furnished by any such Subcontractor. Upon request of the District, the Contractor shall furnish reasonably satisfactory written evidence of the placement of orders for materials and/or equipment necessary for completion of the Work, including without limitation, orders for materials and/or equipment to be provided, furnished or installed by any Subcontractor of any tier.

4.9.4 District's Right to Place Orders for Materials and/or Equipment

If the Contractor fails or refuses to provide reasonably satisfactory written evidence of the placement of orders for materials and/or equipment necessary for completion of the Work, or should the District determine, in its sole and reasonable discretion, that such orders have not been placed in a manner that assures timely delivery of such materials and/or equipment to the Site so the Work can be completed without delay or interruption, the District shall have the right, but not the obligation, to place such orders on behalf of the Contractor. If the District exercises such right, the District's conduct in that regard does not assume control of the work. Rather, Contractor remains responsible for the means, methods, techniques, sequences or procedures for completion of the Work and is not relieved from any of Contractor's obligations under the Contract Documents, including

without limitation, completion of the Work within the Contract Time and for the Contract Price. If the District exercises the right hereunder to place orders for materials and/or equipment on behalf of Contractor pursuant to the foregoing, Contractor shall reimburse the District for all costs and fees incurred by the District in placing such orders; such costs and fees may be deducted by the District from the Contract Price then or thereafter due the Contractor.

4.10 Safety

4.10.1 Safety Programs

The Contractor shall be solely responsible for initiating, maintaining and supervising all safety programs required by applicable law, ordinance, regulation or governmental orders in connection with the performance of the Contract, or otherwise required by the type or nature of the Work. The Contractor shall require that its Subcontractors similarly initiate and maintain all appropriate or required safety programs.

4.10.2 Safety Precautions

The Contractor shall be solely responsible for initiating and maintaining reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury or loss to: (i) employees on the Work and other persons who may be affected thereby; (ii) the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody or control of the Contractor or the Contractor's Subcontractors of any tier; and (iii) other property or items at the site of the Work, or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities whether or not designated for removal, relocation or replacement in the course of construction. The Contractor shall erect and maintain, as required by existing conditions and conditions resulting from performance of the Contract, reasonable safeguards for safety and protection of property and persons, including, without limitation, posting danger signs and other warnings against hazards, promulgating safety regulations and notifying Districts and users of adjacent sites and utilities. The Contractor shall give or post all notices required by applicable law and comply with applicable laws, ordinances, rules, regulations and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury or loss.

4.10.3 Safety Coordinator

The Contractor shall designate a responsible member of the Contractor's organization at the Site whose duty shall be the prevention of accidents and the implementation and maintenance safety precautions and programs. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the District.

4.10.4 Emergencies

In an emergency affecting safety of persons or property, the Contractor shall act, to prevent threatened damage, injury or loss.

4.11 Hazardous Materials

4.11.1 Use of Hazardous Materials

In the event that the Contractor, any Subcontractor or anyone employed directly or indirectly by them shall use, at the Site, or incorporate into the Work, any material or substance deemed to be hazardous or toxic under any law, rule, ordinance, regulation or interpretation thereof (collectively "Hazardous Materials"), the Contractor shall comply with all laws, rules, ordinances or regulations applicable thereto and shall exercise all necessary safety precautions relating to the use, storage or disposal thereof. Unless otherwise provided, Contractor shall be solely responsible for the transportation and disposal of any Hazardous Materials on or about the Site.

4.11.2 Prohibition on Use of Asbestos Containing Building Materials ("ACBMs")

Notwithstanding any provision of the Drawings or the Specifications to the contrary, it is the intent of the District that ACBMs not be used or incorporated into any portion of the Work. If any portion of the Work depicted in the Drawings or the Specifications shall require materials or products which the Contractor knows, or should have known with reasonably diligent investigation, to contain ACBMs, Contractor shall promptly notify the District of the same so that an appropriate alternative can be made in a timely manner so as not to delay the progress of the Work. Contractor warrants to the District that there are no materials or products used or incorporated into the Work which contain ACBMs. Whether before or after completion of the Work, if it is discovered that any product or material forming a part of the Work or incorporated into the Work contains ACBMs, the Contractor shall at its sole cost and expense remove such product or material in accordance with any laws, rules, procedures and regulations applicable to the handling, removal and disposal of ACBMs and to replace such product or material with non-ACBM products or materials and to return the affected portion(s) of the Work to the finish condition depicted in the Drawings and Specifications relating to such portion(s) of the Work. Contractor's obligations under the preceding sentence shall survive the termination of the Contract, the warranty period provided under the Contract Documents, the Contractor's completion of the Work or the District's acceptance of the Work. In the event that the Contractor shall fail or refuse, for any reason, to commence the removal and replacement of any material or product containing ACBMs forming a part of, or incorporated into the Work, within ten (10) days of the date of the District's written notice to the Contractor of the existence of ACBM materials or products in the Work, the District may thereafter proceed to cause the removal and replacement of such materials or products in any manner which the District determines to be reasonably necessary and appropriate; all costs, expenses and fees, incurred by the District in connection with such removal and replacement shall be the responsibility of the Contractor and the Contractor's Performance Bond Surety.

4.11.3 Encountering of Hazardous Materials

If the Contractor encounters Hazardous Materials at the Site which have not been rendered harmless or for which there is no provision in the Contract Documents for their containment, removal, abatement or handling, the Contractor shall immediately stop the Work in the affected area and shall immediately notify the District, in writing, of such condition. The Contractor shall diligently proceed with the Work in all other unaffected areas. The Contractor shall proceed with the Work in the affected area only after the Hazardous Materials have been rendered harmless, contained, removed or abated. Adjustments, if any, to the Contract Time or Price shall be made in accordance with Articles 7 and 9.

4.11.4 Material Safety Data Sheets

Contractor is required to insure that Material Safety Data Sheets (MSDS) for any material requiring a MSDS pursuant to the federal “hazard communication” standard or employee’s right-to-know law are available in a readily accessible place on the Work premises. The Contractor is also required to insure (i) the proper labeling of any substance brought onto the Work premises, and (ii) that the persons working with the material, or within the general area of the material, are informed about the hazards of the substance and follow proper handling and protection procedures.

4.11.5 Compliance with Proposition 65

Contractor is required to comply with the provisions of California Health and Safety Code § 25249.5, et seq., which requires the posting and giving of notice to persons who may be exposed to any chemical known to the State of California to cause cancer. The Contractor agrees to familiarize itself with such statutory provisions and to fully comply with the requirements set forth therein.

4.12 Maintenance of Documents

4.12.1 Documents at Site

The Contractor shall maintain at the Site: (i) one record copy of the Drawings, Specifications and all addenda thereto; (ii) Change Orders approved by the District and all other modifications to the Contract Documents; (iii) Submittals reviewed by the Architect; (iv) Requests for Information and responses thereto; (v) Record Drawings; (vi) Material Safety Data Sheets (“MSDS”) accompanying any materials, equipment or products delivered or stored at the Site or incorporated into the Work; and (vii) all building and other codes or regulations applicable to the Work, including without limitation, Title 24, Part 2 of the California Code of Regulations. During performance of the Work, all documents maintained by Contractor at the Site shall be available to the District, the Project Manager, the Architect, the District’s Inspector and DSA for review, inspection or reproduction. Upon completion of the Work, all documents maintained at the Site by the Contractor pursuant to the foregoing, except for (vii), shall be assembled and transmitted to the District.

4.12.2 Maintenance of Record Documents

During its performance of the Work, the Contractor shall continuously maintain Record Documents which are marked to indicate all field changes made to adapt the Work depicted in the Documents to field conditions, changes resulting from Change Orders and all concealed or buried installations, including without limitation, piping, conduit and utility services. The Record Documents shall be clean and all changes, corrections and dimensions shall be marked in a neat and legible manner in a contrasting color. The District’s inspection or review shall not be deemed to be the District’s approval or verification of the completeness or accuracy of the Record Documents. The failure or refusal of the Contractor to continuously maintain complete and accurate Record Documents or to make available the Record Documents for inspection and review by the District may be deemed by the District to be Contractor’s default of a material obligation hereunder. Payments to the Contractor are conditioned upon continuous maintenance and completion of the Record Documents pursuant to Articles 8.3.2 and 8.3.3. If the Contractor fails or refuses to continuously maintain the Record Documents in a complete

and accurate manner, the District may take appropriate action to cause such maintenance, and all costs incurred in connection therewith shall be charged to the Contractor; the District may deduct such costs from any portion of the Contract Price then or thereafter due the Contractor.

4.13 Use of Site

The Contractor shall confine operations at the Site to areas permitted by law, ordinances or permits, subject to any restrictions or limitations set forth in the Contract Documents. The Contractor shall not unreasonably encumber the Site or adjoining areas with materials or equipment. The Contractor shall be solely responsible for providing security at the Site with all such costs included in the Contract Price. The District shall at all times have access to the Site.

4.14 Noise and Dust Control

The Contractor shall be responsible for complying with the requirements of the city and county having jurisdiction with regard to noise ordinances governing construction sites and activities. Construction equipment noise is subject to the control of the Environmental Protection Agency's Noise Control Program (Code of Federal Regulations, Title 40, Part 204). The Contractor shall be solely responsible for maintaining all areas of the Work free from all materials and products that by becoming airborne may cause respiratory inconveniences to District students and personnel. Damages and/or any liability derived from the Contractor's failure to comply with these requirements shall be the sole cost of the Contractor, including all penalties incurred for violations of local, state and/or federal regulations.

4.15 Cutting and Patching

The Contractor shall be responsible for cutting, fitting or patching required to complete the Work or to make the component parts thereof fit together properly in accordance with the Contract Documents. Only tradespersons skilled and experienced in cutting and patching shall perform such work. The Contractor shall not damage or endanger any portion of the Work, or the fully or partially completed construction of the District or separate contractors by cutting, patching, excavation or other alteration. The Contractor shall not cut, patch or otherwise alter the construction by the District or separate contractor without the prior written consent of the District or separate contractor thereto, which consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold consent to the request of the District or separate contractor to cut, patch or otherwise alter the Work.

4.16 Clean-Up

The Contractor shall at all times keep the Site and all adjoining areas free from the accumulation of any waste material, rubbish or excess materials and equipment, placed, caused by performance of the Work. The Contractor shall maintain the Site in a "rake-clean" standard on a daily basis. Prior to completion of the Work, Contractor shall remove from the Site all rubbish, waste and excess material, tools, Construction Equipment, machinery, temporary facilities and barricades, and any other items which are not the property of the District under the Contract Documents. Upon completion of the Work, the Site and all adjoining areas shall be left in a neat and broom clean condition satisfactory to District. The Project Manager is authorized to direct the Contractor's clean-up obligations hereunder. If the Contractor fails to clean up as provided for in the Contract Documents, the District may do so, and all costs incurred in connection therewith shall be charged to the Contractor; the District may deduct such costs from any portion of the Contract Price then or thereafter due the Contractor.

4.17 Access to the Work

The Contractor shall provide the DSA, the District, the Project Manager, the District's Inspector, Labor Compliance Officer and Labor Compliance administrator and consultant(s), the Architect and the Architect's consultant(s) with access to the Work, whether in place, preparation and progress and wherever located.

4.18 Information for the District's Inspector

The Contractor shall furnish the District's Inspector access to the Work for obtaining such information as may be necessary to keep the District's Inspector fully informed respecting the progress, quality and character of the Work and materials, equipment or other items incorporated therein.

4.19 Inspector's Field Office

The Contractor shall provide and include in the Contract Price a temporary furnished office at the Site, if specified in the Contract Documents, for use by the District, the Project Manager and the District's Inspector, until removal of the same is authorized by the District.

4.20 Patents and Royalties

The Contractor and the Surety shall defend, indemnify and hold harmless the District and its agents, employees and officers from any claim, demand or legal proceeding arising out of or pertaining, in any manner, to any actual or claimed infringement of patent rights in connection with performance of the Work under the Contract Documents.

4.21 Prevailing Wage Rates; Employment of Apprentices and Labor Compliance Program

4.21.1. Determination of Prevailing Wage Rates

Pursuant to Labor Code §§1770 et seq., the District has obtained from the Director of the Department of Industrial Relations determinations of the generally prevailing rates of per diem wages and the prevailing rate for holiday and overtime work in the locality in which the Work is to be performed. Copies of these determinations, entitled "PREVAILING WAGE SCALE", are maintained at the District office identified in the Notice to Contractors Calling For Bids and on the Internet. Holidays shall be as defined in the collective bargaining agreement applicable to each particular craft, classification or type of worker employed under the Contract. Per diem wages include employer payments for health and welfare, pensions, vacation, travel time and subsistence pay, apprenticeship or other training programs authorized by California Labor Code §3093, and similar purposes when the term "per diem wages" is used herein. Holiday and overtime work, when permitted by law, shall be paid for at the rate of at least one and one-half (1½) times the above specified rate of per diem wages, unless otherwise specified. The Contractor shall post, at appropriate and conspicuous locations on the Site, a schedule showing all determined general prevailing wage rates.

4.21.2. Labor Compliance Program

The Project is in part funded by the Kindergarten-University Public Education Facilities Bond Act of 2002 or the Kindergarten-University Public Education Facilities Bond Act of 2004. The District has initiated a Labor Compliance Program ("LCP") pursuant to the

provisions of Labor Code §1771.5 and other applicable law. The District's LCP Manual is included in Section 00900 of the Contract Specifications. The Contractor and all Subcontractors of any tier shall comply with the LCP initiated and enforced by the District.

4.21.3. Payment of Prevailing Wage Rates

4.21.3.1 Statutory Requirements

The Project is subject to the provisions of Labor Code §§1720 et seq. and the requirements of Title 8 of the California Code of Regulations §§16000 et seq., which govern the payment of prevailing wage rates on public works projects. The Contractor and Subcontractors of any tier shall be governed by and required to comply with these statutes and regulations in connection with the Project. Pursuant to Labor Code §1771, the Contractor and all Subcontractors of any tier shall pay not less than the prevailing wage rates to all workers employed in execution of the Contract. Contractor and Subcontractors shall comply with applicable statutes and regulations, including but not limited to Labor Code §§ 1771, 1775, 1777.5, 1813 and 1815, and the District's LCP. Copies of these statutes and the District's LCP are contained in Section 00900 of the Contract Specifications.

4.21.3.2. Weekly Payments to Employees

Contractor and all Subcontractors of any tier shall pay each worker on the Project, unconditionally and not less often than once each week, the full amounts that are due and payable for the period covered by the particular payday. Thus, an employer must establish a fixed workweek and an established payday. On each payday, each worker must receive all sums due at the end of the preceding workweek and must be provided with an itemized wage statement.

4.21.4. Penalty for Prevailing Wage Rate Underpayment

Pursuant to Labor Code §1775, the Contractor shall, as a penalty, forfeit up to Fifty Dollars (\$50.00) to the District for each calendar day or portion thereof, for each worker paid less than the prevailing wage rates as determined by the Director of the Department of Industrial Relations for such work or craft in which such worker is employed for the Work by the Contractor or by any Subcontractor, of any tier, in connection with the Work. The difference between prevailing wage rates and the amount paid to each worker each calendar day, or portion thereof, for which each worker paid less than the prevailing wage rate, shall be paid to each worker by the Contractor.

4.21.5. Payroll Records

4.21.5.1. Certified Payroll Reports and Basic Payroll Records

The Contractor and Subcontractors of any tier shall maintain Certified Payroll Reports and "Basic Payroll Records", as that term is defined in Appendix A to the District's LCP, during the course of the Work and shall preserve them for a period of three (3) years after completion of the Project

for all tradesworkers executing the Work of the Contract. Certified Payroll Reports must be submitted weekly at the time designated in Article 4.21.5.2 or upon request as described in Article 4.21.5.4. Basic Payroll Records may be requested by the District at any time and shall be provided within ten (10) calendar days following the receipt of the request.

4.21.5.2. Weekly Submittal of Certified Payroll Reports

4.21.5.2.1. Pursuant to Labor Code §1776, the Contractor and each Subcontractor of any tier shall maintain an accurate, weekly payroll record showing the employee full name, address, social security number, work classification, amount paid per hour, straight time, overtime and holiday hours worked each day and weekly totals, the actual per diem wages paid to each person employed for the Work, and the gross/net wages paid for this Project/all projects, as well as the Contractor name and address, Project name and location, and dates of payroll. If payments are made to any third party trust, funds or plans for health and welfare, pension or vacation trusts, those payments must be stated on the payroll report. The basic wage rate paid per hour plus the employer contributions for benefits, including training fund contributions, must at least equal the prevailing wage rate for that classification.

4.21.5.2.2. The Contractor shall maintain and submit its Certified Payroll Reports and those of the Subcontractors of any tier to the District each week, no later than seven (7) calendar days after the payday for the week covered by the payroll reports. If there is no work on a given week or on a given day, the Certified Payroll Report must indicate “no work” for that week or day(s). The Certified Payroll Reports must account for each day of the week including Saturdays, Sundays and holidays. Contractor and Subcontractors of every tier must write “final” on the last submitted payroll report for the Project.

4.21.5.2.3 The Certified Payroll Reports shall be verified by a written declaration made by a person with authority to represent the reporting entity, under penalty of perjury, that the information contained in the payroll record is true and correct and that the reporting entity has complied with the requirements of California Labor Code §§1771, 1811, and 1815 for any Work performed by his, her or its employees on the Project. Copies of the District’s certified payroll form and the required declaration are provided in Section 00900 of the Contract Specifications. The Contractor and Subcontractors must use the District-provided forms.

4.21.5.3. Penalty for Delinquent or Inadequate Payroll Records

In the event Contractor submits “Inadequate Payroll Records” or Contractor has “Delinquent Payroll Records”, as those terms are defined in Appendix A to the District’s LCP, the Contractor shall have ten (10) days in which to comply, subsequent to receipt of written notice specifying in what respects the Contractor must comply herewith. Should Contractor fail to strictly comply after such 10-day period, the Contractor shall, as a penalty to the District, forfeit Twenty-Five Dollars (\$25.00) for each calendar day, or portion thereof, for each worker, until strict compliance is effectuated.

4.21.5.4. Making Certified Payroll Reports Available Upon Request

Pursuant to Labor Code §1776, in addition to its obligation to deliver certified payroll records to the District on a weekly basis as set forth above, the Contractor shall also make payroll records available for inspection at all reasonable hours at the principal office of the Contractor on the following basis: (i) a certified copy of an employee's payroll record shall be made available for inspection or furnished to such employee or his/her authorized representative on request; (ii) a certified copy of all payroll records shall be made available for inspection or furnished upon request to the District, the Division of Labor Standards Enforcement and the Division of Apprenticeship Standards of the Department of Industrial Relations; (iii) a certified copy of payroll records shall be made available upon request to the public for inspection or copies thereof made; provided, however, that a request by the public shall be made through either the District, the Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement. If the requested payroll records have not been previously provided to the District, the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement, the requesting party shall, prior to being provided the records, reimburse the cost of preparation by the Contractor, Subcontractors and the entity through which the request was made; the public shall not be given access to such records at the principal office of the Contractor; (iv) the Contractor shall file a certified copy of the payroll records with the entity that requested such records within ten (10) days after receipt of a written request; (v) any copy of records made available for inspection as copies and furnished upon request to the public or any public agency by the District, the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement 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 the Contractor or any Subcontractor, of any tier, performing a part of the Work shall not be marked or obliterated. The Contractor shall inform the District of the location of payroll records, including the street address, city and county and shall, within five (5) working days, provide a notice of a change or location and address. In the event of noncompliance with the requirements of this subparagraph, the Contractor shall have ten (10) days in which to comply, subsequent to receipt of written notice specifying in what respects the Contractor must comply herewith. Should Contractor fail to strictly comply after such 10-day period, the Contractor shall, as a

penalty to the District, forfeit Twenty-Five Dollars (\$25.00) for each calendar day, or portion thereof, for each worker, until strict compliance is effectuated. Upon the request of the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement, such penalties shall be withheld from any portion of the Contract Price then or thereafter due the Contractor. The responsibility for compliance with the foregoing provisions shall rest upon the Contractor.

4.21.6. Hours of Work

4.21.6.1. Limits on Hours of Work

Pursuant to Labor Code §1810, eight (8) hours of labor shall constitute a legal day's work. Pursuant to Labor Code §1811, the time of service of any worker employed at any time by the Contractor or by a Subcontractor, of any tier, upon the Work or upon any part of the Work, is limited and restricted to eight (8) hours during any one calendar day and forty (40) hours during any one calendar week, except as hereafter provided. Notwithstanding the foregoing provisions, Work performed by employees of Contractor or any Subcontractor, of any tier, in excess of eight (8) hours per day and forty (40) hours during any one week, shall be permitted upon compensation for all hours worked in excess of eight (8) hours per day at not less than one and one-half (1½) times the basic rate of pay.

4.21.6.2. Penalty for Excess Hours

Pursuant to Labor Code §§1813 and 1815, the Contractor shall pay to the District a penalty of Twenty-five Dollars (\$25.00) for each worker employed in the execution of the Contract by the Contractor or any Subcontractor, of any tier, for each calendar day during which such worker is required or permitted to work more than eight (8) hours in any calendar day and forty (40) hours in any one calendar week, or as otherwise provided by law, in violation of the provisions of the California Labor Code, unless compensation to the worker so employed by the Contractor is not less than one and one-half (1½) times the basic rate of pay for all hours worked in excess of eight (8) hours per day.

4.21.6.3. Contractor Responsibility For Cost of Excess Hours.

Any Work performed by workers necessary to be performed after regular working hours or on Sundays or other holidays shall be performed without adjustment to the Contract Price or any other additional expense to the District.

4.21.7. Audit/Investigation of Compliance with Prevailing Wage Laws

The District shall conduct audits and investigations of the Contractor's and Subcontractors' Certified Payroll Records in fulfillment of the District's obligation as an authorized LCP to enforce compliance with prevailing wage laws. The District shall conduct audits/investigations on a random and as-needed basis. An audit shall include the comparison of submitted Certified Payroll Records to Basic Payroll Records or documents

maintained independent of the Certified Payroll Records, or to records used to gather the information in the Certified Payroll Records. The comparison may also involve other documents which authenticate or corroborate representations made in the Certified Payroll Records. The purpose of any audit or investigation shall be to verify the payment of prevailing wage rates. To ensure that the audit/investigation is fair, the Contractor or Subcontractor shall be provided an opportunity to submit evidence supporting its position. Should the District find that a Contractor or a Subcontractor has violated prevailing wage laws, the District shall refer the matter to the Labor Commissioner for approval of the District recommended forfeiture. The District shall forward its audit/investigation report to the affected Contractor or Subcontractor concurrently with the District's submission of the report to the Labor Commissioner, excepting documents which the District originally received from the Contractor or Subcontractor and which are also expressly referenced in the report. The District recommended forfeiture amount shall be in conformity with the provisions of Labor Code §§1720 et seq. Depending on the ruling of the Labor Commissioner, the audit/investigation may result in a withholding from the Contractor's Contract Payments.

4.21.8. Responsibility for Subcontractors' Payment of Prevailing Wages

Pursuant to Labor Code §1775, the Contractor is responsible for ensuring that all Subcontractors of any tier comply with requirements for payment of prevailing wages. Contractor is responsible for Labor Code violations by Subcontractors of any tier. The agreement executed between the Contractor and each Subcontractor must contain a copy of the provisions of Labor Code §§ 1771, 1775, 1777.5, 1813 and 1815, at a minimum. Contractor shall monitor each Subcontractors' payment of prevailing wage rates. Upon becoming aware of the failure of any Subcontractor of any tier to pay its workers the specified prevailing wage, the Contractor shall diligently take action to halt and rectify the failure, including, without limitation, retaining sufficient funds due to the Subcontractor to cover the underpayment. Before making final payment to any Subcontractor, the Contractor must obtain an affidavit from the Subcontractor, signed under penalty of perjury, which states that the Subcontractor has paid the specified, determined prevailing wage rate to its employees for the Project, as well as any amounts due pursuant to Labor Code §1813. Contractor shall provide copies of such affidavits to the District and provide Contractor's affidavit that it has paid the specified, determined prevailing wage rate to its employees for the Project, as well as any amounts due under Labor Code §1813.

4.21.9. Statement of Employer Payments

Within five (5) calendar days of signing the Contract or Subcontract, as applicable, the Statement of Employer Payments (DSLE Form PW 26 included in Section 00900 of the Specifications) must be completed and submitted to the District by each Contractor and Subcontractor who pays benefits to a third party trust, plan or fund for health and welfare benefits, vacation funds or makes pension contributions. The form must contain, for each worker classification, the fund or trust name, address, administrator, and amount per hour contributed and frequency of contributions. Training fund contributions must also be reported on this form. In February and August of each year during the Project, the Contractor and Subcontractors of any tier must verify changes in wage rates for any trade classifications used on the Project. Thereafter, Contractor and its Subcontractors must submit a new Statement of Employer Payments to the District which reflects any changes

in wages and benefits.

4.21.10. Apprentices

4.21.10.1. Apprenticeship Committee Contract Award Information

Pursuant to Labor Code §1777.5 and Title 8 California Code of Regulations §230, Contractor and Subcontractors of any tier who are not already approved to train by an apprenticeship program sponsor shall, within ten (10) calendar days of signing the Contract or Subcontract, as applicable, but in any event prior to the first day in which the Contractor or Subcontractor has workers employed on the Project, submit the Public Works Contract Award Information form (DAS form 140 included in Section 00900 of the Contract Specifications) to the appropriate local apprenticeship committees whose geographic area of operation include the area of the Project and can supply apprentices to the Project. Contractor and Subcontractors must also submit a copy of the form to the District which shall include, in addition to other information, an estimate of journeymen hours to be performed under the Contract or Subcontract, the number of apprentices to be employed, and the approximate dates the apprentices will be employed.

4.21.10.2. Employment of Apprentices

4.21.10.2.1. Labor Code §1777.5 and Title 8 California Code of Regulations §§2000 et seq. provide detailed requirements for employing apprentices on public works. The responsibility of complying with Section 1777.5 and the regulations lies exclusively with the Contractor.

4.21.10.2.2. Any apprentices employed to perform any of the Work shall be paid the standard wage paid to apprentices under the regulations of the craft or trade for which such apprentice is employed, and such individual shall be employed only for the work of the craft or trade to which such individual is registered.

4.21.10.2.3. Only apprentices, as defined in California Labor Code §3077, who are in training under apprenticeship standards and written apprenticeship agreements under California Labor Code §§3070 et seq. are eligible to be employed for the Work. The employment and training of each apprentice shall be in accordance with the provisions of the apprenticeship standards and apprentice agreements under which such apprentice is training.

4.21.10.3. Apprenticeship Certificate and Dispatch of Apprentices

When the Contractor or any Subcontractor of any tier in performing any of the Work employs workers in any Apprenticeable Craft or Trade, the Contractor and such Subcontractor shall apply to the Joint Apprenticeship Committee administering the apprenticeship standards of the craft or trade in the area of the site of the Work for a certificate approving the Contractor

or such Subcontractor under the apprenticeship standards for the employment and training of apprentices in the area or industry affected, provided, however, that the approval as established by the Joint Apprenticeship Committee or Committees shall be subject to the approval of the Administrator of Apprenticeship. The Joint Apprenticeship Committee or Committees, subsequent to approving the Contractor or Subcontractor, shall arrange for the dispatch of apprentices to the Contractor or such Subcontractor in order to comply with California Labor Code §1777.5. There shall be an affirmative duty upon the Joint Apprenticeship Committee or Committees, administering the apprenticeship standards of the crafts or trades in the area of the site of the Work, to ensure equal employment and affirmative action and apprenticeship for women and minorities. Contractors or Subcontractors shall not be required to submit individual applications for approval to local Joint Apprenticeship Committees provided they are already covered by the local apprenticeship standards. Contractors who are not already approved to train apprentices must request dispatch of required apprentices from one of the applicable Apprentices Committees by giving the program actual notice of at least 48 hours (excluding Saturdays, Sundays and holidays) before the date on which apprentices are required. Contractors who do not receive a sufficient number of apprentices from their initial request must request dispatch of apprentices from at least one other apprenticeship committee if more than one exists in the area of the Project.

4.21.10.4. Ratio of Apprentices to Journeymen

The ratio of Work performed by apprentices to journeymen, who shall be employed in the Work, may be the ratio stipulated in the apprenticeship standards under which the Joint Apprenticeship Committee operates, but in no case shall the ratio be less than one hour of apprentice work for each five hours of labor performed by a journeyman, except as otherwise provided in California Labor Code §1777.5. The minimum ratio for the land surveyor classification shall not be less than one apprentice for each five journeymen. Any ratio shall apply during any day or portion of a day when any journeyman, or the higher standard stipulated by the Joint Apprenticeship Committee, is employed at the site of the Work and shall be computed on the basis of the hours worked during the day by journeymen so employed, except for the land surveyor classification. The Contractor shall employ apprentices for the number of hours computed as above before the completion of the Work. The Contractor shall, however, endeavor, to the greatest extent possible, to employ apprentices during the same time period that the journeymen in the same craft or trade are employed at the site of the Work. Where an hourly apprenticeship ratio is not feasible for a particular craft or trade, the Division of Apprenticeship Standards, upon application of a Joint Apprenticeship Committee, may order a minimum ratio of not less than one apprentice for each five journeymen in a craft or trade classification. The Contractor or any Subcontractor covered by this Article and California Labor Code §1777.5, upon the issuance of the approval certificate, or if it has been previously

approved in such craft or trade, shall employ the number of apprentices or the ratio of apprentices to journeymen stipulated in the apprenticeship standards. Upon proper showing by the Contractor that it employs apprentices in such craft or trade in the State of California on all of its contracts on an annual average of not less than one apprentice to each five journeymen, the Division of Apprenticeship Standards may grant a certificate exempting the Contractor from the 1-to-5 ratio as set forth in this Article and California Labor Code §1777.5. This Article shall not apply to contracts of general contractors, or to contracts of specialty contractors not bidding for work through a general or prime contractor, involving less than Thirty Thousand Dollars (\$30,000.00) or twenty (20) working days. The term "Apprenticeable Craft or Trade," as used herein shall mean a craft or trade determined as an Apprenticeable occupation in accordance with rules and regulations prescribed by the Apprenticeship Council.

4.21.10.5. Exemption from Ratios

The Joint Apprenticeship Committee shall have the discretion to grant a certificate, which shall be subject to the approval of the Administrator of Apprenticeship, exempting the Contractor from the 1-to-5 ratio set forth in this Article when it finds that any one of the following conditions are met: (i) unemployment for the previous three-month period in such area exceeds an average of fifteen percent (15%) or; (ii) the number of apprentices in training in such area exceeds a ratio of 1-to-5 in relation to journeymen, or; (iii) the Apprenticeable Craft or Trade is replacing at least one-thirtieth (1/30) of its journeymen annually through apprenticeship training, either on a statewide basis or on a local basis, or; (iv) if assignment of an apprentice to any Work performed under the Contract Documents would create a condition which would jeopardize such apprentice's life or the life, safety or property of fellow employees or the public at large, or if the specific task to which the apprentice is to be assigned is of such a nature that training cannot be provided by a journeyman. When such exemptions from the 1-to-5 ratio between apprentices and journeymen are granted to an organization which represents contractors in a specific trade on a local or statewide basis, the member contractors will not be required to submit individual applications for approval to local Joint Apprenticeship Committees, provided they are already covered by the local apprenticeship standards.

4.21.10.6. Contributions to Trust Funds

The Contractor or any Subcontractor of any tier who performs any of the Work by employment of journeymen or apprentices in any apprenticeable craft or trade shall contribute to the California Apprenticeship Council in the same amount that the Director determines is the prevailing amount of apprenticeship training contributions in the area of the Project. Contractor or any Subcontractor, of any tier, may take as a credit for payments to the Council any amounts paid by the Contractor or Subcontractor to an approved apprenticeship program that can supply apprentices to the

Project. Contractors who do not contribute to an apprenticeship program must submit their contributions to the California Apprenticeship Council. Training Fund contributions are due and payable on the 15th day of the month for work performed during the preceding month. Training contributions to the California Apprenticeship Council shall be paid by check and shall be accompanied by a Completed Training Fund Contribution form (CAC-2), a copy of which is included in Section 00900 of the Contract Specifications. Contractors who contribute to an apprenticeship program are entitled to a full credit in the amount of those contributions. The Division of Labor Standards Enforcement is authorized to enforce the payment of such contributions to such fund(s) as set forth in California Labor Code §227. Such contributions shall not result in an increase in the Contract Price.

4.21.10.7. Contractor's Compliance

The responsibility of compliance with this Article for all Apprenticeable Trades or Crafts is solely and exclusively that of the Contractor. All decisions of the Joint Apprenticeship Committee(s) under this Article are subject to the provisions of California Labor Code §3081. In the event the Contractor willfully fails to comply with the provisions of this Article and California Labor Code §1777.5, pursuant to California Labor Code §1777.7, the Contractor shall: (i) be denied the right to bid on any public works contract for a period of one (1) year from the date the determination of non-compliance is made by the Administrator of Apprenticeship; and (ii) forfeit, as a civil penalty, Fifty Dollars (\$50.00) for each calendar day of noncompliance. Notwithstanding the provisions of California Labor Code §1727, upon receipt of such determination, the District shall withhold such amount from the Contract Price then due or to become due. Any such determination shall be issued after a full investigation, a fair and impartial hearing, and reasonable notice thereof in accordance with reasonable rules and procedures prescribed by the California Apprenticeship Council. Any funds withheld by the District pursuant to this Article shall be deposited in the General Fund or other similar fund of the District. The interpretation and enforcement of California Labor Code §§1777.5 and 1777.7 shall be in accordance with the rules and procedures of the California Apprenticeship Council.

4.21.11. Employment of Independent Contractors

Pursuant to California Labor Code §1021.5, Contractor shall not willingly and knowingly enter into any agreement with any person, as an independent contractor, to provide any services in connection with the Work where the services provided or to be provided requires that such person hold a valid contractors license issued pursuant to California Business and Professions Code §§7000 et seq. and such person does not meet the burden of proof of his/her independent contractor status pursuant to California Labor Code §2750.5. In the event that the Contractor shall employ any person in violation of the foregoing, Contractor shall be subject to the civil penalties under California Labor Code §1021.5 and any other penalty provided by law. In addition to the penalties provided under California Labor

Code §1021.5, Contractor's violation of this Article 4.18.7 or the provisions of California Labor Code §1021.5 shall be deemed an event of Contractor's default under Article 15.1 of these General Conditions. The Contractor shall require any Subcontractor of any tier performing or providing any portion of the Work to adhere to and comply with the foregoing provisions.

4.21.12. District's Enforcement of Violations

The District shall withhold Contract payments when: 1) Contractor submits Inadequate Payroll Records or Contractor has Delinquent Payroll Records; 2) after an investigation, it is established Prevailing Wages have not been paid to all workers on the Project; or 3) Contractor's or Subcontractors' failure to comply with Labor Code requirements concerning employment of apprentices. As set forth in the District's LCP, the District will first obtain approval from the Labor Commissioner of the amounts of forfeitures for violations of Labor Code requirements.

4.22 Assignment of Antitrust Claims

Pursuant to California Public Contract Code §7103.5, the Contractor and its Subcontractor(s), of any tier, hereby offers and agrees to assign to the District all rights, title and interest in and to all causes of action they may have under Section 4 of the Clayton Act, (15 U.S.C. §15) or under the Cartwright Act (California Business and Professions Code §§16700 et seq.), arising from purchases of goods, services or materials hereunder or any Subcontract. This assignment shall be made and become effective at the time the District tenders Final Payment to the Contractor, without further acknowledgment by the parties. If the District receives, either through judgment or settlement, a monetary recovery in connection with a cause of action assigned under California Public Contract Code §7103.5, the assignor thereof shall be entitled to receive reimbursement for actual legal costs incurred and may, upon demand, recover from the District any portion of the recovery, including treble damages, attributable to overcharges that were paid by the assignor but were not paid by the District as part of the Contract Price, less the expenses incurred by the District in obtaining that portion of the recovery. Upon demand in writing by the assignor, the District shall, within one year from such demand, reassign the cause of action assigned pursuant to this Article if the assignor has been or may have been injured by the violation of law for which the cause of action arose: and (i) the District has not been injured thereby; or (ii) the District declines to file a court action for the cause of action.

ARTICLE 5: SUBCONTRACTORS

5.1 Subcontracts

Any Work performed for the Contractor by a Subcontractor shall be pursuant to a written agreement between the Contractor and such Subcontractor which specifically incorporates by reference the Contract Documents and which specifically binds the Subcontractor to the applicable terms and conditions of the Contract Documents. The foregoing notwithstanding, no contractual relationship shall exist, or be deemed to exist, between any Subcontractor and the District, unless the Contract is terminated and District, in writing, elects to assume the Subcontract. Each Subcontract for a portion of the Work shall provide that such Subcontract may be assigned to the District if the Contract is terminated by the District pursuant to Article 15.1 hereof, subject to the prior rights of the Surety obligated under a bond relating to the Contract.

Upon request, the Contractor shall provide to the District copies of executed Subcontracts and Purchase Orders, including amendment thereto, to which Contractor is a party within seven (7) days of District's request for same. The Contractor's failure or refusal, for any reason, to provide copies of such Subcontracts or Purchase Orders shall be deemed the Contractor's default of a material term of the Contract Documents.

5.2 Substitution of Listed Subcontractor

5.2.1 Substitution Process

Any request of the Contractor to substitute a listed Subcontractor will be considered only if such request is in strict conformity with this Article 5.2 and California Public Contract Code §4107. All costs and fees incurred by the District in the review and evaluation of a request to substitute a listed Subcontractor shall be borne by the Contractor; such costs and fees may be deducted by the District from the Contract Price then or thereafter due the Contractor.

5.2.2 Responsibilities of Contractor Upon Substitution of Subcontractor

Neither the substitution nor the District's consent to Contractor's substitution of a listed Subcontractor shall relieve Contractor from its obligation to complete the Work within the Contract Time and for the Contract Price. In the event that the District determines that revised or additional Submittals are required of the newly substituted Subcontractor, the District shall promptly notify the Contractor, in writing, of such requirement and the time for submittal. In the event that the revised or additional Submittals are not submitted by Contractor within the time specified, Contractor shall be subject to the per diem assessments for late Submittals as set forth in Article 4.8 of these General Conditions. Any revised or additional Submittals required pursuant to this Article 5.2.2 shall conform with the requirements of Article 4.8 of these General Conditions. Contractor shall reimburse the District for all fees and costs incurred or associated with the processing, review and evaluation of any revised or additional Submittals required pursuant to this Article 5.2.2; the District may deduct such fees and costs from any portion of the Contract Price then or thereafter due the Contractor. In the event that additional or revised Submittals are required pursuant to this Article 5.2.2, such requirement shall not result in an increase to the Contract Time or the Contract Price.

ARTICLE 6: INSURANCE; INDEMNITY; BONDS

6.1 Workers' Compensation Insurance; Employer's Liability Insurance

The Contractor shall purchase and maintain Workers' Compensation Insurance as will protect the Contractor from claims under workers' or workmen's compensation, disability benefit and other similar employee benefit acts which are applicable to the Work to be performed, whether such operations be by the Contractor or by a Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable. Contractor shall purchase and maintain Employer's Liability Insurance covering bodily injury (including death) by accident or disease to any employee which arises out of the employee's employment by Contractor. The Employer's Liability Insurance required of Contractor hereunder may be obtained by Contractor as a separate policy of insurance or as an additional coverage under the Workers' Compensation Insurance required to be obtained and maintained by Contractor hereunder. The limits of liability for the Employer's Liability Insurance required hereunder shall be as set forth in the Special Conditions.

6.2 Commercial General Liability and Property Insurance

The Contractor shall purchase and maintain Commercial General Liability and Property Insurance covering the types of claims set forth below which may arise out of or result from Contractor's operations under the Contract Documents and for which the Contractor may be legally responsible: (i) claims for damages because of bodily injury, occupational sickness or disease or death of the Contractor's employees; (ii) claims for damages because of bodily injury, sickness or disease or death of any person other than the Contractor's employees; (iii) claims for damages insured by usual personal injury liability coverage which are sustained (a) by a person as a result of an offense directly or indirectly related to employment of such person by the Contractor, or (b) by another person; (iv) claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom; (v) claims for damages because of bodily injury, death of a person or property damages arising out of ownership, maintenance or use of a motor vehicle; and (vi) contractual liability insurance applicable to the Contractor's obligations under the Contract Documents. Contractor shall also provide excess or umbrella liability limits for Products and Completed Operations Aggregate for this Project as a Designated Project as set forth in the Special Conditions.

6.3 Builder's Risk "All-Risk" Insurance

The Contractor, during the progress of the Work and until Final Acceptance of the Work by the District upon completion of the entire Contract, shall maintain Builder's Risk "All-Risk" Completed Value Insurance Coverage on all insurable Work included under the Contract Documents which coverage is to provide extended coverage and insurance against vandalism and malicious mischief, perils of fire, sprinkler leakage, civil authority, sonic boom, collapse and flood upon the entire Work which is the subject of the Contract Documents, and including completed Work and Work in progress to the full insurable value thereof. Contractor's Builders Risk Insurance shall include coverage and insurance against the perils of earthquake if so indicated in the Special Conditions. Such insurance shall include the District as an additional named insured, and any other person with an insurable interest designated by the District as an additional named insured. The risk of damage to the Work due to the perils covered by the Builder's Risk "All Risk" Insurance, as well as any other hazard which might result in damage to the Work, is that of the Contractor and the Surety, and no claims for such loss or damage shall be recognized by the District, nor will such loss or damage excuse the complete and satisfactory performance of the Contract by the Contractor.

6.4 Coverage Amounts

The insurance required of the Contractor hereunder shall be written for not less than any limits of liability specified in the Contract Documents, or required by law, whichever is greater. In the event of any loss or damage covered by a policy of insurance required to be obtained and maintained by the Contractor hereunder, the Contractor shall be solely and exclusively responsible for the payment of the deductible, if any, under such policy of insurance, without adjustment to the Contract Price on account thereof.

6.5 Evidence of Insurance; Subcontractor's Insurance

6.5.1 Certificates of Insurance

With the execution of the Contract, Contractor shall deliver to the District Certificates of Insurance evidencing the insurance coverages required by the Contract Documents.

Failure or refusal of the Contractor to so deliver Certificates of Insurance may be deemed by the District to be a default of a material obligation of the Contractor under the Contract Documents. The Certificates of Insurance and the insurance policies required by the Contract Documents shall contain a provision that coverages afforded under such policies will not be canceled or allowed to expire until at least thirty (30) days prior written notice has been given to the District. The insurance policies required of Contractor hereunder shall also name the District as an additional insured as its interests may appear. Should any policy of insurance be canceled before Final Acceptance of the Work by the District and the Contractor fails to immediately procure replacement insurance as required, the District reserves the right to procure such insurance and to deduct the premium cost thereof and other costs incurred by the District in connection therewith from any sum then or thereafter due the Contractor under the Contract Documents. The Contractor shall, from time to time, furnish the District, when requested, with satisfactory proof of coverage of each type of insurance required by the Contract Documents; failure of the Contractor to comply with the District's request may be deemed by the District to be a default of a material obligation of the Contractor under the Contract Documents.

6.5.2 Subcontractors' Insurance

Contractor shall require that every Subcontractor, of any tier, performing or providing any portion of the Work obtain and maintain the policies of insurance set forth in Articles 6.1 and 6.2 of these General Conditions; the coverages and limits of liability of such policies of insurance to be obtained and maintained by Subcontractors shall be as set forth in the Special Conditions. The policies of insurance to be obtained and maintained by Subcontractors hereunder are in addition to, and not in lieu of, Contractor obtaining and maintaining such policies of insurance. Each of the policies of insurance obtained and maintained by a Subcontractor hereunder shall conform with the requirements of this Article 6. Upon request of the District, Contractor shall promptly deliver to the District Certificates of Insurance evidencing that the Subcontractors have obtained and maintained policies of insurance in conformity with the requirements of this Article 6. Failure or refusal of the Contractor to provide the District with Subcontractors' Certificates of Insurance evidencing the insurance coverages required hereunder is a material default of Contractor hereunder.

6.6 Maintenance of Insurance

Any insurance bearing on the adequacy of performance of Work shall be maintained after the District's Final Acceptance of all of the Work for the full one year correction of Work period and any longer specific guarantee or warranty periods set forth in the Contract Documents. Should such insurance be canceled before the end of any such periods and the Contractor fails to immediately procure replacement insurance as specified, the District reserves the right to procure such insurance and to charge the cost thereof to the Contractor. Nothing contained in these insurance requirements is to be construed as limiting the extent of the Contractor's responsibility for payment of damages resulting from its operations or performance of the Work under the Contract Documents, including without limitation the Contractor's obligation to pay Liquidated Damages. In no instance will the District's exercise of its option to occupy and use completed portions of the Work relieve the Contractor of its obligation to maintain insurance required under this Article until the date of Final Acceptance of the Work by the District, or such time thereafter as required by the Contract Documents. The insurer providing any insurance coverage required hereunder shall be to the reasonable satisfaction of the District.

6.7 Contractor's Insurance Primary

All insurance and the coverages thereunder required to be obtained and maintained by Contractor hereunder, if overlapping with any policy of insurance maintained by the District, shall be deemed to be primary and non-contributing with any policy maintained by the District and any policy or coverage thereunder maintained by District shall be deemed excess insurance. To the extent that the District maintains a policy of insurance covering property damage arising out of the perils of fire or other casualty covered by the Contractor's Builder's Risk Insurance or the Commercial General Liability Insurance of the Contractor or any Subcontractor, the District, Contractor and all Subcontractors waive rights of subrogation against the others. The costs for obtaining and maintaining the insurance coverages required herein shall be included in the Contract Price. The District shall be endorsed on all policies provided by Contractor, as appropriate, as additional insureds as respects liability arising out of Contractor's or Subcontractors' performance of the terms and conditions of these Contract Documents.

6.8 Indemnity

Unless arising solely out of the active negligence, gross negligence or willful misconduct of the District, the Architect or the Project Manager, the Contractor shall indemnify, defend and hold harmless: (i) the District and its Board of Trustees, officers, employees, agents and representatives (including the District's Inspector); (ii) the Architect and its consultants for the Work and their respective agents and employees; and (iii) the Project Manager and its agents and employees from and against any and all damages, losses, claims, demands or liabilities whether for damages, losses or other relief, including, without limitation attorneys fees and costs which arise, in whole or in part, from the Work, the Contract Documents or the acts, omissions or other conduct of the Contractor or any Subcontractor or any person or entity engaged by them for the Work. The Contractor's obligations under the foregoing include without limitation: (i) injuries to or death of persons; (ii) damage to property; or (iii) theft or loss of property; and (iv) other losses, liabilities, damages or costs resulting from, in whole or part, any acts, omissions or other conduct of Contractor, any of Contractor's Subcontractors, of any tier, or any other person or entity employed directly or indirectly by Contractor in connection with the Work and their respective agents, officers or employees. If any action or proceeding, whether judicial, administrative, arbitration or otherwise, shall be commenced on account of any claim, demand or liability subject to Contractor's obligations hereunder, and such action or proceeding names the District as a party thereto, the Contractor shall, at its sole cost and expense, defend the District in such action or proceeding with counsel reasonably satisfactory to District. In the event that there shall be any judgment, award, ruling, settlement, or other relief arising out of any such action or proceeding to which the District is bound by, Contractor shall pay, satisfy or otherwise discharge any such judgment, award, ruling, settlement or relief; Contractor shall indemnify and hold harmless the District from any and all liability or responsibility arising out of any such judgment, award, ruling, settlement or relief. The Contractor's obligations hereunder are binding upon Contractor's Performance Bond Surety and these obligations shall survive notwithstanding Contractor's completion of the Work or the termination of the Contract.

6.9 Payment Bond; Performance Bond

Prior to commencement of the Work, the Contractor shall furnish a Performance Bond as security for Contractor's faithful performance of the Contract and a Labor and Material Payment Bond as security for payment of persons or entities performing work, labor or furnishing materials in connection with Contractor's performance of the Work under the Contract Documents. The

amounts of the Performance Bond and the Payment Bond required hereunder shall be one hundred percent (100%) of the Contract Price. Said Labor and Material Payment Bond and Performance Bond shall be in the form and content set forth in the Contract Documents. The failure or refusal of the Contractor to furnish either the Performance Bond or the Labor and Material Payment Bond in strict conformity with this Article 6.9 may be deemed by the District as a default by the Contractor of a material obligation hereunder. Upon request of the Contractor, the District may consider and accept, but is not obligated to do so, multiple sureties on such bonds. The Surety on any bond required under the Contract Documents shall be an Admitted Surety Insurer as that term is defined in California Code of Civil Procedure §995.120.

ARTICLE 7: CONTRACT TIME

7.1 Substantial Completion of the Work Within Contract Time

Unless otherwise expressly provided in the Contract Documents, the Contract Time is the period of time, including authorized adjustments thereto, allotted in the Contract Documents for achieving Substantial Completion of the Work. The date for commencement of the Work is the date established by the Notice to Proceed issued by the District, which shall not be postponed by the failure to act of the Contractor or of persons or entities for whom the Contractor is responsible. The date of Substantial Completion is the date certified by the Architect, the Project Manager and the District's Inspector as such in accordance with the Contract Documents. The Contract Time is as indicated in the Special Conditions.

7.2 Progress and Completion of the Work

7.2.1 Time of Essence

Time limits stated in the Contract Documents are of the essence. By executing the Agreement, the Contractor confirms that the Contract Time is a reasonable period for performing and achieving Substantial Completion of the Work. The Contractor shall employ and supply a sufficient force of workers, material and equipment, and prosecute the Work with diligence so as to maintain progress, to prevent Work stoppage and to achieve Substantial Completion of the Work within the Contract Time.

7.2.2 Substantial Completion

Substantial Completion is that stage in the progress of the Work when the Work is complete in accordance with the Contract Documents, including but not limited to start-up and testing, so the District can occupy or use the Work for its intended purpose. Substantial Completion shall be determined by the Architect and the District's Inspector upon request by the Contractor in accordance with the Contract Documents. The good faith and reasonable determination of Substantial Completion by the District's Inspector and the Architect shall be controlling and final.

7.2.3 Correction or Completion of the Work After Substantial Completion

Upon achieving Substantial Completion of the Work, the District, the District's Inspector, the Project Manager, the Architect and the Contractor shall jointly inspect the Work and prepare a comprehensive list of items of the Work (punch list) to be corrected or completed by the Contractor. The exclusion of, or failure to include, any item on such list shall not alter or limit the obligation of the Contractor to complete or correct any portion

of the Work in accordance with the Contract Documents. In the event that the Contractor shall fail or refuse, for any reason, to complete all punch list items within the Contract Time, Contractor shall be subject to assessment of Liquidated Damages in accordance with Article 7.4 hereof. If the Contractor fails or refuses to complete all items of the Work within the Contract Time, the District may, in its sole and exclusive discretion and without further notice to Contractor, elect to cause the completion of such items of the Work, provided, however, that such election by the District is in addition to, and not in lieu of, any other right or remedy of the District under the Contract Documents or at law. If the District elects to complete items of the Work, Contractor shall be responsible for all costs incurred by the District in connection therewith and the District may deduct such costs from the Contract Price then or thereafter due the Contractor; if these costs exceed the remaining Contract Price due to the Contractor, the Contractor and the Performance Bond Surety are liable to District for any such excess costs.

7.2.4 Final Completion

Final Completion is that stage of the Work when all Work has been completed in accordance with the Contract Documents, including without limitation, the performance of all punch list items noted upon Substantial Completion, and the Contract has been otherwise fully performed by the Contractor. Final Completion shall be determined by the Architect and the District's Inspector upon request of the Contractor. The good faith and reasonable determination of Final Completion by the District's Inspector and the Architect shall be controlling and final.

7.2.5 Contractor Responsibility for Multiple Inspections

In the event the Contractor shall request determination of Substantial or Final Completion and it is determined by the District that the Work does not then justify certification of Substantial or Final Completion, as applicable, and re-inspection is required at a subsequent time to make such determination, the Contractor shall be responsible for all costs of such re-inspection, including without limitation, the fees of the Architect and the salary of the District's Inspector. The District may deduct such costs from the Contract Price then due or thereafter due to the Contractor.

7.2.6 Final Acceptance

Final Acceptance of the Work shall occur upon approval of the Work by the District's Board of Trustees. Such approval shall be submitted for adoption at the next regularly scheduled meeting of the District's Board of Trustees after the determination of Final Completion. The commencement of any warranty or guarantee period under the Contract Documents shall be deemed to be the date upon the District's Board of Trustees approves of the Final Acceptance of the Work.

7.3 Progress Schedule

7.3.1 Submittal of Preliminary Construction Schedule

Within ten (10) days following execution of the Agreement, the Contractor shall prepare and submit to the District, the Project Manager and the Architect a Preliminary Construction Schedule indicating, in graphic and tabular form, the estimated rate of progress and sequence of all Work required under the Contract Documents. The purpose

of the Preliminary Construction Schedule is to assure adequate planning and execution of the Work so that it is completed within the Contract Time and to permit evaluation of the progress of the Work. The Preliminary Construction Schedule shall indicate the dates for commencement and completion of various portions of the Work, including, without limitation, the procurement and fabrication of major items, material and equipment forming a part of, or to be incorporated into, the Work as well as Site construction activities. The Preliminary Construction Schedule shall identify all major (critical) Submittals required, the portion(s) of the Work for which the identified Submittals relate to and the date upon which each Submittal required will be transmitted to the Architect for review (the "Submittal Schedule"). The Contractor shall prepare the Preliminary Construction Schedule using Primavera, Sure Track, or comparable software in Critical Path Method format. If Contractor elects to use software other than Primavera or Sure Track, Contractor shall provide such software to the District at Contractor's expense. These requirements shall not be deemed control over or assumption of construction means, methods or sequences, all of which remain the Contractor's responsibility. Further, these requirements shall not give rise to an increase in the Contract Time or the Contract Price. The Contractor may submit a Preliminary Construction Schedule depicting completion of the Work in a duration shorter than the Contract Time; provided that such Preliminary Construction Schedule shall not be a basis for adjustment to the Contract Price in the event that completion of the Work shall occur after the time depicted therein, nor shall such Preliminary Construction Schedule be the basis for any extension of the Contract Time, the Contractor's entitlement to any extension of the Contract Time shall be based upon the Contract Time and not on any shorter duration which may be depicted in the Contractor's Preliminary Construction Schedule. In the event any of the Construction Schedules required under this Article 7.3 incorporate therein "float" time, such float shall be deemed to belong to and owned by the District. As used herein, "float time" shall be deemed to refer to the time between the earliest start date and the latest start date, or between the earliest finish date and the latest finish date of each activity shown on the Construction Schedule.

7.3.2 Review of Preliminary Construction Schedule

The District, the Project Manager and the Architect shall review the Preliminary Construction Schedule submitted by the Contractor pursuant to Article 7.3.1 above for conformity with the requirements of the Contract Documents. Within fifteen (15) days of the date of receipt of the Preliminary Construction Schedule, such Schedule will be returned to the Contractor with comments to the form or content thereof. Review of the Preliminary Progress Schedule and any comments thereto by the District, the Project Manager and/or the Architect shall not be deemed to be the assumption of construction means, methods or sequences by the District, the Project Manager or the Architect, all of which remain the Contractor's obligations under the Contract Documents.

7.3.3 Preparation and Submittal of Contract Construction Schedule

Within ten (10) days of the District's return of the Preliminary Construction Schedule to the Contractor pursuant to Article 7.3.2 above, the Contractor shall prepare and submit the Cost Loaded Construction Schedule which incorporates therein the comments to the Preliminary Construction Schedule. Upon the Contractor's submittal of such Construction Schedule, the District shall review the same for purposes of determining conformity with

the requirements of the Contract Documents. Within fifteen (15) days of the receipt of the Construction Schedule, the District will approve such Construction Schedule or will return the same to the Contractor with comments to the form or content. In the event there are comments to the form or content thereof, the Contractor, shall within seven (7) days of receipt of such comments, revise and resubmit the Construction Schedule incorporating therein such comments. Upon the District's approval of the form and content of a Construction Schedule, the same shall be deemed the "Approved Construction Schedule." The District's approval of a Construction Schedule shall be for the sole and limited purpose of determining conformity with the requirements of the Contract Documents. By the Approved Construction Schedule, the District shall not be deemed to have exercised control over, or approval of, construction means, methods or sequences, all of which remain the responsibility and obligation of the Contractor in accordance with the terms of the Contract Documents. Further, the Approved Construction Schedule shall not operate to limit or restrict any of Contractor's obligations under the Contract Documents nor relieve the Contractor from the full, faithful and timely performance of such obligations in accordance with the terms of the Contract Documents. The activities, commencement and completion dates of activities, and the sequencing of activities depicted on the Approved Construction Schedule shall not be modified or revised by the Contractor without the prior consent, or direction, of the District. Updates to the Approved Construction Schedule pursuant to Article 7.3.5 below shall not be deemed revisions to the Approved Construction Schedule. In the event that the Approved Construction Schedule shall depict completion of the Work in a duration shorter than the Contract Time, the same shall not be a basis for an adjustment of the Contract Time or the Contract Price in the event that actual completion of the Work shall occur after such the time depicted in such Approved Construction Schedule. In such event, the Contract Price shall not be subject to adjustment on account of any additional costs incurred by the Contractor to complete the Work prior to the Contract Time, as adjusted in accordance with the terms of the Contract Documents. Any adjustment of the Contract Time or the Contract Price shall be based upon the Contract Time set forth in the Contract Documents and not any shorter duration which may depicted in the Approved Construction Schedule.

7.3.4 Revisions to Approved Construction Schedule

In the event that the progress of the Work or the sequencing of the activities of the Work shall materially differ from that indicated in the Approved Construction Schedule, as determined by the District in its reasonable discretion and judgment, the District may direct the Contractor to revise the Approved Construction Schedule; within fifteen (15) days of the District's direction, the Contractor shall prepare and submit a revised Approved Construction Schedule, for review and approval by the District. The Contractor may request consent of the District to revise the Approved Construction Schedule. Any such request shall be considered by the District only if in writing setting forth the Contractor's proposed revision(s) to the Approved Construction Schedule and the reason(s) therefor. The District may consent to, or deny, any such request of the Contractor to revise the Approved Construction Schedule in its reasonable discretion.

7.3.5 Updates to Approved Construction Schedule

The Contractor shall monitor and update the Approved Construction Schedule on a monthly basis, or more frequently as required by the conditions or progress of the Work, or as may be requested by the District. Proper and complete updating of the Approved

Construction Schedule shall be a condition precedent to the issuance of progress payments described in Article 8 of these General Conditions. The Contractor shall provide the District with updated Approved Construction Schedules indicating progress achieved and activities commenced or completed within the prior updated Approved Construction Schedule. Updates to the Approved Construction Schedule shall not include any revisions to the activities, commencement and completion dates of activities or the sequencing of activities depicted on the Approved Construction Schedule. Any such revisions to the Approved Construction Schedule shall result in the District's rejection of such update and Contractor shall, within seven (7) days of the District's rejection of such update, submit to the Architect and the Project Manager an Updated Approved Construction Schedule which does not incorporate any such revisions. If requested by the District, the Contractor shall also submit, with its updates to the Approved Construction Schedule, a narrative statement including a description of current and anticipated problem areas of the Work, delaying factors and their impact, and an explanation of corrective action taken or proposed by the Contractor. If the progress of the Work is behind the Approved Construction Schedule, the Contractor shall indicate what measures will be taken to place the Work back on schedule. The District may, from time to time, and in the District's sole and exclusive discretion, transmit to the Contractor's Performance Bond Surety the Approved Construction Schedule, any updates thereof and the narrative statement described hereinabove. The District's election to transmit, or not to transmit such information, to the Contractor's Performance Bond Surety shall not limit the Contractor's obligations under the Contract Documents.

7.3.6 Contractor Responsibility for Construction Schedule

The Contractor shall be responsible for the preparation, submittal and maintenance of the Construction Schedules required by the Contract Documents, and any failure of the Contractor to do so may be deemed by the District as the Contractor's default in the performance of a material obligation under Contract Documents. Any and all costs or expenses required or incurred to prepare, submit, maintain, and update the Construction Schedules shall be solely that of the Contractor and no such cost or expense shall be charged to the District. The Contract Price shall not be subject to adjustment on account of costs, fees or expenses incurred or associated with the Contractor's preparation, submittal, maintenance or updating of the Construction Schedules. All schedule submittals shall include electronic diskettes for use by the District in its analysis and approval of the schedule submittal.

7.4 Adjustment of Contract Time

If Substantial Completion or completion of an Interim Milestone is delayed, adjustment, if any, to the Contract Time on account of such delay shall be in accordance with this Article 7.4.

7.4.1 Excusable Delays

If Substantial Completion of the Work or completion of an Interim Milestone is delayed by Excusable Delays, the Contract Time shall be subject to adjustment for such reasonable period of time as determined by the District. Excusable Delays shall not result in any increase in the Contract Price. Excusable Delays refer to unforeseeable and unavoidable casualties or other unforeseen causes beyond the control, and without fault or neglect, of the Contractor, any Subcontractor, Material Supplier or other person directly or indirectly engaged by the Contractor in performance of any portion of the Work. Excusable Delays

include unanticipated and unavoidable labor disputes, unusual and unanticipated delays in transportation of equipment, materials or Construction Equipment reasonably necessary for completion and proper execution of the Work, and unanticipated unusually severe weather conditions. Neither the financial resources of the Contractor or any person or entity directly or indirectly engaged by the Contractor in performance of any portion of the Work shall be deemed conditions beyond the control of the Contractor. If an event of Excusable Delay occurs, the Contract Time shall be subject to adjustment hereunder only if the Contractor establishes: (i) full compliance with all applicable provisions of the Contract Documents relative to the method, manner and time for Contractor's notice and request for adjustment of the Contract Time; (ii) that the event(s) forming the basis for Contractor's request to adjust the Contract Time are outside the reasonable control and without any fault or neglect of the Contractor or any person or entity directly or indirectly engaged by Contractor in performance of any portion of the Work; and (iii) that the event(s) forming the basis for Contractor's request to adjust the Contract Time directly and adversely impacted the progress of the Work as indicated in the Approved Construction Schedule or the most recent updated Approved Construction Schedule relative to the date(s) of the claimed event(s) of Excusable Delay. The foregoing provisions notwithstanding, if the Special Conditions set forth a number of "Rain Days" to be anticipated during performance of the Work, the Contract Time shall not be adjusted for rain related unusually severe weather conditions until and unless the actual number of Rain Days during performance of the Work shall exceed those noted in the Special Conditions and such additional Rain Days shall have directly and adversely impacted the progress of the Work as depicted in the Approved Construction Schedule or the most recent updated Approved Construction Schedule relative to the date(s) of such additional Rain Days.

7.4.2 Compensable Delays

If Substantial Completion of the Work or completion of an Interim Milestone is delayed and such delay is caused by the acts or omissions of the District, the Architect, the Project Manager or separate contractor employed by the District (collectively "Compensable Delays"), upon Contractor's request and notice, in strict conformity with Articles 7 and 9 of these General Conditions, the Contract Time will be adjusted by Change Order for such reasonable period of time as determined by the Architect, Project Manager and the District. In accordance with California Public Contract Code § 7102, if the Contractor's progress is delayed by any of the events described in the preceding sentence, Contractor shall not be precluded from the recovery of damages directly and proximately resulting therefrom, provided that the District is liable for the delay, the delay is unreasonable under the circumstances involved and the delay was not within the reasonable contemplation of the District and the Contractor at the time of execution of the Agreement. In such event, Contractor's damages, if any, shall be limited to direct, actual and unavoidable additional costs of labor, materials or Construction Equipment directly resulting from such delay, and shall exclude indirect or other consequential damages. Except as expressly provided for herein, Contractor shall not have any other claim, demand or right to adjustment of the Contract Price arising out of delay, interruption, hindrance or disruption to the progress of the Work. Adjustments to the Contract Price and the Contract Time, if any, on account of Changes to the Work or Suspension of the Work shall be governed by the applicable provisions of the Contract Documents, including without limitation, Articles 9 and 14 of these General Conditions.

7.4.3 Unexcusable Delays

Unexcusable Delays refer to any delay to the progress of the Work caused by events or factors other than those specifically identified in Articles 7.4.1 and 7.4.2 above. Neither the Contract Price nor the Contract Time shall be adjusted on account of Unexcusable Delays.

7.4.4 Adjustment of Contract Time

7.4.4.1 Procedure for Adjustment of Contract Time

The Contract Time shall be subject to adjustment only in strict conformity with applicable provisions of the Contract Documents. Failure of Contractor to request adjustment(s) of the Contract Time in strict conformity with applicable provisions of the Contract Documents shall be deemed Contractor's waiver of the same.

7.4.4.2 Limitations Upon Adjustment of Contract Time on Account of Delays

Any adjustment of the Contract Time on account of an Excusable Delay or a Compensable Delay shall be limited as set forth herein. If an Excusable Delay and a Compensable Delay occur concurrently, the maximum extension of the Contract Time shall be the number of days from the commencement of the first delay to the cessation of the delay which ends last. If an Unexcusable Delay occurs concurrently with either an Excusable Delay or a Compensable Delay, the maximum extension of the Contract Time shall be the number of days, if any, which the Excusable Delay or the Compensable Delay exceeds the period of time of the Unexcusable Delay. No adjustment of the Contract Time shall be made on account of any Excusable Delays or Compensable Delays unless such delay(s) actually and directly impact Work or Work activities on the critical path of the then current and updated Approved Construction Schedule as of the date on which such delay first occurs. The District shall not be deemed in breach of, or otherwise in default of any obligation hereunder, if the District shall deny any request by the Contractor for an adjustment of the Contract Time for any delay which does not actually and directly impact Work on the then current and updated Approved Construction Schedule.

7.5 Liquidated Damages

7.5.1 Contractor Delays

Should the Contractor neglect, fail or refuse to achieve Substantial Completion of the Work within the Contract Time, as adjusted, or to complete an Interim Milestone or Final Completion in accordance with the times specified or provided for in the Contract Documents, the Contractor agrees to pay to the District the amount of per diem Liquidated Damages set forth in the Special Conditions, not as a penalty but as Liquidated Damages, for every day beyond the Contract Time, as adjusted, Interim Milestone or Final Completion, the Work is achieved. The Liquidated Damages amounts set forth in the Special Conditions are agreed upon by and between the Contractor and the District because of the difficulty of fixing the District's actual damages in the event of delayed completion of the Work. The Contractor and the District specifically agree that said amounts are reasonable estimates of the District's damages in such event, and that such amounts do not constitute a penalty. Liquidated Damages may be deducted from the Contract Price then or thereafter due the Contractor. The Contractor and the Surety shall

be liable to the District for any Liquidated Damages exceeding any amount of the Contract Price then held or retained by the District. In the event that the Contractor shall fail or refuse to correct or complete items of the Work noted upon Substantial Completion and the District elects to exercise its right to cause completion or correction of such items pursuant to Article 7.2.3.2 hereof, the District's assessment of Liquidated Damages pursuant to the foregoing shall be in addition, and not in lieu of, the District's right to charge Contractor with the cost of completing or correcting such items of the Work, as provided for under Article 7.2.3.2.

7.5.2 District Delays

If the Contractor is delayed by the District or anyone employed by it and granted an extension of time, or if the Contractor is delayed and the District is held responsible for such delay, the Contractor and the District agree that it is impractical and infeasible to determine the amount of actual damage suffered by the Contractor as a result of such delay. Such damages include, but are not limited to, extended home and field office overhead, impairment of bonding capacity, lost opportunity, and all other damages or claims, regardless of tier, attributable, or claimed to be attributable to any such delay. Accordingly, in such an instance, it is agreed that the District will pay to the Contractor as fixed and liquidated damages, and not as a penalty, the sum of set forth in the Special Conditions for each calendar day of delay beyond the Contract Time.

7.5.3 Liquidated Damages Reasonable

The Contractor and the District acknowledge and agree that the provisions of this Article 7.5 are reasonable under the circumstances existing at the time of the Contractor's execution of the Agreement.

ARTICLE 8: CONTRACT PRICE

8.1 Contract Price

The Contract Price is the amount stated in the Agreement as such, and subject to any authorized adjustments thereto in accordance with the Contract Documents, is the total amount payable by the District to the Contractor for performance of the Work under the Contract Documents. The District's payment of the Contract Price to the Contractor shall be in accordance with the Contract Documents.

8.2 Cost Breakdown (Schedule of Values)

Within fifteen (15) days of the Cost Loaded Contract Construction Schedule (Article 7.3.3), the Contractor shall furnish a detailed tabular Cost Breakdown of the Contract price consistent with the cost-loaded work activities included in the Approved Construction Schedule. The Cost Breakdown shall be subject to the District's review and approval of the form and content thereof. In the event that the District shall reasonably object to any portion of the Cost Breakdown, within ten (10) days of the District's receipt of the Cost Breakdown, the District shall notify the Contractor, in writing of the District's objection(s) to the Cost Breakdown. Within five (5) days of the date of the District's written objection(s), Contractor shall submit a revised Cost Breakdown to the District for review and approval. The foregoing procedure for the preparation, review and approval of the Cost Breakdown shall continue until the District has approved of the entirety of the Cost Breakdown. Once the Cost Breakdown is approved by the District, the Cost Breakdown

shall not be thereafter modified or amended by the Contractor without the prior consent and approval of the District, which may be granted or withheld in the sole reasonable discretion of the District. Notwithstanding any provision of the Contract Documents to the contrary, payment of the Contractor's overhead, supervision and general conditions costs and profit, as such items are reflected in the Cost Breakdown, shall be made incrementally as included in the activities included in the Approved Construction Schedule.

8.3 Progress Payments

8.3.1 Applications for Progress Payments

During the Contractor's performance of the Work, the Contractor shall submit monthly, on the first working day of each month, to the Project Manager, Applications for Progress Payments, on forms approved by the District, setting forth an itemized estimate of Work completed in the preceding month. Values utilized in the Applications for Progress Payments shall be based upon the proper updating of the Approved Construction Schedule. The Cost Breakdown and/or Approved Cost Loaded Construction Schedule, pursuant to Article 8.2 above, and such values shall be only for determining the basis of Progress payments to the Contractor, and shall not be considered as fixing a basis for adjustments, whether additive or deductive, to the Contract Price.

8.3.2 District's Review of Applications for Progress Payments

In accordance with Public Contract Code §20104.50, upon receipt of an Application for Progress Payment, the Project Manager, the District's Inspector, and the Architect shall review the Application. Such review shall be for the purpose of determining that the Application for Progress Payment is a proper Progress Payment request. For purposes of this Article 8.3.2, an Application for Progress Payment shall be deemed "proper" only if it is submitted on the properly completed form approved by the District, and accompanied by:

- (i) the Application submitted by the Contractor shall be consistent with and accompanied by the updated Approved Construction Schedule;
- (ii) weekly Certified Payrolls of the Contractor and all Subcontractors, of any tier, for laborers performing any portion of the Work for which a Progress Payment is included (if requested);
- (iii) duly completed and executed forms of Conditional Waiver and Release of Rights Upon Progress Payment in accordance with California Civil Code § 3262 of the Contractor, all Subcontractors of any tier, and Material Suppliers covering the Progress Payment requested;
- (iv) duly completed and executed forms of Unconditional Waiver and Release of Rights upon Progress Payment in accordance with California Civil Code § 3262 of the Contractor, all Subcontractors of any tier, and Material Suppliers covering the Progress Payment received by the Contractor under the prior Application for Progress Payment;
- (v) a current union statement reflecting that the Contractor and any Subcontractor of any tier, are current in the payment of any supplemental fringe benefits required pursuant to any collective bargaining agreement to which the Contractor or any such Subcontractor is a party to or is otherwise bound by (if requested); and

- (vi) a certification by the Contractor that it has maintained the Record Documents reflecting the actual as-built conditions of the Work performed (such certification is subject to verification by the District's Inspector prior to approval of the Progress Payment).

In accordance with Public Contract Code § 20104.50, an Application for Progress Payment determined by the District not to be a proper Application for Progress Payment shall be returned by the District to the Contractor as soon as is practicable after receipt of the same from the Contractor, but in no event not more than seven (7) days after the District's receipt thereof. The District's return of any Application for Progress Payment pursuant to the preceding sentence shall be accompanied by a written document setting forth the reason(s) why the Application for Progress Payment is not proper. Pursuant to the District's Labor Compliance Program, Labor Code §1771.5 and other applicable law, the District shall withhold payments when payroll records are delinquent or inadequate.

8.3.3 Architect and District's Inspector Review of Applications for Progress Payments

Upon receipt of an Application for Progress Payment, the Architect and the District's Inspector shall meet with the Contractor to inspect the completed work and verify the portion of the work completed during the month using the approved Construction Schedule update and the Cost Breakdown. The Application for Progress Payment shall reflect the agreed percentages of work complete that is properly due to the Contractor under the terms of the Contract Documents. The Application submitted by the Contractor shall be consistent with and accompanied by the updated Approved Construction Schedule.

8.3.4 District's Disbursement of Progress Payments

8.3.4.1 Timely Disbursement of Progress Payments

In accordance with Public Contract Code § 20104.50, within thirty (30) days after the District's receipt of a proper Application for Progress Payment, there shall be paid, by District, to Contractor a sum equal to ninety percent (95%) of the value of the Work indicated in the Application for Progress Payment as verified and approved by the District's Inspector and the Architect. If an Application for Progress payment is determined not to be proper due to the failure or refusal of the contractor to submit the required documents with the Application for progress payment, or if it is reasonably determined that the Record Documents have not been continuously maintained to reflect the actual as-built conditions of the Work completed in the period for which the Progress Payment is requested, the thirty (30) day period hereunder for the District's timely disbursement of a Progress payment shall be deemed to commence on the date that the District is actually in receipt of a complete and proper Application for Progress payment or verifies the proper updating of the as-built conditions.

8.3.4.2 Untimely Disbursement of Progress Payments

In accordance with Public Contract Code §20104.50, in the event that the District shall fail to make any Progress Payment within thirty (30) days after receipt of an undisputed and properly submitted Application for Progress Payment, the District shall pay the Contractor interest on the undisputed amount of such Application for

Progress Payment equal to the legal rate of interest set forth in California Code of Civil Procedure § 685.010(a). The foregoing notwithstanding, pursuant to the District's Labor Compliance Program, Labor Code §1771.5 and other applicable law, the District shall withhold payments when payroll records are delinquent or inadequate without penalty or payment of interest under Public Contract Code §20104.50.

8.3.4.3 District's Right to Disburse Progress or Final Payments by Joint Checks

The District may, in its sole discretion, issue joint checks to the Contractor and any Subcontractor or Material Supplier providing work, labor, materials, equipment or services for the Project in satisfaction of its obligation to make Progress Payments or the Final Payment due hereunder. District may require Contractor to provide copies of applicable Subcontracts, purchase orders, rental invoices or materials invoices.

8.3.4.4 No Waiver of Defective or Non-Conforming Work

The approval of any Application for Progress Payment or the disbursement of any Progress Payment to the Contractor shall not be deemed nor constitute acceptance of defective Work or Work not in conformity with the Contract Documents.

8.3.5 Progress Payments for Changed Work

The Contractor's Applications for Progress Payment may include requests for payment on account of Changes in the Work which have been properly authorized and approved by the District's Inspector, the Architect and the Board. Except as provided for herein, no other payment shall be made by the District for Changes in the Work.

8.3.6 Materials or Equipment Not Incorporated Into the Work

8.3.6.1 Limitations Upon Payment

Except as expressly provided for herein, no payments shall be made by the District on account of any item of the Work, including without limitation, materials or equipment which has/have not been incorporated into and made a part of the Work.

8.3.6.2 Materials or Equipment Delivered and Stored at the Site

The District may, in its sole and exclusive discretion, make payment for materials or equipment not yet incorporated into the Work if, a request for payment of such materials or equipment is made and if all of the following are complied with: (a) the materials or equipment have been delivered to the Site; (b) adequate arrangements, reasonably satisfactory to the District, have been made by the Contractor to store and protect such materials or equipment at the Site including without limitation, insurance reasonably satisfactory to the District, covering and protecting against the risk of loss, destruction, theft or other damage to such materials or equipment while in storage; and (c) the establishment of procedures reasonably satisfactory to the District by which title to such materials or equipment will be vested in the District upon the District's payment therefor. The Contractor acknowledges that the discretion to make, or not to make, payment for materials or equipment delivered or stored at the site of the Work pursuant to the preceding sentence shall be exercised exclusively by the District; the District's exercise of discretion not to make payment for materials or equipment delivered or stored at

the Site, but not yet incorporated into the Work shall not be deemed the District's default hereunder. In the event that the District shall elect to make payment for materials or equipment delivered and stored at the Site, the costs and expenses incurred to comply with the requirements of (b) and (c) of this Article 8.3.6.2 shall be borne solely and exclusively by the Contractor and no payment shall be made by the District on account of such costs and expenses.

8.3.7 Exclusions From Progress Payments

No payments shall be made by the District for materials or equipment to be incorporated into the Work where such materials or equipment have not been delivered or stored at the Site. The District shall not make any payment on account of any materials or equipment which are in the process of being fabricated or which are in transit to the Site or other storage location. In addition to the District's right to withhold disbursement of any Progress Payment provided for in the Contract Documents, neither the Contractor's Application for Progress Payment shall include, nor shall the District be obligated to disburse any portion of the Contract Price for amounts which the Contractor does not intend to pay any Subcontractor, of any tier, or Material Supplier because of a dispute or any other reason.

8.3.8 Title to Work

The Contractor warrants that title to all Work covered by an Application for Progress Payment will pass to the District no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Progress Payment, all Work for which a Progress Payment has been previously issued and the Contractor has received payment from the District therefor shall, to the best of the Contractor's knowledge, information and belief, be free and clear of liens, claims, stop notices, security interests or encumbrances in favor of the Contractor, Subcontractors, Material Suppliers or other persons or entities making a claim by reason of having provided labor, materials and equipment relating to the Work.

8.4 Final Payment

8.4.1 Application for Final Payment

When the Contractor has achieved Final Completion of the Work and has otherwise fully performed its obligations under the Contract Documents, the Contractor shall submit an Application for Final Payment on such form as approved by the District. Thereupon, the Architect and the District's Inspector will promptly make a final inspection of the Work and when the Architect and the District's Inspector find the Work acceptable under the Contract Documents and that the Contract has been fully performed by the Contractor, the Architect and the District's Inspector will thereupon promptly approve the Application for Final Payment, stating that to the best their knowledge, information and belief, the Work has been completed in accordance with the terms of the Contract Documents. The Final Payment shall include the remaining balance of the Contract Price and any retention from Progress Payments previously withheld by the District.

8.4.2 Conditions Precedent to Disbursement of Final Payment

Neither Final Payment nor any remaining Contract Price shall become due until the Contractor submits to the District each and all of the following, the submittal of which are conditions precedent to the District's obligation to disburse the Final Payment: (i) an

affidavit or certification by the Contractor that payrolls, bills for materials and other indebtedness incurred in connection with the Work for which the District or the District's property may or might be responsible or encumbered have been paid or otherwise satisfied; (ii) a certificate evidencing that insurance required by the Contract Documents to remain in force after the Contractor's receipt of Final Payment is currently in effect; (iii) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover any period following Final Payment as required by the Contract Documents; if required (iv) consent of the Surety on the Labor and Material Payment Bond and Performance Bond, to Final Payments if required; (v) duly completed and executed forms of Conditional or Unconditional Waivers and Releases of rights upon Final Payment of the Contractor, Subcontractors of any tier and Material Suppliers in accordance with California Civil Code §3262, with each of the same stating that there are, or will be, no claims for additional compensation after disbursement of the Final Payment; (vi) Operations and Maintenance manuals and separate warranties provided by any manufacturer or distributor of any materials or equipment incorporated into the Work; (vii) the Record Drawings; (viii) the form of Guarantee included in the Contract Documents duly executed by an authorized representative of the Contractor; (ix) any and all other items or documents required by the Contract Documents to be delivered to the District upon completion of the Work; and (x) if required by the District, such other data establishing payment or satisfaction of obligations such as receipts, releases and waivers of liens, stop notices, claims, security interest or encumbrances arising out of the Contract to the extent and in such form as may be required by the District.

8.4.3 Disbursement of Final Payment

Provided that the District is then in receipt of all documents and other items in Article 8.4.2 above as conditions precedent to the District's obligation to disburse Final Payment, not later than sixty (60) days following Final Acceptance the District shall disburse the Final Payment to the Contractor. Pursuant to California Public Contract Code §7107, if there is any dispute between the District and the Contractor at the time that disbursement of the Final Payment is due, the District may withhold from disbursement of the Final Payment an amount not to exceed one hundred fifty percent (150%) of the amount in dispute.

8.4.4 Waiver of Claims

The Contractor's acceptance of the Final Payment is a waiver and release by the Contractor of any and all claims against the District for compensation or otherwise in connection with the Contractor's performance of the Contract.

8.4.5 Claims Asserted After Final Payment

Any lien, stop notice or other claim filed or asserted after the Contractor's acceptance of the Final Payment by any Subcontractor, of any tier, laborer, Material Supplier or others in connection with or for Work performed under the Contract Documents shall be the sole and exclusive responsibility of the Contractor who further agrees to indemnify, defend and hold harmless the District and its officers, agents, representatives and employees from and against any claims, demands or judgments arising or associated therewith, including without limitation attorneys fees incurred by the District in connection therewith. In the event any lien, stop notice or other claim of any Subcontractor, Laborer, Material Supplier or others performing Work under the Contract Documents remain unsatisfied after Final

Payment is made, Contractor shall refund to District all monies that the District may pay or be compelled to pay in discharging any lien, stop notice or other claim, including, without limitation all costs and reasonable attorneys fees incurred by District in connection therewith.

8.5 Withholding of Payments. The District may decline to pay the Contractor, or reduce or withhold any portion of a payment otherwise due the Contractor for any progress payment or final payment on account of:

- 8.5.1** In the District's opinion, the Work cannot be completed for the unpaid balance of the Contract Price;
- 8.5.2** In the District's opinion, the Work will not be completed within the Contract Time and the unpaid balance of the Contract Price would not be adequate to cover liquidated damages resulting from the anticipated delay;
- 8.5.3** Any damage has occurred to the District or any Subcontractor, Material Supplier or another contractor, and the Contractor may be liable for such damage;
- 8.5.4** The Contractor fails to perform any portion of the Work in accordance with the Contract Documents or otherwise violates any provision of the Contract Documents or fails to discharge any Contractor obligation thereunder;
- 8.5.5** Any claims, liens, labor compliance withholds, or stop payment notices are filed in connection with the Work or asserted against the District, the Project or the Site;
- 8.5.6** The Contractor fails to reimburse the District for any costs or expenses incurred by the District, or amounts advanced by the District, on behalf of the Contractor as may be provided or permitted in this Contract;
- 8.5.7** Notification has been given that a penalty will be assessed by any State, local or municipal agency or by the District for violations of any applicable laws, including, without limitation, tax laws, labor laws and/or fair employment laws;
- 8.5.8** Any current and non-resolved non-compliance notices issued by any public agency;
- 8.5.9** Defective Work or Work not in conformity with the Contract Documents which is not remedied as required in Article 12 herein;
- 8.5.10** Stop Payment Notices or other liens or third party claims served upon the District as a result of the Contract;
- 8.5.11** Liquidated damages incurred by the District for delays to the Project;
- 8.5.12** Unsatisfactory prosecution of the Work by the Contractor;
- 8.5.13** Failure to store and properly secure materials;
- 8.5.14** Failure of the Contractor to submit, on a timely basis, proper, sufficient, and acceptable documentation required by the Contract Documents, including, without limitation, a Construction Schedule, updated Schedule, Schedule of Submittals, Schedule of Values, monthly progress schedules, Shop Drawings, Product Data and samples, proposed product lists, and/or executed Change Orders;
- 8.5.15** Failure of the Contractor to maintain As-Built Drawings;

- 8.5.16** Erroneous estimates by the Contractor of the value of the Work performed, or other false statements in an Application for Payment;
- 8.5.17** Unauthorized deviations from the Contract Documents;
- 8.5.18** Failure of the Contractor to prosecute the Work in a timely manner in compliance with the Construction Schedule, established progress schedules, milestones, and/or other completion dates;
- 8.5.19** Failure to properly pay prevailing wages as defined in Labor Code §§1720 et seq. or failure to comply with any other Labor Code requirements;
- 8.5.20** Failure to properly maintain or clean up the Site;
- 8.5.21** Failure to indemnify, defend, or hold harmless the District;
- 8.5.22** Failure to make payments due to the District, including but not limited to payments for failed tests, utilities changes, or permits;
- 8.5.23** Failure of the Contractor to make payments when due Subcontractors or Material Suppliers for materials or labor; or
- 8.5.24** Contractor is otherwise in breach, default, or in substantial violation of any provision of this Contract.

8.6 Payments to Subcontractors

The Contractor shall pay all Subcontractors for and on account of Work of the Contract performed by such Subcontractors in accordance with the terms of their respective subcontracts and as provided for pursuant to California Public Contract Code §10262, the provisions of which are deemed incorporated herein by this reference. In the event of the Contractor's failure to make payment to Subcontractors in conformity with California Public Contract Code §10262, the provisions of California Public Contract Code §10253 shall apply; by this reference, the provisions of California Public Contract Code §10253 are incorporated herein in its entirety, except that the references in said Section 10253 to "the director" shall be deemed to refer to the District.

ARTICLE 9: CHANGES

9.1 Changes in the Work

The District, at any time, by written order, may make Changes within the general scope of the Work under the Contract Documents or issue additional instructions, require additional Work or direct deletion of Work. The Contractor shall not proceed with any Change involving an increase or decrease in the Contract Price or the Contract Time without prior written authorization from the District. The foregoing notwithstanding, the Contractor shall promptly commence and diligently complete any Change to the Work subject to the District's written authorized issued pursuant to the preceding sentence; the Contractor shall not be relieved or excused from its prompt commencement and diligent completion of any Change subject to the District's written authorization by virtue of the absence or inability of the Contractor and the District to agree upon the extent of any adjustment to the Contract Time or the Contract Price on account of such Change. The issuance of a Change Order pursuant to this Article 9 in connection with any Change authorized by the District under this Article 9.1 shall not be deemed a condition precedent to Contractor's obligation to promptly commence and diligently complete any such Change authorized by the District hereunder. The District's right to make Changes shall not invalidate

the Contract nor relieve the Contractor of any liability or other obligations under the Contract Documents. Any requirement of notice of Changes in the scope of Work to the Surety shall be the responsibility of the Contractor. Changes to the Work depicted or described in the Drawings or the Specifications shall be subject to approval by the DSA. The District may make Changes to bring the Work or the Project into compliance with environmental requirements or standards established by state or federal statutes and regulations enacted after award of the Contract.

9.2 Oral Order of Change in the Work

Any oral order, direction, instruction, interpretation, or determination from the District, the District's Inspector or the Architect which in the opinion of the Contractor causes any change to the scope of the Work, or otherwise requires an adjustment to the Contract Price or the Contract Time, shall be treated as a Change only if the Contractor gives the Architect and the District's Inspector written notice within ten (10) days of the order, directions, instructions, interpretation or determination and prior to acting in accordance therewith. Time is of the essence in Contractor's written notice pursuant to the preceding sentence so that the District can promptly investigate and consider alternative measures to address the order, direction, instruction, interpretation or determination giving rise to Contractor's notice. Accordingly, Contractor acknowledges that its failure, for any reason, to give written notice within ten (10) days of such order, direction, instruction, interpretation or determination shall be deemed Contractor's waiver of any right to assert or claim any entitlement to an adjustment of the Contract Time or the Contract Price on account of such order, direction, instruction, interpretation or determination. The written notice shall state the date, circumstances, extent of adjustment to the Contract Price or the Contract Time, if any, requested, and the source of the order, directions, instructions, interpretation or determination that the Contractor regards as a Change. Unless the Contractor acts in strict accordance with this procedure, any such order, direction, instruction, interpretation or determination shall not be treated as a Change and the Contractor hereby waives any claim for any adjustment to the Contract Price or the Contract Time on account thereof.

9.3 Contractor Submittal of Data

Within fifteen (15) days after receipt of a written order directing a Change in the Work or furnishing the written notice regarding any oral order directing a Change in the Work, the Contractor shall submit to the District a detailed written statement setting forth the amount of any adjustment to the Contract Price on account thereof, properly itemized and supported by sufficient substantiating data to permit evaluation of the same, and the extent of adjustment of the Contract Time, if any, required by such Change. No claim or adjustment to the Contract Price or the Contract Time shall be allowed if not asserted by the Contractor in strict conformity herewith or if asserted after Final Payment is made under the Contract Documents.

9.4 Adjustment to Contract Price and Contract Time on Account of Changes to the Work

9.4.1 Adjustment to Contract Price

Adjustments to the Contract Price due to Changes in the Work shall be determined by application of one of the following methods, in the following order of priority:

9.4.1.1 Mutual Agreement

By negotiation and mutual agreement, on a lump sum basis, between the District and the Contractor on the basis of the estimate of the actual and direct increase or decrease in costs on account of the Change. Upon request of the District, the Contractor shall provide a detailed estimate of increase or decrease in costs

directly associated with performance of the Change along with cost breakdowns of the components of the Change and supporting data and documentation. The Contractor shall be solely responsible for any additional costs or additional time arising out of, or related in any manner to, its failure to provide the estimate of costs within fifteen (15) days after the receipt of the written request of the District for such estimate.

9.4.1.2 Determination by the District

By the District, whether or not negotiations are initiated pursuant to Article 9.4.1.1 above, based upon actual and necessary costs incurred by the Contractor as determined by the District on the basis of the Contractor's records. In the event that the procedure set forth in this Article 9.4.1.2 is utilized to determine the extent of adjustment to the Contract Price on account of Changes to the Work, promptly upon determining the extent of adjustment to the Contract Price, the District shall notify the Contractor in writing of the same; the Contractor shall be deemed to have accepted the District's determination of the amount of adjustment to the Contract Price on account of a Change to the Work unless Contractor shall notify the District, the Architect and the District's Inspector, in writing, not more than fifteen (15) days from the date of the District's written notice, of any objection to the District's determination. Failure of the Contractor to timely notify the District, the Architect and the District's Inspector of Contractor's objections to the District's determination of the extent of adjustment to the Contract Price shall be deemed Contractor's acceptance of the District's determination and a waiver of any right or basis of the Contractor to thereafter protest or otherwise object to the District's determination. Notwithstanding any objection of the Contractor to the District's determination of the extent of any adjustment to the Contract Price pursuant to this Article 9.4.1.2,

Contractor shall, pursuant to Article 9.7 below, diligently proceed to perform and complete any such Change.

9.4.1.3 Basis for Adjustment of Contract Price

If Changes in the Work require an adjustment of the Contract Price pursuant to Articles 9.4.1.1 or 9.4.1.2 above, the basis for adjustment of the Contract Price shall be as follows:

9.4.1.3.1 Labor

Contractor shall be compensated for the costs of labor actually and directly utilized in the performance of the Change. 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 the labor classification(s) necessary for the performance of the Change. Use of a labor classification which would increase labor costs associated with any Changes shall not be permitted. Labor costs shall exclude costs incurred by the Contractor in preparing estimate(s) of the costs of the Change,

in the maintenance of records relating to the costs of the change coordination and assembly of materials and information relating to the Change or performance thereof, or the supervision and other overhead and general conditions costs associated with the Change or performance thereof.

9.4.1.3.2 Materials and Equipment

Contractor shall be compensated for the costs of materials and equipment necessarily and actually used or consumed in connection with the performance of Changes. Costs of materials and equipment 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 necessary used in the performance of Changes, they shall be credited to the District. If materials and/or equipment necessarily used in the performance of Changes are obtained from a supplier or source owned in whole or in part by the Contractor, compensation therefore shall not exceed the current wholesale price for such materials or equipment. If, in the reasonable opinion of the District, the costs asserted by the Contractor for materials and/or equipment in connection with any Change is excessive, or if the Contractor fails to provide satisfactory evidence of the actual costs of such materials and/or equipment from its supplier or vendor of the same, the costs of such materials and/or equipment and the District's obligation for payment of the same shall be limited to the then lowest wholesale price at which similar materials and/or equipment are available in the quantities required to perform the Change. The District may elect to furnish materials and/or equipment for changes to the Work, in which event the Contractor shall not be compensated for the costs of furnishing such materials and/or equipment or any mark-up thereon.

9.4.1.3.3 Construction Equipment

Contractor shall be compensated for the actual cost of the necessary and direct use of Construction Equipment in the performance of Changes to the Work. Use of such Construction Equipment in the performance of Changes to Work shall be compensated in increments of hourly, weekly or monthly rates, whichever shall be the most economical to the District when applied to the scope of the specific change. Rental time for Construction Equipment moved by its own power shall include time required to move such Construction Equipment to the site of the Work from the nearest available rental source of the same. If Construction Equipment is not moved to the Site by its own power, Contractor 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 Construction Equipment is used for performance of any portion of

the Work other than Changes to the Work. Unless prior approval in writing is obtained by the Contractor from the Architect, the District's Inspector and the District, no costs or compensation shall be allowed for time while Construction Equipment is inoperative, idle or on standby, for any reason. The Contractor shall not be entitled to an allowance or any other compensation for Construction Equipment or tools used in the performance of Changes to the Work where such Construction Equipment or tools have a replacement value of \$1,000.00 or less. Construction Equipment costs claimed by the Contractor in connection with the performance of any Change to the Work shall not exceed rental rates (Blue Book) 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 District's inspector and the District, the allowable rate for the use of Construction Equipment in connection with the Changes to the Work shall constitute full compensation to the Contractor 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 Construction Equipment operator), and any / all other costs incurred by the Contractor incidental to the use of such Construction Equipment.

9.4.1.3.4 Mark-up on Costs of Changes to the Work

In determining the cost to the District and the extent of increase to the Contract Price resulting from a Change adding to the Work, the allowance for mark-ups on the costs of the Change for all overhead (including home office and field overhead), general conditions costs and profit associated with the Change shall not exceed the percentage set forth in the Special Conditions, regardless of the number of Subcontractors, of any tier, performing any portion of any Change to the Work. If a Change to the Work reduces the Contract Price, the maximum adjustment to the Contract Price shall be the actual cost reduction realized by the reduced or deleted Work multiplied by the percentage set forth in the Special Conditions.

9.4.1.4 Contractor Maintenance of Records

In the event that Contractor shall be directed to perform any Changes to the Work pursuant to Article 9.1 or 9.2, or should the Contractor encounter conditions which the Contractor, pursuant to Article 9.6, believes would obligate the District to adjust the Contract Price and/or the Contract Time, Contractor shall maintain detailed records on a daily basis. Such records shall include without limitation hourly records for labor and Construction Equipment and itemized records of materials and equipment used that day in connection with the performance of any Change to the Work. In the event that more than one Change to the Work is performed by the Contractor in a calendar day, Contractor shall maintain separate

records of labor, Construction Equipment, materials and equipment for each such Change. In the event that any Subcontractor, of any tier, shall provide or perform any portion of any Change to the Work, Contractor shall require that each such Subcontractor maintain records in accordance with this Article. Each daily record maintained hereunder shall be signed by Contractor's Superintendent or Contractor's authorized representative; such signature shall be deemed Contractor's representation and warranty that all information contained therein is true, accurate, complete and relate only to the Change referenced therein. All records maintained by a Subcontractor, of any tier, relating to the costs of a Change to the Work shall be signed by such Subcontractor's authorized representative or Superintendent. All records maintained hereunder shall be subject to inspection, review and/or reproduction by the District, the Architect or the District's Inspector upon request. In the event that Contractor shall fail or refuse, for any reason, to maintain or make available for inspection, review and/or reproduction such records and the adjustment to the Contract Price on account of any Change to the Work is determined pursuant to this Article, the District's reasonable good faith determination of the extent of adjustment to the Contract Price on account of such Change shall be final, conclusive, dispositive and binding upon Contractor. Contractor's obligation to maintain records hereunder is in addition to, and not in lieu of, any other Contractor obligation under the Contract Documents with respect to Changes to the Work.

9.4.2 Adjustment to Contract Time.

In the event of any Change(s) to the Work pursuant to this Article 9, the Contract Time shall be extended or reduced by Change Order for a period of time commensurate with the time reasonably necessary to perform such Change. Such time shall be requested in writing by the Contractor with the Contract price Adjustment Proposal. The time extension request shall be justified by the Contractor by submittal of a CPM analysis accurately portraying the impact of the change on the critical path of the project schedule. Changes performed within available float as indicated in the updated Approved Construction Schedule shall not justify a time extension to the Contract. When agreement is reached between the District and Contractor that a Change shall require an extension of the contract time, the Contractor shall not be subject to Liquidated Damages for such period of time. If completion of the Work is delayed by causes for which the District is responsible and the delay is unreasonable under the circumstances involved, and not within the contemplation of the Contractor and the District at the time of execution of the Agreement, the Contractor shall not be precluded from the recovery of damages arising therefrom.

9.4.3 Addition or Deletion of Alternate Bid Item(s)

If the Bid for the Work includes proposal(s) for Alternate Bid Item(s), during Contractor's performance of the Work, the District may elect, pursuant to this Article to add any such Alternate Bid Item(s) if the same did not form a basis for award of the Contract or delete any such Alternate Bid Item(s) if the same formed a basis for award of the Contract. If the District elects to add or delete any such Alternate Bid Item(s) pursuant to the foregoing, the cost or credit for such Alternate Bid Item(s) shall be as set forth in the Contractor's Bid.

9.5 Change Orders

If the District approves of a Change, a written Change Order prepared on behalf of the District shall be forwarded to the Contractor describing the Change and setting forth the adjustment to the Contract Time and the Contract Price, if any, on account of such Change. All Change Orders shall be in full payment and final settlement of all claims for direct, indirect and consequential costs, including without limitation, costs of delays or impacts related to, or arising out of, items covered and affected by the Change Order, as well as any adjustments to the Contract Time. Any claim or item relating to any Change incorporated into a Change Order not presented by the Contractor for inclusion in the Change Order shall be deemed waived. The Contractor shall execute the Change Order prepared pursuant to the foregoing; once the Change Order has been prepared and forwarded to the Contractor for execution, without the prior approval of the District which may be granted or withheld in the sole and exclusive discretion of the District, the Contractor shall not modify or amend the form or content of such Change Order, or any portion thereof. The Contractor's attempted or purported modification or amendment of any such Change Order, without the prior approval of the District, shall not be binding upon the District; any such unapproved modification or amendment to such Change Order shall be null, void and unenforceable. Unless otherwise expressly provided for in the Contract Documents or in the Change Order, any Change Order issued hereunder shall be binding upon the District only upon action of the District's Board of Trustees approving and ratifying such Change Order. In the event of any amendment or modification made by the Contractor to a Change Order for which there is no prior approval by the District, in accordance with the provisions of this Article 9.5, unless otherwise expressly stated in its approval and ratification of such Change Order, any action of the Board of Trustees to approve and ratify such Change Order shall be deemed to be limited to the Change Order as prepared by the Architect; such approval and ratification of such Change Order shall not be deemed the District's approval and ratification of any unapproved amendment or modification by the Contractor to such Change Order.

9.6 Contractor Notice of Changes

If the Contractor should claim that any instruction, request, the Drawings, the Specifications, action, condition, omission, default, or other situation obligates the District to increase the Contract Price or to extend the Contract Time, the Contractor shall notify the District's Project Manager and the Architect, in writing, of such claim within ten (10) days from the date of its actual or constructive notice of the factual basis supporting the same. The District shall consider any such claim of the Contractor only if sufficient supporting documentation is submitted with the Contractor's notice to the District's Project Manager and the Architect. Time is of the essence in Contractor's written notice pursuant to the preceding sentence so that the District can promptly investigate and consider alternative measures to the address such instruction, request, Drawings, Specifications, action, condition, omission, default or other situation. Accordingly, Contractor acknowledges that its failure, for any reason, to give written notice (with sufficient supporting documentation to permit the District's review and evaluation) within ten (10) days of its actual or constructive knowledge of any instruction, request, Drawings, Specifications, action, condition, omission, default or other situation for which the Contractor believes there should an adjustment of the Contract Time or the Contract Price shall be deemed Contractor's waiver, release, discharge and relinquishment of any right to assert or claim any entitlement to an adjustment of the Contract Time or the Contract Price on account of any such instruction, request, Drawings, Specifications, action, condition, omission, default or other situation. In the event that the District determines that the Contract Price or the Contract Time are subject to adjustment based upon the events, circumstances and supporting documentation submitted with the Contractor's written notice under this Article 9.6, any such adjustment shall be determined in accordance with the provisions of

Articles 9.4.1 and 9.4.2.

9.7 Disputed Changes

In the event of any dispute or disagreement between the Contractor and the District or the Architect regarding the characterization of any item as a Change to the Work or as to the appropriate adjustment of the Contract Price or the Contract Time on account thereof, the Contractor shall promptly proceed with the performance of such item of the Work, subject to a subsequent resolution of such dispute or disagreement in accordance with the terms of the Contract Documents. The Contractor's failure or refusal to so proceed with such Work may be deemed to be Contractor's default of a material obligation of the Contractor under the Contract Documents.

9.8 Emergencies

In an emergency affecting the safety of life, or of the Work, or of property, the Contractor, without special instruction or prior authorization from the District or the Architect, is permitted to act at its discretion to prevent such threatened loss or injury. Any compensation claimed by the Contractor on account of such emergency work shall be submitted and determined in accordance with this Article 9.

9.9 Minor Changes in the Work

The Architect may order minor Changes in the Work not involving an adjustment in the Contract Price or the Contract Time and not inconsistent with the intent of the Contract Documents. Such Changes shall be effected by written order and shall be binding on the District and the Contractor. The Project Manager or the District's Inspector may direct the Contractor to perform Changes provided that each such Change does not result in an increase of more than \$500.00 to the Contract Price and no adjustment of the Contract Time. The Contractor shall carry out such orders promptly.

9.10 Unauthorized Changes

Any Work beyond the lines and grades shown on the Contract Documents, or any extra Work performed or provided by the Contractor without notice to the Architect and the District's Inspector in the manner and within the time set forth in Articles 9.2 or 9.6 shall be considered unauthorized and at the sole expense of the Contractor. Work so done will not be measured or paid for, no extension to the Contract Time will be granted on account thereof and any such Work may be ordered removed at the Contractor's sole cost and expense. The failure of the District to direct or order removal of such Work shall not constitute acceptance or approval of such Work nor relieve the Contractor from any liability on account thereof.

ARTICLE 10: SEPARATE CONTRACTORS

10.1 District's Right to Award Separate Contracts

The District reserves the right to perform construction or operations related to the Project with the District's own forces or to award separate contracts in connection with other portions of the Project or other construction or operations at or about the Site. If the Contractor claims that delay or additional cost is involved because of such action by the District, the Contractor shall seek an adjustment to the Contract Price or the Contract Time as provided for in the Contract Documents. Failure of the Contractor to request such an adjustment of the Contract Time or the Contract Price in strict conformity with the provisions of the Contract Documents applicable thereto shall be deemed a waiver of the same.

10.2 District's Coordination of Separate Contractors

The District shall provide for coordination of the activities of the District's own forces and of each separate contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with other separate contractors and the District in reviewing their respective Construction Schedules when directed to do so. The Contractor shall make any revisions to the Approved Construction Schedule for the Work hereunder deemed necessary after a joint review and mutual agreement. The Construction Schedules shall then constitute the Construction Schedules to be used by the Contractor, separate contractors and the District until subsequently revised.

10.3 Mutual Responsibility

The Contractor shall afford the District and separate contractors reasonable opportunity for storage of their materials and equipment and performance of their activities at the Site and shall connect and coordinate the Contractor's Work, construction and operations with theirs as required by the Contract Documents.

10.4 Discrepancies or Defects

If part of the Contractor's Work depends for proper execution or results upon construction or operations by the District or a separate contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly report to the Project Manager any apparent discrepancies or defects in such other construction that would render it unsuitable for such proper execution and results. Failure of the Contractor to so report shall constitute an acknowledgment that the District's or separate contractors' completed or partially completed construction is fit and proper to receive the Contractor's Work, except as to defects not then discoverable by the Contractor's reasonable diligence.

ARTICLE 11: TESTS AND INSPECTIONS

11.1 Tests; Inspections; Observations

11.1.1 Contractor's Notice

If the Contract Documents, laws, ordinances or any public authority with jurisdiction over the Work requires the Work, or any portion thereof, to be specially tested, inspected or approved, the Contractor shall give the Project Manager written notice of the readiness of such Work for observation, testing or inspection at least two (2) working days prior to the time for the conducting of such test, inspection or observation. If inspection, testing or observation is by authority other than the District, the Contractor shall inform the District's Inspector and the Project Manager not less than two (2) working days prior to the date fixed for such inspection, test or observation. The Contractor shall not cover up any portion of the Work subject to tests, inspections or observations prior to the completion and satisfaction of the requirements of such test, inspection or observation. In the event that any portion of the Work subject to tests, inspection or approval shall be covered up by Contractor prior to completion and satisfaction of the requirements of such tests, inspection or approval, Contractor shall be responsible for the uncovering of such portion of the Work as is necessary for performing such tests, inspection or approval without

adjustment of the Contract Price or the Contract Time on account thereof.

11.1.2 Cost of Tests and Inspections

Costs for tests and inspection of materials shall be paid by the District as provided for herein. Within twenty (20) days after the establishment of the Approved Construction Schedule pursuant to Article 7.3 hereof, the District shall submit to the Contractor a written list of the portions of the Work subject to special tests or inspections to be paid for by the District along with the number of hours or costs of testing or inspection allocated for each such portion of the Work. Should any act, omission or other conduct of the Contractor, any of its Subcontractors, of any tier, or Material Suppliers cause the number of hours or the costs of such tests or inspections to exceed that set forth in the District's list submitted pursuant to the foregoing, the Contractor shall be solely responsible for all such excess costs and the District may deduct such amount from any portion of the Contract Price then or thereafter due the Contractor. The District will pay for all tests and inspections provided that, in addition to the cost to be paid by the Contractor previously set forth in this Article, the Contractor shall pay for all tests and inspections under any of the following conditions: (i) when such costs are stipulated in the provisions of the Contract Documents to be borne by the Contractor; (ii) when a material is tested or inspected and fails to meet the requirements of the Specifications and/or Drawings; or (iii) when the source of the material is changed after the original test or inspection has been made or approved.

11.1.3 Testing/Inspection Laboratory

The District shall select duly qualified person(s) or testing laboratory(ies) to conduct the tests and inspections to be paid for by the District and required by the Contract Documents. All such tests and inspections shall be in conformity with the latest adopted Title 24 of the California Code of Regulations. Where inspection or testing is to be conducted by an independent laboratory or testing agency, materials or samples thereof shall be selected by the laboratory, testing agency, the District's Inspector, the Project Manager or the Architect and not by the Contractor.

11.1.4 Additional Tests, Inspections and Approvals

If the Architect, the Project Manager, the District's Inspector or public authorities having jurisdiction over the Work determine that portions of the Work require additional testing, inspection or approval, the Project Manager shall instruct the Contractor to make arrangements for such additional testing, inspection or approval by an entity acceptable to the District, and the Contractor shall give timely notice to the Project Manager of when and where tests and inspections are to be made so the District's Inspector and the Architect may observe such procedures. The District shall bear the costs of such additional tests, inspections or approvals, except to the extent that such additional tests, inspections or approvals reveal any failure of the Work to comply with the requirements of the Contract Documents, in which case the Contractor shall bear all costs made necessary by such failures, including without limitation, the costs of corrections, repeat tests, inspections or approvals and the costs of the Architect's services or its consultants in connection therewith. Where required DSA testing of the work identifies a failure rate of ten percent (10%) or greater for any system, scope of work, installation or subtrade that has been specifically targeted, District may, at its sole discretion, order that all such similar systems,

installations, scopes of work or subtrade work used in connection with the Project be tested, and the cost to test all such work shall be paid by the Contractor.

11.2 Delivery of Certificates

Required certificates of testing, inspection or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Architect. If a material is not required to be tested, the Architect, Inspector or the District may require Contractor to furnish a certificate bearing the official and legal signature of the supplier with each delivery of such material, which certificate shall state that the material complies with the Specifications.

11.3 Timeliness of Tests, Inspections and Approvals

Tests or inspections required and conducted pursuant to the Contract Documents shall be made or arranged by Contractor to avoid delay in the progress of the Work.

ARTICLE 12: UNCOVERING AND CORRECTION OF WORK

12.1 Inspection of the Work

12.1.1 Access to the Work

All Work and all materials and equipment forming a part of the Work or incorporated into the Work are subject to inspection by the District, the Project Manager, the Architect and the District's Inspector for conformity with the Contract Documents. The Contractor shall, at its cost and without adjustment to the Contract Price or the Contract Time, furnish any facilities necessary for sufficient and safe access to the Work for purposes of inspection by the District, the Project Manager, the Architect, the District's Inspector, DSA or any other public or quasi-public authority with jurisdiction over the Work or any portion thereof.

12.1.2 Limitations Upon Inspections

Inspections, tests, measurements, or other acts of the Architect and the District's Inspector hereunder are for the sole purpose of assisting them in determining that the Work, materials, equipment, progress of the Work, and quantities generally comply and conform with the requirements of the Contract Documents. These acts or functions shall not relieve the Contractor from performing the Work in full compliance with the Contract Documents. No inspection by the Architect or the District's Inspector shall constitute or imply acceptance of Work inspected. Inspection of the Work hereunder is in addition to, and not in lieu of, any other testing, inspections or approvals of the Work required under the Contract Documents.

12.2 Uncovering of Work

If any portion of the Work is covered contrary to the request of the Architect, the District's Inspector, the Project Manager or the requirements of the Contract Documents, it must be uncovered by the Contractor for observation by such District representative and be replaced by the Contractor without adjustment of the Contract Time or the Contract Price.

12.3 Rejection of Work

Prior to the District's Final Acceptance of the Work, any Work or materials or equipment forming a part of the Work or incorporated into the Work which is defective or not in conformity with the

Contract Documents may be rejected by the District, the Project Manager, the Architect or the District's Inspector and the Contractor shall correct such rejected Work without any adjustment to the Contract Price or the Contract Time, even if the Work, materials or equipment have been previously inspected by the Architect or the District's Inspector or even if they failed to observe the defective or non-conforming Work, materials or equipment.

12.4 Correction of Work

The Contractor shall promptly correct any portion of the Work rejected by the District, the Project Manager, the Architect or the District's Inspector for failing to conform to the requirements of the Contract Documents, or which is determined by them to be defective, whether observed before or after Substantial Completion and whether or not fabricated, installed or completed. The Contractor shall bear all costs of correcting such rejected Work, including additional testing and inspections and compensation for the Architect's or Inspector's services and expenses made necessary thereby. The Contractor shall bear all costs of correcting destroyed or damaged construction, whether completed or partially completed, of the District or separate contractors, caused by the Contractor's correction or removal of Work which is not in accordance with the requirements of the Contract Documents, or which is defective.

12.5 Removal of Non-Conforming or Defective Work

The Contractor shall, at its sole cost and expense, remove from the Site all portions of the Work which are defective or are not in accordance with the requirements of the Contract Documents which are neither corrected by the Contractor nor accepted by the District.

12.6 Failure of Contractor to Correct Work

If the Contractor fails to commence to correct defective or non-conforming Work within three (3) days of notice of such condition and promptly thereafter complete the same within a reasonable time, the District may correct it in accordance with the Contract Documents. If the Contractor does not so proceed, the District may remove it and store the salvable materials or equipment at the Contractor's expense. If the Contractor does not pay costs of such removal and storage after written notice, the District may sell such materials or equipment at auction or at private sale and shall account for the proceeds thereof, after deducting costs and damages that should have been borne by the Contractor, including without limitation compensation for the Architect's and Inspector's services, attorneys fees and other expenses made necessary thereby. If such proceeds of sale do not cover costs which the Contractor should have borne, the Contract Price shall be reduced by the deficiency. If payments of the Contract Price then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor and the Surety shall promptly pay the difference to the District.

12.7 Acceptance of Defective or Non-Conforming Work

The District may, in its sole and exclusive discretion, elect to accept Work which is defective or which is not in accordance with the requirements of the Contract Documents, instead of requiring its removal and correction, in which case the Contract Price shall be reduced as appropriate and equitable.

ARTICLE 13: WARRANTIES

13.1 Workmanship and Materials

The Contractor warrants to the District that all materials and equipment furnished under the Contract Documents shall be new, of good quality and of the most suitable grade and quality for

the purpose intended, unless otherwise specified in the Contract Documents. All Work shall be of good quality, free from faults and defects and in conformity with the requirements of the Contract Documents. If required by the District, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment incorporated into the Work. Any Work, or portion thereof not conforming to these requirements, including substitutions or alternatives not properly approved in accordance with the Contract Documents may be deemed defective. Where there is an approved substitution of, or alternative to, material or equipment specified in the Contract Documents, the Contractor warrants to the District that such installation, construction, material, or equipment will equally perform the function and have the quality of the originally specified material or equipment. The Contractor expressly warrants the merchantability, the fitness for use, and quality of all substitute or alternative items in addition to any warranty given by the manufacturer or supplier of such item.

13.2 Warranty Work

If, within one year after the date of Final Acceptance, or such other time frame set forth elsewhere in the Contract Documents, any of the Work is found to be defective or not in accordance with the requirements of the Contract Documents, or otherwise contrary to the warranties contained in the Contract Documents, the Contractor shall commence all necessary corrective action not more than seven (7) days after receipt of a written notice from the District to do so, and to thereafter diligently complete the same. In the event that Contractor shall fail or refuse to commence correction of any such item within said seven (7) day period or to diligently prosecute such corrective actions to completion, the District may, without further notice to Contractor, cause such corrective Work to be performed and completed. In such event, Contractor and Contractor's Performance Bond Surety shall be responsible for all costs in connection with such corrective Work, including without limitation, general administrative overhead costs of the District in securing and overseeing such corrective Work. Nothing contained herein shall be construed to establish a period of limitation with respect to any obligation of the Contractor under the Contract Documents. The obligations of the Contractor hereunder shall be in addition to, and not in lieu of, any other obligations imposed by any special guarantee or warranty required by the Contract Documents, guarantees or warranties provided by any manufacturer of any item or equipment forming a part of, or incorporated into the Work, or otherwise recognized, prescribed or imposed by law. 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 Contractor or the Contractor'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.

13.3 Guarantee

Upon completion of the Work, Contractor shall execute and deliver to the District the form of Guarantee included within the Contract Documents. The Contractor's execution and delivery of the form of Guarantee is an express condition precedent to any obligation of the District to disburse the Final Payment to the Contractor.

13.4 Survival of Warranties

The provisions of this Article 13 shall survive the Contractor's completion of Work under the Contract Documents, the District's Final Acceptance or the termination of the Contract.

ARTICLE 14 : SUSPENSION OF WORK

14.1 District's Right to Suspend Work

The District may, without cause and without invalidating or terminating the Contract, order the Contractor, in writing, to suspend, delay or interrupt the Work in whole or in part for such period of time as the District may determine. The Contractor shall resume and complete the Work suspended by the District in accordance with the District's directive, whether issued at the time of the directive suspending the Work or subsequent thereto.

14.2 Adjustments to Contract Price and Contract Time

If the District orders a suspension of the Work, an adjustment shall be made to the Contract Price for increases in the direct cost of performance of the Work of the Contract Documents actually caused by suspension, delay or interruption ordered by the District; provided however that no adjustment of the Contract Price shall be made to the extent: (i) that performance is, was or would have been so suspended, delayed or interrupted by another cause for which the Contractor is responsible under the Contract Documents; or (ii) that an equitable adjustment is made or denied under another provision of the Contract Documents. Any such adjustment of the Contract Price shall not include any adjustment to increase the Contractor's overhead, general administrative costs or profit, all of which will remain as reflected in the Cost Breakdown submitted by the Contractor pursuant to the Contract Documents. In the event of the District's suspension of the Work, the Contract Time shall be equitably adjusted.

ARTICLE 15: TERMINATION

15.1 Termination for Cause

15.1.1 District's Right to Terminate

The District may terminate the Contract upon the occurrence of any one or more of the following events of the Contractor's default: (i) if the Contractor refuses or fails to prosecute the Work with diligence as will ensure Substantial Completion of the Work within the Contract Time, or if the Contractor fails to substantially Complete the Work within the Contract Time; (ii) if the Contractor becomes bankrupt or insolvent, or makes a general assignment for the benefit of creditors, or if the Contractor or a third party files a petition to reorganize or for protection under any bankruptcy or similar laws, or if a trustee or receiver is appointed for the Contractor or for any of the Contractor's property on account of the Contractor's insolvency, and the Contractor or its successor in interest does not provide adequate assurance of future performance in accordance with the Contract Documents within 10 days of receipt of a request for such assurance from the District; (iii) if the Contractor repeatedly fails to supply sufficient skilled workmen or suitable materials or equipment; (iv) if the Contractor repeatedly fails to make prompt payments to any Subcontractor, of any tier, or Material Suppliers or others for labor, materials or equipment; (v) if the Contractor disregards laws, ordinances, rules, codes, regulations, orders applicable to the Work or similar requirements of any public entity having jurisdiction over the Work; (vi) if the Contractor disregards proper directives of the Architect, the District's Inspector or District under the Contract Documents; (vii) if the Contractor performs Work which deviates from the Contract Documents and neglects or refuses to correct such Work; or (viii) if the Contractor otherwise violates in any material way any provisions or requirements of the Contract Documents. Once the District determines that sufficient cause exists to justify the action, the District may terminate the Contract without prejudice to any other right or remedy the District may have, after giving the Contractor and the Surety at least seven (7) days advance written notice of the effective

date of termination. The District shall have the sole discretion to permit the Contractor to remedy the cause for the termination without waiving the District's right to terminate the Contract, or otherwise waiving, restricting or limiting any other right or remedy of the District under the Contract Documents or at law.

15.1.2 District's Rights Upon Termination

In the event that the Contract is terminated pursuant to this Article 15.1, the District may take over the Work and prosecute it to completion, by contract or otherwise, and may exclude the Contractor from the site. The District may take possession of the Work and of all of the Contractor's tools, appliances, construction equipment, machinery, materials, and plant which may be on the site of the Work, and use the same to the full extent they could be used by the Contractor without liability to the Contractor. In exercising the District's right to prosecute the completion of the Work, the District may also take possession of all materials and equipment stored at the site of the Work or for which the District has paid the Contractor but which are stored elsewhere, and finish the Work as the District deems expedient. In exercising the District's right to prosecute the completion of the Work, the District shall have the right to exercise its sole discretion as to the manner, methods, and reasonableness of the costs of completing the Work and the District shall not be required to obtain the lowest figure for completion of the Work. In the event that the District takes bids for remedial Work or completion of the Work, the Contractor shall not be eligible for the award of such contract(s).

15.1.3 Completion by the Surety

In the event that the Contract is terminated pursuant to this Article 15.1, the District may demand that the Surety take over and complete the Work. The District may require that in so doing, the Surety not utilize the Contractor in performing and completing the Work. Upon the failure or refusal of the Surety to take over and begin completion of the Work within fifteen (15) days after demand therefor, the District may take over the Work and prosecute it to completion as provided for above. Such remedy is in addition to, and not lieu of, other remedies available to District as provided by law or in equity.

15.1.4 Assignment and Assumption of Subcontracts

The District shall, in its sole and exclusive discretion, have the option of requiring any Subcontractor or Material Supplier to perform in accordance with its Subcontract or Purchase Order with the Contractor and assign the Subcontract or Purchase Order to the District or such other person or entity selected by the District to complete the Work.

15.1.5 Costs of Completion

In the event of termination under this Article 15.1, the Contractor shall not be entitled to receive any further payment of the Contract Price until the Work is completed. If the unpaid balance of the Contract Price as of the date of termination exceeds the District's direct and indirect costs and expenses for completing the Work, including without limitation, attorneys' fees and compensation for additional professional and consultant services, such excess shall be used to pay the Contractor for the cost of the Work performed prior to the effective date of termination with a reasonable allowance for overhead and profit. If the District's costs and expenses to complete the Work exceed the unpaid Contract Price, the Contractor and/or the Surety shall pay the difference to the District.

15.1.6 Contractor Responsibility for Damages

The Contractor and the Surety shall be liable for all damage sustained by the District resulting from, in any manner, the termination of Contract under this Article 15.1, including without limitation, attorneys' fees, and for all costs necessary for repair and completion of the Work over and beyond the Contract Price.

15.1.7 Conversion to Termination for Convenience

In the event the Contract is terminated under this Article 15.1, and it is determined, for any reason, that the Contractor was not in default under the provisions hereof, the termination shall be deemed a Termination for Convenience of the District and thereupon, the rights and obligations of the District and the Contractor shall be determined in accordance with Article 15.2 hereof.

15.1.8 District's Rights Cumulative

In the event the Contract is terminated pursuant to this Article 15.1, the termination shall not affect or limit any rights or remedies of the District against the Contractor or the Surety. The rights and remedies of the District under this Article 15.1 are in addition to, and not in lieu of, any other rights and remedies provided by law or otherwise under the Contract Documents. Any retention or payment of monies to the Contractor by the District shall not be deemed to release the Contractor or the Surety from any liability hereunder.

15.2 Termination for Convenience of the District

The District may at any time, in its sole and exclusive discretion, by written notice to the Contractor, terminate the Contract in whole or in part when it is in the interest of, or for the convenience of, the District. In such case, the Contractor shall be entitled to payment for: (i) Work actually performed and in place as of the effective date of such termination for convenience of the District, with a reasonable allowance for profit and overhead on such Work, and (ii) reasonable termination expenses for reasonable protection of Work in place and suitable storage and protection of materials and equipment delivered to the site of the Work but not yet incorporated into the Work, provided that such payments exclusive of termination expenses shall not exceed the total Contract Price as reduced by payments previously made to the Contractor and as further reduced by the value of the Work as not yet completed. The Contractor shall not be entitled to profit and overhead on Work which was not performed as of the effective date of the termination for convenience of the District. The District may, in its sole discretion, elect to have subcontracts assigned pursuant to Article 15.1.4 above after exercising the right hereunder to terminate for the District's convenience.

ARTICLE 16: MISCELLANEOUS

16.1 Governing Law

This Contract shall be governed by and interpreted in accordance with the laws of the State of California.

16.2 Successors and Assigns

Except as otherwise expressly provided in the Contract Documents, all terms, conditions and covenants of the Contract Documents shall be binding upon, and shall inure to the benefit of the District and the Contractor and their respective heirs, representatives, successors-in-interest and

assigns.

16.3 Cumulative Rights and Remedies; No Waiver

Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not in lieu of or otherwise a limitation or restriction of duties, obligations, rights and remedies otherwise imposed or available by law. No action or failure to act by the District shall constitute a waiver of a right or remedy afforded it under the Contract Documents or at law nor shall such an action or failure to act constitute approval of or acquiescence in a breach hereunder, except as may be specifically agreed in writing.

16.4 Severability

In the event any provision of the Contract Documents shall be deemed illegal, invalid, unenforceable and/or void, by a court or any other governmental agency of competent jurisdiction, such provision shall be deemed to be severed and deleted from the Contract Documents, but all remaining provisions hereof, shall in all other respects, continue in full force and effect.

16.5 No Assignment by Contractor

The Contractor shall not sublet or assign the Contract, or any portion thereof, or any monies due thereunder, without the express prior written consent and approval of the District, which approval may be withheld in the sole and exclusive discretion of the District. The District's approval to such assignment shall be upon such terms and conditions as determined by the District in its sole and exclusive discretion.

16.6 Independent Contractor Status

In performing its obligations under the Contract Documents, the Contractor is an independent contractor to the District and not an agent or employee of the District.

16.7 Notices

Except as otherwise expressly provided for in the Contract Documents, all notices which the District or the Contractor may be required, or may desire, to serve on the other, shall be effective only if delivered by personal delivery or by postage prepaid, First Class Certified Return Receipt Requested United States Mail, addressed to the District or the Contractor at their respective address set forth in the Contract Documents, or such other address(es) as either the District or the Contractor may designate from time to time by written notice to the other in conformity with the provisions hereof. In the event of personal delivery, such notices shall be deemed effective upon delivery, provided that such personal delivery requires a signed receipt by the recipient acknowledging delivery of the same. In the event of mailed notices, such notice shall be deemed effective on the third working day after deposit in the mail.

16.8 Disputes; Continuation of Work

Notwithstanding any claim, dispute or other disagreement between the District and the Contractor regarding performance under the Contract Documents, the scope of Work thereunder, or any other matter arising out of or related to, in any manner, the Contract Documents, the Contractor shall proceed diligently with performance of the Work in accordance with the District's written direction, pending any final determination or decision regarding any such claim, dispute or disagreement.

16.9 Dispute Resolution; Claims Under \$375,000.00

Claims between the District and the Contractor of \$375,000.00 or less shall be resolved in accordance with the procedures established in Part 3, Chapter 1, Article 1.5 of the California Public Contract Code, §§20104 et seq.; provided however that California Public Contract Code §20104.2(a) shall not supersede the requirements of the Contract Documents with respect to the Contractor's notification to the District of such claim or extend the time for the giving of such notice as provided in the Contract Documents. The term "claims" as used herein shall be as defined in California Public Contract Code §20104(b)(2).

16.10 Attorneys Fees

Except as expressly provided for in the Contract Documents, or authorized by law, neither the District nor the Contractor shall recover from the other any attorneys fees or other costs associated with or arising out of any legal, administrative or other proceedings filed or instituted in connection with or arising out of the Contract Documents or the performance of either the District or the Contractor thereunder.

16.11 Marginal Headings; Interpretation

The titles of the various Articles of these General Conditions and elsewhere in the Contract Documents are used for convenience of reference only and are not intended to, and shall in no way, enlarge or diminish the rights or obligations of the District or the Contractor and shall have no effect upon the construction or interpretation of the Contract Documents. The Contract Documents shall be construed as a whole in accordance with their fair meaning and not strictly for or against the District or the Contractor.

16.12 Provisions Required by Law Deemed Inserted

Each and every provision of law and clause required by law to be inserted in the Contract Documents is deemed to be inserted herein and the Contract Documents shall be read and enforced as though such provision or clause are included herein, and if through mistake, or otherwise, any such provision or clause is not inserted or if not correctly inserted, then upon application of either party, the Contract Documents shall forthwith be physically amended to make such insertion or correction.

16.13 Entire Agreement

The Contract Documents contain the entire agreement and understanding between the District and the Contractor concerning the subject matter hereof, and supersedes and replaces all prior negotiations, proposed agreements or amendments, whether written or oral. No amendment or modification to any provision of the Contract Documents shall be effective or enforceable except by an agreement in writing executed by the District and the Contractor.

[End of Section]

SPECIAL CONDITIONS

Section 00800

1.01 Contract Time

- A. Substantial Completion of the Work.** The Work shall commence on the Start Date listed on the Notice to Proceed issued by the District to the Contractor and shall be completed (Substantial Completion) within One Hundred and Twenty (120) consecutive calendar days from and after the date stated in the Notice to Proceed (Reference Article 7 of the General Conditions).
- B. Interim Milestone Completion Dates.** Notwithstanding any provision of the Contract Documents to the contrary, Contractor shall sequence and coordinate the work so that portions of the work are completed as required by the Work Segment Plan in accordance with the following interim start and completion dates as well as Owner supplied Materials and products: Contractor shall coordinate with Owner to install Owner supplied products in a timely manner following delivery to site.
- C. County of Ventura Environmental Health Inspection** The Ventura County Environmental Health Department will inspect the work. The Work shall be in compliance with the approved plans, and must receive approval from Ventura County Environmental Health upon completion.

1.02 Liquidated Damages

- A. Delayed Substantial Completion of the Work.** Pursuant to Article 7 of the General Conditions, the Contractor shall be subject to the assessment and withholding of Liquidated Damages for failure to achieve Substantial Completion of the Work within the Contract Time as indicated in item 1.01.A, above. Liquidated Damages shall be at the rate of Five Hundred Dollars (\$500) per calendar day until Substantial Completion of the Work is achieved.
- B. Delayed Completion of Interim Milestones.** - The per day assessment of Liquidated Damages for Contractor's delayed approval by Ventura County Environmental Health pursuant to Article 4.8.2.1 of the General Conditions is Two Hundred Fifty Dollars (\$250) per calendar day until the required approval is obtained.
- C. Delayed Final Completion of the Work.** Pursuant to Article 7 of the General Conditions, the Contractor shall be subject to the assessment and withholding of Liquidated Damages for failure to achieve Final Completion of the Work in accordance with the Contract Documents. Liquidated Damages shall be at the rate of Five Hundred Dollars (\$500) per Calendar day until Final Completion of the Work is achieved
- D. Delayed Submittals.** The per day assessment of Liquidated Damages for Contractor's delayed submission of Submittals pursuant to Article 4.8.2.1 of the General Conditions is One Hundred Dollars (\$100) per calendar day per Submittal until the required Submittal is submitted.

E. Cumulative Assessment of Liquidated Damages. If the Contractor fails to timely delivery the Submittals, fails to achieve Final Completion of the Work Segments as set forth herein, or fails to achieve Substantial or Final Completion of the Work, the Contractor shall be subject to assessment and withholding of Liquidated Damages in the amounts set forth above for each such portion of the Work which is not timely delivered or completed within the time allocated for each portion of the Work.

F. Contractor Liquidated Damages. – N/A

1.03 Insurance

A. Insurance Provided By Contractor. Pursuant to Article 6 of the General Conditions, the Contractor shall provide and maintain the following insurance coverage amounts as set forth below:

- 1. Workers Compensation Insurance**
In accordance with limits established by law.
- 2. Employers Liability Insurance** \$1,000,000
- 3. Commercial General Liability Insurance**
Per Occurrence \$2,000,000
Aggregate \$5,000,000
- 4. Automobile Liability Insurance** \$1,000,000
- 5. Builders Risk Insurance**
In an amount equal to 110% of the original Contract Price.
- 6. Excess Products and Completed Operations** \$2,000,000

B. Insurance Provided by Subcontractors.

Pursuant to Article 6 of the General Conditions, all Subcontractors and Sub-Subcontractors shall provide and maintain the following insurance coverages, with minimum coverage amounts as set forth below:

- 1. Workers Compensation Insurance**
In accordance with limits established by law.
- 2. Employers Liability Insurance** \$1,000,000
- 3. Commercial General Liability Insurance**
Per Occurrence \$1,000,000
Aggregate \$2,000,000
- 4. Automobile Liability**
Bodily Injury/Property Damage Per Occurrence \$1,000,000

1.04 Drawings and Specifications.

The number of sets of the Drawings and Specifications, which the District will provide to the awarded Contractor, pursuant to Article 2.1.2 of the General Conditions, is one (1) set of reproducible specifications with plans.

1.05 Number of Contract Documents.

The number of executed copies of the Agreement is two (2); the number of Performance Bonds and Payment Bonds required is one (1).

1.06 Security.

In addition to the security requirements set forth elsewhere in the Contract Documents, the Contractor must adhere to the following:

A. Locked Door Policy. No building, room or site gate shall be left unsecured for any period of time when not occupied by the Contractor and/or after the Contractor's daily work hours.

1.07 Working Hours.

The working hours for this Contract shall be 7:00 a.m. to 7:00 p.m. Monday through Friday. Saturday/Sunday work requires written notification to the District.

Work hours are subject to standard construction hours per the Ordinance set by the **City of Moorpark, CA**. Contractor is expected to work weekends and holidays, as necessary, to complete the work within the specified time of completion without any additional cost to the District. At the District's request, Contractor shall modify the working hours for the Contract without adjustment of the Contract Time or Contract Price. (Reference General Conditions Article 7.2.1)

1.08 Temporary Electric Power.

Provide temporary electric power as necessary for execution of work. The Contractor will arrange distribution service point for electric power with the Director of Facilities, Maintenance and Operations (DFMO). Contractor shall provide meters, necessary wiring, switches, receptacles, etc., and make connections to distribution points. Contractor is to pay all costs for temporary electric power.

1.09 Temporary Lighting.

Provide lighting and outlets in temporary structures and wherever necessary for proper performance and inspection of work. If operations are performed during hours of darkness and whenever District deems natural lighting insufficient, provide adequate floodlights, clusters, and spot illumination, as required to facilitate reading of drawings and specifications. Make arrangements with subcontractors for electric services and lighting as necessary in performance of their work. Contractor is to pay for all temporary lighting.

1.10 Temporary Heat and Ventilation.

1.10.1 Provide heat, fuel and services to protect the work against injury from dampness and cold until final acceptance of all work of the contract.

1.10.2 When the new HVAC system is used for temporary heat and ventilation, comply with air quality requirements of ASHRAE 62, and the following:

- 1) Temporary Filters for Air Systems: Provide temporary filters in air conditioning and ventilating systems to prevent dust and fumes from contaminating the new ductwork and equipment. Use commercial viscous-coated throw away filters, or equal, having efficiency of not less than 60 percent.
- 2) At completion, inspect the entire system for dirt and debris. Clean equipment, ducts and plenums that are soiled, at no cost to the District.

1.10.3 Before casework is delivered to the building, for not less than 5 days prior to installing wood finishes, and throughout placing of this finish and other finish operations such as painting and laying of resilient floor covering, sufficient heat to maintain building temperature at 65 degrees F.

1.10.4 Operate HVAC system over a weekend as directed, for not less than 48 hours to purge VOC and other contaminants from the building.

1.11 Temporary Telephone and Fax Service.

Provide maintain and pay for duration of work, for temporary telephone and fax service including installation, maintenance and removal for construction needs.

1.12 Temporary Water Services.

1.12.1 The District will provide and pay for water at existing mains as shown on the drawings. The Contractor shall provide meter and service lines to site. Temporary service lines shall be installed and removed by the Contractor, who shall pay all charges for making the connections, running temporary lines, installing meter, removing same at the completion of the work, and disconnecting the services.

1.12.2 An approved double check valve shall be furnished and installed by the Contractor at the connection to the main.

1.12.3 All relocations required to clear work of others shall be performed when requested by the District. The District reserves the right to make connections to the temporary lines by themselves or by other contractors. In the event the contractor uses the water in a wasteful manner, the Contractor will be billed District's cost for the wasted water.

1.12.4 Drinking water shall be available in the Construction trailer.

1.13 Temporary Gas.

Provide temporary gas service as necessary for execution of work. Contractor shall connect gas service to new meter in an approved manner. Gas used and all other costs including installation, maintenance and removal of temporary meter shall be paid by the Contractor.

1.14 Temporary Sanitary Facilities.

Provide and maintain temporary toilet facilities for duration of operations. Properly proportion number of fixtures for the number of workers employed all in accordance with

CAL OSHA requirements. Provide water tight and floored structures. Maintain in a clean and sanitary condition acceptable to District.

1.15 Utility Costs for Subcontractors.

Distribution of temporary utility services to subcontractors shall be Contractor's responsibility.

1.16 Temporary Fire Protection and Safety Requirements.

The Contractor shall take necessary precautions to guard against and eliminate fire hazards and to prevent damage to construction work, building materials, equipment, temporary field offices, storage sheds, and public and private property. The Contractor shall be responsible for providing, maintaining, and enforcing the following conditions and requirements during the entire construction period.

- 1) Fire Inspection: The Contractor's Superintendent shall inspect the entire project at least once each week to make certain that the conditions and requirements are being adhered to.
- 2) Hose: The number of outlets, supply of hose, and proper hose size to protect the construction area shall be determined by the local Fire Marshal and provided by the Contractor.
- 3) Fires: Employees shall not be allowed to start fires with gasoline or kerosene or other highly flammable materials. No open fires shall be allowed.
- 4) Flammable Building Materials: Only a reasonable working supply of flammable building material shall be located inside of, or on the roof of, any storage facility.
- 5) Combustible Waste Materials: Oil-soaked rags, papers, and other highly combustible materials must be stored in closed metal containers at all times, and shall be removed from the site at the close of each day's work and more often where necessary, and placed in metal containers with tight hinged lids.
- 6) Gasoline and other flammable or polluting liquids/materials shall not be poured into sewers, manholes, or traps, but shall be disposed of, together with flammable or waste material subject to spontaneous combustion, in a safe manner meeting all applicable laws and ordinances. Make appropriate arrangements for storing these materials outside of the building.
- 7) Provide and maintain fire extinguishers during construction, conveniently located for proper protection, one fire extinguisher for each 5,000 square feet of floor area or less, but not less than four extinguishers. Fire extinguishers shall be ten-pound ABC type. Extinguishers shall meet approval of Underwriter's Laboratory, and shall be inspected at regular intervals and recharged as necessary.

1.17 Self-Propelled Construction Equipment

All self-propelled construction equipment, except light service trucks, panels, pickups, station wagons, crawler type cranes, power shovels and draglines, whether moving alone or in combination, shall be equipped with a reverse signal alarm (hub-cap type).

1.18. Temporary Offices (Construction Trailers).

1.18.1 Prior to starting work, provide and maintain for duration of operations, separate temporary office facilities as required for Contractor's administration; likewise, all necessary sheds and facilities for proper storage of tools, materials, and equipment employed in performance of work.

1.18.2 The office shall be conveniently located in area as directed by the District, substantially and neatly constructed, weather-tight, well lighted, and neatly painted inside and out. The office shall be heated and cooled. It shall have doors, which are separately keyed, and two or more windows on opposite sides.

1.19 Temporary Office (Contractor's Trailer).

1.19.1 Prior to starting work, provide and maintain for duration of operations, temporary office facilities as required for Contractor's administration; likewise, all necessary sheds and facilities for proper storage of tools, materials, and equipment employed in performance of work.

1.19.2 The office shall be a separate structure. The location of the office trailer will be determined at the time of mobilization to be acceptable to the District. The office structure shall be substantially and neatly constructed, weather-tight, well lighted, and neatly painted inside and out. The office shall be heated and cooled. It shall have doors that are separately keyed and two or more windows on opposite sides.

1.19.3 The facilities for Contractor's use shall be not less than described herein. The facilities shall be of suitable size to accommodate the office, and shall be furnished with whatever facilities the Contractor needs.

1.19.4 Costs of the field office and utilities, including cleaning service not less than once per week, shall be borne by the Contractor.

1.20 Temporary Scaffolding, Stairs, and Hoists.

Provide and maintain for duration of work, in accordance with CAL-OSHA and applicable laws and ordinances, all required temporary standing scaffolding, and temporary stairs, ladders, ramps, runways and hoists for use of all trades, unless otherwise specified in Contract Documents.

1.21 Temporary Guards, Barricades, and Lights.

1.21.1 Provide construction canopies, barricades, fences, guards, railings, lights, and warning signs necessary and required by law, and take necessary precautions required to avoid injury or damage to any and all persons and property.

1.21.2 Provide and maintain protective fences and barricades as shown on drawings and as Contractor may deem necessary to protect construction yard, storage areas and work in place, subject to approval as to type and appearance. Hog wire fencing is

not acceptable Remove all temporary fences and barricades upon project completion.

1.22 Protection of Work and Facilities.

1.22.1 Protect all adjacent property, roads, streets, curbs, shrubbery, lawns, erosion control materials and planting during construction operations. All damaged material shall be replaced and/or repaired at the expense of the Contractor.

1.22.2 Upon completion deliver the entire work to the District in proper, whole and unblemished condition. Work outside of the immediate construction site shall be restored to a whole and unblemished condition immediately upon completion of that portion of the work.

- 1) Parts of work in place that are subject to injury, because of operations being carried on adjacent thereto, shall be covered, boarded up, or substantially enclosed with adequate protection.
- 2) The Contractor shall be responsible for preventing the overloading of any part of the facilities beyond their safe calculated carrying capacity by the placing of materials and/or equipment, tools, machinery, or any other items thereon.
- 3) The District may provide such watchman services deemed necessary to protect the District's interest, but any protection so provided by the District shall not relieve the Contractor of the responsibility for the safety and condition of the work and material until the completion and acceptance thereof. The Contractor shall employ such watchman services as he may deem necessary to properly protect and safeguard the work and material.

1.23 Special Controls.

1.23.1 Use of Powder-Driven Fasteners: The use of powder set (cartridge type) anchors or lugs for attaching of any work is strictly prohibited on this project unless approved in writing by the District.

1.23.2 Use of Explosives: Blasting will not be permitted unless approved in writing by the District.

1.23.3 Dust Control: Throughout the entire Contract period, effectively dust-palliate the working area, roads, and storage areas constructed under this Contract and involved portions of the site, except during such periods that other contractors may be performing work of separate contracts in these areas. Such application shall consist of intermittent watering and sprinkling of such frequency as will satisfactorily allay the dust during all hours that work is being performed. At no time shall water be allowed to pond or puddle. Ponds and puddles shall be removed immediately and steps taken to remove or dry the mud resulting from the ponds or puddles.

1.24 Water Control.

Surface or subsurface water or other fluid shall not be permitted to accumulate in excavations or under the structures. Should such conditions develop or be encountered,

the water or other fluid shall be controlled and suitably disposed of by means of temporary pumps, piping, drainage lines and ditches, dams or other methods approved by the District.

1.25. Project Identification.

Provide and maintain one sign only on the property at location as directed by the Construction Manager (CM). Signboard shall contain information and be of size as detailed on the drawings. Small direction signs may be installed if specifically approved by the CM. Signs by subcontractors and material suppliers will not be permitted.

1.26 Contractor Vehicles on Campus.

Contractor's vehicles shall be restricted to access routes established by the District. Parking of Contractor's employees' vehicles will be limited to areas as established by the District, not necessarily adjacent to the site.

1.27 Removal of Temporary Construction.

Remove temporary office facilities, toilets, storage sheds, fences, and other construction of temporary nature from site as soon as progress of work permits. Recondition and restore portions of site occupied by same to a condition acceptable to District.

1.28 Use of Facilities.

The Contractor and subcontractor shall not, during hours of construction or at times when they are on site to perform work under the contract, use any of the campus facilities, including but not limited to, the restrooms, phones and roadways and the like without prior permission of the campus DFMO.

1.29 Damages.

The Contractor shall be responsible to report and repair, at no additional cost to the District, any damage to College property caused by Contractor, Contractor's employees, Subcontractors, material suppliers, or any other persons or entities, which are onsite as a result of the Contract and work there under. Contractor shall notify the District Project Manager/DFMO in writing within four (4) hours of the occurrence, and provide a description of the damage and the exact location. The Contractor shall immediately contact the DFMO, the Project Manager and Inspector of Records (IOR), and immediately repair the damage using materials of equal or superior grade to that which was damaged. No backfilling or covering up of damage or repairs shall be performed by the Contractor until such time as the DFMO has inspected the work and provided the Contractor with written approval to cover the work.

1.30 Waste Management.

Contractor shall not use the campus dumpsters, or dispose of waste or any other items, on Campus.

1.31 State and College Regulations

The Contractor and his Subcontractors shall comply with all District, City, County and State regulations regarding noise, dust, smoke, fire and safety rules, and shall keep the site and surrounding areas clean and free of debris.

1.32 Drawings and Plans.

The terms "drawings" and "plans" are used interchangeable in the Contract Documents and

have the same meaning.

1.33 Approval for Commencement of Work.

The Contractor shall obtain approval from the Director of Facilities, Maintenance & Operations, before commencing work in any existing occupied area, or before working on existing piping, wiring, or equipment. The Contractor shall indicate the particular area where work will be in progress and the length of time any existing system will be out of service. This work is to be scheduled in such a manner so as not to disrupt present operations, where possible. If new construction requires interruption of present operations, the Contractor shall obtain approval from the parties named above, after providing them with specific information regarding areas, dates, hours of the day, and number of hours any interruption is expected to take place. All interruption of services shall be approved by the District, in writing, prior to such interruptions and at the sole discretion of the District. The Contractor shall perform such work on weekends, after regular working hours, or in incremental blocks of time as directed by the District, at no additional cost to the contract price. Work performed as herein described shall not be a basis for an extension to the contract time for completion of all work.

1.34 Verify Existing Conditions.

The Contractor shall verify, identify and locate all utilities (above and below grade, visible and concealed), and all conditions and dimensions of the Work as described in the Contract Documents, prior to starting construction. All Subcontractors shall verify at the Site all conditions and measurements related to their work.

1.35 Scaling Dimensions from Drawings.

In no case shall working dimensions be scaled from plans, sections, or details from the Working Drawings. If no dimension is shown, the Contractor shall request in writing that the District provide clarification and dimensions.

1.36 Similar Conditions.

The intent is to provide a fully functional finished product, complete in every respect. Where a specific detail is not shown, the construction shall be similar to that indicated or noted for similar conditions and as necessary for a complete installation. References of notes and details to specific conditions and locations shall not limit their applicability. Materials for similar use shall be of the same type and manufacturer, unless otherwise indicated or specified as different. Any deviation must be approved in writing, by the District, prior to incorporation into the work.

1.37 Handicap Access Regulations.

The Contractor and all Subcontractors shall comply with Title 24, Disabled Access Regulations and ADA, Americans with Disabilities Act Regulations, whether or not specifically indicated on the Contract Documents. Where existing paths of travel are interrupted due to construction, barrier-free paths of travel shall be maintained by the Contractor, without adjustment to Contract Price or Contract Time.

1.38 Items marked "N.I.C." (Not in Contract).

Items marked N.I.C. in the Drawings are not part of the Work. In most instances, they are included for coordination under this Contract of the Work with concurrent or future work outside this contract. However, the Contractor shall review all items marked N.I.C. and

provide the District notice and deadline dates of when the items are needed onsite for coordination and incorporation into the project. Failure by the Contractor to give notice to the District and to provide such notice in sufficient time so as to allow District to select, order and receive the items shall not be the basis for delay claims, time extensions, or increased cost to the contract price.

1.39 Coordination for all Trades.

The Contractor shall be responsible for the proper location and size of openings for all trades, and shall coordinate all construction as indicated by the Contract Documents, including Shop Drawings reviewed by the District.

1.40 Items Not Identified in Construction Documents.

Any conditions or installations not identified in the Contract Documents and affecting the Work to be performed shall be brought to the attention of the District in order that cost and responsibility for any added work may be determined before work is undertaken. The Contractor's notice to the District of such installations or conditions shall be in writing. Pending receipt of written direction from the District, the Contractor shall not disturb or perform construction operations in any area affected by such installations or conditions.

1.41 Vehicular Access and Parking.

Construction, which might affect existing College vehicular access and parking, shall be scheduled during non-school hours. The Contractor shall immediately vacate any area if Contractor's operations or activities curtail vehicular access to the campus or to parking. Fire Department vehicular access to and around the construction area shall be maintained at all times by the Contractor clear of obstruction. Contractor shall provide keys to all gates to local Fire Department and DFMO for gate access.

1.42 Right of Access.

The District, or its representative(s), shall be able at all times to enter the construction site and observe the work. They shall have the right to reject defective materials and workmanship and to require appropriate corrections at the Contractor's expense. The Contractor shall not be relieved of any responsibility under this contract to provide materials and equipment in accordance with the Contract Documents for failure by the District representatives to discover, or otherwise bring to the attention of the Contractor, any deficiencies with the work.

1.43 Restoration of Existing Conditions.

The Contractor shall restore all landscaping, paving, and grading to the original condition at all areas adjoining the construction sites. Prior to performing any work on the project, the Contractor shall, at his sole expense, locate and mark the locations of all components of the irrigation systems which will, or may be, affected by or interfere with work under the contract. The Contractor shall meet with the Director of Facilities, Maintenance & Operations to develop a plan and schedule to expose and rework the irrigation system as necessary to maintain continuous uninterrupted functioning of the irrigation system. In the event that irrigation lines, sprinklers, control wiring or the like are damaged, the Contractor shall notify the Director of Facilities, Maintenance & Operations within one (1) hour, and within four (4) hours of the occurrence provide a written description of the damage and its exact location. The Contractor shall immediately repair the damage using materials of equal or superior grade to that which was damaged. No backfilling or covering up of

damage or repair shall be performed by the Contractor until such time as the Director of Facilities, Maintenance & Operations has inspected the work and provided the Contractor with written approval to cover the work.

1.44 Municipal Laws and Regulations.

The Contractor shall have full knowledge of, and at no additional cost to the contract comply with, all laws and regulations including, but not limited to, limitations on noise, hours of operation, hauling routes or limits on weight of equipment traveling on adjacent streets, and any other limitations which might affect the Contractor's work and operations.

1.45. Weekend Hours.

The contract time is expressed in calendar days. The Contractor may perform work, with prior notification as per Article 1.07 of the Special Conditions, on weekends or holidays, at his discretion. Should it be necessary for inspectors, District personnel, consultants, or DFMO to visit the work site on weekends or holidays, additional cost, if any, shall be reimbursed to the District by the Contractor. The District, at its sole discretion, may direct certain portions of the work to be performed after hours, or on weekends or holidays, in order to minimize interruption to the academic operations of the College. The Contractor shall reflect in his Progress Schedule all work, which may impact academic operations, and at Contractor's sole expense, and as directed by the District, perform all work at times convenient to the District.

1.46 Testing and Inspection Costs.

1.46.1 All costs for testing and inspection shall be paid by the District. However, the Contractor shall be responsible for all costs incurred for re-testing that may be required due to failed tests. Upon receipt from the Contractor of a Progress Schedule in accordance with the Contract Documents, the District shall provide a copy of the Progress Schedule to the Testing Laboratory and obtain from them a cost to perform all necessary inspections for the project based on the timeframes set forth in the Progress Schedule. The Contractor shall reimburse the District for quantities, which exceed the scheduled amounts of time.

1.46.2 If the Contractor uses a fabricator or supplier subject to DSA inspection or documentation from beyond a 100 mile radius of the Project Site, costs above and beyond those for the same inspections and documentation were it to occur within a 100 mile radius of the Project Site, including, but not limited to, out of state tests and inspections, per diem, travel, or the like, will be paid by the District and the District shall be reimbursed by the Contractor upon submittal by the District to the Contractor of the costs incurred.

1.47 Needless Requests for Information.

Any needless Request for Information (RFI) will be billed to the Contractor by the A/E team at the additional service rate contained in their respective contracts. A needless RFI is any request for which an answer is in the plans or specifications, or Contract related correspondence, prior to the date of the RFI. Needless punch list visits will be billed in the same way.

1.48 E-mail Address.

All parties shall have an Email address and be responsible for all correspondence

distributed via E-Mail. No Exceptions!

1.49 Service Charges.

Electrical, water, telephone, and other utility charges will be billed to the contract at the same rate paid by the Ventura County Community College District (VCCCD).

1.50 Material Substitutions.

Any and all material specification substitutions must be submitted to the District for approval no later than seven (7) days prior to the bid due date. Any substitutions submittal after that date will not be accepted or reviewed.

1.51 Electronic Schedule Files.

Pursuant to the requirements of the General Conditions under Article 7, the Contractor shall provide copies of project schedules submitted to the District on paper, including but not limited to, weekly, semi-monthly & monthly schedule updates, on compact discs, in the proper file format to function in the scheduling program provided by the Contractor to the District as required under Article 7 of the General Conditions.

1.52 Changes to the Work for Contractor Convenience.

Any changes to the Work resulting from a request by the Contractor to deviate from the approved Contract Documents or as a result of the Contractor not following the Contract Documents that requires additional architectural or engineering services, including but not limited to document submittal to the Division of State Architects (DSA), will be billed to the Contractor by the A/E team at the additional service rate contained in their respective contracts.

1.53 Mark-ups on Changes to the Work.

In the event of Changes to the Work, the mark-up for all general conditions, costs, overhead (including home and field office overhead), profit and bond, shall not exceed **Twenty Percent (20%)** of the direct actual costs of the performance of an additive Change, as determined in accordance with the provisions of Article 9.4 of the General Conditions. However, in the event that Contractor self-performs the entirety of the Change, the mark-up for all general conditions, costs, overhead (including home and field office overhead), profit and bond, shall not exceed **Fifteen Percent (15%)** of the direct actual costs of the performance of an additive Change, as determined in accordance with the provisions of Article 9.4 of the General Conditions. In addition, the mark-up shall include the actual, direct cost of the bond for such Change, not to exceed **Two Percent (2%)** of the direct, actual costs of the performance of the Change.

The foregoing limitation or mark-up shall apply regardless of the number of subcontractors, of any tier, performing any portion of such additive Change to the Work. In the event that the Work of such additive Change is performed in part by a subcontractor, Contractor agrees to allocate at least Ten Percent (10%) to such subcontractor, with no more than Five Percent (5%) to be allocated to the Contractor. In the event the Change is deductive, the District shall receive a credit equal to the value of the direct actual costs of the Work of the deductive Change plus Zero **(0%)** of such direct actual costs for all general conditions, overhead (including home and field office overhead), profit and bond.

1.54 Allowances.

The following allowances are in addition to the scope of the Work as defined in the

Contract Documents and the Contractor shall add all Allowances to complete the work and shall include the total Allowances amount in the Bid Proposal Lump Sum Amount (Refer to Bid Proposal, Section 00210).

List of Allowances

Item	Description	Amount (\$)
1	No Allowance included in this project	<i>[ENTER</i>
		<i>AMOUNTS]</i>
Total Allowances		

The District may utilize the above allowances up to the total amount during the course of construction by issuing a Work Order(s) to the Contractor. A deductive Change Order will be issued at the completion of the Work to return the entire balance of the unused allowances to the District, without application of any mark-up.

Upon incorporation of the Work described in each Work Order, the Contractor will be paid out of the Allowance fund as a line Item included in the Contractors payment application.

1.55 Inclement Weather Days.

Pursuant to Article 7.4.1 of the General Conditions, the number of Working Rain Days (including inclement weather) for this Contract is Fifteen (15) days.

1.56 District's Project Manager.

The District's Project Manager Moorpark College is
John Sinutko, Moorpark College Director of Facilities, Maintenance & Operation,
7075 Campus Rd., Moorpark, CA 93021, Phone: 805-378-1454.

[End Of Section]

TECHNICAL SPECIFICATIONS

Section 01000

1.01 GENERAL INFORMATION

A. Job Walk

All bidders are required to attend the job walk to be eligible to bid on this project.

B. Discrepancies

Where there are discrepancies between the General Conditions of the Ventura County Community College District and the Technical Specifications and Drawings, the General Conditions of the District shall take precedence.

C. Alternative Materials

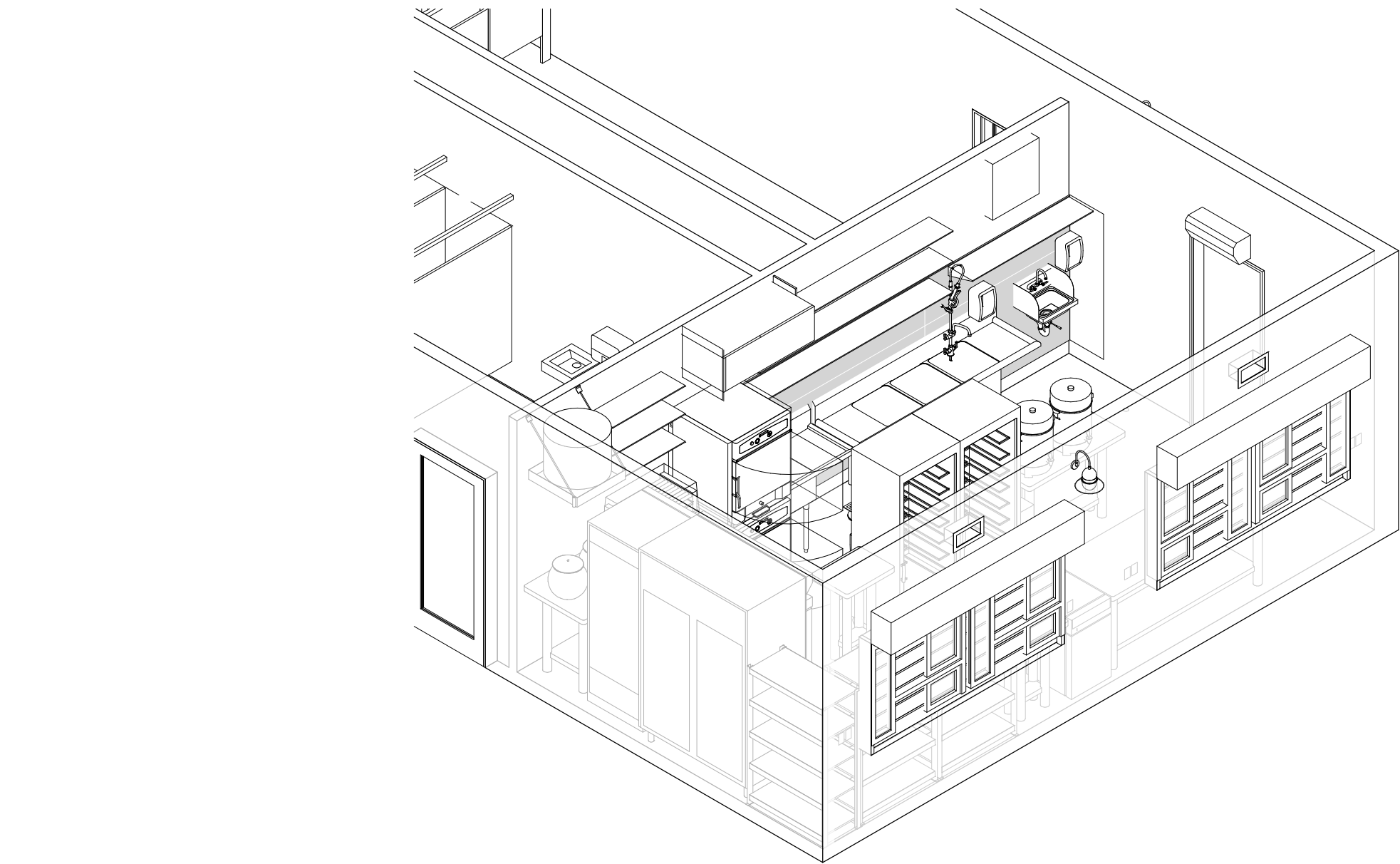
The use of a manufacturer, product brand name or make in the specifications is not intended to restrict bidders. The specifications establish the character or quality of the article desired. Alternative materials or goods on which other proposals are submitted must, in all cases, be equal or exceed in every detail to the item specified. Bid must clearly state the brand, make or model number. Alternative goods and materials are subject to review and must be approved prior to the date listed on the bid specifications. The District, for inspection and specification testing, may require samples of bid items. Samples furnished must be free of expense to the District. Samples furnished must also be identical in all respects to the products specified in the bid. Samples, if not destroyed by tests and if requested, will be returned at the bidder's expense. All goods furnished under this contract shall be newly manufactured goods. Used or reconditioned goods are prohibited, unless otherwise specified.

D. Questions Concerning Technical Specifications

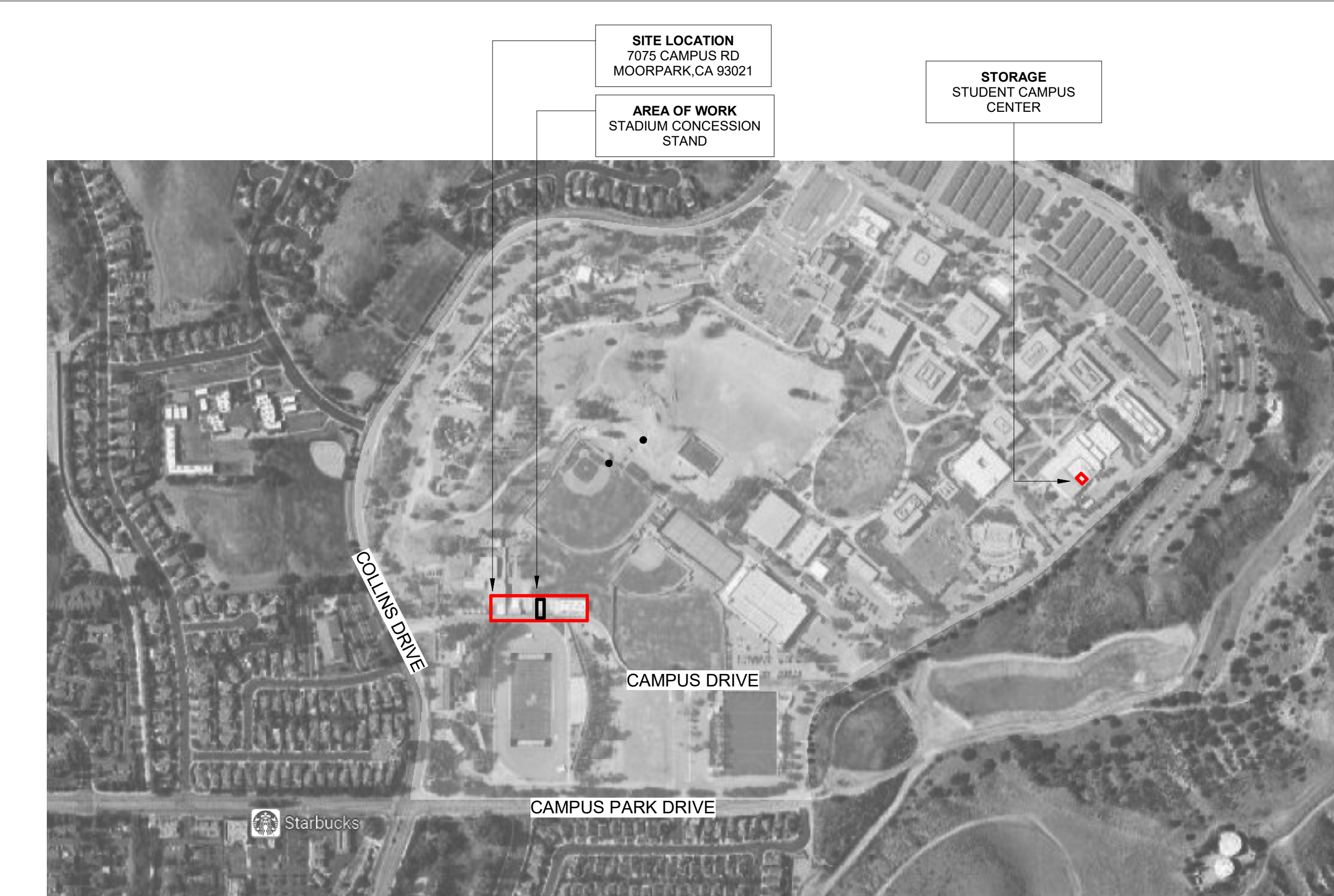
Technical specifications continue on the following pages. All questions regarding this bid and or specifications should be directed to the Purchasing Department of the District. Questions should be addressed by e-mail to the Purchasing Specialist handling this bid. Questions must be submitted by e-mail no later than February 16th, 2023.

E. Technical Specifications & Plan Drawings

The technical specifications and the plan drawings continue on the following pages and are considered a part of this bid package:
See attached technical specifications documents.



VICINITY MAP



STADIUM CONCESSION STAND BID#639

MOORPARK COLLEGE

7075 CAMPUS ROAD,
MOORPARK, CA 93021

SUBMITTAL: HEALTH DEPARTMENT PERMIT

DATE: 11/11/2022

SCOPE OF WORK

ALTERATION TO EXISTING STADIUM RESTROOM
BUILDING FOR BUILDOUT AS A CONCESSION STAND.

REPAIRS AT EXISTING DRY STORAGE IN CAMPUS
CENTER.

PROJECT TEAM

ARCHITECT
AMADOR WHITTLE ARCHITECTS, INC.
28328 AGOURA RD. #203
AGOURA HILLS, CA 93021
(805) 530 - 3938

STRUCTURAL ENGINEER
ORION STRUCTURAL GROUP
223 Thousand Oaks Blvd Suite 304,
Thousand Oaks, CA 91360

MECHANICAL ENGINEER
AE GROUP MECHANICAL
838 E Front St,
Ventura, CA 93001

ELECTRICAL ENGINEER
LUCCI & ASSOCIATES
3251 Corte Malpaso # 511,
Camarillo, CA 93012

SHEET NO. SHEET NAME

GENERAL
G000 TITLE SHEET
G001 GENERAL NOTES

ARCHITECTURAL
A1.00A SITE PLAN - MPC CAMPUS, STADIUM CONCESSION STAND
A1.00B SITE PLAN - CAMPUS CENTER
A1.01 FLOOR PLAN & RCP
A1.02 EQUIPMENT PLAN AND MENU
A1.03 INTERIOR ELEVATIONS - NORTH
A1.04 INTERIOR DETAILS - SOUTH
A1.05 EXTERIOR ELEVATION
A5.01 DETAILS
A502 CEILING NOTES
A503 CEILING DETAILS

MECHANICAL
MP1.0 MECHANICAL & PLUMBING NOTES & SCHEDULE
MP2.0 MECHANICAL & PLUMBING PLAN
MP2.1 FIELD HOUSE & CAMPUS CENTER PLUMBING PLAN
MP3.0 MECHANICAL & PLUMBING DETAILS

ELECTRICAL
E100 GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND DRAWING LIST
E101 INDOOR TITLE 24 PAGE 1
E102 INDOOR TITLE 24 PAGE 2
E110 SITE PLAN - ELECTRICAL EXISTING CONDITION
E200 ELECTRICAL SINGLE LINE DIAGRAM
E300 LIGHTING PLAN AND PHOTOMETRIC PLAN
E400 POWER AND COMMUNICATIONS PLAN
E401 FIELD HOUSE & CAMPUS CENTER HOT WATER HEATER POWER PLAN

FA1.01 FIRE ALARM GENERAL NOTES AND DEVICES LEGEND
FA1.02 FIRE ALARM DETAILS AND BATTERY CALCULATIONS
FA1.03 FIRE ALARM PLAN

DIVISION OF THE STATE ARCHITECT



7075 CAMPUS RD
MOORPARK, CA 93021
TEL: (805) 378 - 1400

PROJECT TITLE AND SCHOOL LOCATION

STADIUM CONCESSION
STAND BID#639

7075 CAMPUS ROAD, MOORPARK, CA
93021

COMMISSIONED ARCHITECT

AMADOR

28328 AGOURA RD, 203 | AGOURA HILLS CA, 91301 | 805-556-4334

CONSULTANT

STAMPS/SEALS



SHEET TITLE:

TITLE SHEET

PROJECT NO: 20-MPC-036 PROJECT ARCH: BA
DRAWN: LM CHECKED: BA
SHEET NUMBER:

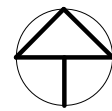
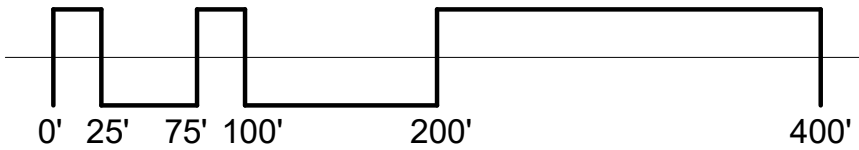
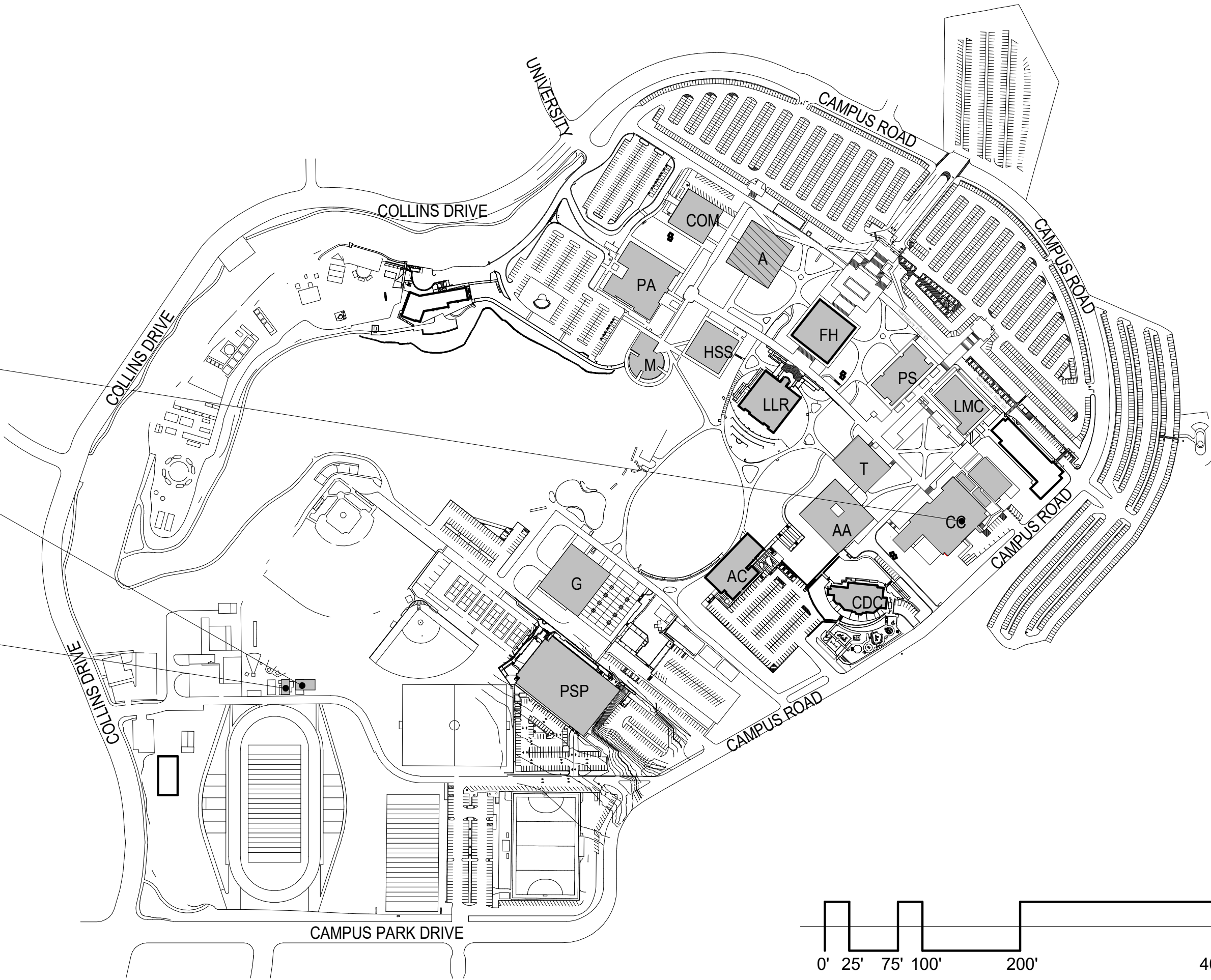
G000

DATE: 11/11/2022 SHEET: OF

CAMPUS CENTER
DRY STORAGE AREA, SEE A.1.00B

FIELD HOUSE
ADJACENT SERVICES, SEE 1/A.1.00A

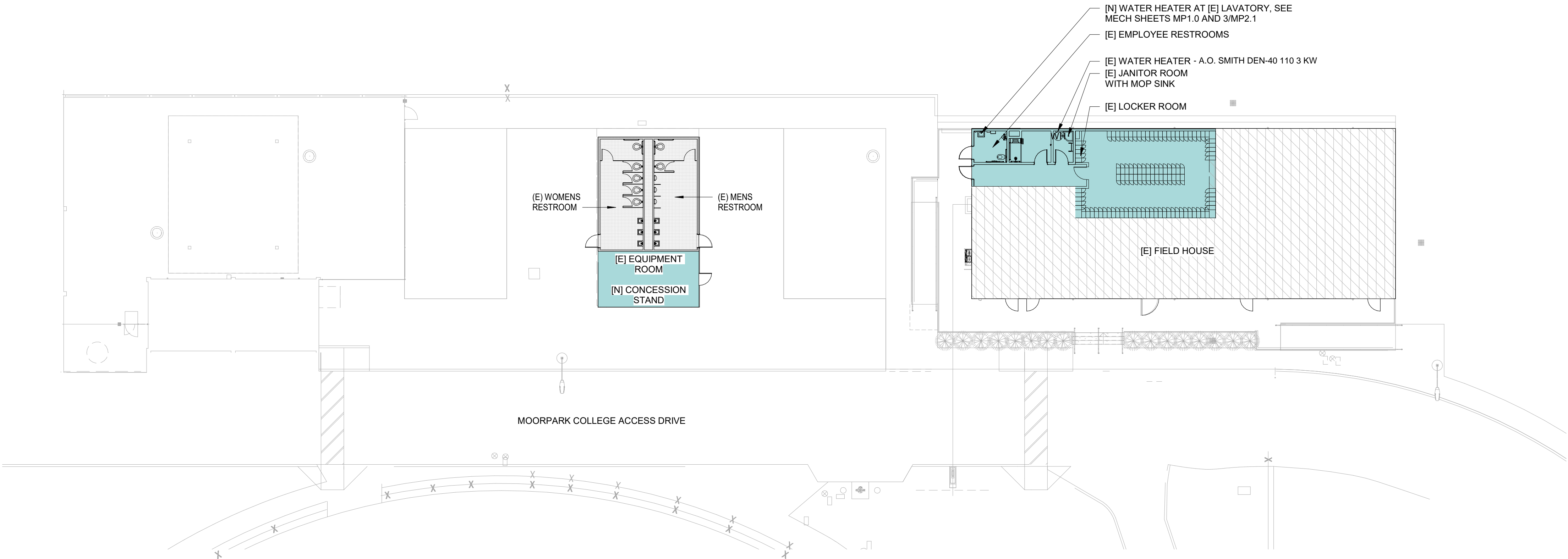
STADIUM RESTROOMS +
CONCESSION STAND
AREA OF WORK



MPC SITE PLAN

1" = 300'-0"

2



CONCESSION STAND SITE PLAN

1/16" = 1'-0"

1

DIVISION OF THE STATE ARCHITECT



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STAND BID#639

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AMADÒR

amador white architects, inc.
28328 AGOURA RD, 203 | AGOURA HILLS CA, 91301 | 805-556-4334

CONSULTANT

STAMPS/SEALS



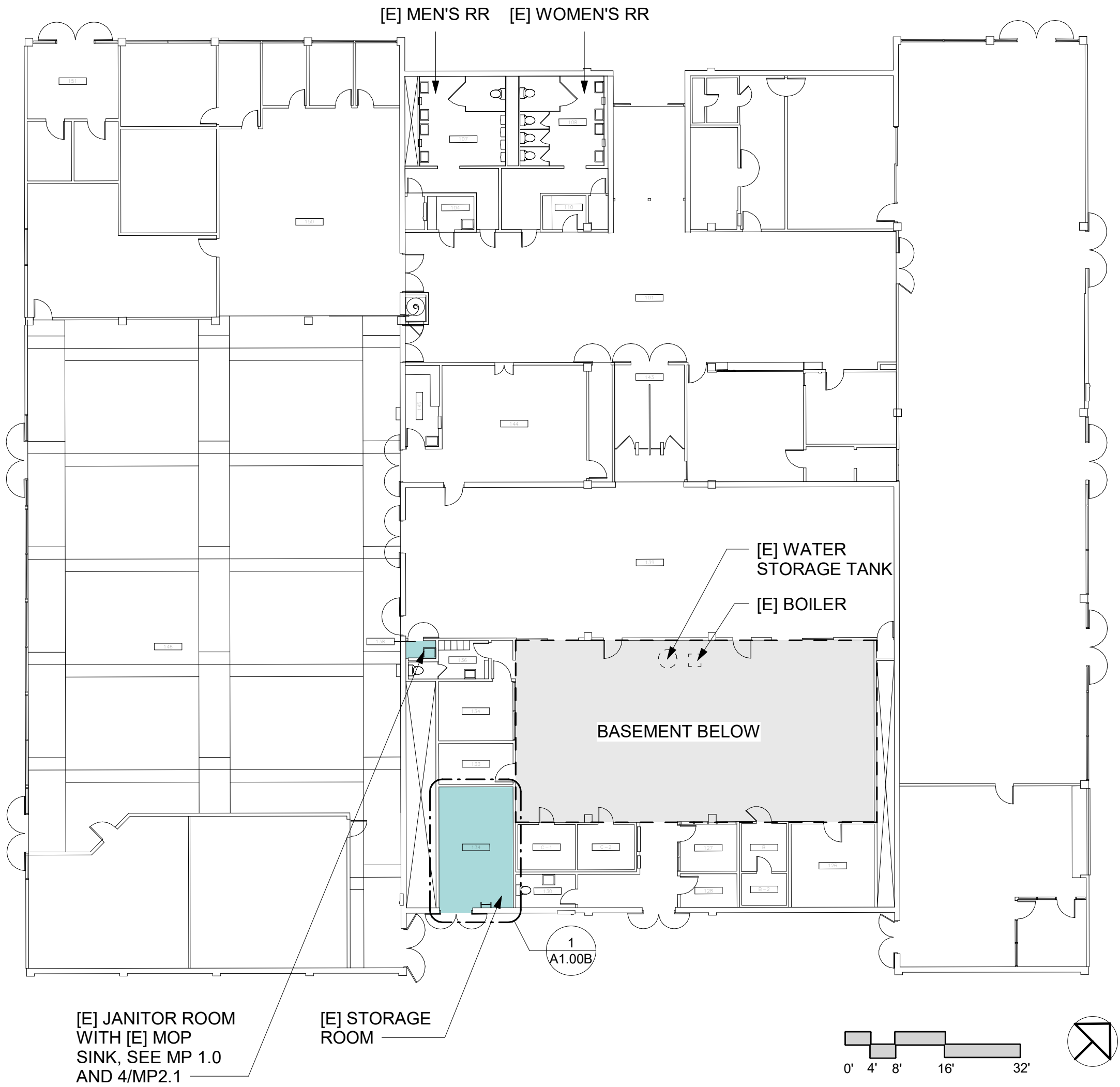
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SITE PLAN - MPC
CAMPUS, STADIUM
CONCESSION STAND

PROJECT NO: 20-MPC-036	PROJECT ARCH: Designer
DRAWN: Author	CHECKED: Checker
SHEET NUMBER:	

A1.00A

DATE: 11/11/2022	SHEET: ____ OF ____
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PLAN NOTES

- 3.01
5.03
9.04
9.05

9.06
12.01

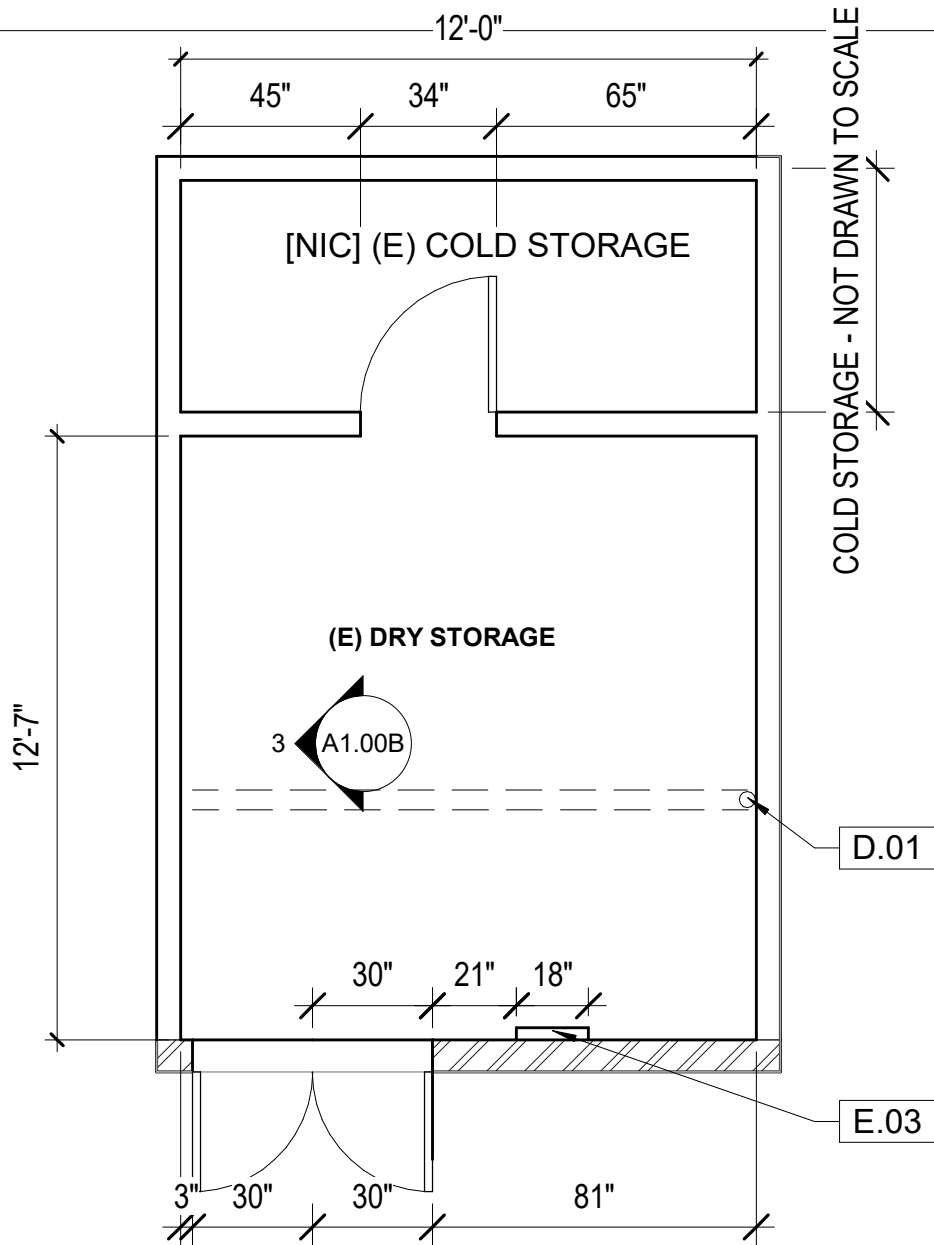
D.01
E.03
E.04
E.05
- CLEAN AND SEAL (E) CONCRETE FLOOR
(N) METAL TOPSET BASE, SEAL TOP AND BOTTOM, SEE 6/A5.01
PAINT (E) DRYWALL, PAINT SEMI-GLOSS ENAMEL
(N) 4.25" COVED SANITARY CERAMIC TILE ON BASE OF ALL NON-METAL WALLS, SEE 5/A5.01
PAINT SEMI-GLOSS ENAMEL (E) BRICK WALL
(N) 30.5' LINEAR SHELVING -- SEE A1.02 FOR EQUIPMENT SCHEDULE

DEMOLISH (E) 2-1/2" PIPE
(E) LADDER - KEEP ACCESS CLEAR
(E) LIGHT SWITCH
(E) ELECTRICAL OUTLET

CAMPUS CENTER - BUILDING PLAN

1/16" = 1'-0"

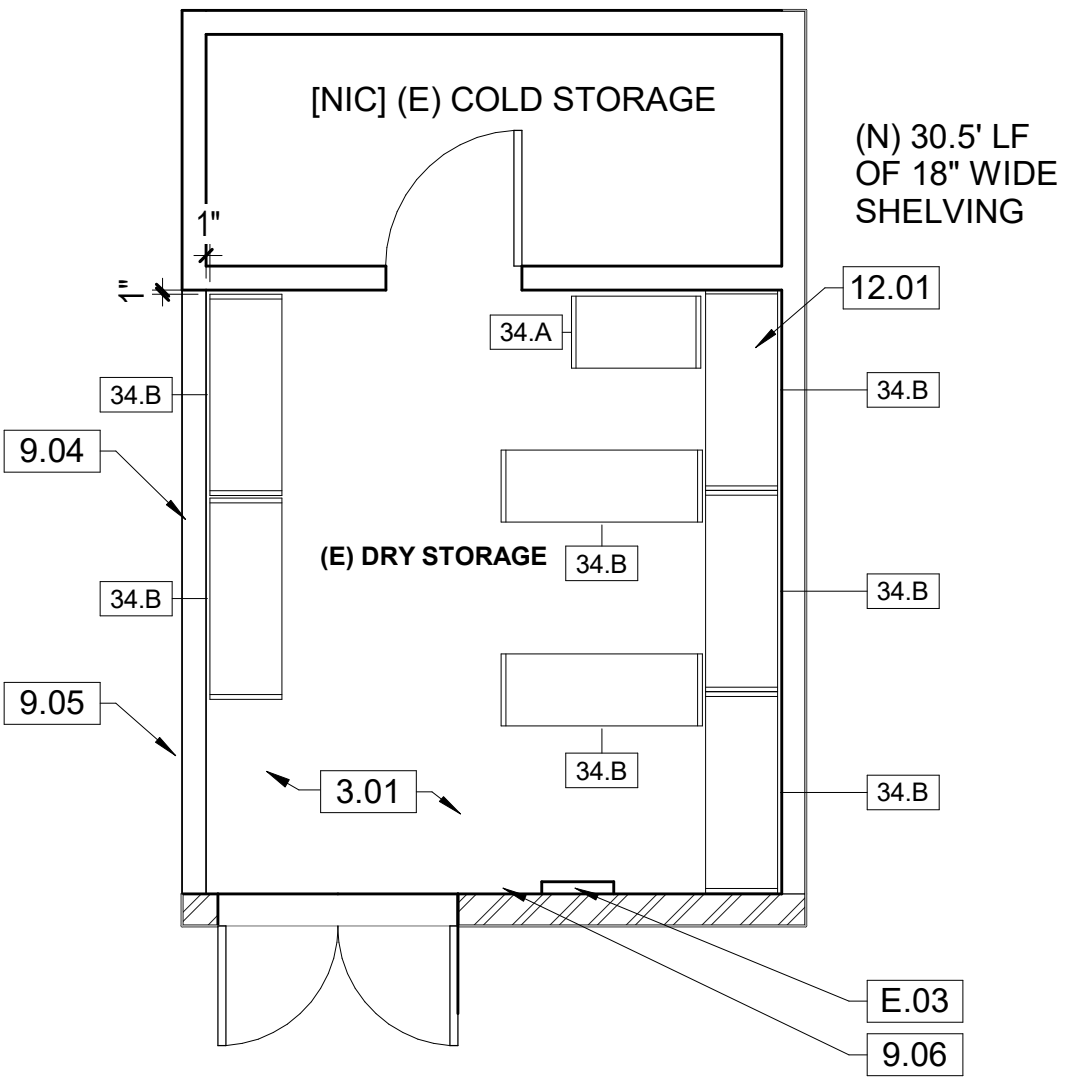
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DEMO - (E) DRY STORAGE

1/4" = 1'-0"

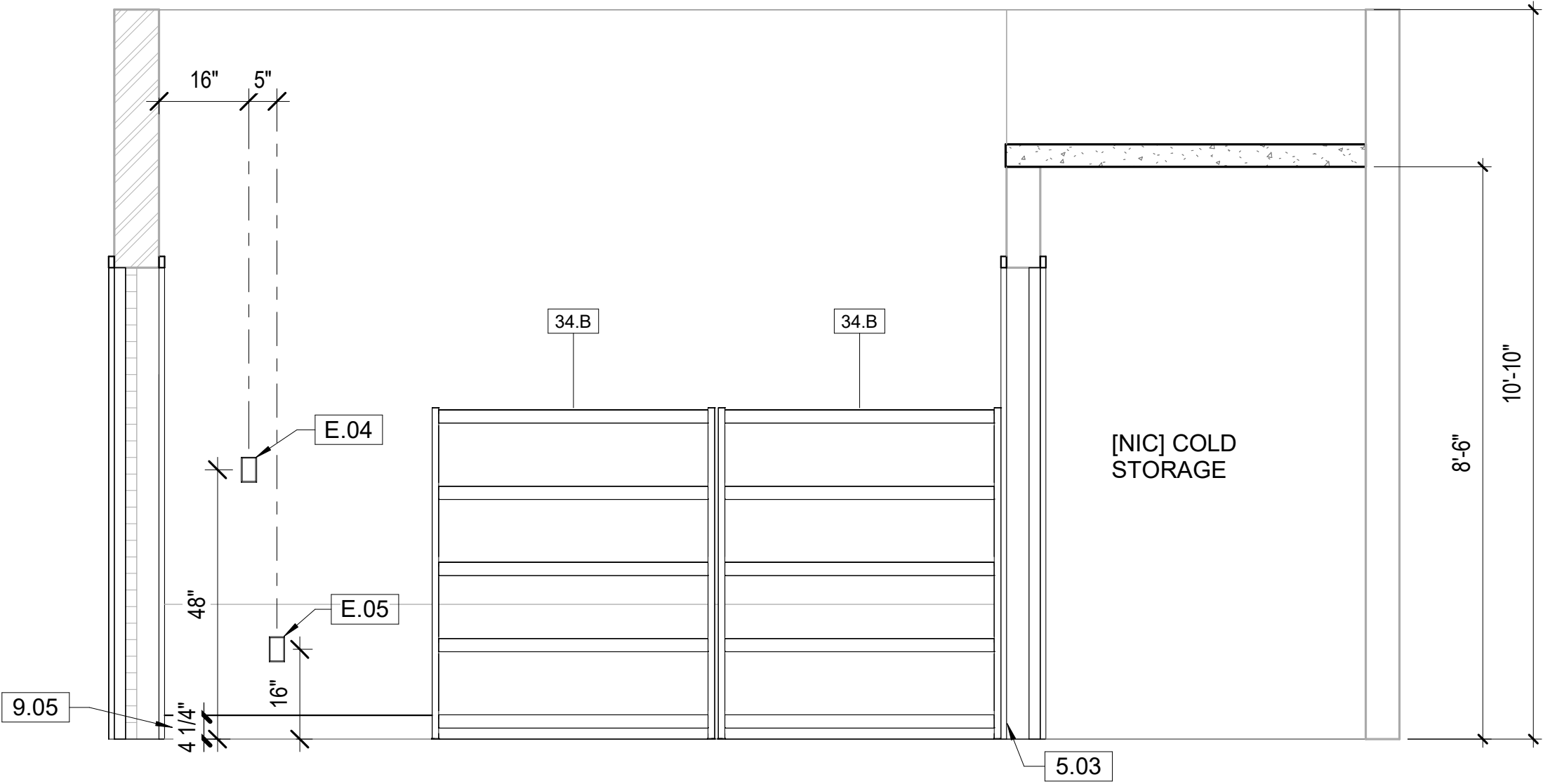
1



NEW - (E) DRY STORAGE

1/4" = 1'-0"

2



NEW ELEVATION - (E) DRY STORAGE AT CAMPUS CENTER

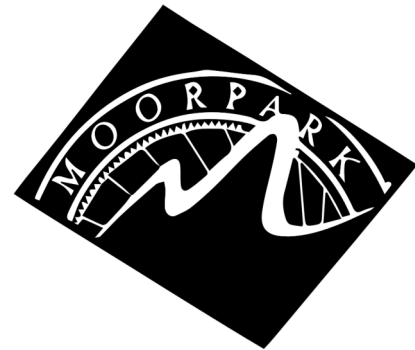
1/2" = 1'-0"

3

INTERIOR FINISH SCHEDULE - DRY STORAGE

ROOM NAME	ROOM #	FLOOR FINISH	FLOOR TRIM - BASE	FLOOR AREA	CEILING FINISH	WALL FINISH			
						NORTH	SOUTH	EAST	WEST
(E) DRY STORAGE	302	(N) SEAL ON (E) CONCRETE FLOOR	4-1/4" CERAMIC SANITARY COVED BASE	151.00 SF	(N) SEMI-GLOSS PAINT	(E) METAL WALL, (N) METAL TOPSET BASE, SEAL TOP AND BOTTOM	(N) PAINT SEMI-GLOSS ENAMEL ON (E) BRICK WALL, (N) CERAMIC SANITARY BASE	(N) PAINT SEMI-GLOSS ENAMEL, (N) CERAMIC SANITARY BASE	(N) PAINT SEMI-GLOSS ENAMEL ON (N) DRYWALL, (N) CERAMIC SANITARY BASE

DIVISION OF THE STATE ARCHITECT



MOORPARK
COLLEGE

7075 CAMPUS RD
MOORPARK, CA 93021
TEL: (805) 378 - 1400

PROJECT TITLE AND SCHOOL LOCATION

STADIUM CONCESSION
STAND BID#639

7075 CAMPUS ROAD, MOORPARK, CA
93021

COMMISSIONED ARCHITECT

AMADÒR

28328 AGOURA RD, 203 | AGOURA HILLS CA, 91301 | 805-556-4334
amador.white.architects, inc.

CONSULTANT

STAMPS/SEALS



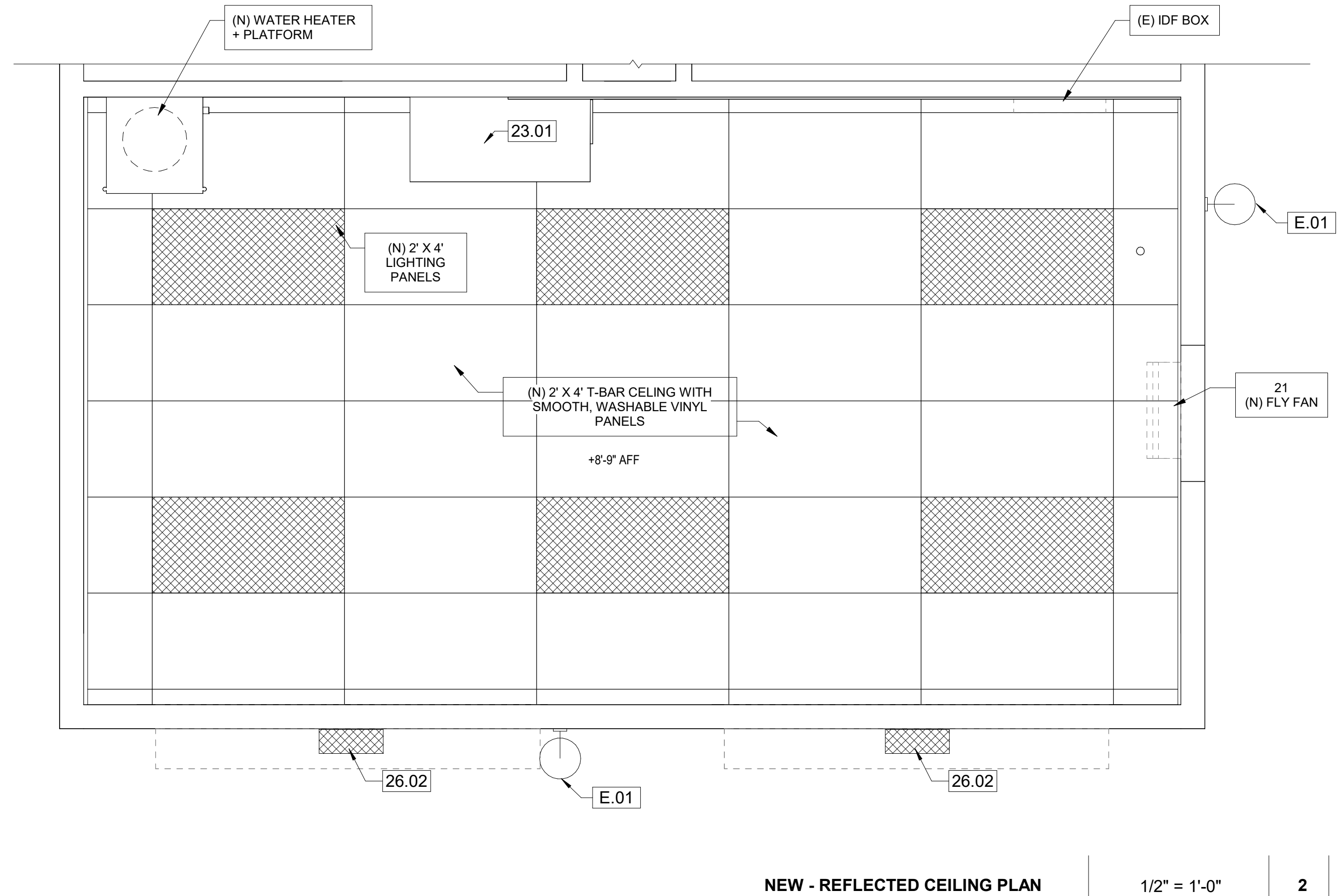
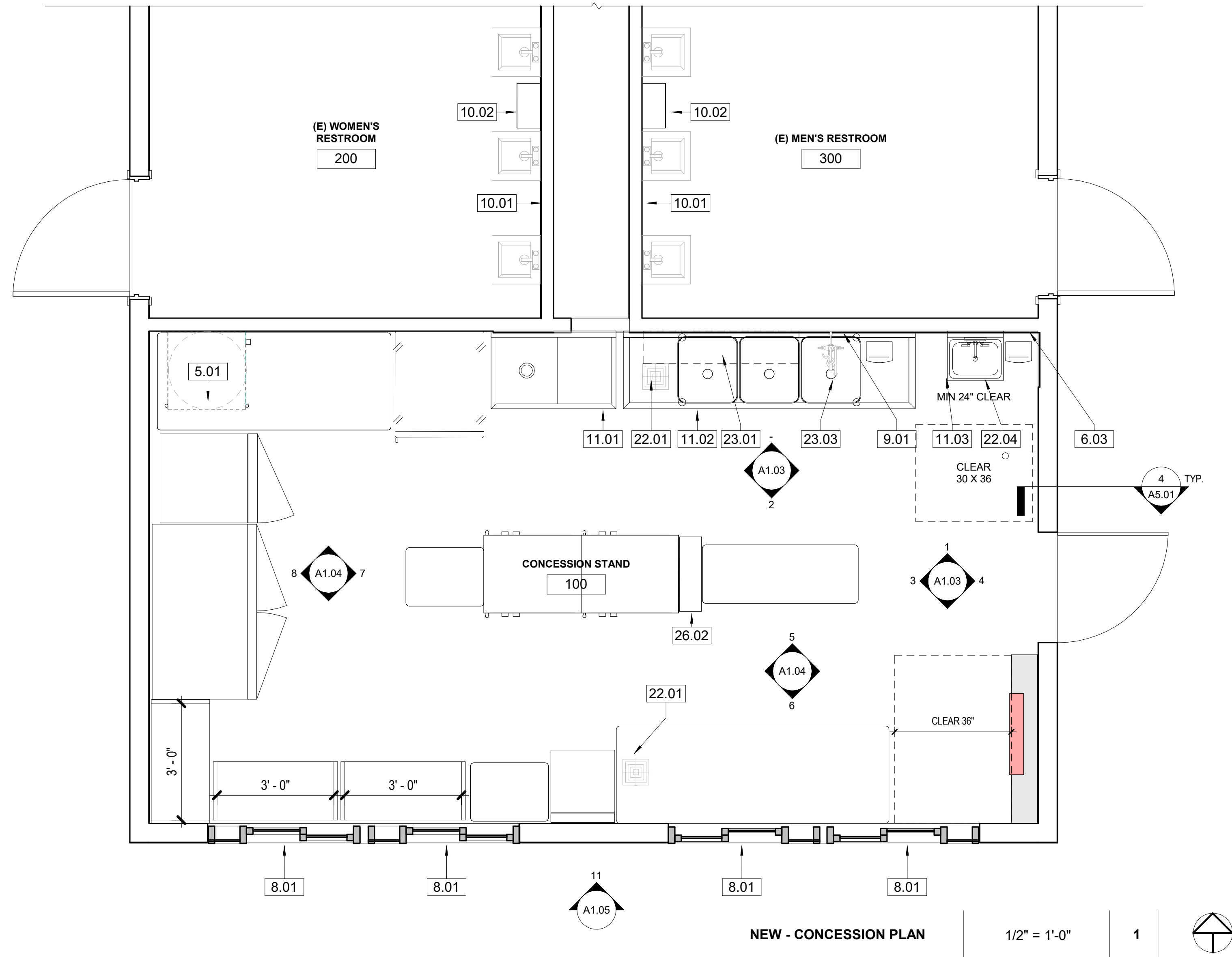
SHEET TITLE:

SITE PLAN - CAMPUS
CENTER

PROJECT NO: 20-MPC-036	PROJECT ARCH: Designer
DRAWN: Author	CHECKED: Checker
SHEET NUMBER:	

A1.00B

DATE: 11/11/2022	SHEET: ____ OF ____
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PLAN NOTES

- 5.01 (N) PLATFORM AND WATER HEATER. INSTALL (N) BLOCKING IN WALL AS REQUIRED TO ADEQUATELY SUPPORT NEW WEIGHT OF NEW WATER HEATER. FRP PANELS ON WALL BEHIND. PLATFORM TO BE 80" CLEAR OF FLOOR. SEE 5/MP 3.0
- 6.03 PROVIDE 1/2" PLYWD. SHEATHING BEHIND GYP. BD. ENTIRE NORTH WALL
- 8.01 (N) CLEAR ANODIZED ALUMINUM WINDOW WITH SELF-CLOSING OPENING NOT TO EXCEED 43 SQ IN. SEE DETAIL 1/A5.01
- 9.01 (N) FIBER - REINFORCED PLASTIC (FRP) PANELS, SEE SHEET A1.03 - FINISH SCHEDULE
- 10.01 (N) MOUNTED SIGN WITH HANDWASHING GRAPHIC THAT INDICATES "THIS SINK DESIGNATED FROM EMPLOYEE HANDWASHING WITH WARM WATER. EMPLOYEES MUST WASH HANDS BEFORE RETURNING TO WORK."
- 10.02 (N) ADA COMPLIANT WALL MOUNTED ELECTRIC HAND DRYER
- 11.01 (N) FOOD PREPARATION SINK [23] - MP1.0
- 11.02 (N) INSTALL 3-COMPARTMENT SINK [4] - SEE 5/MP3.0
- 11.03 (N) INSTALL DUAL STAINLESS STEEL SPLASH GUARD [25] AT HAND WASH SINK
- 22.01 (N) FLOOR DRAIN WITH TRAP PRIMER - FLUSH (N) EPOXY FLOOR COATING WITH LIP PER MANUFACTURER'S RECOMMENDATIONS
- 22.04 (N) INSTALL HAND WASHING SINK [5] - SEE MP.1
- 23.01 (N) HVAC - SEE MP.1
- 23.03 (N) HOT AND COLD WATER MIXING FAUCET - SEE MP.1
- 26.02 (N) 34" HIGH POWER WALL, SEE 3/A5.01 AND ELECTRICAL DOCS
- E.01 (E) LIGHTING FIXTURE TO REMAIN

GENERAL NOTE

EXISTING ROOM HAS EXPOSED WOOD STUD WALLS AND BATT INSULATION. ROOM SHALL RECEIVE 5/8" GYPSUM BOARD, PAINTED, THROUGHOUT. PROVIDE FRP PANELS WHERE INDICATED.

CEILING LEGEND

- 2' x 4' SUSPENDED ACOUSTICAL CEILING TILE SYSTEM W/ SMOOTH, WASHABLE FINISH, SEE SHEETS A502 & A503
- NO CEILING - OPEN TO STRUCTURE ABOVE
- EXISTING PLASTER CEILING
- GYPSUM BOARD
- 2' x 4' LIGHT FIXTURE, SEE ELEC. DWGS.
- SURFACE MOUNTED LIGHT FIXTURE, SEE ELEC. DWGS.
- SUSPENDED LIGHT FIXTURE, SEE ELEC. DWGS.
- ILLUMINATED EXIT LIGHT, SEE ELEC. DWGS.
- RECESSED DOWNLIGHT FIXTURE, SEE ELEC. DWGS.
- RECESSED DOWNLIGHT WALL WASHER FIXTURE, SEE ELEC. DWGS.
- HVAC - SUPPLY AIR GRILL, SEE MECH. DWGS.
- HVAC - RETURN AIR GRILL, SEE MECH. DWGS.
- HVAC - EXHAUST FAN, SEE MECH. DWGS.
- ROOF HATCH
- RECESSED COVE LIGHT FIXTURE
- CEILING HEIGHT

DIVISION OF THE STATE ARCHITECT



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PROJECT TITLE AND SCHOOL LOCATION

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amador.white.architects, inc.

CONSULTANT

STAMPS/SEALS



SHEET TITLE:

FLOOR PLAN & RCP

PROJECT NO: 20-MPC-036

PROJECT ARCH: BA

DRAWN: LM

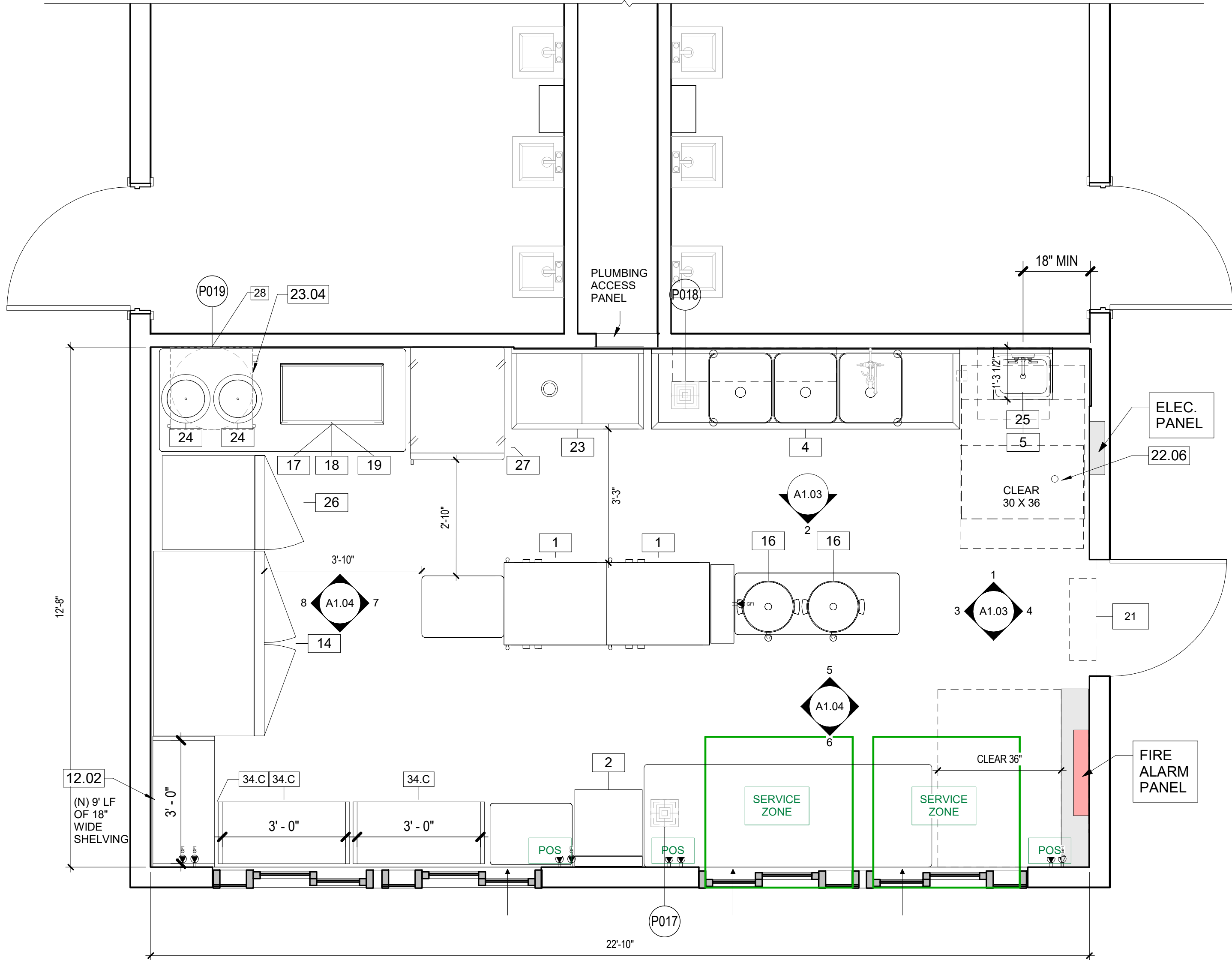
CHECKED: BA

SHEET NUMBER:

A1.01

DATE: 11/11/2022

SHEET: ____ OF ____



EQUIPMENT LAYOUT

1/2" = 1'-0"

1



PLUMBING FIXTURES

No.	DESCRIPTION
P012	FAUCET - WAREWASHING SINK
P017	FLOOR SINK, SEE MP1.0
P018	FLOOR SINK, SEE MP1.0
P019	(N) WATER HEATER - AO SMITH MODEL DS-20A,20 GALLON, 208 V, SEE MP1.0

PLAN NOTES

- 12.02 (N) 9' LINEAR SHELVING -- SEE A1.02 FOR EQUIPMENT SCHEDULE
22.06 (N) FLOOR CLEAN OUT - SEE MP2.0
23.04 (N) HOLDRITE 50-SWHP-W WALL MOUNTED RESTRAINING SYSTEM [28], SEE 5/MP3.0

MENU OF FOOD OFFERED

- PACKAGED CANDIES: including Snickers Bars, M&M, Twix, Kit Kat, Sour Patch Kids, Skittles.
- PACKAGED SNACKS: Bags of Lays Potato Chips, Fritos, Doritos, Pretzels, etc.
- COLD DRINKS: Bottled water, Powerade, sodas in cans (Coke, Diet Coke, Dr. Pepper, Sprite, Lemonade). Kept cold in **Refrigerator** [14].
- HOT DOGS, CHILI DOGS, NACHO DOGS: Hot dogs heated on **Hot Dog Grill** [19], kept warm in **Warming Oven** [1]; Chili dogs using pre-cooked and canned chili heated in **Crock Pot** [24]; Nacho dogs using cheese heated in **Crock Pots** [24]. Stored frozen packages in **Freezer** [26].
- HAMBURGERS / CHEESEBURGERS: Cooked from frozen in **Oven** [27], kept warm in **Warming Oven** [1]. Stored frozen packages in **Freezer** [26].
- PIZZA: Cooked from frozen in **Oven** [27], kept warm in **Warming Oven** [1]. Stored frozen packages in **Freezer** [26].
- CHURROS: Cooked from frozen in **Oven** [27], kept warm in **Warming Oven** [1]. Stored frozen packages in **Freezer** [26].
- PRETZEL: Cooked from frozen in **Oven** [27], kept warm in **Warming Oven** [1]. Served with Nacho Cheese from **Crock Pot** [24]. Stored frozen packages in **Freezer** [26].
- GUT BUSTER: Cheese and chili (warmed in **Crock Pot** [24]) poured in Fritos bag.
- CUP OF NOODLES: Packaged, served with hot water from **Coffee Urn** [16].
- HOT DRINKS: From **Coffee Urn** [16]: Coffee, Hot Cocoa, Hot Tea.

NO.	TYPE	DESCRIPTION	BASE	COUNT	Manufacturer	MODEL	WASTE	COMMENTS	BY CONTRACTOR					
									WATER LINES	DRAIN	WATTS	VOLTS	AMPS	PLUG
1	WARMING OVEN TWO SIDED	FLAV-R-FAVOR TALL DRY HOLDING CABINETS	CASTERS	2	HATCO	PFST-2X		NEW EQUIPMENT - OWNER FURNISHED & CONTRACTOR INSTALLED			1767W	120V	14.7	NEMA 5-15P
2	UNDERCOUNTER ICE MAKER	MANITOWOC 65/80 UNDERCOUNTER ICE MACHINE		1	MANITOWOC	NEO 65/80		NEW EQUIPMENT - OWNER FURNISHED & CONTRACTOR INSTALLED, SEE MP1.0	3/8" COLD WATER INLET	FLOOR DRAIN		115V	5.3	NEMA 5-15P
4	WAREWASHING SINK	ELKAY 16 GAUGE STAINLESS STEEL THREE COMPARTMENT SINK	20" LEGS	1	ELKAY	14-3C16X20-2-18X	FLOOR SINK	NEW EQUIPMENT - CONTRACTOR FURNISHED & INSTALLED, SEE MP1.0	CHICAGO FAUCET 445-DJ18E35ABCP	3 1/2" DRAIN				
5	HAND SINK	HS-2L WALL HUNG HAND WASH SINK W/1" RADIUS CORNERS	WALL MOUNTED	1	KROWNE	HS-2	DIRECT	NEW EQUIPMENT - CONTRACTOR FURNISHED & INSTALLED, SEE MP1.0	INCL. 4" CENTER WALL MOUNT FAUCET	1 1/2" DRAIN				
14	FOOD REFRIGERATOR	AVANTOCO A SERIES SOLID DOOR REACH IN REFRIGERATORS	6" LEGS	1	AVANTCO	178A49RHC		NEW EQUIPMENT - OWNER FURNISHED & CONTRACTOR INSTALLED			60 H	115V	4.56	NEMA 5-15P
16	COFFEE URN	WARING 55 CUP COFFEE URN BREWER W/ DUAL HEATER	COUNTERTOP	2	WARING	WCU550		NEW EQUIPMENT - OWNER FURNISHED & CONTRACTOR INSTALLED			60 H	120V		NEMA 5-15P
17	CANOPY SNEEZE GUARD		COUNTERTOP	1	NEMCO	8036-CGD		NEW EQUIPMENT - OWNER FURNISHED & CONTRACTOR INSTALLED						
18	MOIST HEAT HOT DOG BUN WARMER	NEMCO 8045W	COUNTERTOP	1	NEMCO	8036-BW		NEW EQUIPMENT - OWNER FURNISHED & CONTRACTOR INSTALLED			550W	120V	4.6	NEMA 5-15P
19	HOT DOG ROLLER GRILL 45	NEMCO 8045N	COUNTERTOP	1	NEMCO	8036		NEW EQUIPMENT - OWNER FURNISHED & CONTRACTOR INSTALLED			1520W	120 V	12.7	NEMA 5-15P
21	FLY FAN	CURTRON AP-2-24-1SS	WALL MOUNTED	1	CURTRON	LPN236-1UA-OB		NEW EQUIPMENT - CONTRACTOR FURNISHED & INSTALLED			60 H	120V		NEMA 5-15P
23	FOOD PREPARATION SINK	ELKAY SINGLE COMPARTMENT SCULLERY SINKS, RIGHT DRAINBOARD	20" LEGS	1	ELKAY	1C18X18-R-18X	FLOOR SINK WITH AIRGAP	NEW EQUIPMENT - CONTRACTOR FURNISHED & INSTALLED, SEE MP1.0	1-1/8" HOT AND COLD	3-1/2" DRAIN				
24	CROCK POT	AVANTCO S600 14 QT	COUNTERTOP	2	AVANTCO	S600		NEW EQUIPMENT - OWNER FURNISHED & CONTRACTOR INSTALLED			600W	110V		NEMA 5-15P
25	SPLASH GUARD KIT	FRANKLIN MACHINE PRODUCT 117-1474 14" X 10"	SINK MOUNTED	1	FRANKLIN MACHINE PRODUCT	117-1474		NEW EQUIPMENT - CONTRACTOR FURNISHED & INSTALLED						
26	STACKABLE FREEZER	TRUE T-23DT-HC	6" LEGS	1	TRUE	T-23DT-HC		NEW EQUIPMENT - OWNER FURNISHED & CONTRACTOR INSTALLED			60 H	115V	4.1	NEMA 5-15P
27	STACKED OVEN	WINSTON CHV7-05US-ST CVAP COOK/HOLD CABINET	6" LEGS	1	Winston	CHV7-05UV-ST		NEW EQUIPMENT - OWNER FURNISHED & CONTRACTOR INSTALLED			4992	208	24	6-30P
28	HOLDRITE WALL MOUNTED RESTRAINING SYSTEM	Quick Stand™ Wall Mounted Equipment Platform 24" X 24" X 4"-Welded Steel Drain		1	HOLDRITE®	30-SWHP-WM		NEW EQUIPMENT - CONTRACTOR FURNISHED & INSTALLED						
31.B	30" x 72"	REGENCY 18 GAUGE STAINLESS STEEL WORKTABLE	CASTERS	1	REGENCY	600T3072G		NEW EQUIPMENT - OWNER FURNISHED & CONTRACTOR INSTALLED						
31.C	30" x 84"	REGENCY 18 GAUGE STAINLESS STEEL WORKTABLE	CASTERS	1		600T3082G		NEW EQUIPMENT - OWNER FURNISHED & CONTRACTOR INSTALLED						
32.B	18" x 24"	REGENCY 18 GAUGE STAINLESS STEEL WORKTABLE	CASTERS	2	REGENCY	600T1824G		NEW EQUIPMENT - OWNER FURNISHED & CONTRACTOR INSTALLED						
32.D	18" X 48"	REGENCY 18 GAUGE STAINLESS STEEL WORKTABLE	CASTERS	1		600T1848G		NEW EQUIPMENT - OWNER FURNISHED & CONTRACTOR INSTALLED						
33.A	12" x 96"	REGENCY STAINLESS STEEL SOLID WALL WORK SHELVES	WALL MOUNTED	2	Bradley Corporation	600WS1296		NEW EQUIPMENT - OWNER FURNISHED & CONTRACTOR INSTALLED						
33.B	12" x 72"	REGENCY STAINLESS STEEL SOLID WALL WORK SHELVES	WALL MOUNTED	1	Bradley Corporation	600WS1272		NEW EQUIPMENT - OWNER FURNISHED & CONTRACTOR INSTALLED						
33.C	12" x 60"	REGENCY STAINLESS STEEL SOLID WALL WORK SHELVES	WALL MOUNTED	1	Bradley Corporation	600WS1260		NEW EQUIPMENT - OWNER FURNISHED & CONTRACTOR INSTALLED						
33.D	12" x 36"	REGENCY STAINLESS STEEL SOLID WALL WORK SHELVES	WALL MOUNTED	3	Bradley Corporation	600WS1236		NEW EQUIPMENT - OWNER FURNISHED & CONTRACTOR INSTALLED						
34.A	30" X 18" SHELF UNIT - 5 TIER	WIRE SHELVING - METRO SUPER ERECTA 2 SERIES METROSEAL		1	METRO	30"W x 18"D		NEW EQUIPMENT - OWNER FURNISHED & CONTRACTOR INSTALLED						
34.B	48" X 18" SHELF UNIT - 5 TIER	WIRE SHELVING - METRO SUPER ERECTA 2 SERIES METROSEAL		8	METRO	48" W X 18" D		NEW EQUIPMENT - OWNER FURNISHED & CONTRACTOR INSTALLED						
34.C	36" X 18" SHELF UNIT - 5 TIER	WIRE SHELVING - METRO SUPER ERECTA 2 SERIES METROSEAL		3	METRO	36"W x 18"D		NEW EQUIPMENT - OWNER FURNISHED & CONTRACTOR INSTALLED						
40	EXISTING SPLIT SYSTEM HVAC			1				EXISTING EQUIPMENT						

DIVISION OF THE STATE ARCHITECT



7075 CAMPUS RD
MOORPARK, CA 93021
TEL: (805) 378 - 1400

PROJECT TITLE AND SCHOOL LOCATION

STADIUM CONCESSION
STAND BID#639

7075 CAMPUS ROAD, MOORPARK, CA
93021

COMMISSIONED ARCHITECT

AMADÒR

28328 AGOURA RD, 203 | AGOURA HILLS CA, 91301 | 855-556-4334
amador@amadorarchitects.com

CONSULTANT

STAMPS/SEALS



12/20/2022

SHEET TITLE:

EQUIPMENT PLAN AND
MENU

PROJECT NO: 20-MPC-036

PROJECT ARCH: BA

DRAWN: LM

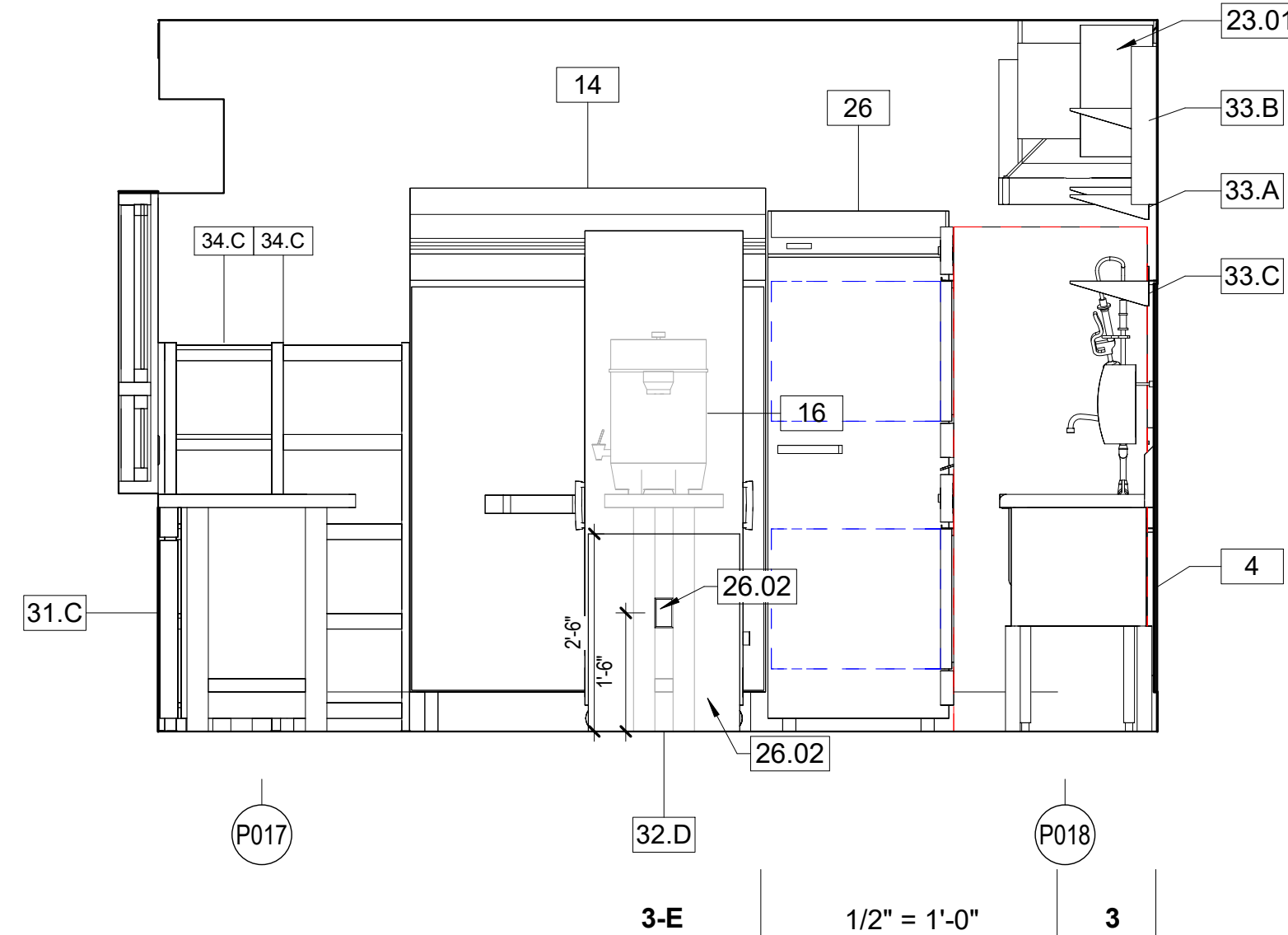
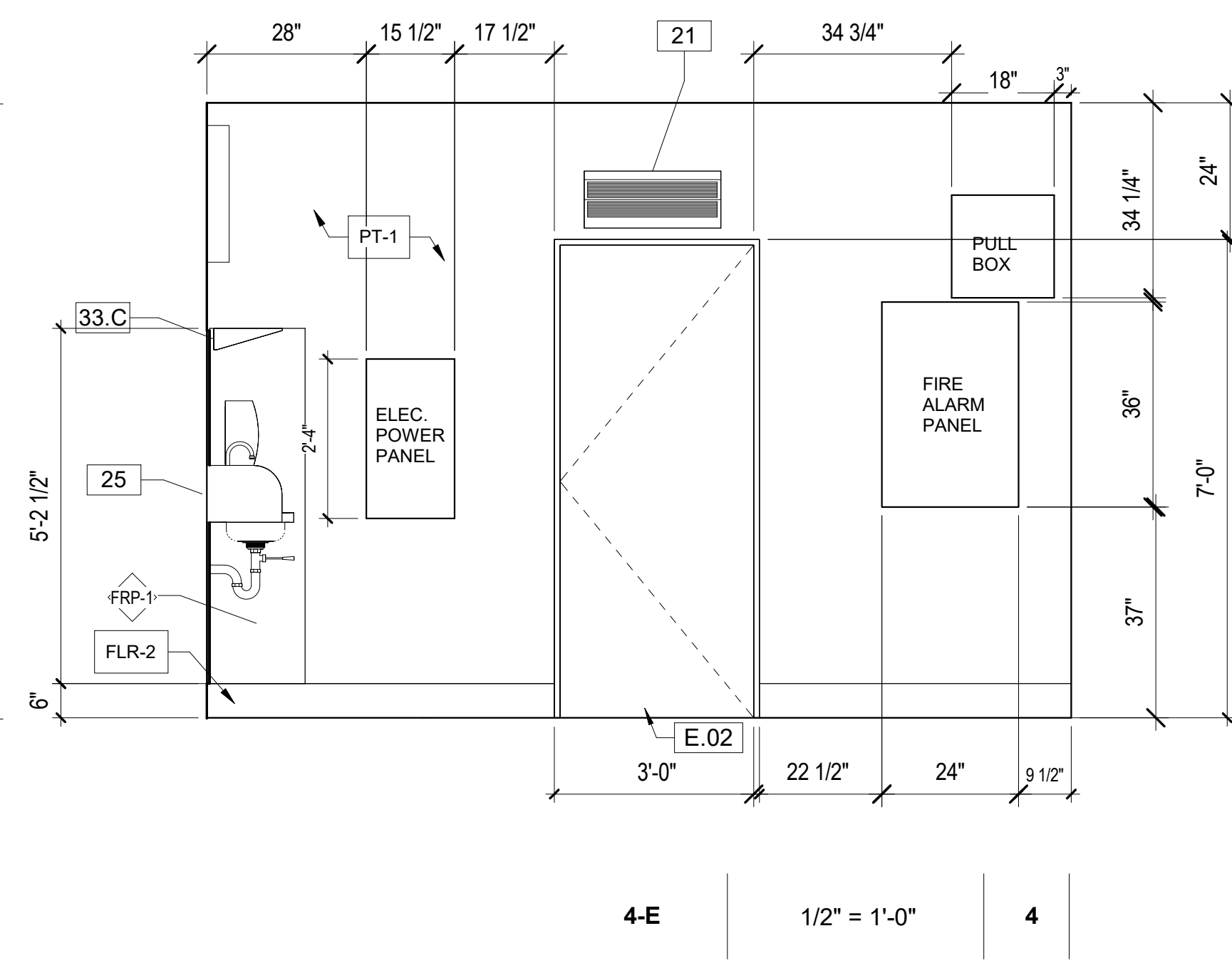
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SHEET NUMBER:

A1.02

DATE: 11/11/2022

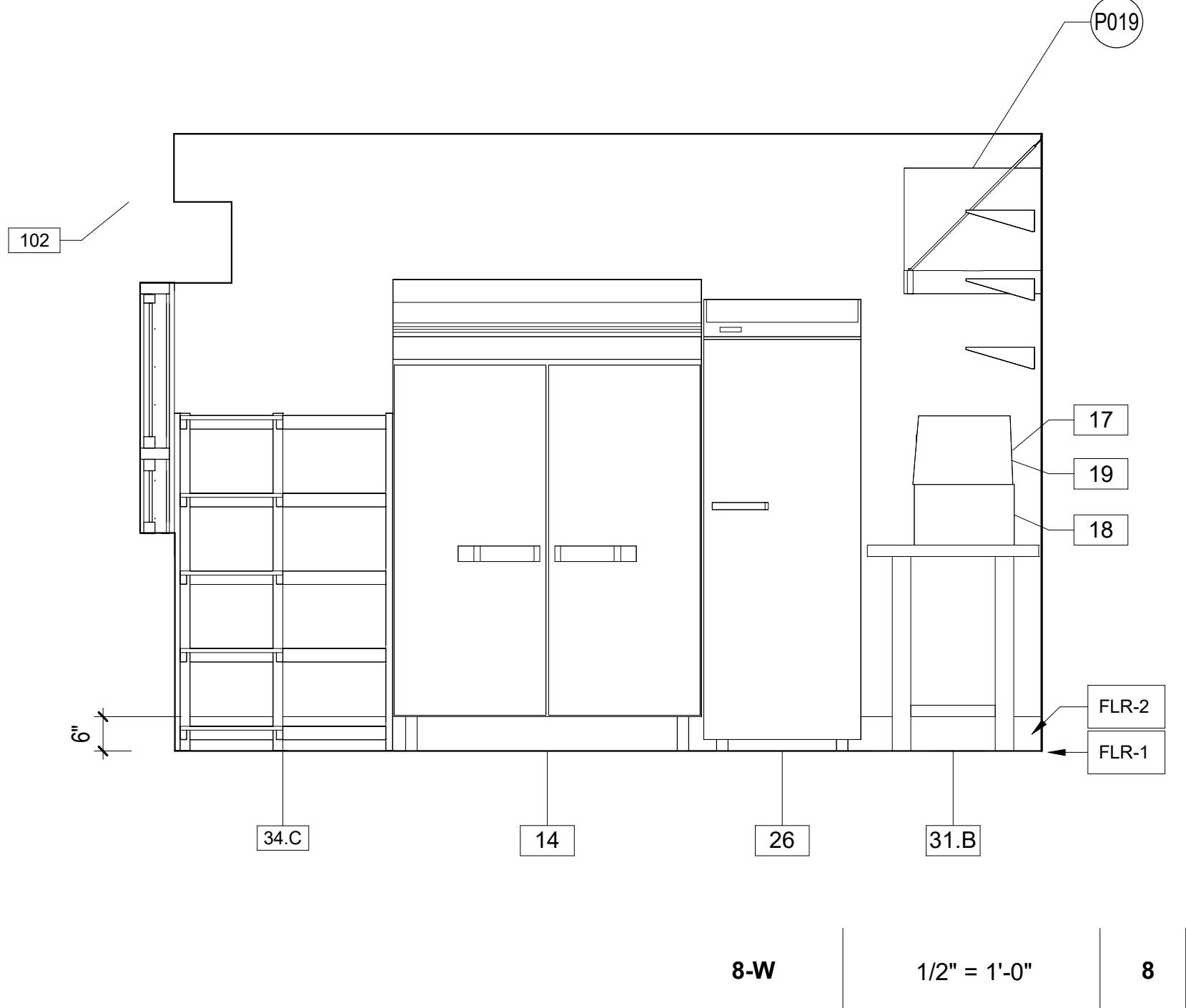
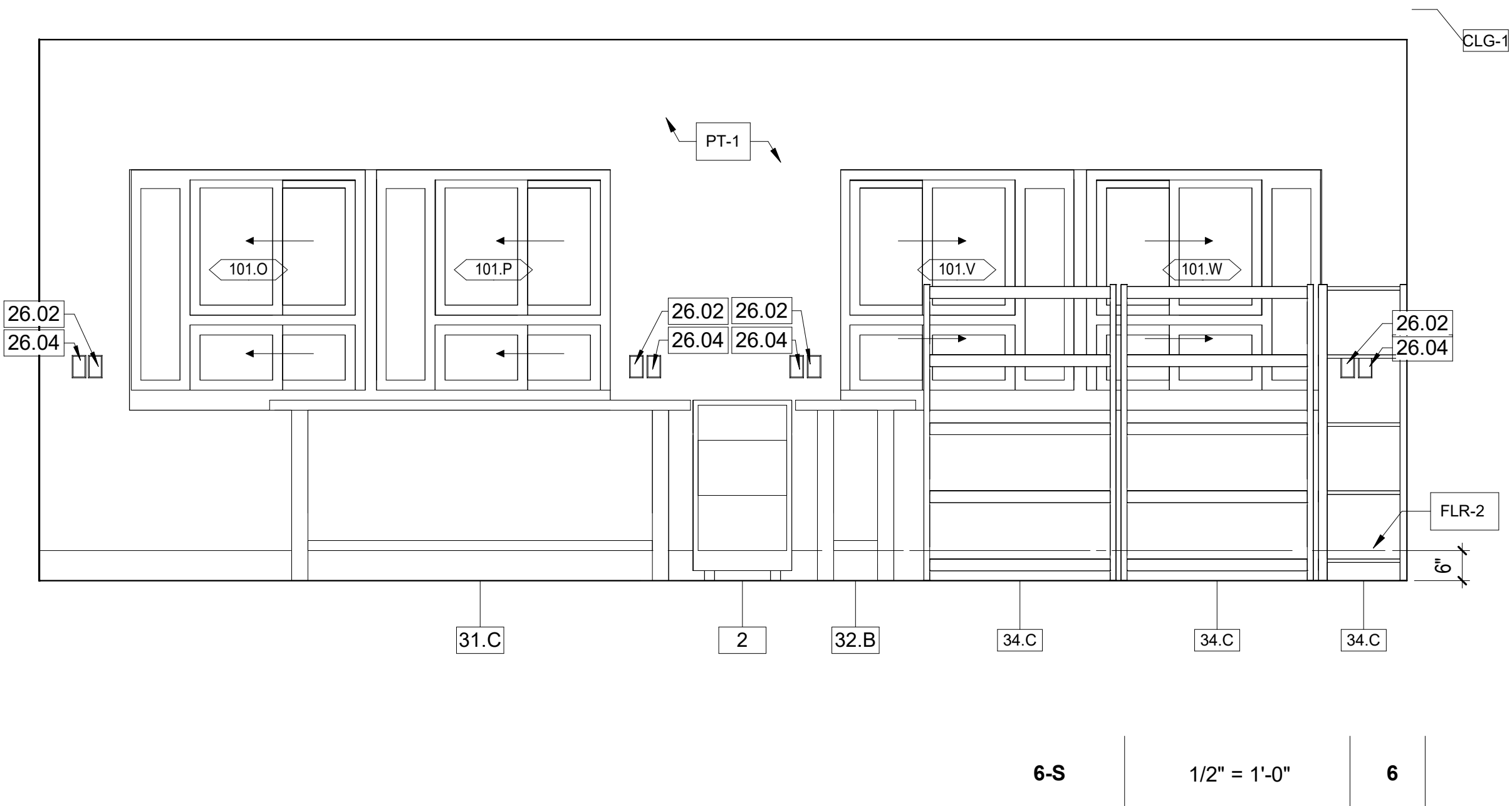
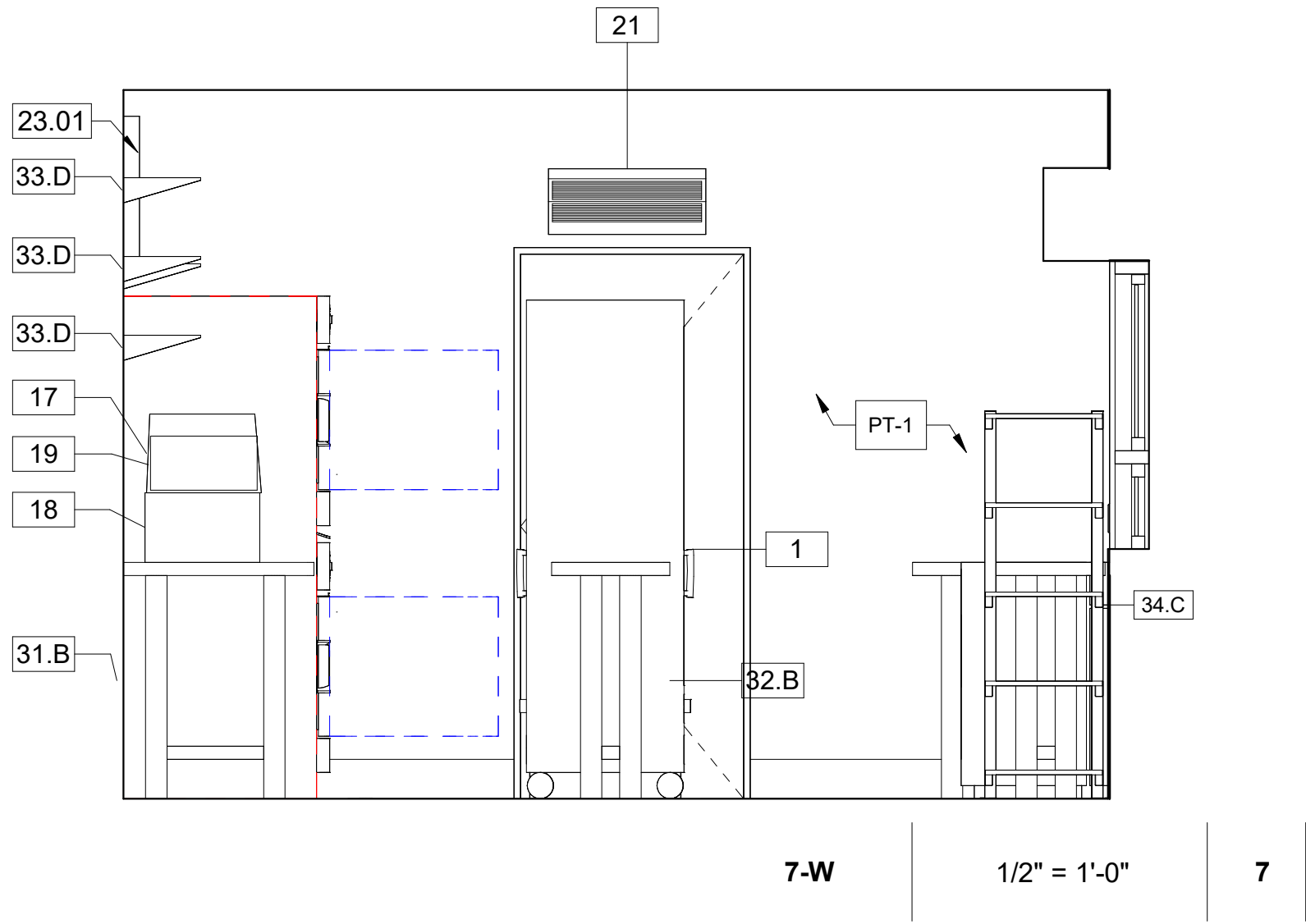
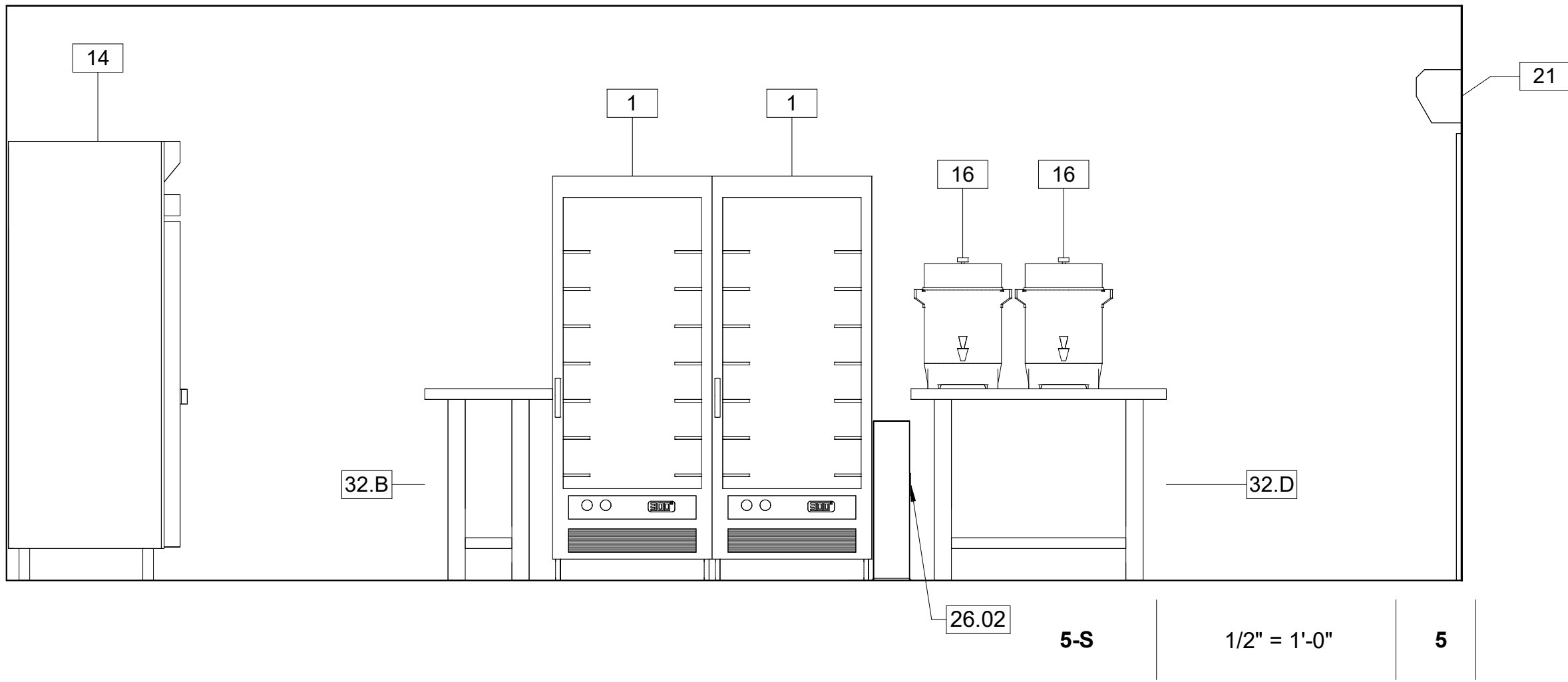
SHEET: ____ OF ____



PLUMBING FIXTURES	
No.	DESCRIPTION
P012	FAUCET - WAREWASHING SINK
P017	FLOOR SINK, SEE MP1.0
P018	FLOOR SINK, SEE MP1.0
P019	(N) WATER HEATER - AO SMITH MODEL DS-20A, 20 GALLON, 208 V. SEE MP1.0

1. ENSURE SURFACES TO RECEIVE FINISHES ARE CLEAN, TRUE AND FREE FROM IRREGULARITIES. DO NOT PROCEED WITH WORK UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.
2. NO FINISH SUBSTITUTIONS MAY BE MADE W/O PRIOR WRITTEN AUTHORIZATION FROM THE ARCHITECT.
3. ALL FINISHES SHALL BE APPLIED IN STRICT ACCORDANCE W/ MANUFACTURER'S SPECIFICATIONS.
4. GENERAL CONTRACTOR (G.C.) TO PROVIDE TEMPORARY PROTECTION FOR INSTALLED FINISHES AS WORK PROGRESSES.
5. GENERAL CONTRACTOR SHALL SUBMIT THE 3 SAMPLES OF ALL FINISHES TO ARCHITECT FOR APPROVAL PRIOR TO INSTALLATION.
6. ALL PAINT SHALL BE APPLIED IN ACCORDANCE W/ THE MANUFACTURER'S SPECIFICATION FOR THAT PARTICULAR SURFACE.
7. GYPSUM BOARD WALLS AND CEILINGS SCHEDULED TO BE PAINTED SHALL BE LEVEL 5 FINISH.
8. ALL WALLS, CEILINGS, DOORS AND TRIMS SCHEDULED TO RECEIVE PAINT SHALL BE PATCHED AND PREPARED TO RECEIVE A MINIMUM ONE (1) PRIMER COAT & TWO (2) COATS OF PAINT. FINISH SHALL HAVE CONSISTENT COVERAGE, FREE OF ROLLER OR BRUSH MARKS.
9. PAINTING SUBCONTRACTOR SHALL EXAMINE WALLS TO ENSURE PROPER PREPARATION BEFORE APPLICATION. BEGINNING WORK IMPLIES ACCEPTANCE OF THEIR CONDITION.
10. ALL METAL ACCESS DOORS SHALL BE PAINTED TO MATCH ADJACENT WALL OR CEILING FINISH. ANY GRAPHICS ON EXISTING DOORS SHALL BE REPAINTED OR REAPPLIED TO MATCH EXISTING.
11. FLOORING SHALL MEET ALL CURRENT NON-SLIP STANDARDS & REQUIREMENTS (WET & DRY CONDITION) SPECIFIED BY APPLICABLE CODES &/OR AUTHORITIES. CONTRACTOR SHALL PROVIDE NON-SUP COATINGS AS NECESSARY TO MEET THESE REQUIREMENTS.

MATERIALS LIST					
TAG	MATERIAL	MANUFACTURER	STYLE	COLOR	REMARKS
CLG-1	(N) T-BAR CEILING WITH WASHABLE VINYL TILES			WHITE	
FLR-1	(N) TROWELED EPOXY FLOOR COATING - 3/16" MIN. THICKNESS	TERA-LITE	TERA-GEM III	LIGHT GREY	WITH INTEGRAL 3/8" RADIUS COVERED BASE & CLEAR COAT SEALER
FLR-2	(N) 6" TROWELED EPOXY BASE, SEE DETAIL 2/A5.01				
FRP-1	FIBERGLASS REINFORCED WALL PANELS	MARLITE	SYMMETRIX SCORED PANEL WITH SANI-COAT	C 100-G63 WHITE	PROVIDE MANUFACTURER RECOMMENDED EDGES, CORNERS & TRIM. WHITE TO MATCH PANELS.
PT-1	INTERIOR PAINT	DUNN EDWARDS	SEMI GLOSS	WHITE	



INTERIOR ELEVATIONS EQUIPMENT

NO.	TYPE	COUNT
1	WARMING OVEN TWO SIDED	2
2	UNDERCOUNTER ICE MAKER	1
4	WAREWASHING SINK	1
5	HAND SINK	1
14	FOOD REFRIGERATOR	1
16	COFFEE URN	2
17	CANOPY SNEEZE GUARD	1
18	MOIST HEAT HOT DOG BUN WARMER	1
19	HOT DOG ROLLER GRILL 45	1
21	FLY FAN	1
23	FOOD PREPARATION SINK	1
24	CROCK POT	2
25	SPLASH GUARD KIT	1
26	STACKABLE FREEZER	1
27	STACKED OVEN	1
28	HOLDRITE WALL MOUNTED RESTRAINING SYSTEM	1
31.B	30" x 72"	1
31.C	30" x 84"	1
32.B	18" x 24"	2
32.D	18" X 48"	1
33.A	12" x 96"	2
33.B	12" x 72"	1
33.C	12" x 60"	1
33.D	12" x 36"	3
34.A	30" X 18" SHELF UNIT - 5 TIER	1
34.B	48" X 18" SHELF UNIT - 5 TIER	8
34.C	36" X 18" SHELF UNIT - 5 TIER	3
40	EXISTING SPLIT SYSTEM HVAC	1

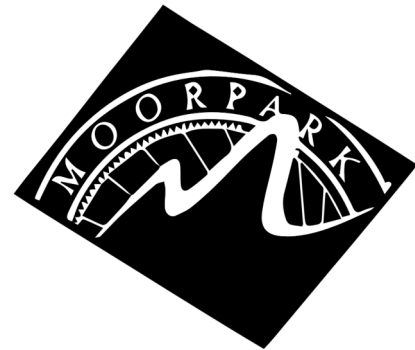
PLUMBING FIXTURES

No.	DESCRIPTION
P012	FAUCET - WAREWASHING SINK
P017	FLOOR SINK, SEE MP1.0
P018	FLOOR SINK, SEE MP1.0
P019	(N) WATER HEATER - AO SMITH MODEL DS-20A,20 GALLON, 208 V, SEE MP1.0

PLAN NOTES

- 23.01 (N) HVAC - SEE MP.1
26.02 (N) 34" HIGH POWER WALL, SEE 3/A5.01 AND ELECTRICAL DOCS
26.04 POINT OF SALE LOCATION: (N) ETHERNET, SEE ELECTRICAL

DIVISION OF THE STATE ARCHITECT



MOORPARK
COLLEGE

7075 CAMPUS RD
MOORPARK, CA 93021
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PROJECT TITLE AND SCHOOL LOCATION

**STADIUM CONCESSION
STAND BID#639**

7075 CAMPUS ROAD, MOORPARK, CA
93021

COMMISSIONED ARCHITECT

AMADÒR

28328 AGOURA RD, 203 | AGOURA HILLS CA, 91301 | 855-556-4334
amador whittle architects, inc.

CONSULTANT

STAMPS/SEALS



SHEET TITLE:

INTERIOR DETAILS -
SOUTH

PROJECT NO: 20-MPC-036

PROJECT ARCH: BA

DRAWN: LM

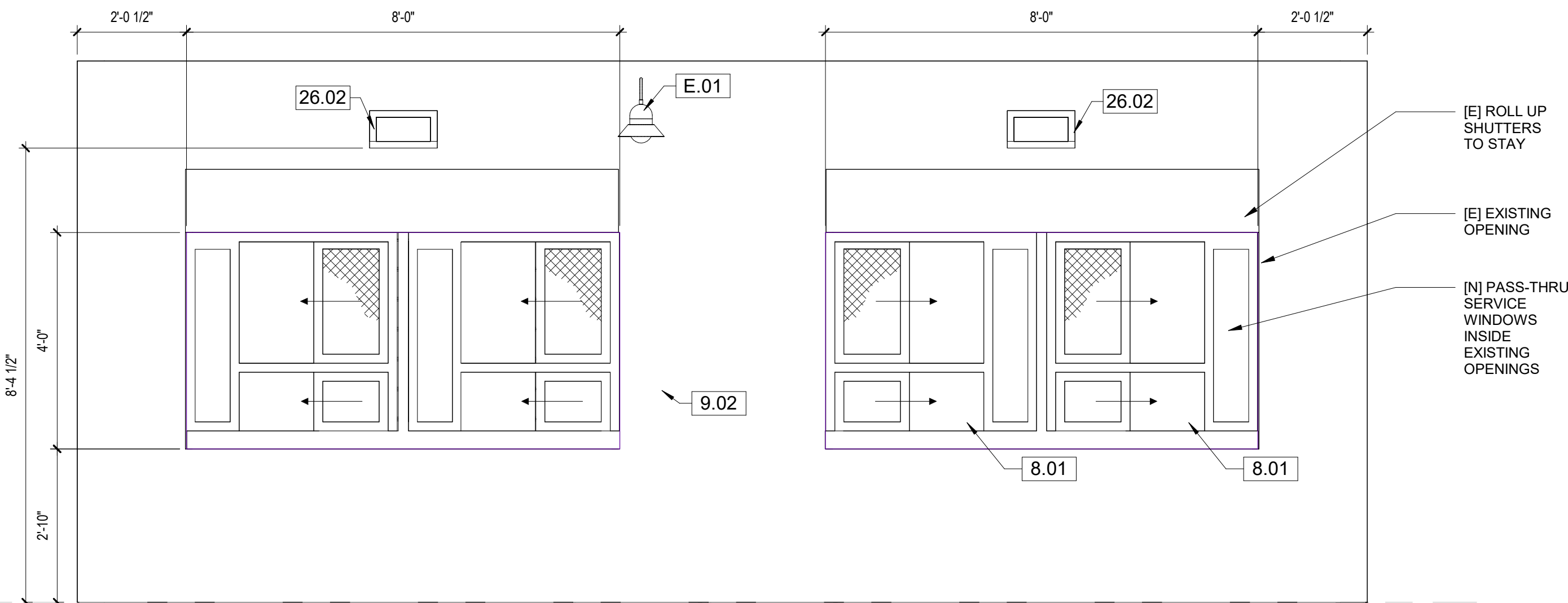
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SHEET NUMBER:

A1.04

DATE: 11/11/2022

SHEET: ____ OF ____



NEW - EXTERIOR ELEVATION

1/2" = 1'-0"

11

PLAN NOTES

- 8.01 (N) CLEAR ANODIZED ALUMINUM WINDOW WITH SELF-CLOSING OPENING NOT TO EXCEED 43 SQ IN. SEE DETAIL 1/A5.01
9.02 (E) EXTERIOR FINISH TO REMAIN
26.02 (N) 34" HIGH POWER WALL, SEE 3/A5.01 AND ELECTRICAL DOCS
E.01 (E) LIGHTING FIXTURE TO REMAIN

CRL DELUXE SERVICE WINDOWS

MORE CHOICES
crlaurence.com/scdw-windows

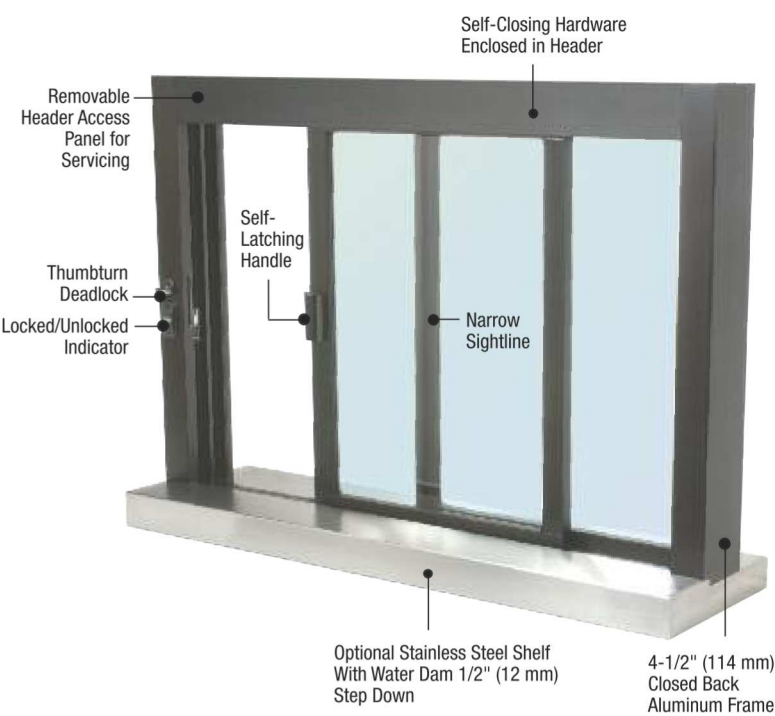
CRL SCDW Series Self-Closing Deluxe Sliding Service Windows

- Each Window is Custom Fabricated to Your Specifications
- One Sliding Panel and One Fixed Panel Configuration
- Optional Sill Conditions Available

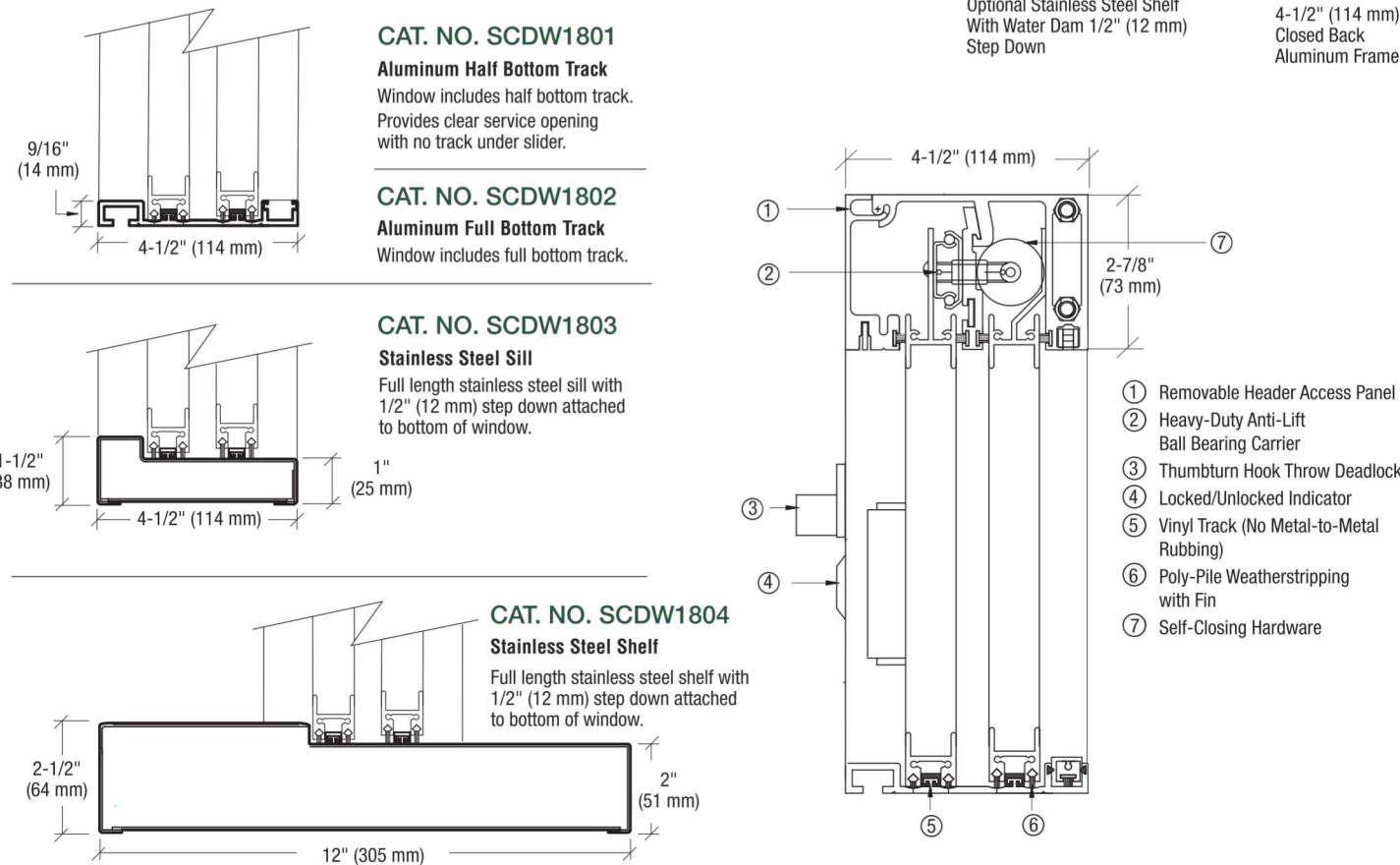


C.R. Laurence "SCDW" Series Service Windows incorporate the self-closing feature typically required by the fast food industry. These high quality windows are manufactured for interior or exterior, high or low usage applications. Self-Closing function is provided with high quality components designed for trouble-free operation.

Since each unit is custom built to your specifications, we will work with you to design a unit that best suits the requirements of the installation. Glazing and sill conditions will be discussed, and our Transaction Hardware professionals will help you select the options that will result in a window that meets your customers' needs and expectations.



Sill Conditions Available



go to crlaurence.com to search for **scdw-windows** or enter the Catalog Number for complete product information

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CRL DELUXE SERVICE WINDOWS

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CRL SCDW Series Self-Closing Deluxe Sliding Service Windows (XO or OX)

- Each Unit is Custom Fabricated to Fit Opening
- One Fixed and One Sliding Panel Configurations
- Self-Closing Mechanism and Self-Latching Handle Included
- Removable Header Access Panel for Easy Servicing



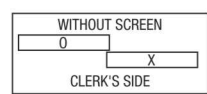
The SCDW Series Self-Closing Deluxe Sliding Service Window is a top-hung unit with a self-closing mechanism that closes and latches automatically when the window is released. For interior or exterior use, this window is manufactured with high quality components to ensure long life and trouble-free service.

Two configurations are offered: XO or XO (X = Sliding Panel and O = Fixed Panel). The configurations should be called out from the clerk's side. A choice of four sill conditions are offered to meet most any jobsite requirement. Satin anodized, bronze anodized, powder painted, and KYNAR® painted finishes are offered, along with custom anodized finishes available.

For additional information, contact CRL Technical Sales at (800) 421-6144 in the U.S., (877) 421-6144 from Canada, or (323) 588-1281 International, and ask for Ext. 7760. You can also e-mail us at transaction@crlaurence.com. From the home page click on Contact Us, and then click on Technical Sales for Transaction Products.



SPECIFICATIONS:
Materials: Aluminum Extrusions; Pile Weatherstrip; Glazing Vinyl; Stainless Steel Shelf or Sill
Finishes: Satin Anodized, Bronze Anodized, Custom Anodized, Powder Painted or KYNAR® Painted
Glazing Options: 1/4" to 9/16" (6 to 14 mm) Tempered, Laminated or Tinted Glass; 1/2" (12 mm) or 5/8" (16 mm) Insulating Glass Unit
Options: Fly Fan Switch
To Determine Rough Opening: Add 1/2" (12 mm) to Width; 1/4" (6 mm) to Height of Frame, including the Track, Sill or Shelf
NOTE: 26" (660 mm) is the minimum frame width for SCDW Series Windows; 48" to 50" (1219 to 1270 mm) Maximum Height Without Transom Depending on Shelf/Sill.



KYNAR is a registered trademark of Archem, Inc.

CAT. NO.	CONFIGURATION*	SILL CONDITION	FINISH
SCDW1801A	XO or OX	Aluminum Half Bottom Track	Satin Anodized
SCDW1801DU	XO or OX	Aluminum Half Bottom Track	Bronze Anodized
SCDW1801P	XO or OX	Aluminum Half Bottom Track	Powder Painted (Specify)
SCDW1801K	XO or OX	Aluminum Half Bottom Track	KYNAR® Painted (Specify)
SCDW1802A	XO or OX	Aluminum Full Bottom Track	Satin Anodized
SCDW1802DU	XO or OX	Aluminum Full Bottom Track	Bronze Anodized
SCDW1802P	XO or OX	Aluminum Full Bottom Track	Powder Painted (Specify)
SCDW1802K	XO or OX	Aluminum Full Bottom Track	KYNAR® Painted (Specify)
SCDW1803A	XO or OX	Stainless Steel Sill	Satin Anodized
SCDW1803DU	XO or OX	Stainless Steel Sill	Bronze Anodized
SCDW1803P	XO or OX	Stainless Steel Sill	Powder Painted (Specify)
SCDW1803K	XO or OX	Stainless Steel Sill	KYNAR® Painted (Specify)
SCDW1804A	XO or OX	Stainless Steel Shelf	Satin Anodized
SCDW1804DU	XO or OX	Stainless Steel Shelf	Bronze Anodized
SCDW1804P	XO or OX	Stainless Steel Shelf	Powder Painted (Specify)
SCDW1804K	XO or OX	Stainless Steel Shelf	KYNAR® Painted (Specify)

Minimum order: 1 each. * Configuration Determined From Clerk's Side. X = Sliding Panel. O = Fixed Panel (Specify when ordering).

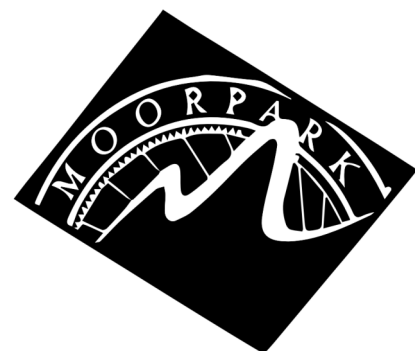
go to crlaurence.com to search for **scdw-windows** or enter the Catalog Number for complete product information

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CRL
ALUMINUM

DIVISION OF THE STATE ARCHITECT



MOORPARK COLLEGE

7075 CAMPUS RD
MOORPARK, CA 93021
TEL: (805) 378 - 1400

PROJECT TITLE AND SCHOOL LOCATION

STADIUM CONCESSION STAND BID#639

7075 CAMPUS ROAD, MOORPARK, CA 93021

COMMISSIONED ARCHITECT

AMADOR

28328 AGOURA RD, 203 | AGOURA HILLS CA, 91301 | 855-558-4334

CONSULTANT

STAMPS/SEALS



SHEET TITLE:

EXTERIOR ELEVATION

PROJECT NO: 20-MPC-036

PROJECT ARCH: BA

DRAWN: LM

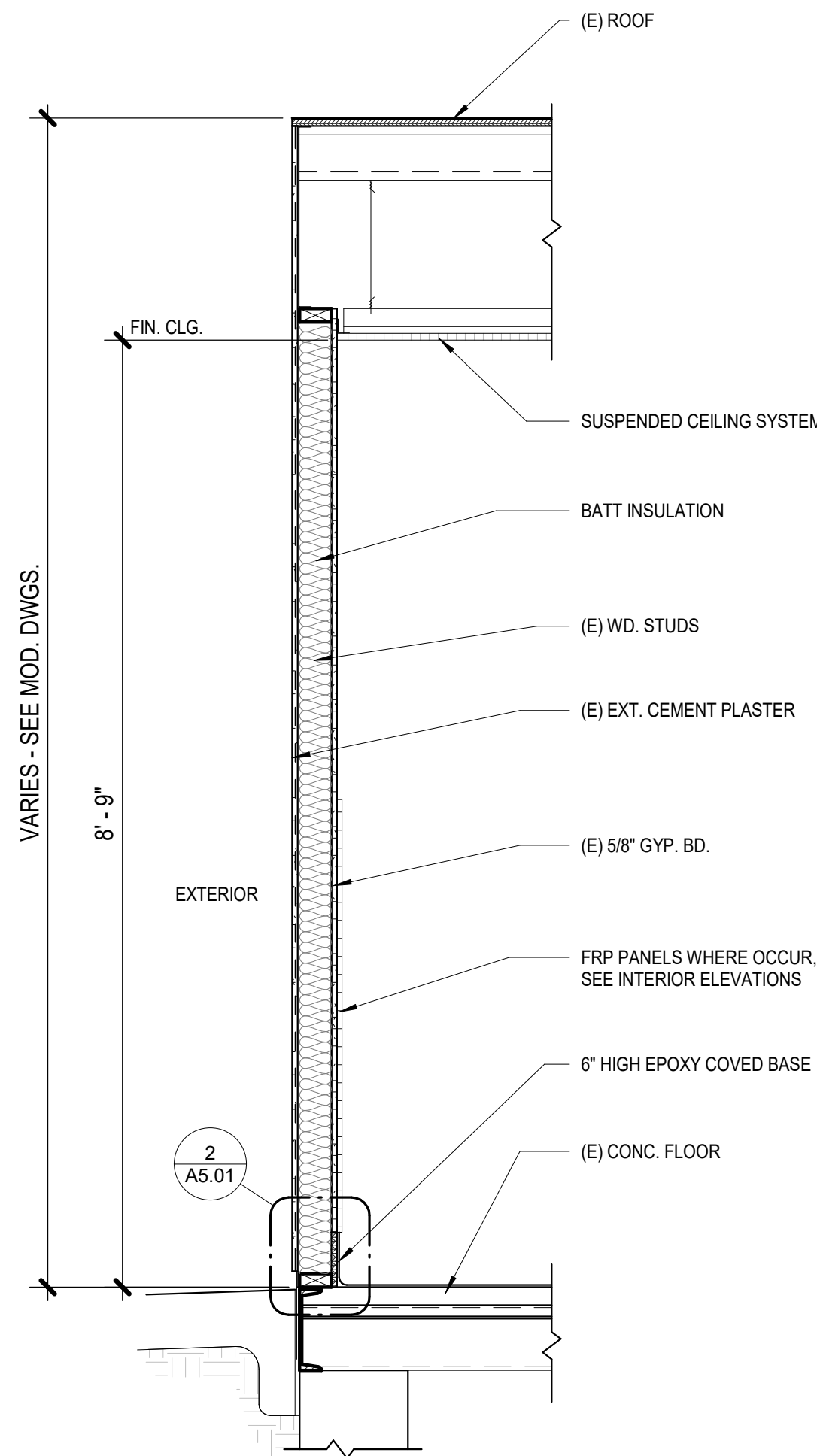
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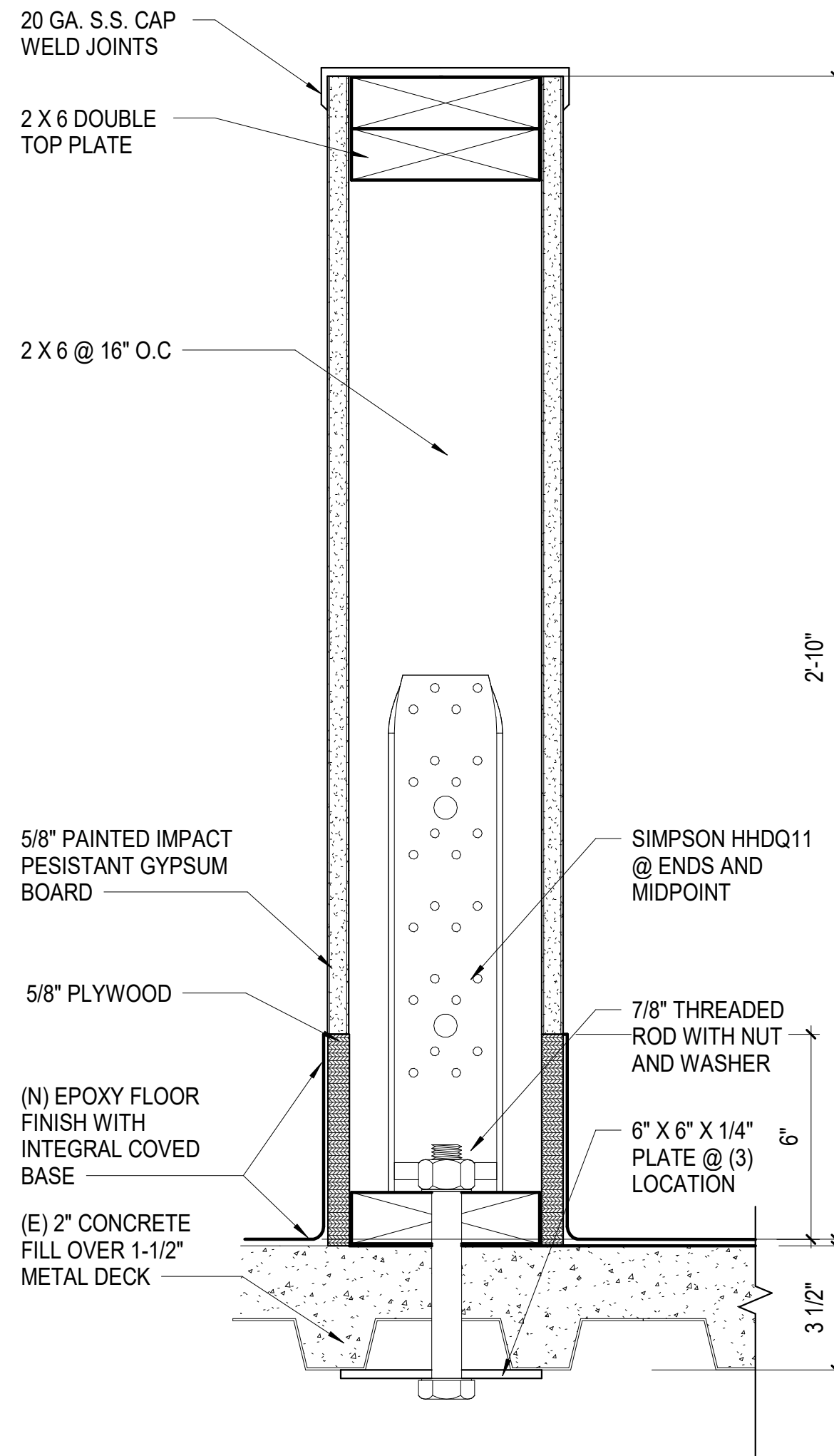
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DATE: 11/11/2022

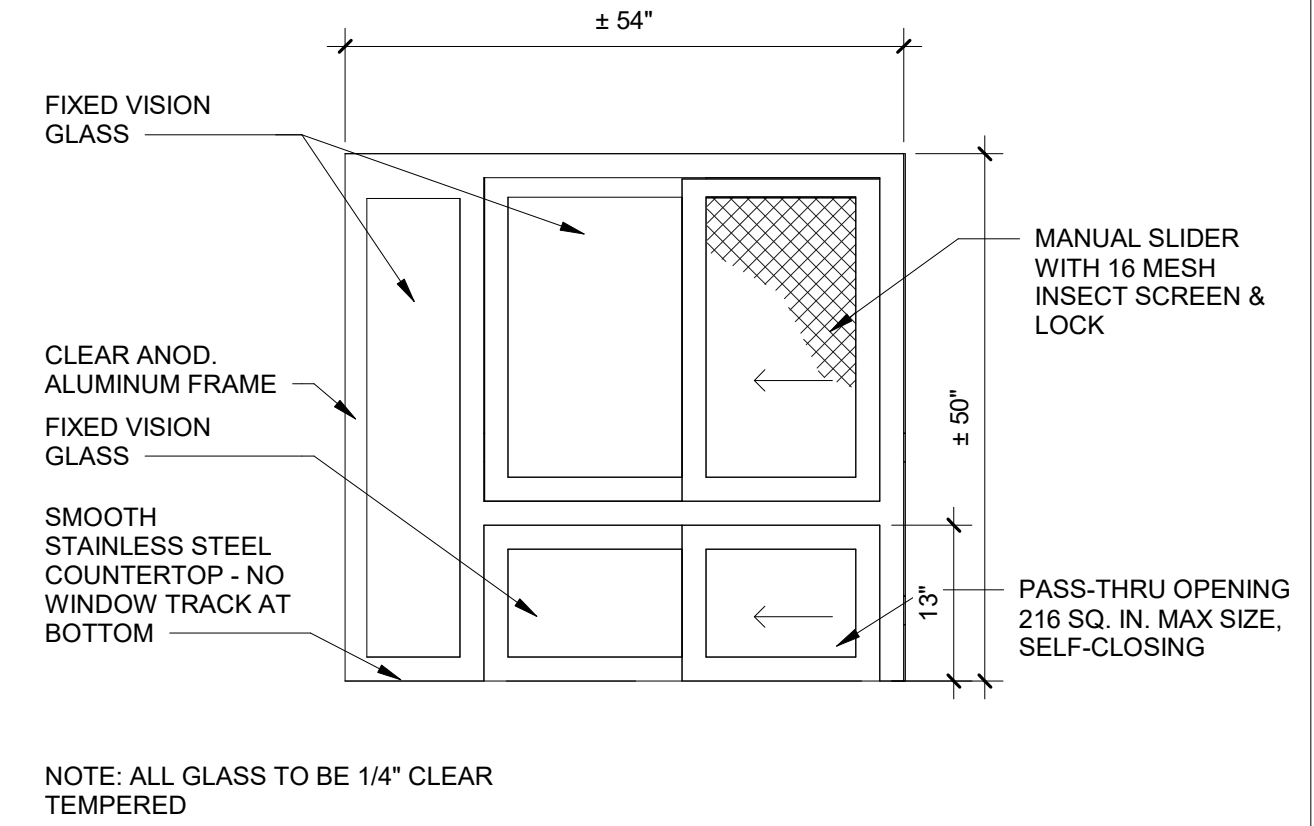
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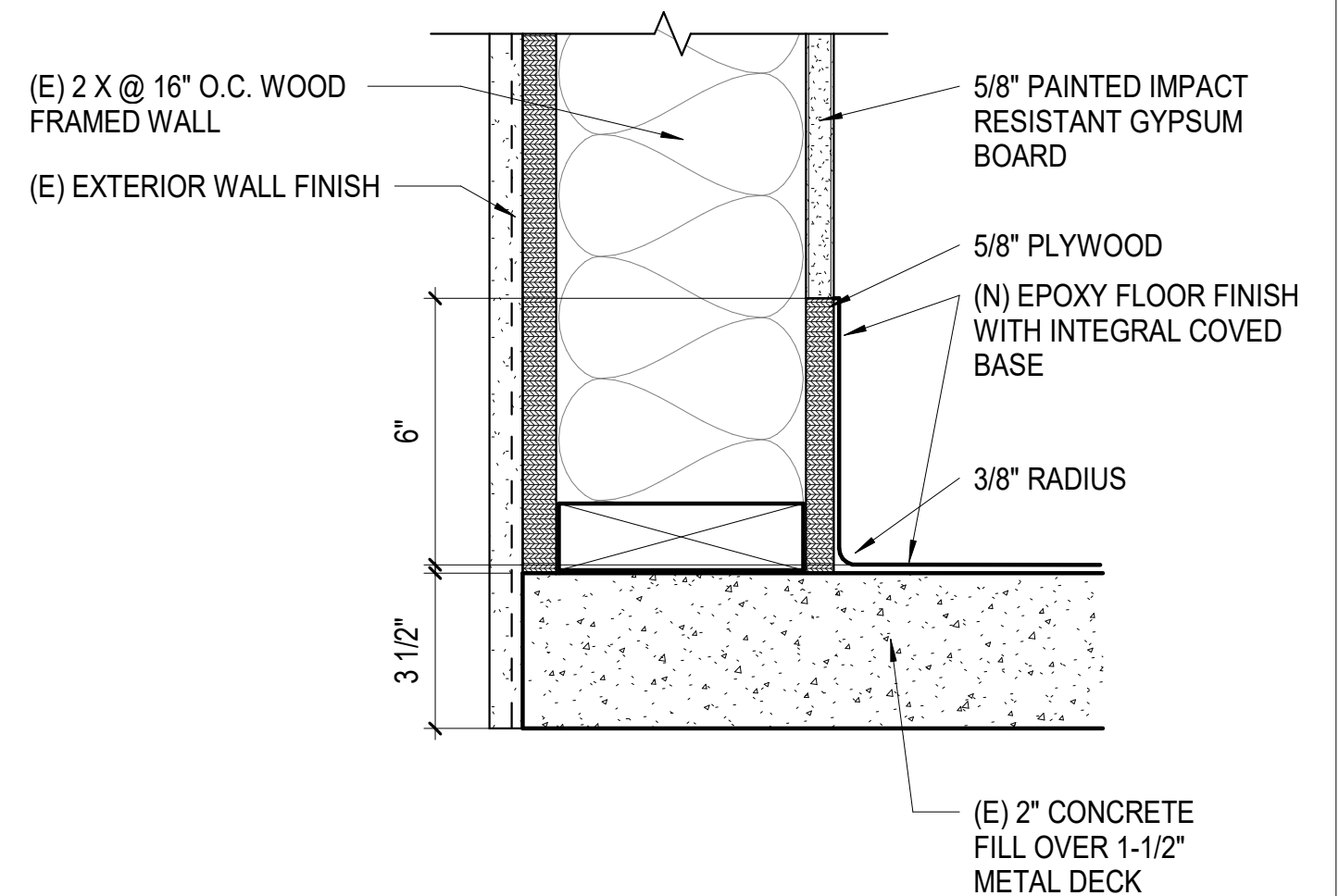
4 TYPICAL WALL SECTION
3/4" = 1'-0"



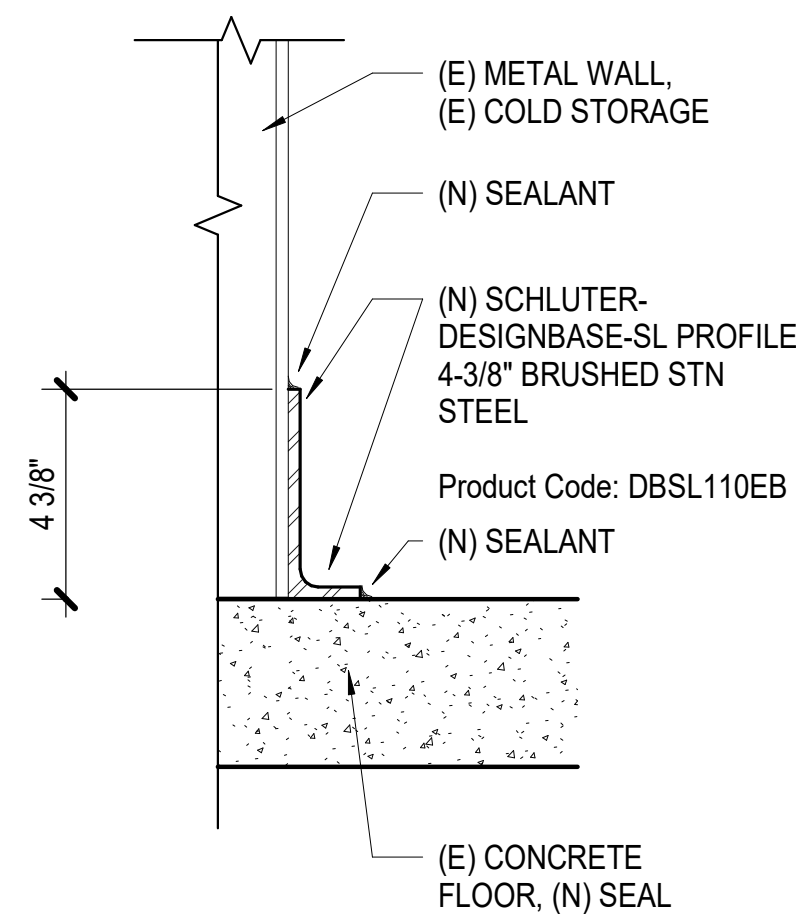
3 POWER WALL
3" = 1'-0"



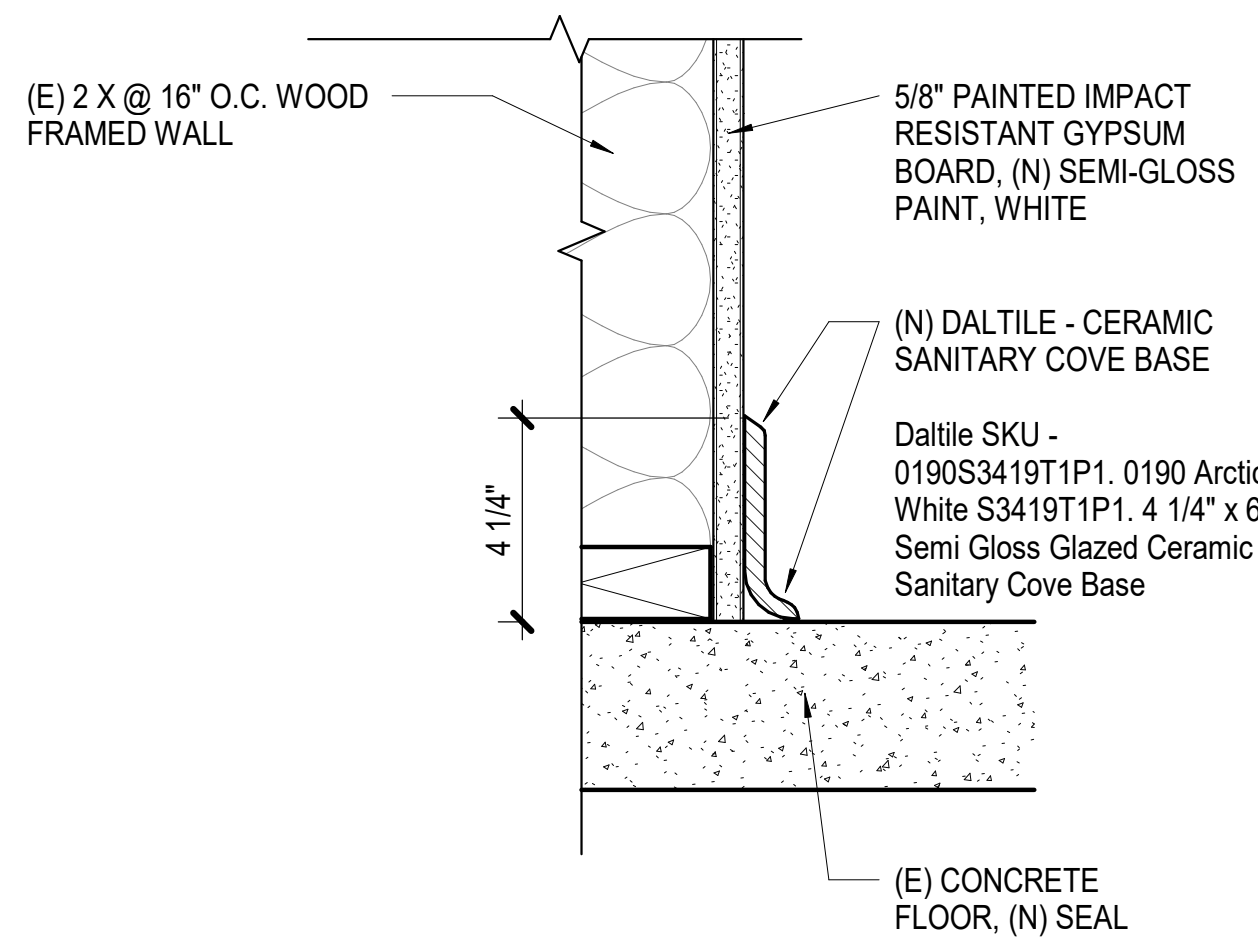
1 PASS THRU WINDOW ELEVATION
3/4" = 1'-0"



2 INTERIOR WALL BASE - CONCESSION
3" = 1'-0"



6 INTERIOR WALL BASE - DRY STORAGE, AT (E) METAL WALL
3" = 1'-0"



5 INTERIOR WALL BASE - DRY STORAGE, AT DRYWALL
3" = 1'-0"

DIVISION OF THE STATE ARCHITECT



MOORPARK
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MOORPARK, CA 93021
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PROJECT TITLE AND SCHOOL LOCATION

**STADIUM CONCESSION
STAND BID#639**

7075 CAMPUS ROAD, MOORPARK, CA
93021

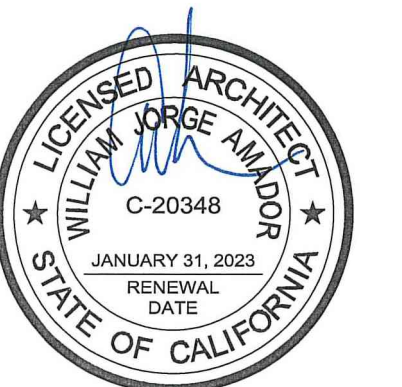
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amadór whitte architects, inc.

CONSULTANT

STAMPS/SEALS



SHEET TITLE:

DETAILS

PROJECT NO: 20-MPC-036

PROJECT ARCH: BA

DRAWN: LM

CHECKED: BA

SHEET NUMBER:

A5.01

DATE: 11/11/2022

SHEET: ____ OF ____

EMT COMPRESSION STRUT	MAX. LENGTH
1/2" DIAMETER EMT (0.042" WALL THICKNESS)	3'-11"
3/4" DIAMETER EMT (0.049" WALL THICKNESS)	6'-4"
1" DIAMETER EMT (0.057" WALL THICKNESS)	9'-9"
1 1/4" DIAMETER EMT (0.065" WALL THICKNESS)	12'-9"
1 1/2" DIAMETER EMT (0.065" WALL THICKNESS)	14'-9"
2" DIAMETER EMT (0.065" WALL THICKNESS)	18'-10"

CHANNEL COMPRESSION STRUT	MAX. LENGTH
250S125-33	5'-10"
250S137-33	6'-10"
362S137-33	8'-0"
250137-43	8'-10"
400S137-43	10'-10"

CEILING NOTES (BASIS DOCUMENT IR 25-2.13 REV 11-09-17):

1. CEILING SYSTEM GENERAL NOTES:

- 1.01 CEILING SYSTEM COMPONENTS SHALL COMPLY WITH ASTM C635-07 AND SECTION 5.1 OF ASTM E580-10A.
- 1.02 THE CEILING GRID SYSTEM MUST BE RATED HEAVY DUTY AS DEFINED BY ASTM C635-08.
- 1.03 CEILING SYSTEMS, THE FOLLOWING CEILING SYSTEM(S) IS/ARE PART OF THE SCOPE OF THIS PROJECT:

HEAVY DUTY NON-RATED GRID SYSTEM	ARMSTRONG	CHICAGO METALLIC	USG
	PRELUDE PLUS XL	1200 SEISMIC SERIES HEAVY DUTY	DONN DXLA
MAIN RUNNER	HD8201	270	DXLA26
CROSS RUNNER (2x4 GRID)	XL8223	1252	DXLA216
CROSS RUNNER	XL8341	1254	DXLA424

- 1.04 SEISMIC WALL CLIP - NOT USED
- 1.05 CEILING PANELS SHALL NOT SUPPORT ANY LIGHT FIXTURES, AIR TERMINALS OR DEVICES.
- 1.06 FOR CEILING INSTALLATIONS UTILIZING ACOUSTICAL TILE PANELS OF MINERAL OR GLASS FIBER, IT IS NOT MANDATORY TO PROVIDE 3/4" CLEARANCE BETWEEN THE ACOUSTICAL TILE PANELS AND THE WALL ON THE SIDES OF THE CEILING WHICH ARE FREE TO SLIP. FOR ALL OTHER CEILING PANEL TYPES, PROVIDE 3/4" CLEARANCE BETWEEN THE CEILING PANEL AND THE WALL ON THE SIDES OF THE CEILING FREE SLIP.
2. MATERIALS:
- 2.01 CEILING WIRE SHALL BE CLASS 1 ZINC COATED (GALVANIZED) CARBON STEEL CONFORMING TO ASTM A641-09A. WIRE SHALL BE #12 GAGE (0.106" DIAMETER) WITH SOFT TEMPER AND MINIMUM TENSILE STRENGTH = 70 KSI.
- 2.02 GALVANIZED SHEET STEEL (INCLUDING THAT USED FOR METAL STUD AND TRACK COMPRESSION STRUTS/POST) SHALL CONFORM TO ASTM A653-11, OR OTHER EQUIVALENT SHEET STEEL LISTED IN SECTION A2.1 OF THE NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS 2007, INCLUDING SUPPLEMENT 2 DATED 2010 (AISI S100-07/S2-10). MATERIAL 43 MIL (18 GAGE) AND LIGHTER SHALL HAVE MINIMUM YIELD STRENGTH OF 33 KSI. MATERIAL 54 MIL (16 GAGE) AND HEAVIER SHALL HAVE MINIMUM YIELD STRENGTH OF 50 KSI.
- 2.03 ELECTRICAL METALLIC TUBE (EMT) SHALL BE ANSI C80.3/UL 797 CARBON STEEL WITH C90 GALVANIZING. EMT SHALL HAVE MINIMUM YIELD STRENGTH (F_y) OF 30 KSI AND MINIMUM ULTIMATE STRENGTH (F_u) OF 48 KSI.
3. ATTACHMENT OF HANGER AND BRACING WIRES:
- 3.01 SEPARATE ALL CEILING HANGER AND BRACING WIRES AT LEAST SIX (6) INCHES FROM ALL UNBRACED DUCTS, PIPES, CONDUIT, ETC.
- 3.02 HANGER AND BRACING WIRES SHALL NOT ATTACH TO OR BEND AROUND OBSTRUCTIONS INCLUDING BUT NOT LIMITED TO: PIPING, DUCTWORK, CONDUIT AND EQUIPMENT.
- 3.03 HANGER WIRES THAT ARE MORE THAN ONE (HORIZONTAL) IN SIX (VERTICAL) OUT OF PLUMB SHALL HAVE COUNTER-SLOPING WIRES.
- 3.04 SLACK SAFETY WIRES SHALL BE CONSIDERED HANGER WIRES FOR INSTALLATION AND TESTING REQUIREMENTS.
- 3.05 HANGER AND BRACING WIRE ANCHORAGE TO THE STRUCTURE SHALL BE INSTALLED IN SUCH A MANNER THAT THE DIRECTION OF THE ANCHORAGE ALIGNS CLOSELY WITH THE DIRECTION OF THE WIRE. (E.G. BRACING WIRE CEILING CLIPS MUST BE BENT AS SHOWN IN THE DETAILS AND ROTATED AS REQUIRED TO ALIGN CLOSELY WITH THE DIRECTION OF THE WIRE, ETC.)
4. FASTENERS AND WELDING:
- 4.01 SHEET METAL SCREWS SHALL COMPLY WITH ASTM C1513-10, ASME B18.6.4-89 (R2005). PENETRATION OF SCREWS THROUGH JOINED MATERIAL SHALL NOT BE LESS THAN THREE EXPOSED THREADS.
- 4.02 EXPANSION ANCHORS SHALL BE: HILTI KB-T2 (ICC-1917)
- 4.03 POWER-ACTUATED FASTENERS SHALL BE: HILTI X-U (ICC-2269)
- 4.04 IF NOT OTHERWISE SPECIFIED IN THE EVALUATION REPORT, POWER-ACTUATED FASTENERS INSTALLED IN STEEL SHALL BE INSTALLED SO THE ENTIRE POINTED END OF THE FASTENER IS DRIVEN THROUGH THE STEEL MEMBER.
- 4.05 POWER-ACTUATED FASTENERS IN CONCRETE ARE NOT PERMITTED FOR BRACING WIRES.

METAL SUSPENSION SYSTEMS FOR LAY-IN PANEL CEILING:
2013 CBC (Basis Document IR 25-2.13 rev 11-09-17)

1. LATERAL FORCE BRACING ASSEMBLY INSTALLATION:

- A) LATERAL FORCE BRACING ASSEMBLIES CONSISTING OF A COMPRESSION STRUT AND FOUR (4) #12 GAUGE SPLAYED BRACING WIRES ORIENTED 90 DEGREES FROM EACH OTHER ARE REQUIRED FOR ALL CEILING AREAS.
- EXCEPTION: LATERAL FORCE BRACING MAY BE OMITTED FOR SUSPENDED ACOUSTICAL CEILING SYSTEMS WITH A CEILING AREA NOT TO EXCEED 144 SQUARE FEET. FOR ALL VALUES OF S_{DS} , WHEN PERIMETER SUPPORT IS PROVIDED IN ACCORDANCE WITH SECTION 2.2 OF THIS DOCUMENT AND PERIMETER WALLS ARE DESIGNED TO CARRY THE CEILING LATERAL FORCES.
- B) LATERAL FORCE BRACING ASSEMBLIES SHALL BE SPACED PER TABLE 1 FOR ALL VALUES OF THE COMPONENT IMPORTANCE FACTOR (I_e) OF THE CEILING.
- C) THERE SHALL BE A BRACE ASSEMBLY A DISTANCE OF NOT MORE THAN ONE-HALF (1/2) OF THE ABOVE SPACING FROM EACH SURROUNDING WALL, EXPANSION JOINT AND AT THE EDGES OF ANY CEILING VERTICAL OFFSET. FOR EXAMPLE, WHERE THE BRACE SPACING IS 8' X 12', THE EDGE DISTANCE SHALL BE 4 FEET IN THE DIRECTION OF THE 8 FOOT SPACING AND 6 FEET IN THE DIRECTION OF THE 12 FOOT SPACING.
- D) THE SLOPE OF BRACING WIRES SHALL NOT EXCEED 45 DEGREES FROM THE HORIZONTAL PLANE AND WIRES SHALL BE TAUT. SPLICES IN BRACING WIRES SHALL DEVELOP THE WIRE ALLOWABLE LOAD.
- E) COMPRESSION STRUTS SHALL MEET THE FOLLOWING REQUIREMENTS:
- THE STRUT SHALL BE SIZED TO ADEQUATELY RESIST THE VERTICAL COMPONENT FORCE INDUCED BY THE CEILING BRACING WIRES AND HAVE A MAXIMUM KL/R NOT TO EXCEED 300. THE STRUTS LISTED IN APPENDIX A MEET THIS REQUIREMENT FOR CEILINGS COMPLYING WITH THE GENERAL REQUIREMENTS OF THIS DOCUMENT.
 - THE STRUT SHALL BE NOT MORE THAN ONE (HORIZONTAL) IN SIX (VERTICAL) OUT OF PLUMB.

TABLE 1
LATERAL FORCE BRACE ASSEMBLY SPACING

Design Spectral Acceleration Parameter, S_{DS}	Brace Assembly Spacing (ft.)	
	$z/h \leq 0.5$ ^a	$z/h > 0.5$ ^{a,b}
$S_{DS} \leq 1.15$	12 x 12	12 x 12
$1.15 < S_{DS} \leq 1.73$	12 x 12	8 x 12
$S_{DS} > 1.73$	8 x 12	8 x 8

S_{DS} = 1.582, z/h = 1,
THEREFORE 12 x 12 GRID

- FOOTNOTES:
- A. WHERE, AS DEFINED IN ASCE 7, SECTION 13.3.1:
- Z = HEIGHT IN STRUCTURE OF JOINT OF ATTACHMENT OF CEILING WITH RESPECT TO THE BASE.
- H = AVERAGE ROOF HEIGHT OF THE STRUCTURE WITH RESPECT TO THE BASE.
- B. IT SHALL BE PERMITTED TO USE THE BRACE ASSEMBLY SPACING FOR "Z/H > 0.5" FOR THE FULL BUILDING HEIGHT.

- 4.06 CONCRETE REINFORCEMENT AND PRESTRESSING TENDONS SHALL BE LOCATED BY NON-DESTRUCTIVE MEANS PRIOR TO INSTALLING POST - INSTALLED ANCHOR.
- 4.07 WELDING SHALL BE IN ACCORDANCE WITH AWS D1.3 USING E60XX SERIES ELECTRODES.
5. TESTING: ALL FIELD TESTING MUST BE PERFORMED IN THE PRESENCE OF THE PROJECT INSPECTOR.
- 5.01 POST- INSTALLED ANCHORS IN CONCRETE USED TO SUPPORT HANGER WIRES SHALL BE TESTED AT A FREQUENCY OF 10 PERCENT. POWER ACTUATED FASTENERS IN CONCRETE SHALL BE FIELD TESTED FOR 200 LBS. IN TENSION. ALL OTHER POST-INSTALLED ANCHORS IN CONCRETE SHALL BE TESTED IN ACCORDANCE WITH CBC SECTION 1913A.7.
- 5.02 POST-INSTALLED ANCHORS IN CONCRETE USED TO ATTACH BRACING WIRES SHALL BE TESTED AT A FREQUENCY OF 50 PERCENT IN ACCORDANCE WITH CBC SECTION 1913A.7.
6. LIGHT FIXTURES:
- 6.01 ALL LIGHT FIXTURES SHALL BE POSITIVELY ATTACHED TO THE CEILING SUSPENSION SYSTEMS BY MECHANICAL MEANS TO RESIST A HORIZONTAL FORCE EQUAL TO WEIGHT OF THE FIXTURE. A MINIMUM OF TWO SCREWS OR APPROVED FASTENERS ARE REQUIRED AT EACH LIGHT FIXTURE, PER ASTM E580, SECTION 5.3.1.
- 6.02 SURFACE-MOUNTED LIGHT FIXTURES SHALL BE ATTACHED TO THE MAIN RUNNER WITH AT LEAST TWO POSITIVE CLAMPING DEVICES. THE CLAMPING DEVICE SHALL COMPLETELY SURROUND THE SUPPORTING CEILING RUNNER AND BE MADE OF STEEL WITH A MINIMUM THICKNESS OF #14 GAGE. ROTATIONAL SPRING CATCHES DO NOT COMPLY. A #12 GAGE SLACK SAFETY WIRE SHALL BE CONNECTED FROM EACH CLAMPING DEVICE TO THE STRUCTURE ABOVE. PROVIDE ADDITIONAL SUPPORTS WHEN LIGHT FIXTURES ARE EIGHT (8) FEET OR LONGER OR EXCEED 56 LB. MAXIMUM SPACING BETWEEN SUPPORTS SHALL NOT EXCEED EIGHT (8) FEET.
- 6.03 LIGHT FIXTURES WEIGHTING LESS THAN OR EQUAL TO 10 LB. SHALL HAVE A MINIMUM OF ONE (1) #12 GAGE SLACK SAFETY WIRE CONNECTED FROM THE FIXTURE HOUSING TO THE STRUCTURE ABOVE.
- 6.04 LIGHT FIXTURES WEIGHTING LESS THAN OR EQUAL TO 10 LB. SHALL HAVE A MINIMUM OF ONE (1) #12 GAGE SLACK SAFETY WIRE CONNECTED FROM THE FIXTURE HOUSING TO THE STRUCTURE ABOVE.
- 6.05 LIGHT FIXTURES WEIGHTING GREATER THAN 10 LB. BUT LESS THAN OR EQUAL TO 56LBS. MAY BE SUPPORTED DIRECTLY ON THE CEILING RUNNERS, BUT THEY SHALL HAVE A MINIMUM OF TWO (2) #12 GAGE SLACK SAFETY WIRES CONNECTED FROM THE FIXTURE HOUSING AT DIAGONAL CORNERS TO THE STRUCTURE ABOVE.
- EXCEPTION: ALL LIGHT FIXTURES GREATER THEN TWO BY FOUR FEET WEIGHING LESS THAN 56 LBS. SHALL HAVE A #12 GAGE SLACK SAFETY WIRE AT EACH CORNER.
- 6.06 ALL LIGHT FIXTURES WEIGHTING GREATER THAN 56 LB. SHALL BE INDEPENDENTLY SUPPORTED BY NOT LESS THAN FOUR (4) TAUT #12 GAGE HANGER WIRES (ONE AT EACH CORNER) ATTACHED FROM THE FIXTURE HOUSING TO THE STRUCTURE ABOVE OR OTHER APPROVED HANGERS. THE FOUR (4) TAUT #12 GAGE WIRES OR OTHER APPROVED HANGERS, INCLUDING THEIR ATTACHMENT TO THE STRUCTURE ABOVE, SHALL BE CAPABLE OF SUPPORTING FOUR (4) TIMES THE WEIGHT OF THE FIXTURE.
7. SERVICES WITHIN THE CEILING
- 7.01 ALL FLEXIBLE SPRINKLER HOSE FITTING MOUNTING BRACKETS, CEILING-MOUNTED AIR TERMINALS OR OTHER SERVICES SHALL BE POSITIVELY ATTACHED TO THE CEILING SUSPENSION SYSTEMS BY MECHANICAL MEANS. SCREWS OR APPROVED FASTENERS ARE REQUIRED. A MINIMUM OF TWO ATTACHMENTS ARE REQUIRED AT EACH COMPONENT.
- 7.02 CEILING- MOUNTED AIR TERMINALS OR OTHER SERVICES WEIGHING LESS THAN OR EQUAL TO 20 LB. SHALL HAVE ONE (1) #12 GAGE SLACK SAFETY WIRE ATTACHED FROM THE TERMINAL OR SERVICE TO THE STRUCTURE ABOVE.
- 7.03 FLEXIBLE SPRINKLER HOSE FITTINGS, CEILING-MOUNTED AIR TERMINALS OR OTHER SERVICES WEIGHING MORE THAN 20 LB. BUT LESS THAN OR EQUAL TO 56 LB. SHALL HAVE TWO (2) #12 GAGE SLACK SAFETY WIRES (AT DIAGONAL CORNERS) CONNECTED FROM THE TERMINAL OR SERVICE TO THE STRUCTURE ABOVE.
- 7.04 FLEXIBLE SPRINKLER HOSE FITTINGS, CEILING-MOUNTED AIR TERMINALS OR OTHER SERVICES WEIGHING MORE THAN 56 LB. SHALL BE SUPPORTED DIRECTLY FROM THE STRUCTURE ABOVE BY NOT LESS THAN FOUR (4) TAUT #12 GAGE HANGER WIRES ATTACHED FROM THE TERMINAL OR SERVICE TO THE STRUCTURE ABOVE OR OTHER APPROVED HANGERS.
8. OTHER DEVICES WITHIN THE CEILING:
- 8.01 ALL LIGHTWEIGHT MISCELLANEOUS DEVICES, SUCH AS STROBE LIGHTS, OCCUPANCY SENSORS, SPEAKERS, EXIT SIGNS, ETC., SHALL BE ATTACHED TO THE CEILING GRID. IN ADDITION, DEVICES WEIGHING MORE THAN 10 LBS. SHALL HAVE A #12 GAGE SLACK SAFETY WIRE ANCHORED TO THE STRUCTURE ABOVE. DEVICES WEIGHING MORE THAN 20 LB. SHALL BE SUPPORTED INDEPENDENTLY FROM THE STRUCTURE ABOVE.

DIVISION OF THE STATE ARCHITECT



7075 CAMPUS RD
MOORPARK, CA 93021
TEL: (805) 378 - 1400

PROJECT TITLE AND SCHOOL LOCATION

STADIUM CONCESSION
STAND BID#639

7075 CAMPUS ROAD, MOORPARK, CA
93021

COMMISSIONED ARCHITECT

AMADOR

28328 AGOURA RD, 203 | AGOURA HILLS CA, 91301 | 805-556-4334
amador@whitearchitects.com

CONSULTANT

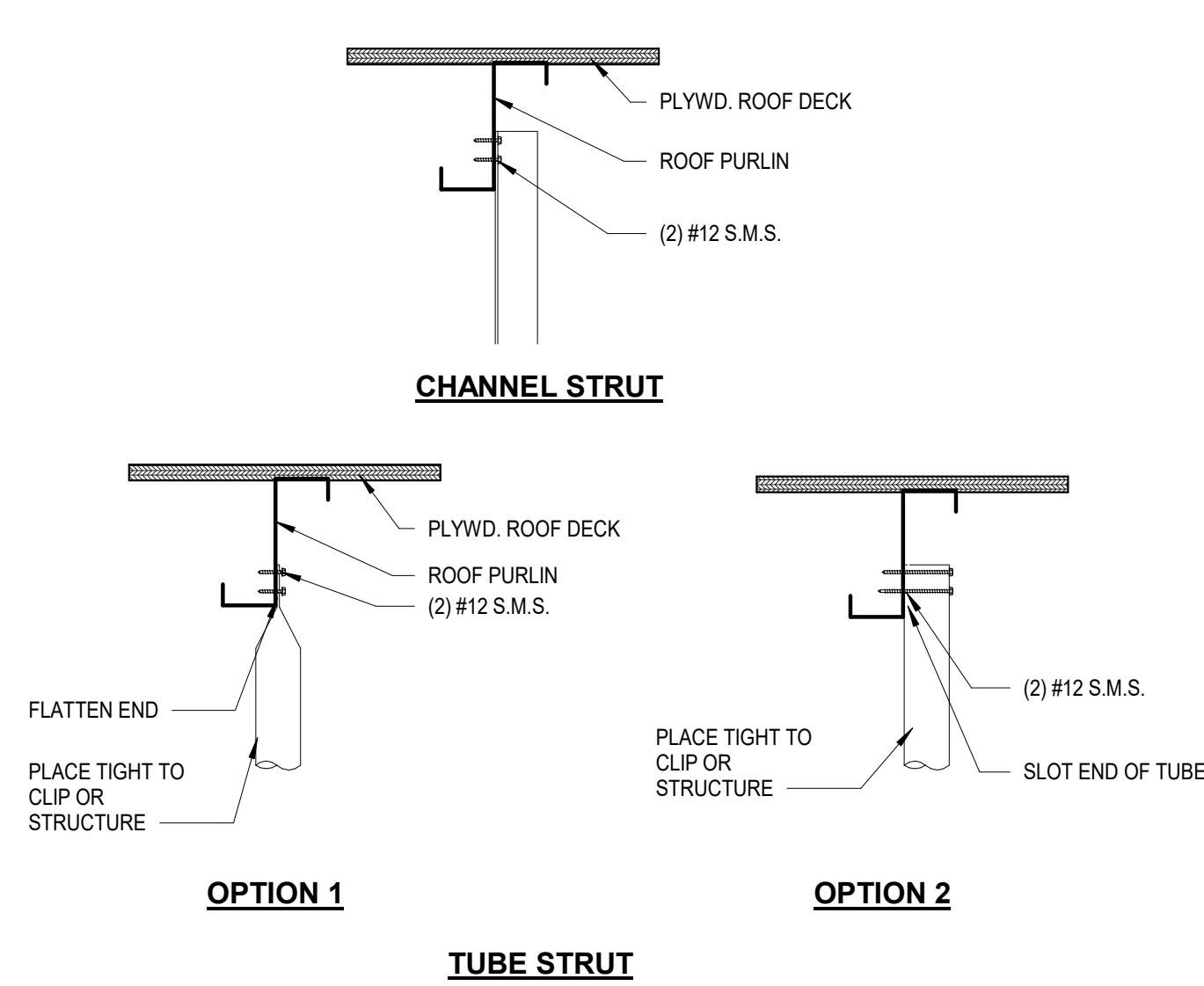
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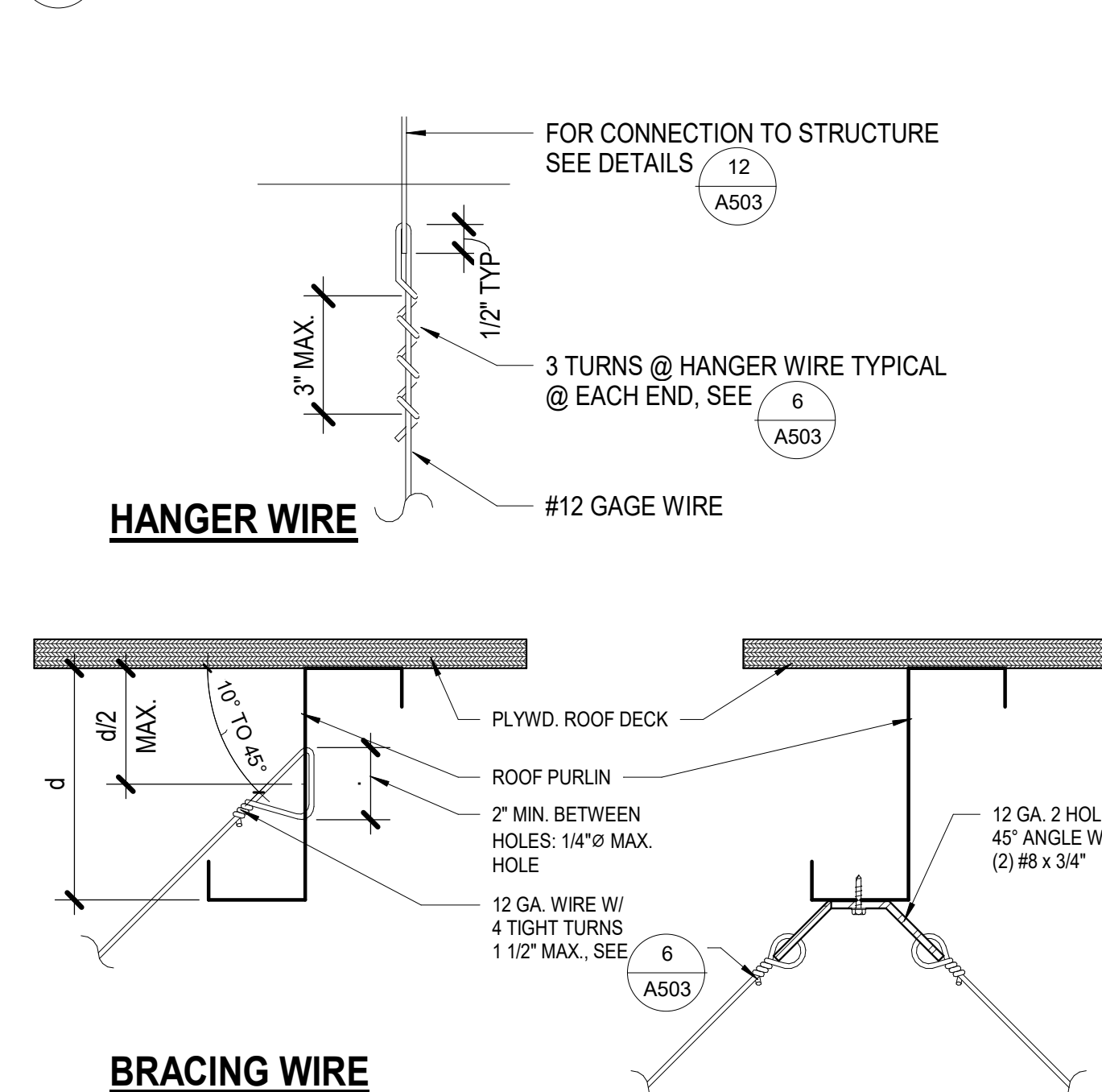
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CEILING NOTES

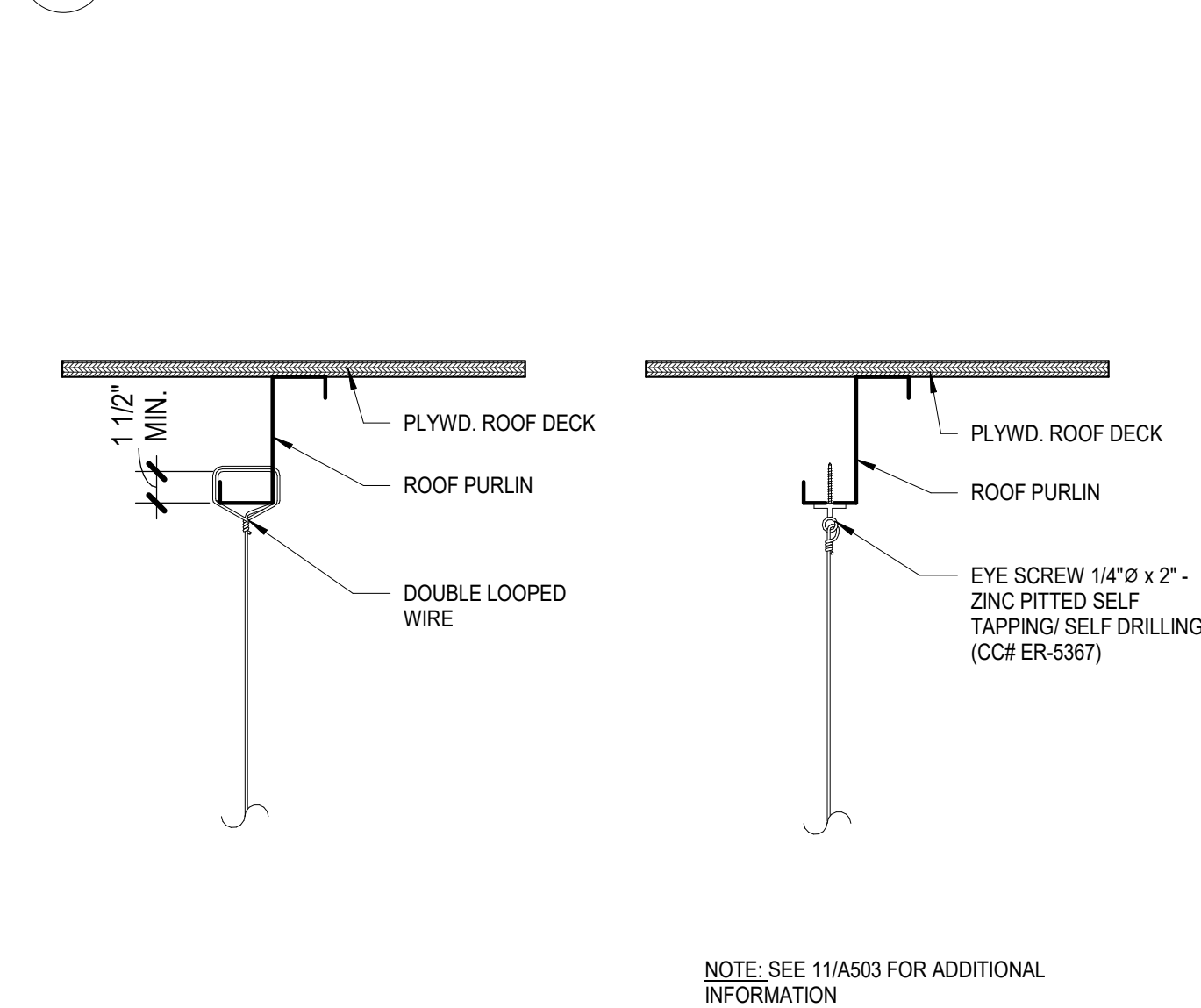
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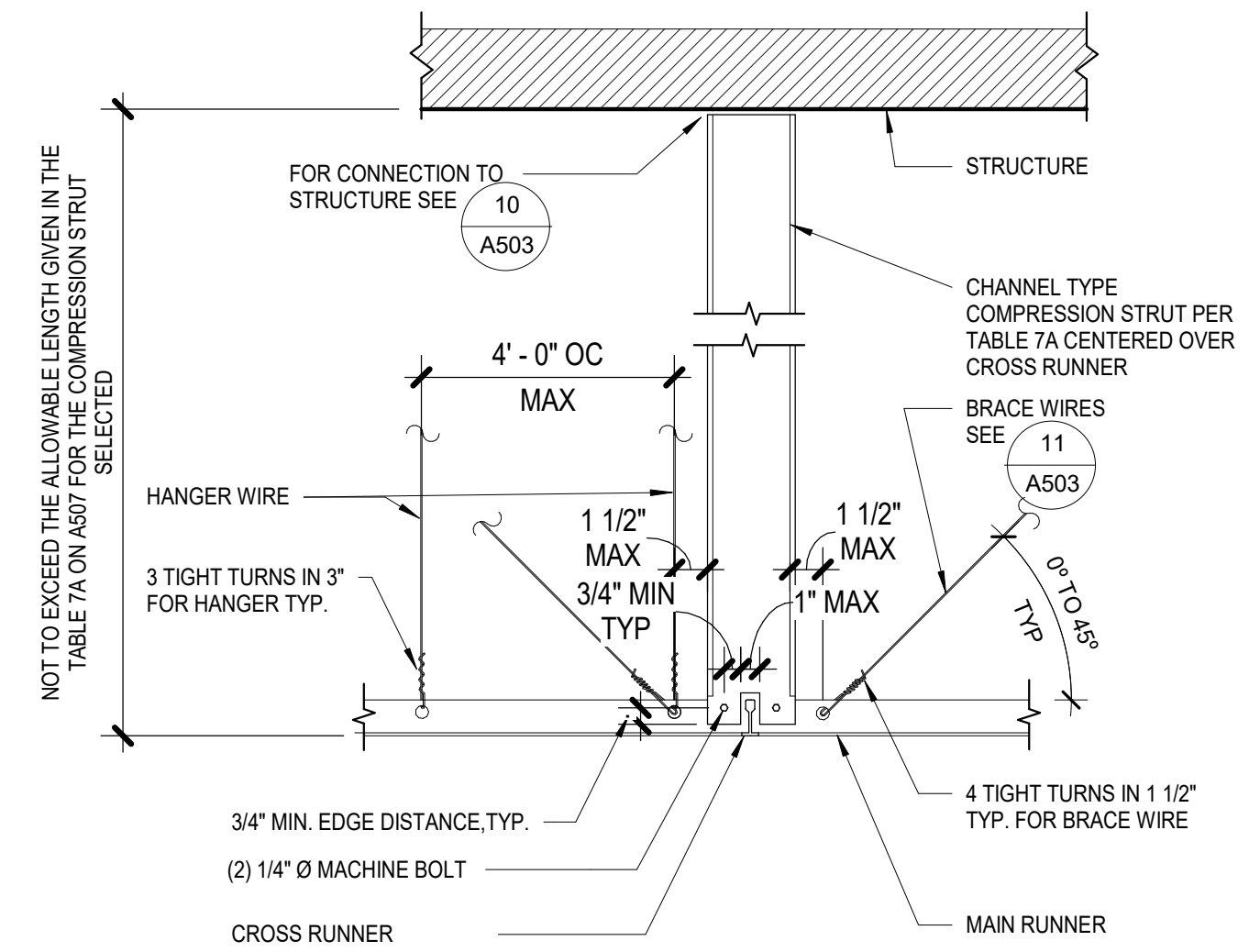
10 **CHANNEL STRUT (TOP CONNECTION)**
1 1/2" = 1'-0"



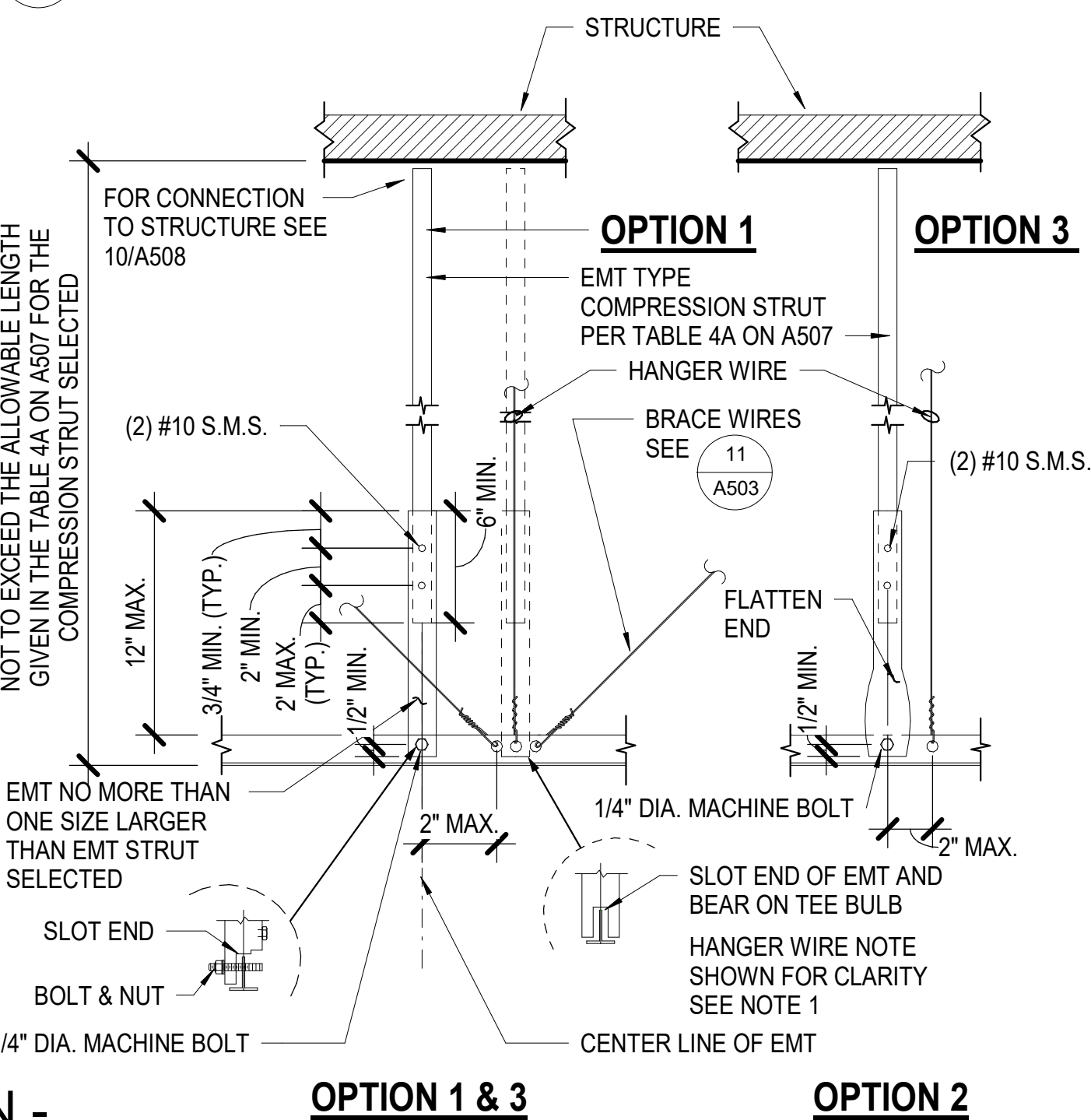
11 **HANGER & BRACING WIRE CONNECTION - TYPICAL WIRE TURNS**
3" = 1'-0"



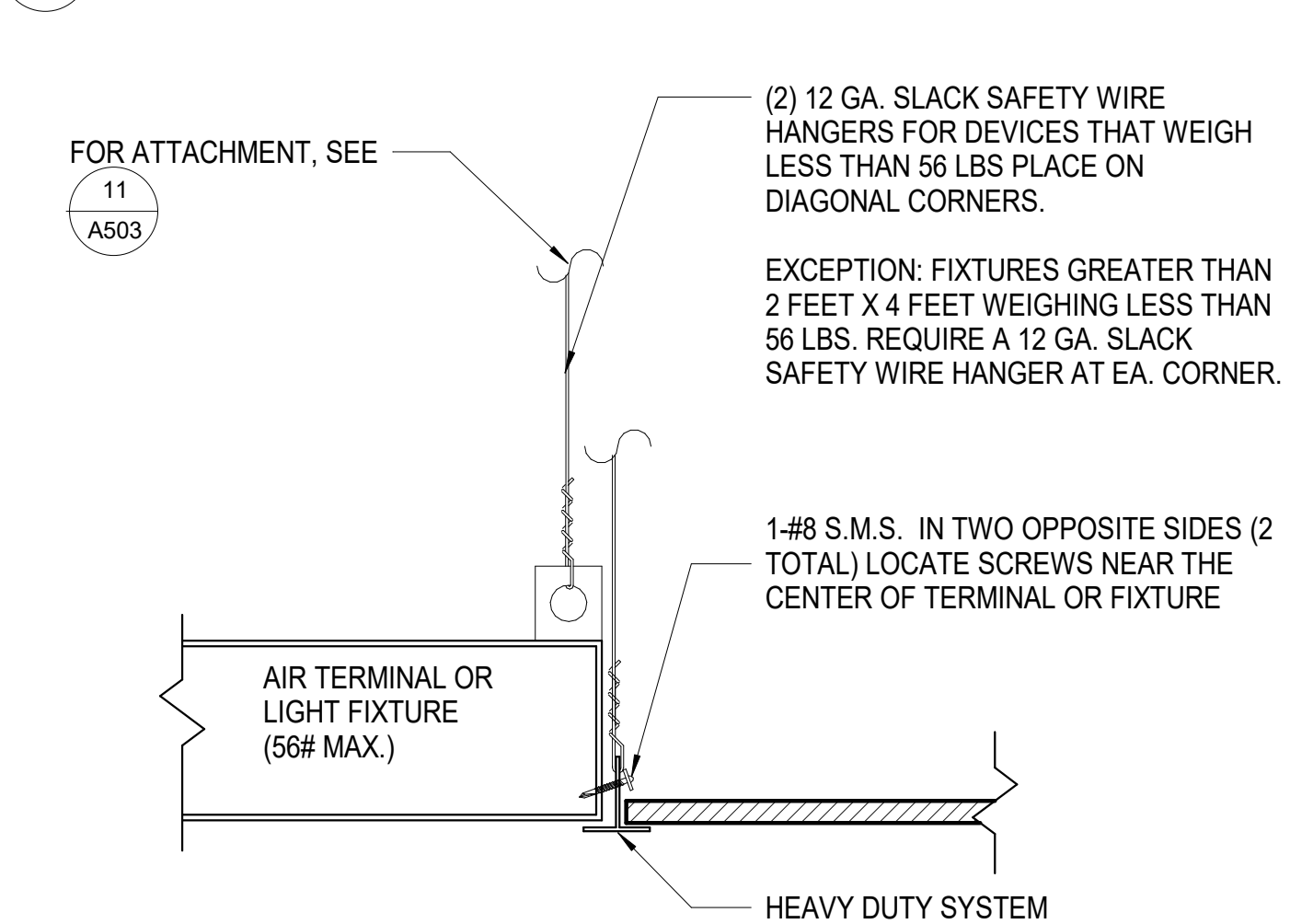
12 **HANGER WIRE ATTACHMENT TO STRUCTURE**
1 1/2" = 1'-0"



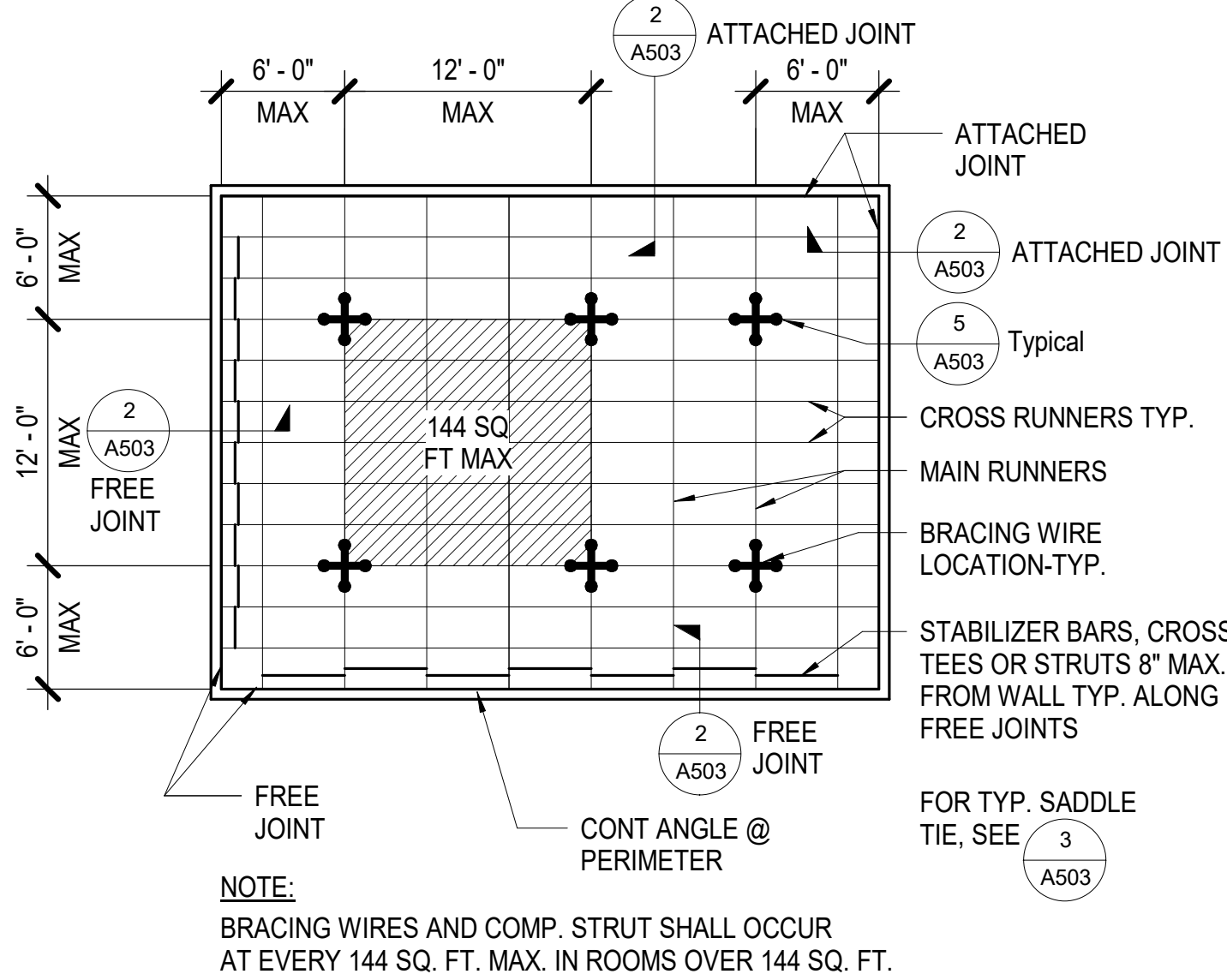
7 **CHANNEL TYPE STRUT**
1 1/2" = 1'-0"



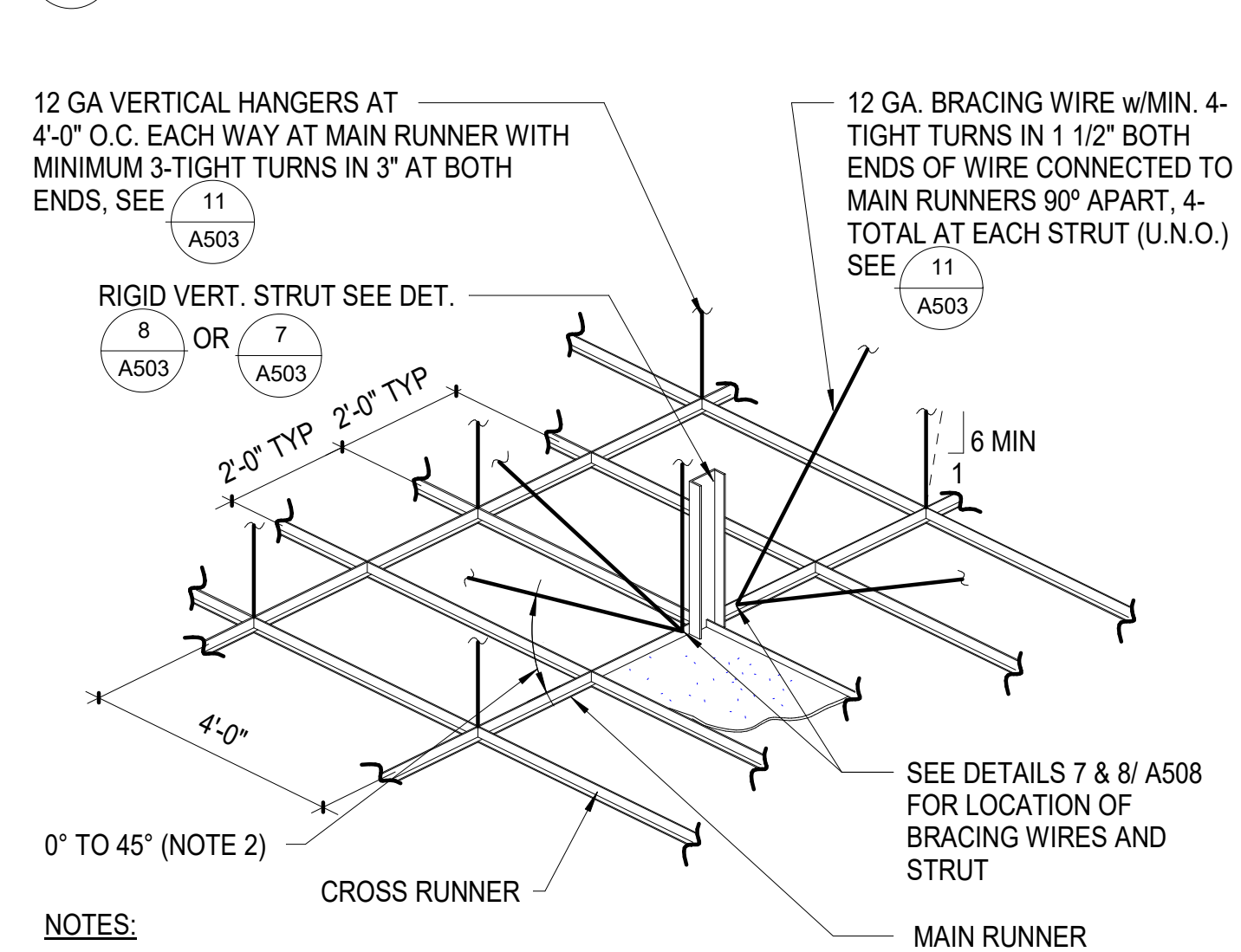
8 **EMT TYPE STRUT**
1 1/2" = 1'-0"



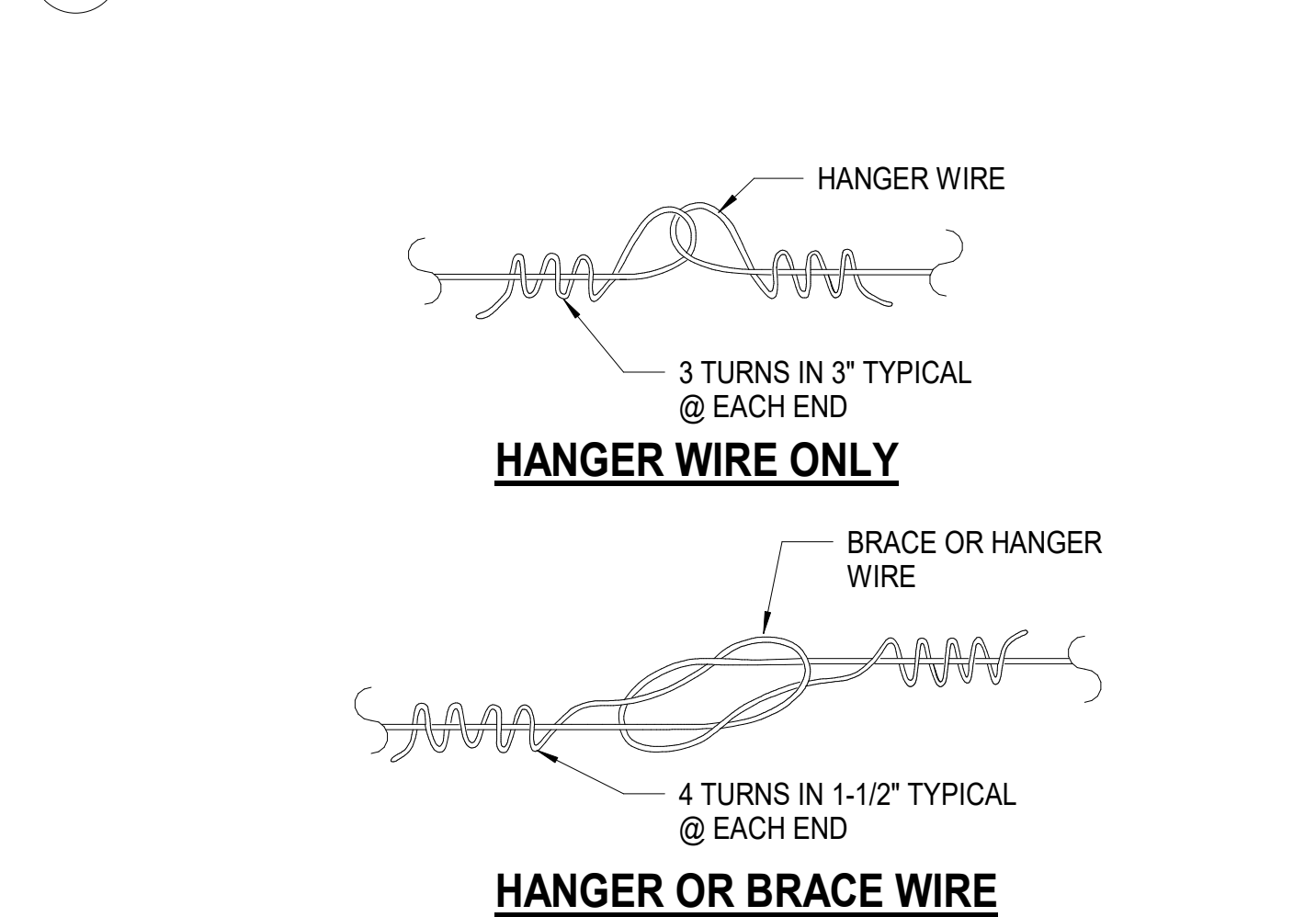
9 **LIGHTING FIXTURE/DEVICE SUPPORT**
3" = 1'-0"



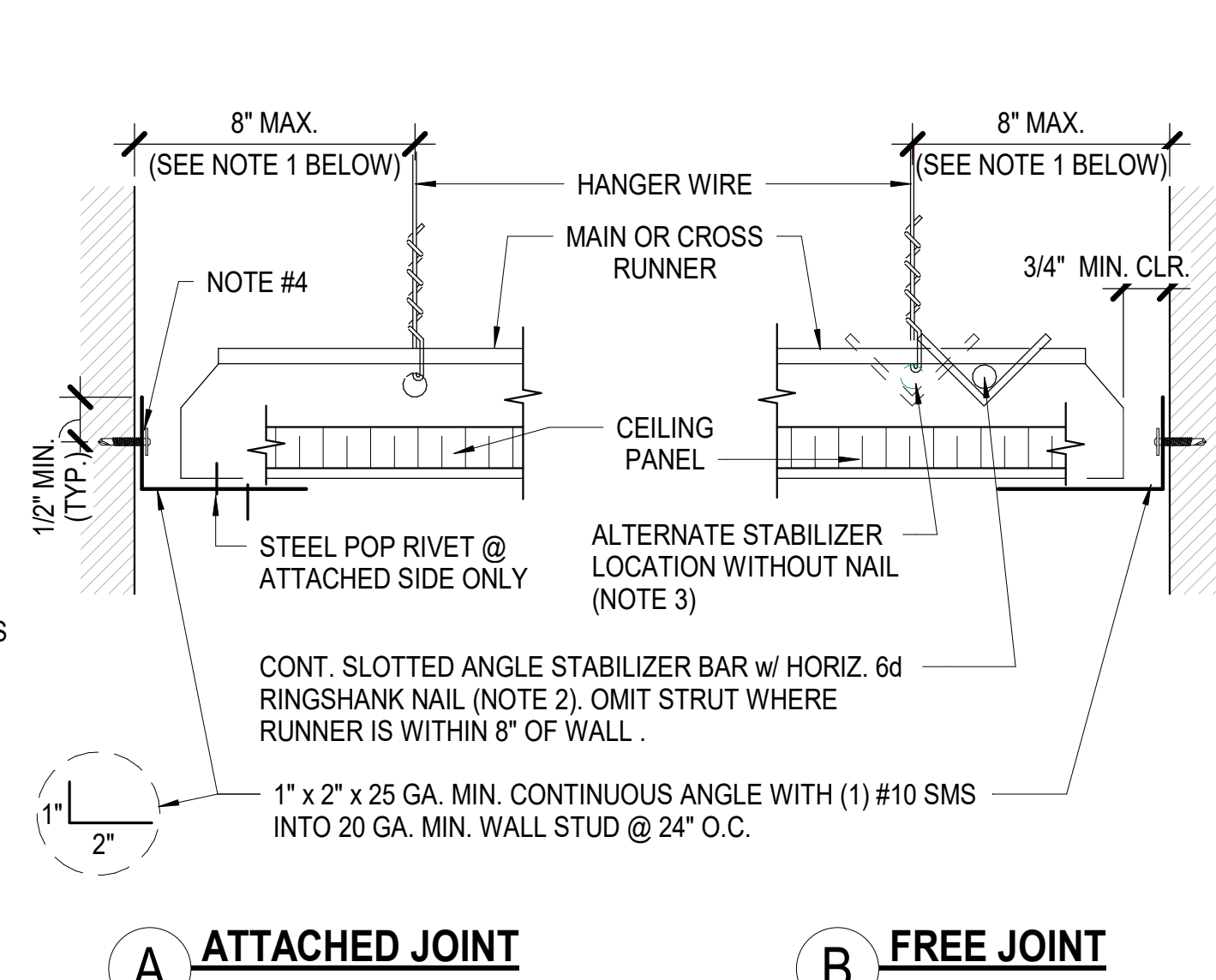
4 **TYPICAL CEILING PLAN FOR 12' X 12' BRACE ASSEMBLY SPACING**
1/8" = 1'-0"



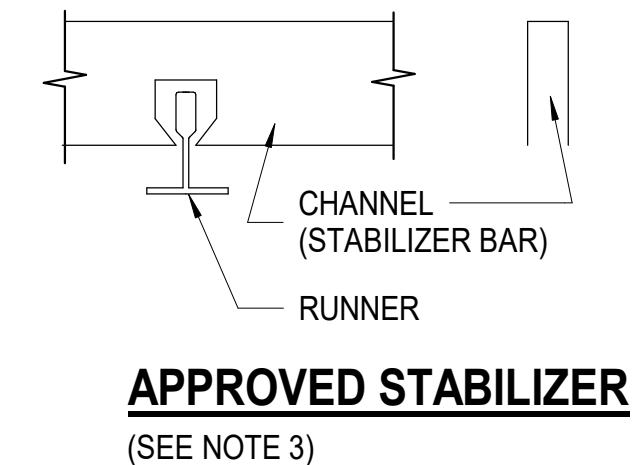
5 **SUSP. CEILING BRACING ASSEMBLY**
3" = 1'-0"



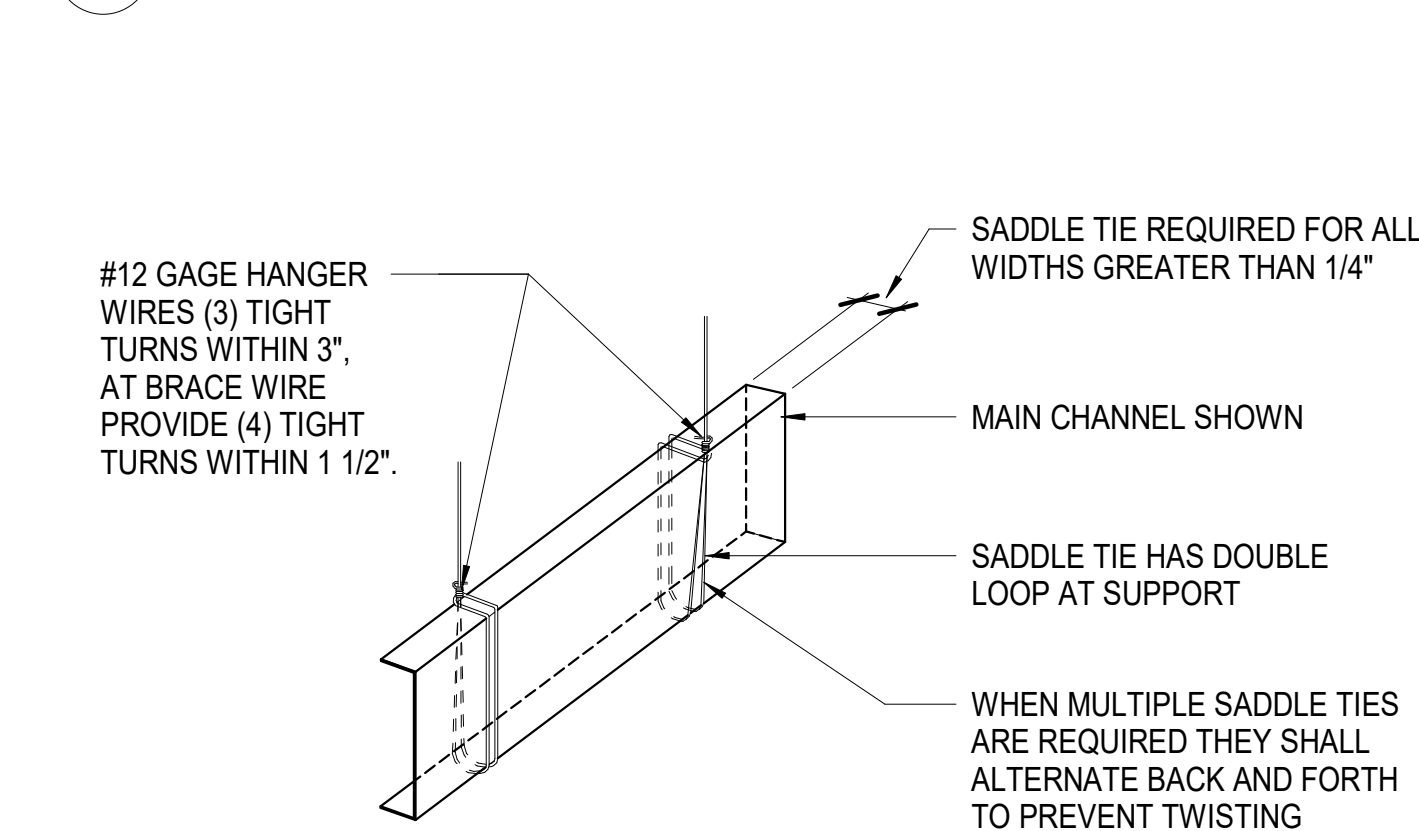
6 **CEILING WIRE SPLICES**
3" = 1'-0"



- NOTES:
1. PROVIDE #12 GAGE HANGER WIRES AT THE ENDS OF ALL MAIN AND CROSS RUNNERS WITHIN EIGHT (8) INCHES OF THE SUPPORT OR WITHIN ONE-FOURTH (1/4) OF THE LENGTH OF THE END TEE, WHICHEVER IS LESS, FOR THE PERIMETER OF THE CEILING AREA. PERIMETER WIRES ARE NOT REQUIRED WHEN THE LENGTH OF THE END TEE IS EIGHT (8) INCHES OR LESS.
 2. NAILS AT ENDS OF HORIZONTAL STABILIZERS ARE TO BE PLACED WITH NAIL HEAD TOWARD CENTER LINE OF SPAN OF STRUT.
 3. STABILIZER BAR MAY BE SLOTTED APPROVED ANGLES OR CHANNELS WITH "DIAMOND POINTS" OF SPRING STEEL WHICH SNAP TIGHT TO PREVENT MOVEMENT OF STRUT.
 4. (1) #10 SMS TO 20 GA. MIN. WALL STUD @ 16" O.C.



2 **CEILING PERIMETER**
3" = 1'-0"



3 **TYPICAL SADDLE TIE DETAIL**
NTS

MECHANICAL/PLUMBING NOTES:

1. SCOPE OF WORK: MECHANICAL/PLUMBING. WORK INCLUDES THE FOLLOWING: FURNISH AND INSTALL ALL PIPING AND PLUMBING FIXTURES SHOWN ON THE PLUMBING, MECHANICAL, AND ARCHITECTURAL DRAWINGS. IF REQUIRED, RELOCATE EXISTING MECHANICAL EQUIPMENT AND CONTROLS. CONTRACTOR SHALL ALSO FURNISH AND INSTALL ALL NECESSARY LABOR, DEVICES, HARDWARE AND SYSTEMS REQUIRED TO MAKE SAID SYSTEMS PROPERLY AND SAFELY OPERABLE, INCLUDING, BUT NOT LIMITED TO, TRENCHING AND BACKFILL, MOUNTING AND SUPPORT HARDWARE, FRAMING, INSULATION, VALVES, AND CLEANOUTS.

2. INTERPRETATION OF DRAWINGS, SPECIFICATIONS OR CONTRACT DOCUMENTS. IF ANY BIDDER IS IN DOUBT AS TO THE TRUE MEANING OF ANY PART OF THE DRAWINGS, THE SPECIFICATIONS OR OTHER PORTIONS OF THE CONTRACT DOCUMENTS, FINDS DISCREPANCIES, ERRORS OR OMISSIONS THEREIN, OR FINDS VARIANCES IN ANY OF THE CONTRACT DOCUMENTS WITH APPLICABLE RULES, REGULATIONS, ORDINANCES AND/OR LAWS, A WRITTEN REQUEST FOR AN INTERPRETATION OR CORRECTION THEREOF MAY BE SUBMITTED TO THE ENGINEER. IT IS THE SOLE AND EXCLUSIVE RESPONSIBILITY OF THE BIDDER TO SUBMIT SUCH REQUEST IN SUFFICIENT TIME FOR THE PREPARATION OF A RESPONSE THERETO AND DELIVERY OF SUCH RESPONSE TO ALL BIDDERS PRIOR TO THE SCHEDULED CLOSING FOR RECEIPT OF BID PROPOSALS.

3. DIMENSIONS. ALL DIMENSIONS SHALL HAVE PREFERENCE OVER SCALE. ALL DIMENSIONS SHALL BE VERIFIED IN THE FIELD. ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES BETWEEN ARCHITECTURAL AND ENGINEERING DRAWINGS BEFORE PROCEEDING WITH WORK. IN NO CASE SHALL WORKING DIMENSIONS BE SCALED FROM PLANS, SECTIONS, OR DETAILS ON WORKING DRAWINGS. ALL SIZES OF EQUIPMENT AND MATERIALS SHALL BE VERIFIED WITH EQUIPMENT MANUFACTURER. ALL PLUMBING FIXTURES SHALL BE INSTALLED PER THE DIMENSIONS ON THE ARCHITECTURAL DRAWINGS.

4. CODES AND STANDARDS: ALL WORK SHALL COMPLY WITH THE REQUIREMENTS OF THE 2019 CALIFORNIA BUILDING CODE, WHICH ADOPTS THE 2019 CALIFORNIA MECHANICAL CODE, THE 2019 CALIFORNIA PLUMBING CODE, 2019 CALIFORNIA ELECTRICAL CODE, THE LOCAL JURISDICTION, AND STANDARD CONSTRUCTION PRACTICES. ALL PLUMBING FIXTURES SHALL BE IN STRICT ACCORDANCE WITH THE FIXTURE SCHEDULE, AND SHALL BE NEW AND FREE FROM DEFECTS. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS AND FEES, AND SHALL OBTAIN APPROVED INSPECTIONS FOR ALL WORK AS REQUIRED BY OWNER, AND LOCAL JURISDICTION. CONTRACTOR SHALL MAINTAIN IN EFFECT ALL INSURANCE REQUIRED BY STATE LAWS, LOCAL JURISDICTION, AND GENERAL CONTRACTOR / OWNER. WHERE CONFLICT OR VARIATION EXISTS AMONGST CODES, SPECIFICATIONS, OR DRAWINGS, THE MOST STRINGENT SHALL GOVERN.

5. TRENCHING: MATERIAL SHALL BE EXCAVATED FROM TRENCHES AND PILED ADJACENT TO THE TRENCH. MATERIAL SHALL BE PILED IN SUCH A MANNER THAT WILL CAUSE A MINIMUM OF INCONVENIENCE TO PUBLIC TRAVEL. ALL ROCK, BOULDERS, AND STONES SHALL BE REMOVED TO PROVIDE A MINIMUM CLEARANCE OF SIX (6) INCHES UNDER AND AROUND PIPES. EXCAVATIONS SHALL BE KEPT FREE OF WATER. TRENCHES SHALL BE DUG TO TRUE AND SMOOTH BOTTOM GRADES AND IN ACCORDANCE WITH THE LINES INDICATED ON DRAWINGS AND AS DIRECTED. TRENCH WIDTHS SHALL NOT EXCEED 30 INCHES OR 1.5 TIMES OUTSIDE DIAMETER OF THE PIPE PLUS 18 INCHES WHICHEVER IS GREATER. MINIMUM TRENCH WIDTH SHALL BE THE OUTSIDE DIAMETER OF PIPE INSTALLED PLUS 12 INCHES.

TRENCHES DEEPER THAN THE FOOTING OF A BUILDING OR STRUCTURE AND PARALLELING THE SAME SHALL BE NOT LESS THAN A 45 DEGREES THEREFROM.

DEPTH OF TRENCHING FOR WATER AND GAS PIPING SHALL BE SUCH AS TO GIVE A MINIMUM COVER OF 18 INCHES OVER THE TOP OF THE PIPE. DEEPER EXCAVATION MAY BE REQUIRED DUE TO LOCALIZED BREAKS IN GRADE, OR TO INSTALL THE NEW PIPING UNDER EXISTING CULVERTS OR OTHER UTILITIES WHERE NECESSARY.

TRENCHING FOR SEWERS AND DRAINS SHALL BE OF SUFFICIENT WIDTH TO PERMIT PROPER JOINTING OF THE PIPE AND BACKFILLING OF MATERIAL ALONG THE SIDES OF THE PIPE. TRENCH WIDTH AT THE SURFACE OF THE GROUND SHALL BE KEPT TO THE MINIMUM AMOUNT NECESSARY TO INSTALL THE PIPE IN A SAFE MANNER. TRENCHES SHALL BE EXCAVATED BELOW THE BARREL OF THE PIPE A SUFFICIENT DISTANCE TO PROVIDE FOR BEDDING MATERIAL.

WHERE THE TRENCH BOTTOM IS IN A MATERIAL WHICH IS UNSUITABLE FOR FOUNDATION OR WHICH WILL MAKE IT DIFFICULT TO OBTAIN UNIFORM BEARING FOR THE PIPE, SUCH MATERIAL SHALL BE REMOVED AND A STABLE FOUNDATION PROVIDED. THIS SHALL INCLUDE THE PREPARATION OF THE NATIVE TRENCH BOTTOM AND/OR THE TOP OF THE FOUNDATION MATERIAL TO A UNIFORM GRADE SO THAT THE ENTIRE LENGTH OF PIPE RESTS FIRMLY ON A SUITABLE PROPERLY COMPACTED MATERIAL. GRAVEL TO BE USED FOR FOUNDATION PURPOSES SHALL BE OF A TYPE AND GRADATION TO PROVIDE A SOLID COMPACT BEDDING IN THE TRENCH.

6. BACKFILL: CONTRACTOR SHALL COMPLETE BEDDING WITH PIPING LAID ON A 2" SAND FIRM BED FOR ITS ENTIRE LENGTH AND THEN BACKFILL WITH SAND TO 12 INCHES OVER THE TOP OF THE PIPE BEFORE STARTING BACKFILLING OPERATIONS. TAKE ALL PRECAUTIONS NECESSARY TO PROTECT THE PIPE FROM DAMAGE, MOVEMENT AND SHIFTING. COMPACTION EQUIPMENT USED ABOVE THE PIPE ZONE SHALL BE OF A TYPE THAT DOES NOT INJURE THE PIPE. BACKFILL MATERIAL SHALL BE CLEAN EARTH WITH NOT STONES, BOULDERS, CINDER FILL, CONSTRUCTION DEBRIS, OR OTHER MATERIALS THAT WILL CAUSE DAMAGE OR CORROSION. WHERE ORIGINAL EXCAVATED MATERIAL IS UNSUITABLE FOR TRENCH BACKFILL, BACKFILL GRAVEL SHALL BE PLACED. UNSUITABLE MATERIAL SHALL BE REMOVED TO A DISPOSAL AREA. WHEREVER A TRENCH IS EXCAVATED IN A PAVED ROADWAY, SIDEWALK OR OTHER AREA WHERE MINOR SETTLEMENTS WOULD BE DETRIMENTAL AND WHERE NATIVE EXCAVATED MATERIAL IS NOT SUITABLE FOR COMPACTION AS BACKFILL, TRENCH SHALL BE BACKFILLED WITH BACKFILL GRAVEL. WARNING TAPE MARKERS AND TRACER WIRES SHALL BE INSTALLED DURING BACKFILL OPERATIONS.

THE METHOD OF COMPACTION SHALL BE AT CONTRACTOR'S OPTION, UNLESS EXCAVATION PERMIT REQUIRES A SPECIFIC TYPE. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE THE PROPER SIZE AND TYPE OF COMPACTION EQUIPMENT AND SELECT THE PROPER METHOD OF UTILIZING SAID EQUIPMENT TO ATTAIN THE REQUIRED COMPACTION DENSITY. COMPACTION BY WATER JETTING WILL NOT BE PERMITTED.

WHERE BACKFILL IS REQUIRED TO BE COMPACTED TO A SPECIFIED DENSITY, TESTS FOR COMPLIANCE SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE GOVERNING AUTHORITY. ALLOW TESTING SERVICE TO INSPECT AND APPROVE EACH SUBGRADE AND FILL LAYER BEFORE FURTHER FILL, BACKFILL OR CONSTRUCTION WORK IS PERFORMED.

7. PIPING LOCATIONS: PIPING LOCATIONS SHOWN ARE DIAGRAMMATIC ONLY. CONTRACTOR SHALL VERIFY LOCATIONS OF ALL LATERAL STUBS, OFFSETS, OBSTRUCTIONS, ETC REQUIRED IN THE FIELD. THE ACTUAL LOCATIONS OF LINES, CLEANOUTS AND CONNECTIONS MAY VARY PROVIDED THAT COMPLETE SYSTEMS ARE SIZED AND INSTALLED IN COMPLIANCE WITH CODES. ANY SIGNIFICANT DEVIATIONS FROM THE PLANS SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER PRIOR TO INSTALLATION.

8. WATER PRESSURE: WATER PRESSURE SHALL BE MAINTAINED AT A MINIMUM OF 60 PSI. IF WATER PRESSURE IS IN EXCESS OF 80 PSI, AN APPROVED WATER PRESSURE REGULATOR AND PRESSURE RELIEF VALVE SHALL BE INSTALLED. AN EXPANSION TANK SHALL BE INSTALLED IN THE COLD WATER DISTRIBUTION DOWNSTREAM OF THE REGULATOR.

9. WASTE AND VENT PIPING: ALL UNDERGROUND DRAINS, VENTS, FITTINGS, AND THE BUILDING DRAIN SHALL BE ABS SCHEDULE 40 PIPE WITH SOLVENT WELDED FITTINGS. INSTALL BACKWATER VALVE TO PROTECT FIXTURES FROM SEWER BACK-UP. INDIRECT WASTE PIPING SHALL BE DWV COPPER. ABOVE-GROUND WASTE AND VENT PIPING SHALL BE U.S. MANUFACTURER CAST IRON.

10. WATER PIPING: ALL UNDERGROUND SITE PIPING SHALL BE SCHEDULE 40 PVC WITH SOLVENT WELD JOINTS. INSTALL BLUE INSULATED TRACER WIRE (MIN. 18 GAUGE) FOR PVC PIPE. TERMINATE WIRE ABOVE GRADE WITH PIPE CLAMP TO PIPE. TRANSITIONS FROM PVC TO COPPER SHALL BE MADE WITH MALE PVC TO FEMALE COPPER ADAPTERS. ALL ABOVE GROUND COLD AND HOT WATER PIPES IN BUILDINGS SHALL BE TYPE "L" HARD COPPER WITH (NON-LEAD) SOLDER SWEAT JOINTS OR PEX WITH APPROVED FITTINGS. ALL UNDERGROUND WATER PIPING IN BUILDINGS SHALL BE U.S. MANUFACTURED TYPE "K" SOFT COPPER, WITH NO JOINTS ALLOWED UNDER SLABS. WATER SHUT-OFF VALVES SHALL BE BALL TYPE OF BRONZE CONSTRUCTION. WATTS B-6001, NIBCO S-580 OR EQUAL. WHERE PIPES PIERCE FINISHED SURFACES, CHROME PLATED BRASS ESCUTCHEONS (BRASSCRAFT OR EQUAL) SHALL BE INSTALLED. LAVATORY AND SINK STOPS SHALL BE ANGLE, 1/2" FIP INLET, 1/2" MIP OUTLET. CHROME PLATED BRASSCRAFT OR EQUAL. CONNECT STOPS WITH CHROME PLATED BRASS NIPPLES INTO FIP ADAPTERS BEHIND ESCUTCHEONS. SUPPLY TUBES SHALL BE BRAIDED STAINLESS STEEL WITH 1/2" FIP FITTINGS AT BOTH ENDS. BRASSCRAFT S8 SERIES, OR EQUAL. PROPERLY PROTECT PLASTIC AND COPPER WATER PIPING WITHIN 1' OF EDGE OF FRAMING MEMBER WITH STEEL PLATES THAT EXTEND 1-1/2" BEYOND THE OUTSIDE DIAMETER OF THE PIPE.

ALL LINES SHALL BE SLOPED @ 1/4" / FT MIN OR IN COMPLIANCE WITH CODE. WHERE VENT PIPES PENETRATE THE ROOF, PIPING SHALL BE FLASHED. INSTALL CLEAN-OUTS PER THE REQUIREMENTS OF CPC SECTION 707 INCLUDING EACH BRANCH LINE OVER 5 FEET FROM MAIN, NO GREATER THAN 100 FEET IN DEVELOPED LENGTH AND OVER 135 DEGREES CHANGE OF DIRECTION. ALL SINKS, URINALS, LAVATORY AND WATER CLOSETS SHALL HAVE CLEANOUTS.

VENTS SHALL TERMINATE NOT LESS THAN 10 FEET FROM OR NOT LESS THAN 3 FEET ABOVE AN OPERABLE WINDOW, DOOR, OPENING, AIR INTAKE, OR VENT SHAFT NOR LESS THAN 3 FEET ROM AN LOT LINE OR STREET. INSTALL VENTS AND TRAPS PER THE REQUIREMENTS OF CHAPTER 9 & 10 OF THE CPC.

TRAP ARMS SHALL COMPLY WITH 2019 CPC TABLE 1002.2			
TRAP ARM PIPE DIAMETER	DISTANCE TRAP TO VENT MIN.	LENGTH OF TRAP MAX.	
1-1/4"	2-1/2"	3"	42"
1-1/2"	3"	4"	60"
2"	4"	6"	72"
3"	6"	8"	120"

11. PIPING PENETRATIONS OF FIRE RESISTIVE RATED WALL, PARTITIONS, FLOOR/CEILING ASSEMBLIES OR SHAFT ENCLOSURES SHALL BE PROTECTED BY IN ACCORDANCE WITH THE REQUIREMENTS OF THE CALIFORNIA BUILDING CODE.

12. THERE SHALL BE NO CUTTING OR NOTCH OR ALTERING EXISTING STRUCTURAL MEMBERS.

13. PROVIDE HANGERS AND SUPPORTS PER 2019 CPC TABLE 313.1			
	HORIZONTAL	VERTICAL	
ABS	18" OF JOINT	EACH FLOOR MAX. 15'	
COPPER PIPE	<1-1/2"@6"	EACH FLOOR MAX. 10'	
PVC & ABS	ALL MAX. 4'	BASE, EACH FLOOR, MID STORY GUIDE	
PEX	<1"@32"-4"	BASE, EACH FLOOR, MID STORY GUIDE	

HANGER ALL THREAD SHALL BE PER CPC TABLE 313.6 WITH A MINIMUM OF 3/8" ROD FOR PIPE TO 4".

14. PIPING SUPPORT: ALL PIPING SHALL BE SUPPORTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE 2019 CALIFORNIA BUILDING CODE, WHICH ADOPTS THE 2019 CALIFORNIA PLUMBING CODE. VERTICAL WATER PIPES SHALL BE SUPPORTED AT THEIR BASES AND AT EACH STORY OR AT TEN FOOT MAXIMUM INTERVALS. TO PREVENT SWAYING, PROVIDE LATERAL BRACING AT SIX FOOT INTERVALS ANCHORED TO OVERHEAD FRAMING. HORIZONTAL NATURAL GAS PIPING SHALL BE SUSPENDED WITH THE SAME HARDWARE AS FOR WATER PIPING, EXCEPT WITHOUT FELT LINER, LOCATED EVERY TEN FEET FOR PIPES 3/4" AND SMALLER, AND TWELVE FEET MAXIMUM FOR PIPES 1" AND LARGER. VERTICAL NATURAL GAS PIPING SHALL BE SUPPORTED AT EACH STORY HEIGHT. TO PREVENT SWAYING, PROVIDE LATERAL BRACING AT TEN FOOT INTERVALS ANCHORED TO OVERHEAD FRAMING.

HORIZONTAL ABS PIPING SHALL BE HUNG IN ACCORDANCE WITH THE REQUIREMENTS OF THE 2019 CALIFORNIA PLUMBING CODE. LOCATED AT FIVE FOOT MAXIMUM INTERVALS. TO PREVENT SWAYING, PROVIDE LATERAL BRACING AT FIVE FOOT INTERVALS ANCHORED TO FRAMING. VERTICAL PIPING SHALL BE SUPPORTED AT EACH FLOOR WITH SUPERSTRUT C-720 RISER CLAMPS AND AT MIDSPAN WITH C-708 CLAMPS INTO SUPERSTRUT CHANNEL.

15. ROUGH-IN: EXCEPT WHERE INDICATED IN THE FIXTURE SCHEDULE FOR HANDICAPPED FIXTURES, PIPING ROUGH-IN SHALL BE IN PRECISE ACCORDANCE WITH THE STANDARD ROUGH-IN DIMENSIONS PUBLISHED BY THE MANUFACTURER. ALL FIXTURES SHALL BE LOCATED IN STRICT CONFORMANCE WITH THE ARCHITECTURAL PLANS. COORDINATE WITH MECHANICAL CONTRACTOR FOR INSTALLATION OF GAS PIPING TO ANY FAU UNITS. COORDINATE W/FRAMING & CONCRETE CONTRACTORS FOR BACKING & BLOCK OUTS AS REQD.

16. INSULATION: INSULATE ALL HOT WATER PIPING WITH 1/2 INCH CLOSED CELL INSULATION INSTALLED PER MANUFACTURER'S RECOMMENDATIONS. THERE SHALL BE NO GAPS IN THE INSULATION. INSULATE DRAIN TRAPS BELOW LAVS & SINKS WITH MCGUIRES PROWRAP ADA INSULATION. INSTALL 1 INCH THICK INSULATION AT EXTERIOR PIPE RISERS.

17. TESTING: ALL PIPING AND FIXTURES INSTALLED SHALL BE TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE 2019 CALIFORNIA PLUMBING CODE AND THE LOCAL JURISDICTION.

18. STERILIZATION: ALL WATER PIPING SHALL BE FLUSHED AND STERILIZED. FLUSH EACH UNIT OF WATER SUPPLY AND DISTRIBUTION SYSTEM THOROUGHLY WITH CLEAN WATER AT THE HIGHEST VELOCITIES ATTAINABLE. STERILIZE WATER LINES BY FILLING WITH A SOLUTION CONTAINING FIFTY (50) PARTS OF CHLORINE PER MILLION PARTS OF WATER AND HOLDING THE SOLUTION THEREIN FOR AT LEAST EIGHT (8) HOURS WITH A WATER HEAD OF AT LEAST FIVE FEET ABOVE THE HIGHEST POINT IN THE SYSTEM. CONTINUE FLUSHING UNTIL THE RESIDUAL CHLORINE IS APPROXIMATELY, BUT NOT MORE THAN, TWO (2.0) PARTS PER MILLION.

19. LOW-FLOW FIXTURES: THE PLUMBING FIXTURES AND PLUMBING FITTINGS SHALL MEET THE FOLLOWING STANDARDS: LAVATORY & SINK FAUCETS - 1.2 GPM MAX. KITCHEN SINK FAUCETS - 1.8 GPM MAX. ALL FIXTURES SHALL MEET APPLICABLE ANSI STDs.

20. MAINTAIN A MINIMUM OF TEN FEET OF CLEARANCE BETWEEN ANY AIR INTAKE AND ALL VENTS AND FLUES.

21. MANDATORY ENERGY MEASURES: PLUMBING EQUIPMENT SUBJECT TO CCR TITLE4, PART 6, SHALL BE CERTIFIED BY THE MANUFACTURER AS COMPLYING WITH THE EFFICIENCY REQUIREMENTS AS PRESCRIBED IN SECTIONS 111, 113, 114, AND 115. SAID PLUMBING EQUIPMENT SHALL BE SPECIFIED AND INSTALLED IN ACCORDANCE WITH SECTION 123.

22. SEISMIC ANCHORING: ANCHOR ALL EQUIPMENT INCLUDING WATER HEATERS TO RESIST SEISMIC INDUCED MOTION WITH APPROVED ANCHORING DEVICES PER CPC & CBC REQTS. WHERE BRACING DETAILS ARE NOT SHOWN ON THE DRAWINGS OR IN THE GUIDELINES, THE FIELD INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT & THE MECHANICAL ENGINEER.

23. CORRECTION OF WORK: THE CONTRACTOR SHALL PROMPTLY CORRECT ALL WORK THE OWNER FINDS DEFECTIVE OR FAILING TO CONFORM TO THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BEAR ALL COSTS REQUIRED BY THE CONTRACT DOCUMENTS. IF ANY OF THE WORK IS FOUND TO BE DEFECTIVE OR NOT IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL CORRECT IT PROMPTLY AFTER RECEIPT OF A WRITTEN NOTICE FROM THE OWNER TO DO SO.

24. AS-BUILT DRAWINGS SHALL BE GIVEN TO THE OWNER PRIOR TO ACCEPTANCE OF THE PROJECT.

25. WARRANTY: THE CONTRACTOR SHALL WARRANT THAT ALL SYSTEMS, SUBSYSTEMS, AND COMPONENT PARTS ARE FULLY FREE FROM DEFECTIVE DESIGN, MATERIALS, AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE BY THE OWNER.

26. CONDENSATE DRAINS: CONDENSATE DRAINS SHALL BE TYPE L COPPER. CONDENSATE DRAINS MUST PROVIDE MINIMUM 1 INCH AIR GAP (TYPICAL) THROUGHOUT.

27. COORDINATION: MECHANICAL CONTRACTOR SHALL COORDINATE WORK WITH THE PROJECT MANAGER AND ALL RELATED TRADES.

28. UNIT LOCATIONS: EQUIPMENT AND SYSTEM LOCATIONS SHOWN ARE APPROXIMATE ONLY. CONTRACTOR SHALL VERIFY LOCATIONS OF ALL STRUCTURAL MEMBERS AND EXISTING CONDITIONS IN THE FIELD, AND LOCATE UNITS AND DUCTWORK TO AVOID INTERFERENCE. ANY SIGNIFICANT DEVIATIONS FROM THE PLANS SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER. ALLOW CLEARANCE FOR DUCTWORK AND PIPING. ALL CLEARANCES REQUIRED BY UNIT MANUFACTURER SHALL BE MAINTAINED. ENTIRE INSTALLATION SHALL BE IN ACCORDANCE WITH CODES AND THE RECOMMENDED INSTALLATION PROCEDURES PUBLISHED BY THE MANUFACTURER.

29. COORDINATION DURING CONSTRUCTION: THE CONTRACTOR SHALL COORDINATE ANY NECESSARY CHANGES IN WORK SCHEDULING WITH THE OWNER TO MINIMIZE THE DISRUPTION. THE CONTRACTOR SHALL COORDINATE WITH OTHER TRADES. THE CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY HIS WORK TO BUILDING(S) AND EQUIPMENT AT NO ADDITIONAL COST TO THE OWNER.

30. CORRECTION OF WORK: THE CONTRACTOR SHALL PROMPTLY CORRECT ALL WORK THE OWNER FINDS DEFECTIVE OR FAILING TO CONFORM TO THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BEAR ALL COSTS REQUIRED BY THE CONTRACT DOCUMENTS, IF ANY OF THE WORK IS FOUND TO BE DEFECTIVE OR NOT IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL CORRECT IT PROMPTLY AFTER RECEIPT OF A WRITTEN NOTICE FROM THE OWNER TO DO SO.

31. AS-BUILT DRAWINGS SHALL BE GIVEN TO THE OWNER PRIOR TO ACCEPTANCE OF THE PROJECT. INCLUDED IN THE AS-BUILTS SHALL BE DOCUMENTATION AND TWO COPIES OF THE PRINTED SHEETS AND PLANS ON MAGNETIC MEDIA.

32. SUBMITTALS REQUIRED: PRIOR TO ORDERING EQUIPMENT AND MATERIALS, CONTRACTOR SHALL FURNISH TO ENGINEER / OWNER SUBMITTALS AND SHOP DRAWINGS OF ALL EQUIPMENT AND MATERIALS PROPOSED FOR USE IN THIS PROJECT. ORDERING OF EQUIPMENT AND MATERIALS SHALL ONLY PROCEED AFTER SATISFACTORY REVIEW OF ALL SUBMITTALS BY CONTRACTOR / ENGINEER / OWNER. COPIES OF ALL OWNER'S MANUALS, WARRANTIES AND OTHER WRITTEN INFORMATION REGARDING SYSTEMS SHALL BE PRESENTED TO THE OWNER PRIOR TO THE COMPLETION OF THE PROJECT.

33. CONSTRUCTION OBSERVATION: IN ADDITION TO THE REQUIREMENT FOR OBTAINING INSPECTIONS BY THE LOCAL JURISDICTION, CONTRACTOR SHALL NOTIFY ENGINEER AT APPROPRIATE TIMES DURING THE CONSTRUCTION PROCESS SO THAT ENGINEER CAN VISIT SITE TO BECOME GENERALLY FAMILIAR WITH THE PROGRESS AND QUALITY OF CONTRACTOR'S WORK AND TO DETERMINE IF THE WORK IS PROCEEDING IN GENERAL ACCORDANCE WITH THE CONTRACT DOCUMENTS.

MECHANICAL/PLUMBING SCHEDULE

	WASTE	VENT	CW	HW
CS 1	1-1/2" INDIRECT	1-1/2"	3/4"	3/4"

HS 1	2"	1-1/2"	1/2"	1/2"
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PS 1	1-1/2" INDIRECT	1-1/2"	1/2"	1/2"
---------	--------------------	--------	------	------

WH 1	-	-	3/4"	3/4"
---------	---	---	------	------

WH 2	-	-	3/4"	3/4"
---------	---	---	------	------

SOV 1	-	-	-	-
----------	---	---	---	---

FS 1	2"	1 1/2"	-	-
---------	----	--------	---	---

TP 1	-	-	1/2	-
---------	---	---	-----	---

FA 1	-	-	1/2	1/2
---------	---	---	-----	-----

EF 1	-	-	-	-
---------	---	---	---	---

WH 3	-	-	3/4"	3/4"
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COMPARTMENT SINK. ELKAY MODEL 14-3C16X20-2-18X. 3 COMPARTMENT SINK. 16 GA SS, 14" DEEP. W/ 18" DRAINBOARDS ON LEFT AND RIGHT, BACKSPASH AND ROLLED FRONT AND SIDE EDGES TO CONTAIN SPLASHES. INCLUDE CHICAGO FAUCET 445-DJ18E35ABCP, 1.5 GPM, 18" DOUBLE-JOINTED SWING SPOUT. ALL EXPOSED INDIRECT DRAIN PIPING SHALL BE DWV COPPER WITH SOLDERED WASTE FITTINGS TERMINATING AT FLOOR SINK PER ENVIRONMENTAL HEALTH REQUIREMENTS. COORDINATE WITH OWNER/ARCH REGARDING ADDITIONAL ACCESSORIES TO FAUCET AND SINK.

HAND SINK. KROWNE MODEL HS-4. 16" WIDE WALL MOUNT SINK WITH OVERFLOW & P-TRAP. INCLUDED 4" CENTER WALL MOUNT FAUCET 10-435L, 0.5 GPM.

PREP SINK. ELKAY MODEL 1C18X18R18X. ONE COMPARTMENT WITH DRAINBOARD, 16 GA, 12" DEEP W/ BACKSPASH. ELKAY FAUCET MODEL LK940HA08T6S. 8" CENTER WALL MOUNT. 1.5 GPM. CHROME PLATED BRASS.

WATER HEATER. AO SMITH MODEL DSE-20A, 20 GALLON, 208 V,1 PH, 9000 WATTS, WITH HOLDRITE PAN. TEMPERING VALVE WATTS MODEL LFN170-M3. OP. WEIGHT: 297 LBS

WATER HEATER, CHRONOMITE MODEL CMI-20L/208. 208/1/60 VOLT 4.16 KW. WEIGHT - 10 LBS. 54 DEGREE TEMP. RISE.

SHUT-OFF VALVE; LEAD-FREE. NIBCO S-685-80-LF. 1/2" THRU 2", BRONZE BALL VALVE, FULL PORT, SOLDER END. LOCATE IN WALL & WHERE INDICATED BEHIND 15"x15" JR SMITH 4730-U-NP STAINLESS STEEL ACCESS COVER W/VANDAL PROOF SCREWS, SIZES ON PLANS.

FLOOR SINK, JR SMITH FIG. 3101Y-C-U-12, B-1/2" SQUARE TOP, NICKEL BRONZE RIM, HALF GRATE & SEDIMENT BUCKET.

TRAP PRIMER, MIFAB M-500. INSTALL IN COLD WATER LINE WITH JR SMITH 4730-U-NB STAINLESS STEEL ACCESS COVER PER DETAIL 8/MP3.0. INSTALL W/MI-DU DISTRIBUTION UNIT WHERE MULTIPLE TRAPS ARE SERVED.

FAUCET. ZURN MODEL Z6915-XL-F, 0.5 GPM SPRAY HEAD, BATTERY POWERED SENSOR FAUCET COLD & HOT WATERO W/ MIXING VALVE SET FAUCET TO RUN MIN. 10 SECONDS. REPLACE (E) FAUCET. INSTALL TRUEBRO LAV SHIELD.

EXHAUST FAN. PANASONIC MODEL FV-1115VK2. 110 CFM @ 0.1 W.G.W/ OCCUPANCY & MOTION SENSOR AND T TOP TERMINATION. ELECTRICAL: 120V 60 HZ 6.9 WATTS. INSTALL PER MANUFACTURERS INSTALLATION MANUAL.

WATER HEATER, AO SMITH MODEL EJC-6. 6 GALLON. 120V, 1650 WATT. MOUNT ABOVE MOP SINK WITH HOLDRITE WALL MOUNT 30-SWHP-WM. T/P DRAINED PIPED TO MOP SINK. WEIGHT - 80 LBS.

SYMBOL LEGEND

CW	COLD WATER
HW	HOT WATER
COND.	CONDENSATE
WCO	WALL CLEAN-OUT
COTG	CLEAN OUT TO GRADE
VTR	VENT TO ROOF
	FLOOR DRAIN
	WALL CLEAN OUT
	FLOOR CLEAN OUT
	COTG IN YARD BOX
	FLOOR SINK
	WATER HAMMER ARRESTOR
	HOSE BIB
	SHUT-OFF VALVE (SOV)

LINE LEGEND

---	-	COLD WATER
---	-	HOT WATER
---	-	VENT
---	-	WASTE
---	-	GAS
---	-	CONDENSATE
---	-	GREASE WASTE

MOORPARK CONCESSION STAND
WATER HEATER CALCULATION
FIXTURE GPH PER FIXTURE

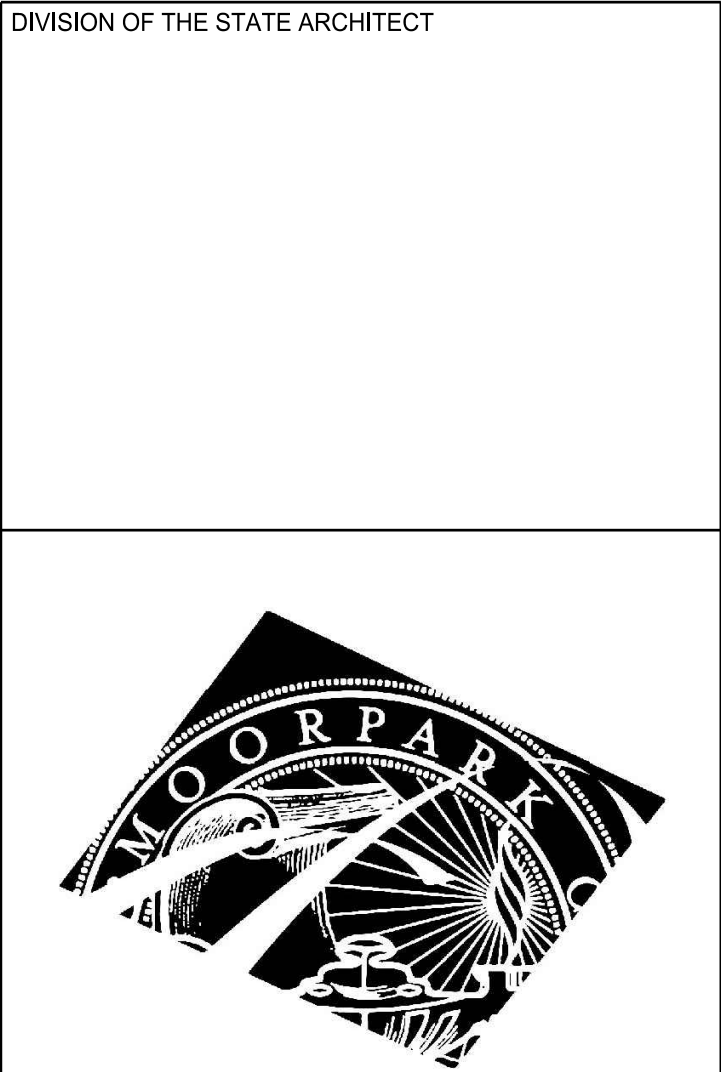
PREP SINK	5 GPH
16X20 COMPARTMENT SINK	14 GPH
HAND WASH SINK	5 GPH

TOTAL	34 GPH
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ELECTRIC WATER HEATER KW IS:
TOTAL GPH X 0.147
34 GPH X 0.147 = 4.99 KW

ABBREVIATIONS

ABBR.	ABBREVIATIONS
ABV.	ABOVE
APPROX.	APPROXIMATELY
AFF	ABOVE FINISHED FLOOR
BLDG	BUILDING
BLW.	BELOW
BOT	BOTTOM
CD	CEILING DIFFUSER
CFM	CUBIC FEET PER MINUTE
CL	CENTERLINE
CLG	CEILING
COND	CONDENSATE
CONT	CONTINUED
DCW	DOMESTIC COLD WATER
DIA	DIAMETER
DWN	DOWN
DS	DOWN SPOUT
DWG	DRAWING
(E)	EXISTING
EA.	EACH
ELEV	ELEVATION
ELEC.	ELECTRIC
EQ	EQUIPMENT
EQUIP	EQUIPMENT
EXH	EXHAUST
FIN	FINISHED
FLR	FLOOR
FRM	FROM
G	GAS
GPM	GALLONS PER MINUTE
MIN.	MINIMUM
MAX.	MAXIMUM
(N)	NEW
OC	ON CENTER
POC	POINT OF CONNECTION
RA	RETURN AIR
RD	ROOF DRAIN
RO	ROOF OVERFLOW
SHT	SHEET
SR	SIDE WALL REGISTER
SOV	SHUT-OFF VALVE
TYP	TYPICAL
UGND	UNDERGROUND
UNDR	UNDER
VTR	VENT TO ROOF
WCO	WALL CLEAN-OUT



MOORPARK COLLEGE

7075 CAMPUS RD
MOORPARK, CA 93021
TEL: (805) 378 - 1400

PROJECT TITLE AND SCHOOL LOCATION

STADIUM RESTROOMS & CONCESSION STAND

7075 CAMPUS ROAD, MOORPARK, CA 93021

COMMISSIONED ARCHITECT

AMADOR

28328 AGOURA RD, 203 | AGOURA HILLS CA, 91001 | 805-558-4334

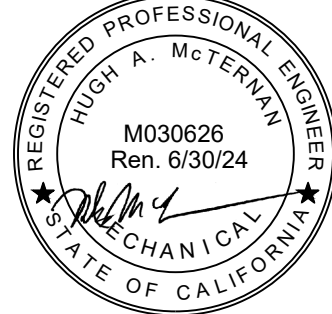
CONSULTANT



AE Group
Mechanical Engineers

838 East Front Street
Ventura, California 93001-2925
(805) 653-1722
hugh@aegrpoume.com

STAMPS/SEALS

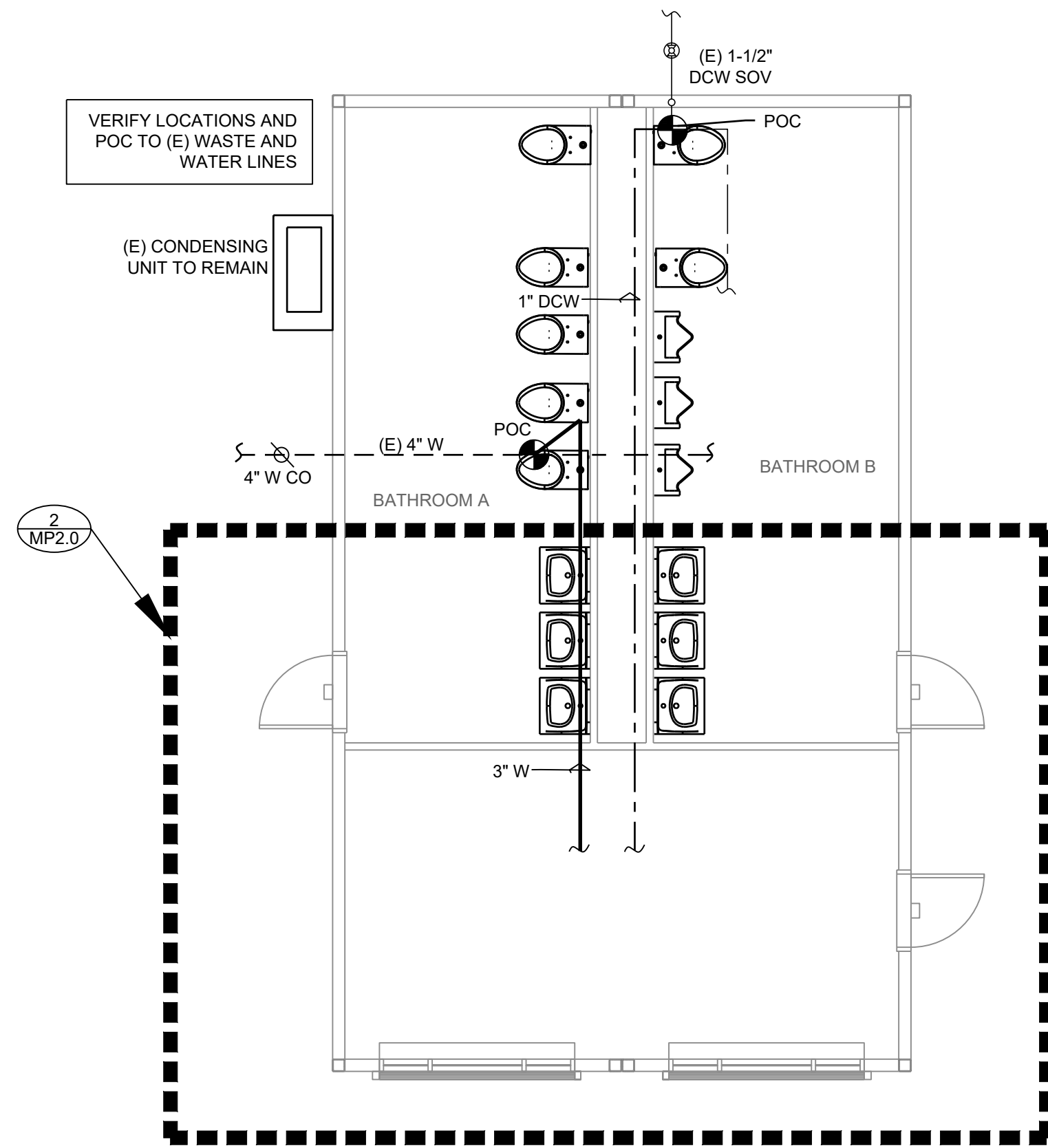


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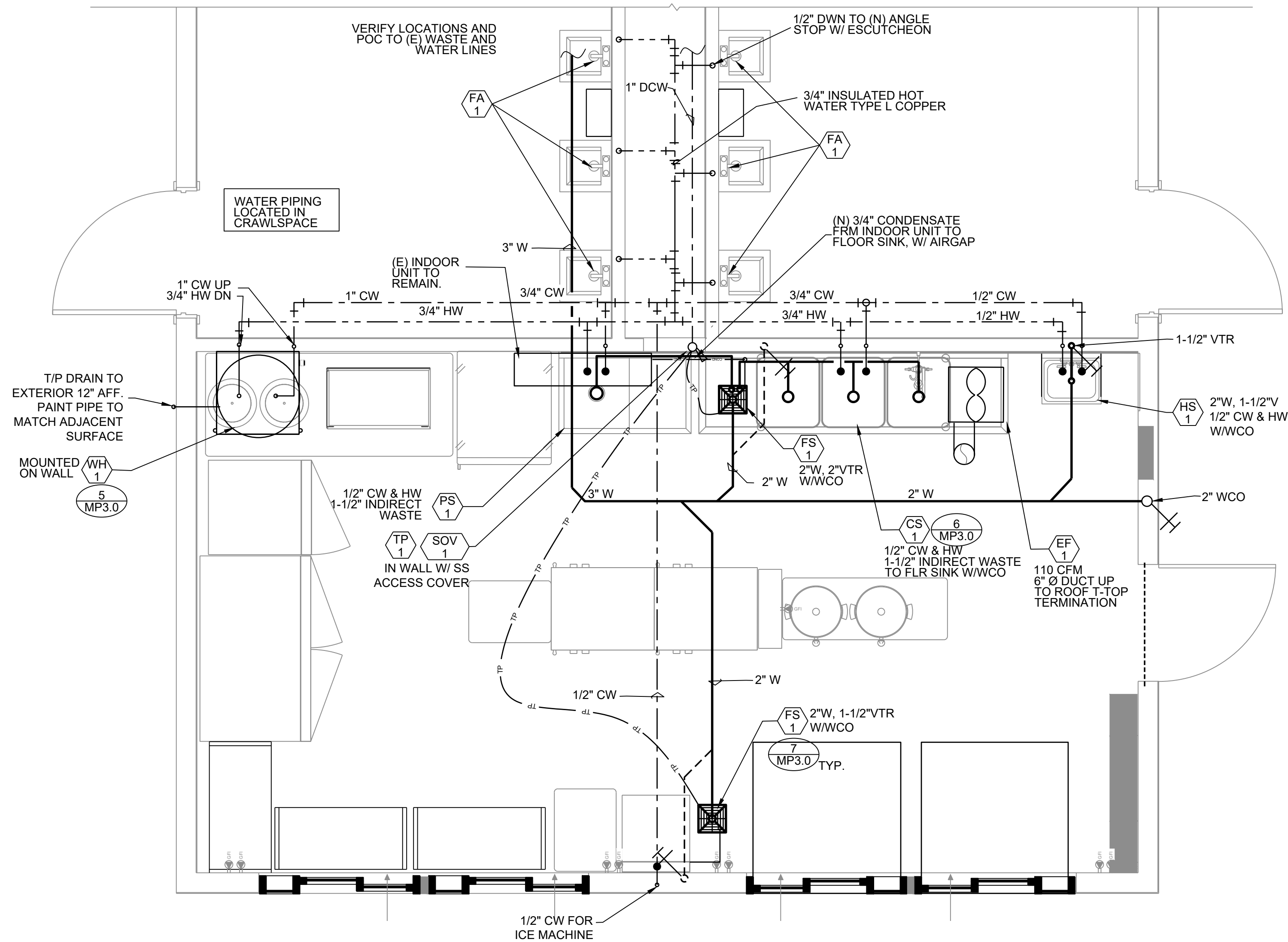
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MECHANICAL & PLUMBING NOTES & SCHEDULE

PROJECT NO.:	PROJECT ARCH:
DRAWN: JS	CHECKED: HM
SHEET NUMBER:	
MP1.0	
DATE: 07/25/2022	SHEET: OF



1 MECHANICAL/PLUMBING PLAN
SCALE: 1/4"=1'-0"



2 ENLARGED MECHANICAL/PLUMBING PLAN
SCALE: 1/2"=1'-0"



MOORPARK COLLEGE
7075 CAMPUS RD
MOORPARK, CA 93021
TEL: (805) 378 - 1400

PROJECT TITLE AND SCHOOL LOCATION

STADIUM RESTROOMS & CONCESSION STAND

7075 CAMPUS ROAD, MOORPARK, CA 93021

COMMISSIONED ARCHITECT

AMADOR

28328 AGOURA RD, 203 | AGOURA HILLS CA, 91301 | 805-558-4334

CONSULTANT



AE Group
Mechanical Engineers
838 East Front Street
Ventura, California 93001-2925
(805) 653-1722
hugh@aegroupme.com

STAMPS/SEALS



SHEET TITLE:

MECHANICAL & PLUMBING PLAN

PROJECT NO.:

PROJECT ARCH:

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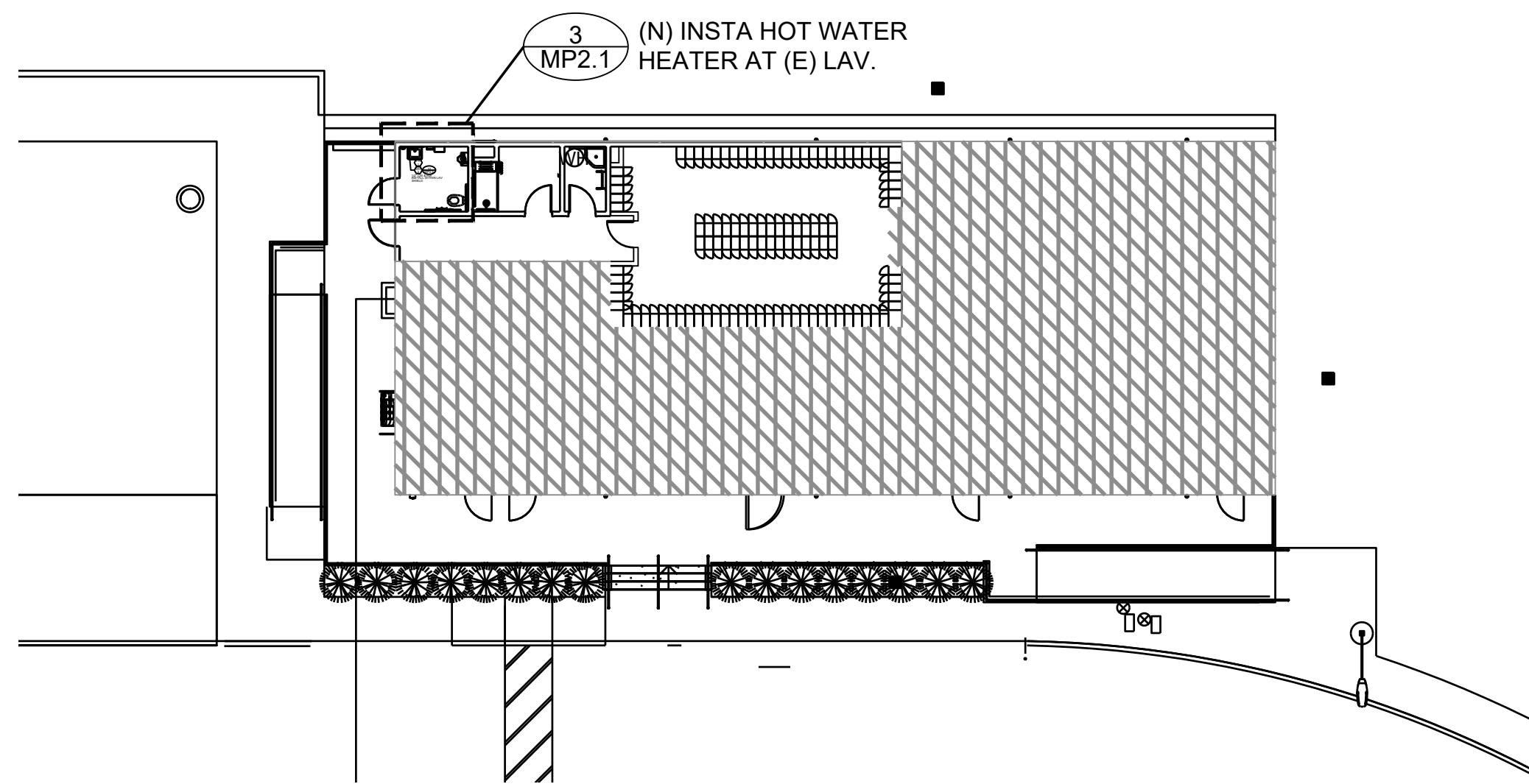
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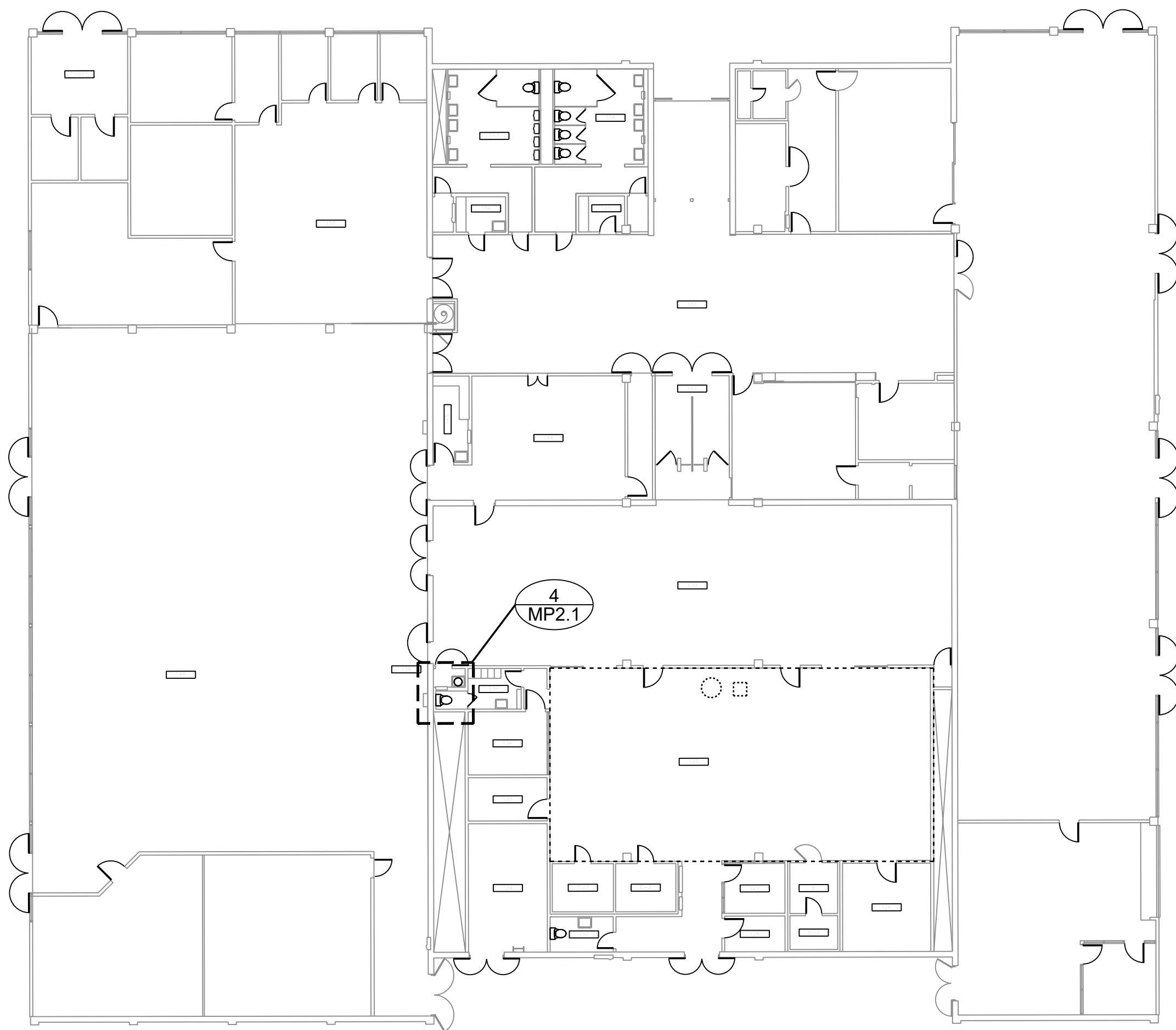
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SHEET: OF



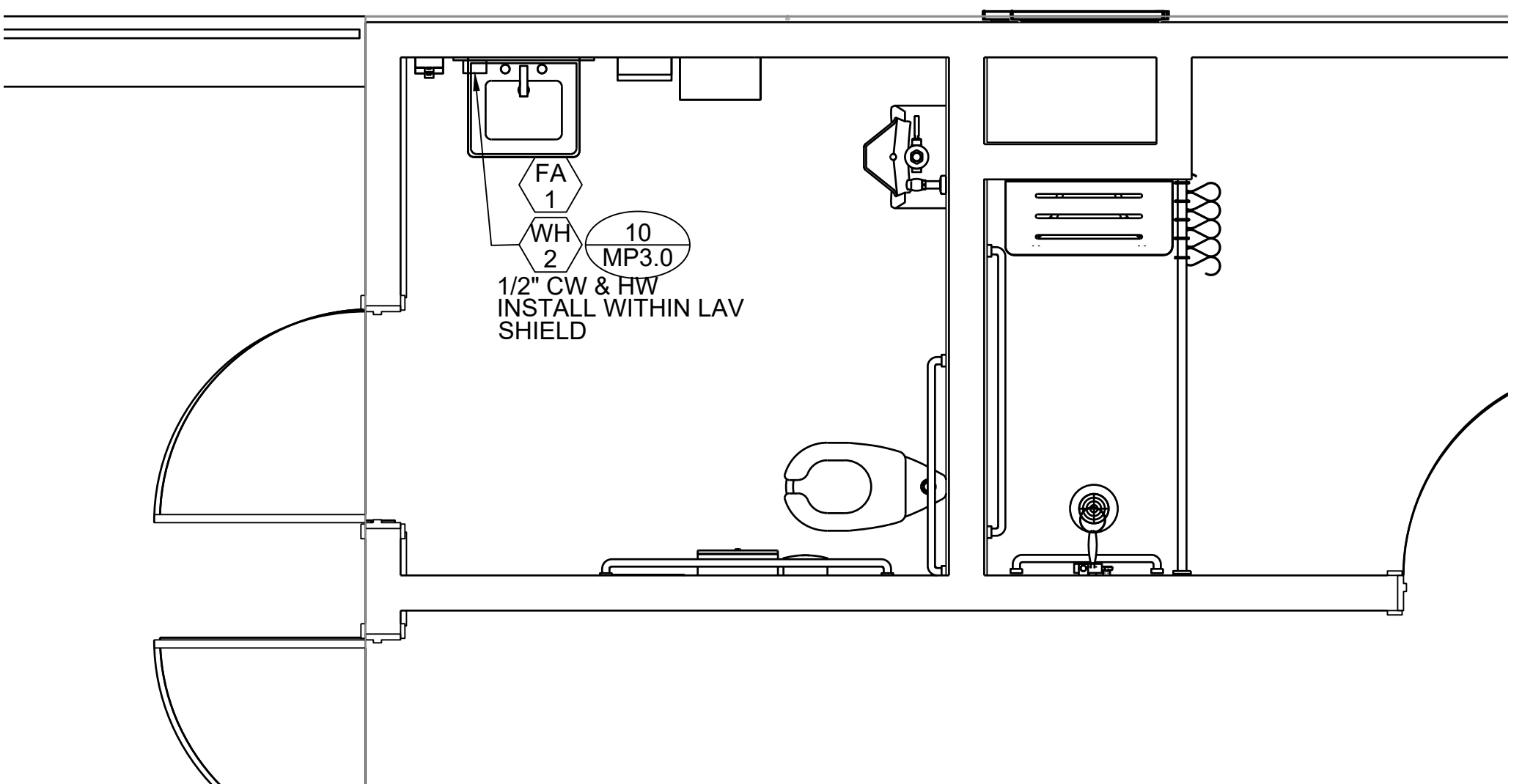
**FIELD HOUSE RESTROOM
PLUMBING PLAN**

1 SCALE: 1/16"=1'-0"



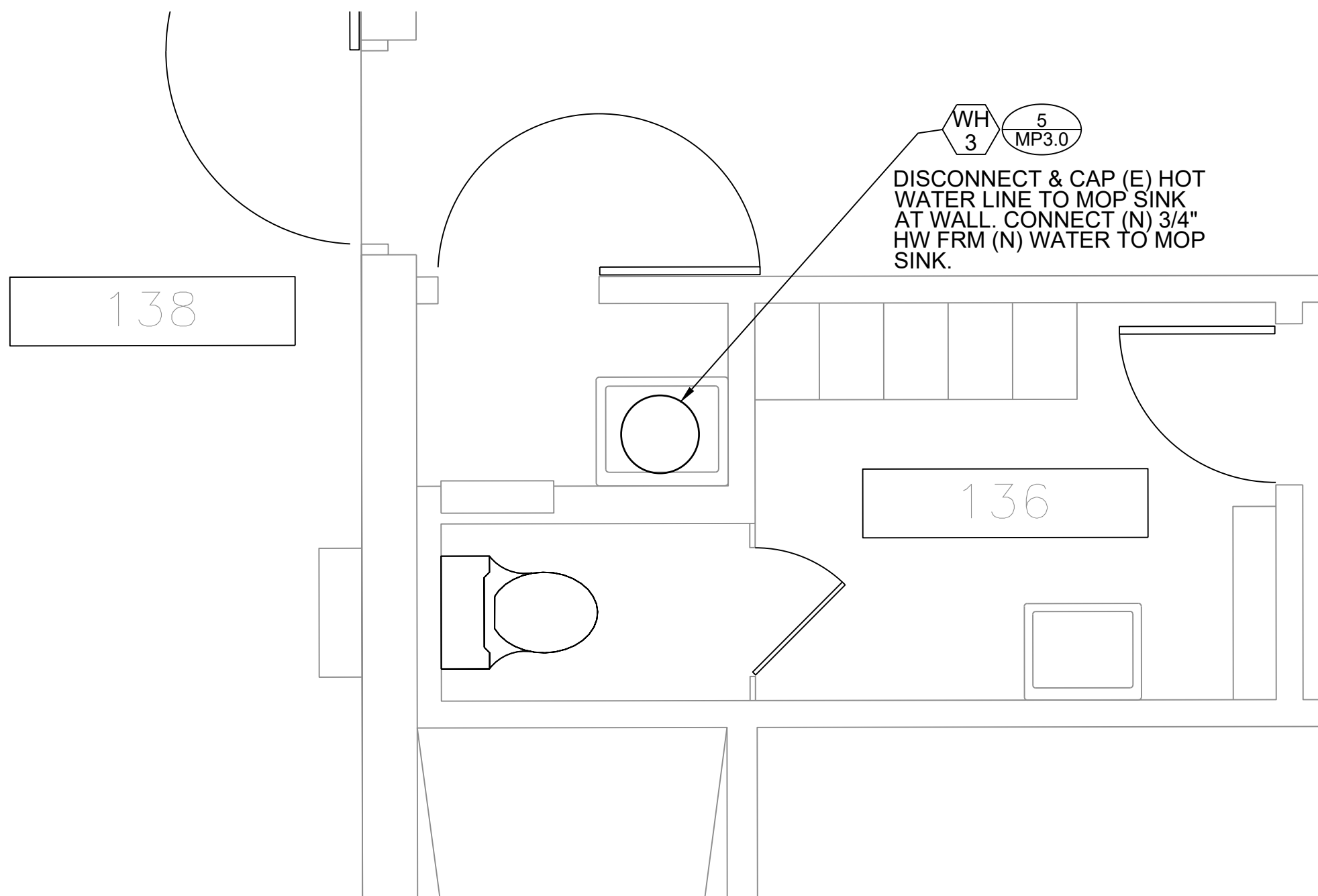
**CAMPUS CENTER
PLUMBING PLAN**

2 SCALE: 1/16"=1'-0"



**FIELD HOUSE RESTROOM
ENLARGED PLUMBING PLAN**

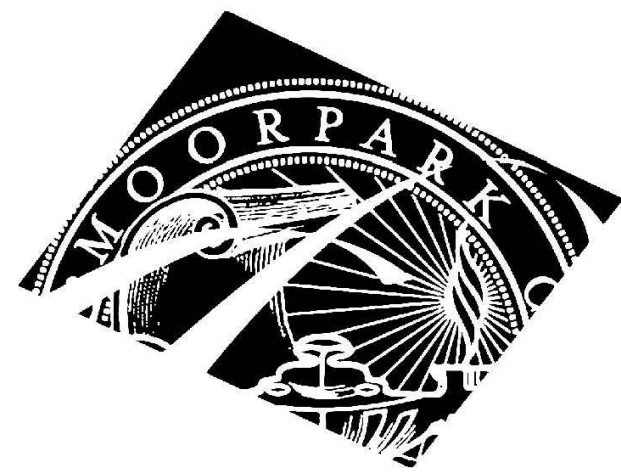
3 SCALE: 1/2"=1'-0"



**CAMPUS CENTER
ENLARGED PLUMBING PLAN**

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

DIVISION OF THE STATE ARCHITECT



MOORPARK COLLEGE
7075 CAMPUS RD
MOORPARK, CA 93021
TEL: (805) 378 - 1400

PROJECT TITLE AND SCHOOL LOCATION

**STADIUM RESTROOMS &
CONCESSION STAND**

7075 CAMPUS ROAD, MOORPARK, CA
93021

COMMISSIONED ARCHITECT

AMADOR

28328 AGOURA RD, 203 | AGOURA HILLS CA, 91301 | 805-558-4334

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838 East Front Street
Ventura, California 93001-2925
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hugh@aegroupme.com

STAMPS/SEALS



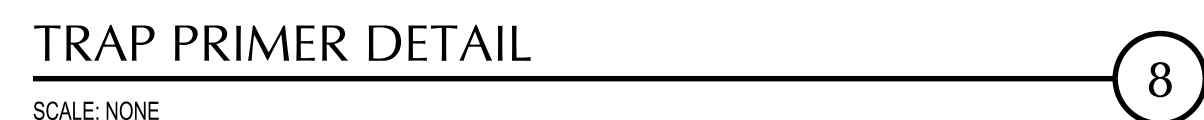
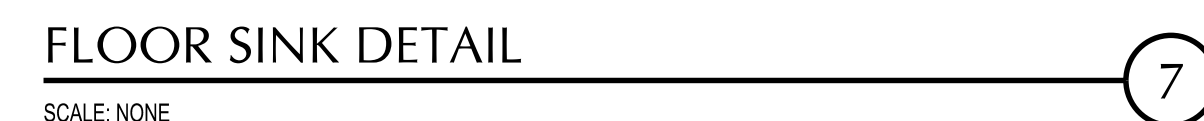
SHEET TITLE:

**FIELD HOUSE &
CAMPUS CENTER
PLUMBING
PLAN**

PROJECT NO.:	PROJECT ARCH:
DRAWN: JS	CHECKED: HM
SHEET NUMBER:	

MP2.1

DATE: 07/25/2022	SHEET: ____ OF ____
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DATE: 10 November 2022
PATHNAME: G:\22557E100\Sheets
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DRAFTER: CM01

GENERAL NOTES															
<div><div>A. GENERAL</div><div><div>1. SCOPE</div><div>THE DRAWINGS AND THESE GENERAL NOTES DESCRIBE THE SCOPE OF WORK AND SYSTEMS. THE MATERIAL REQUIRED FOR THE WORK SHALL BE CONTRACTOR FURNISHED AND CONTRACTOR INSTALLED, UNLESS SPECIFICALLY NOTED OTHERWISE. THE WORK INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING PRINCIPAL SYSTEMS AND EQUIPMENT.</div></div><div><div>2. PERMITS AND CHARGES</div><div>OBTAIN AND PAY FOR ALL NECESSARY CONSTRUCTION PERMITS, INSPECTION FEES, AND OTHER CHARGES BY AGENCIES HAVING JURISDICTION.</div></div><div><div>3. REGULATIONS AND CODES</div><div>PROVIDE AND INSTALL ALL MATERIALS IN CONFORMANCE WITH THE 2019 C.E.C., CALIFORNIA ADMINISTRATIVE CODE TITLE 8, AND OTHER CODES AND REGULATIONS HAVING JURISDICTION. INSTALL ALL EQUIPMENT IN ACCORDANCE WITH THE REQUIREMENTS OF THE INSPECTING AUTHORITY AND THE MANUFACTURERS RECOMMENDATIONS.</div></div><div><div>4. VERIFYING EXISTING CONDITIONS</div><div>BEFORE SUBMITTING BID, BECOME THOROUGHLY FAMILIAR WITH ACTUAL EXISTING CONDITIONS AT THE BUILDING. THE INTENT OF THE WORK IS SHOWN ON THE DRAWINGS AND DESCRIBED HEREINAFTER. BY THE ACT OF SUBMITTING A BID PROPOSAL FOR THE WORK, THE CONTRACTOR SHALL BE DEEMED TO HAVE MADE SUCH STUDY AND EXAMINATION AND TO ACCEPT ALL CONDITIONS PRESENT AT THE SITE. NO REQUEST FOR ADDITIONAL PAYMENT WILL BE CONSIDERED AS VALID, DUE TO FAILURE TO ALLOW FOR CONDITIONS WHICH MAY EXIST.</div></div><div><div>5. COORDINATION</div><div>COORDINATE ALL WORK WITH OTHER TRADES. OBTAIN ALL DRAWINGS THAT WILL REQUIRE COORDINATION AND PROVIDE ALL ELECTRICAL CONNECTION REQUIRED WHETHER SHOWN ON ELECTRICAL DRAWINGS OR NOT.</div><div>ELECTRICAL EQUIPMENT LOCATIONS INDICATED ARE SHOWN DIAGRAMMATICALLY, EXACT LOCATION SHALL BE VERIFIED.</div><div>SCALING OFF OF DRAWINGS SHALL BE DONE AT CONTRACTORS RISK. DO NOT SCALE DEVICES, LIGHTING FIXTURES OR ANY EQUIPMENT FROM PLANS.</div><div>LIGHTING FIXTURE QUANTITIES AND LENGTHS SHALL BE CONTRACTORS RESPONSIBILITY. FIXTURES ARE SHOWN FOR CIRCUITING ONLY. CONTRACTOR TO VERIFY SIZES & QUANTITIES PRIOR TO BID.</div></div><div><div>6. SERVICE CONTINUITY</div><div>UNINTERRUPTED EXISTING ELECTRICAL POWER SHALL BE MAINTAINED TO OTHER TRADES FOR TEMPORARY POWER AREAS OF THE SITE DURING CONSTRUCTION. PROVIDE ANY TEMPORARY SERVICES AS MAY BE REQUIRED. IDENTIFY AT BID TIME, ALL WORK TO BE DONE ON PREMIUM TIME AND THE TOTAL OVERTIME MAN-HOURS REQUIRED FOR COMPLETION.</div></div><div><div>7. AS BUILT</div><div>PROVIDE RECORD DRAWINGS IN ACAD TO THE OWNER WITH ALL CHANGES NOTED THEREON AT THE COMPLETION OF THE PROJECT. RECORD DRAWINGS SHALL BE SIGNED AND DATED BY CONTRACTOR PRIOR TO RELEASE OF FINAL RETENTION OF ALL MONIES.</div></div><div><div>8. GUARANTEE</div><div>CONTRACTOR SHALL UNCONDITIONALLY GUARANTEE ALL LABOR AND MATERIALS ON ALL WORK AGAINST DEFECTS IN WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE YEAR.</div></div><div><div>9. SHOP DRAWINGS</div><div>SUBMIT SHOP DRAWINGS AND MATERIAL LIST FOR REVIEW PRIOR TO COMMENCING ANY WORK. ALL EQUIPMENT TO BEAR U.L. LABEL OR THAT OF ANOTHER ACCEPTABLE TESTING LABORATORY. SHOP DRAWINGS MUST BE STAMPED BY THE CONTRACTOR FOR CONFORMANCE PRIOR TO SUBMITTAL.</div><div>SUBMIT THREE HARD COPY SETS OF SHOP DRAWINGS FOR REVIEW PRIOR TO PURCHASING ALL BREAKER MOUNTING HARDWARE, DISCONNECT SWITCHES, FUSES, CONTROLLERS, LIGHTING FIXTURES, LIGHT SWITCHES, RECEPTABLES, ETC.</div></div><div><div>10. CONTRACTOR BID</div><div>CONTRACTORS BID SHALL BE BASED ON ALL WORK SHOWN ON THE PLANS AND AS SPECIFIED. IF CONTRACTOR PROPOSES TO SUBSTITUTE FOR EQUIPMENT SPECIFIED, HE SHALL SUBMIT HIS REQUEST FOR CONSIDERATION OF THE OWNER AND ENGINEER PRIOR TO BID IN WRITING. ALL SUBSTITUTIONS MUST BE REVIEWED BY THE ENGINEER IN WRITING. SUCH REVIEW SHALL NOT BE CONSIDERED AS ENDORSEMENT OF THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS, AND THE CONTRACTOR SHALL BE RESPONSIBLE AT HIS OWN EXPENSE FOR ANY CHARGES RESULTING FROM HIS PROPOSED SUBSTITUTIONS WHICH AFFECT OTHER PARTS OF HIS OWN WORK, THE OWNER, ENGINEER OF RECORD OR THE WORK OF OTHER CONTRACTORS.</div></div><div><div>B. MATERIAL AND INSTALLATION</div><div>ALL WORK AND MATERIAL SHALL CONFORM TO THE LATEST RULES OF THE GOVERNING ELECTRICAL CODE AND INSTALLATION SHALL BE AS OF THE LATEST INDUSTRY STANDARDS OF WORKMANSHIP.</div><div><div>ALL MATERIALS SHALL BE NEW AND LISTED FOR THE APPLICATION BY UNDERWRITERS LABORATORY (UL).</div></div><div><div>1. CONDUITS</div><div>CONDUIT SHALL BE EMT, PVC, IMC, RIGID OR FLEXIBLE STEEL TYPE. CONDUIT SHALL BE MANUFACTURED IN ACCORDANCE WITH UL-1. A GROUND WIRE IS REQUIRED IN ALL FLEXIBLE CONDUIT AND UNDERGROUND CONDUIT. BUSHINGS BE INSTALLED ON ALL COMMUNICATION, TELEPHONE & SPEAKER CONDUITS. PROVIDE 3/16" NYLON PULL STRING IN ALL APCO CONDUITS. NO MC, BX OR AC30 SHALL BE PERMITTED. FLEXIBLE STEEL CONDUIT RUNS SHALL BE LIMITED TO A MAXIMUM LENGTH OF 4 FEET.</div></div><div><div>2. SWITCHES AND RECEPTABLES</div><div>PROVIDE 200 AMPER RATED SWITCHES AND RECEPTABLES OF SPECIFICATION GRADE. ALL SWITCHES SHALL BE RATED FOR 120 AND/OR 277 VOLT AND RECEPTABLES SHALL BE NEMA 5-20R. IN ALL OFFICES AND OFFICE AREA DEVICES SHALL BE DECORA SERIES TYPE WITH COLOR SELECTION BY CONTRACTOR/OWNERS REPRESENTATIVE.</div></div><div><div>3. FEEDERS AND BRANCH CIRCUITS IDENTIFICATION</div><div>IDENTIFY FEEDERS WITH THE CORRESPONDING CIRCUIT DESIGNATION AT THE OVER-CURRENT DEVICE, LOAD END, AND IN PULL BOXES WITH E-Z CODE OR OTHER APPROVED WIRE MARKER.</div><div>IDENTIFY BRANCH CIRCUITS WITH I.D. MARKERS, THE CORRESPONDING CIRCUIT DESIGNATION AT THE OVER-CURRENT DEVICE, AT ALL SPLICES, IN JUNCTION BOXES, AND IN OUTLETS. USE PLASTIC COATED SELF-STICKING MARKERS SUCH AS THOMAS & BETTS E-Z CODE FOR IDENTIFICATION OF CONDUITS.</div></div><div><div>4. CONDUCTORS</div><div>DELIVER ALL CONDUCTORS TO THE JOB SITE IN ORIGINAL UNBROKEN CARTON OR REEL, PROPERLY TAGGED WITH U.L. LABEL, SIZE, TYPE, MANUFACTURER, TRADE NAME AND THE DATE OF MANUFACTURE. (MUST BE MANUFACTURED WITHIN 6 MONTHS)</div><div>PROVIDE COPPER CONDUCTORS #12 AWG MINIMUM UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS. PROVIDE STRANDED COPPER CONDUCTORS FOR ALL WIRING. USE CONDUCTORS WITH 90°C THIN/THIN 600 VOLTS INSULATION, UNLESS OTHERWISE NOTED.</div></div><div><div>5. STRUCTURAL SUPPORT</div><div>EACH SECTION OF FLOOR MOUNTED SWITCHBOARD, DISTRIBUTION BOARD, MCC, ETC. SHALL BE BOLTED TO THE CONCRETE HOUSEKEEPING PAD USING (3) 3/4" X 10 GRADE 3 BOLTS AND CONICAL WASHERS TORQUED TO 70 LB-FT. PROVIDE MINIMUM 4" PSI STRENGTH CONCRETE BELOW ALL FLOOR MOUNTED ELECTRICAL EQUIPMENT. TIE THE TOP OF ALL FLOOR MOUNTED ELECTRICAL EQUIPMENT TO THE BUILDING STRUCTURE IN A SEISMICALLY APPROVED MANNER.</div></div><div><div>6. ELECTRICAL CERTIFICATION</div><div>"ELECTRICIANS" PERFORMING WORK ON THIS PROJECT SHALL BE CURRENTLY CERTIFIED IN ACCORDANCE WITH THE STATE OF CALIFORNIA AB931 AND THE DIVISION OF APPRENTICESHIP STANDARDS SECTION 3099.</div></div><div><div>C. DEMOLITION</div><div><div>1. NOTIFY THE OWNER IMMEDIATELY WHEREVER EXISTING EQUIPMENT IS ENCOUNTERED WHICH MUST BE RELOCATED DUE TO THE NEW CONSTRUCTION, AND WHICH IS NOT INDICATED ON THE PLANS.</div><div>2. ALL REMOVED MATERIALS AND EQUIPMENT WHICH ARE SALVAGEABLE SHALL REMAIN THE PROPERTY OF THE OWNER. DELIVER SUCH SALVAGED MATERIALS AND EQUIPMENT ON THE PREMISES AS DIRECTED BY OWNER, AND NEATLY PILE OR STORE THEM AND PROTECT FROM DAMAGE. REMO E FROM PREMISES AND DISPOSE OF ALL MATERIALS CONSIDERED BY THE OWNER TO BE SCRAP.</div><div>3. ALL DEVICES, CIRCUITS CONDUCTORS, FEEDERS ETC., WHEN NOTED TO BE REMOVED, SHALL BE REMOVED TO THE LAST ACTIVE DEVICE. ALL OVER-CURRENT PROTECTION AND DISCONNECT DEVICES NO LONGER UTILIZED BUT REMAINING AS LAST ACTIVE DEVICE SHALL BE LABELED AS "SPARE". COORDINATE ALL OUTAGES WITH OWNERS REPRESENTATIVE.</div><div>4. DISCONNECT AND MAKE SAFE ALL ELECTRICAL SYSTEMS ON SITE AND IN WALL, FLOORS, AND CEILINGS SCHEDULED FOR REMOVAL.</div><div>5. REMOVE, RELOCATE, AND EXTEND EXISTING INSTALLATIONS TO ACCOMMODATE NEW CONSTRUCTION.</div><div>6. REMOVE ABANDONED WIRING TO SOURCE OF SUPPLY AND RE-LABEL DEVICES AS SPARES.</div><div>7. REMOVE ABANDONED CONDUIT, INCLUDING ABANDONED CONDUIT ABOVE ACCESSIBLE CEILING FINISHES. CUT CONDUIT FLUSH WITH WALLS AND FLOOR, AND PATCH SURFACES.</div><div>8. DISCONNECT ABANDONED OUTLETS AND REMOVE DEVICES. REMOVE ABANDONED OUTLETS IF CONDUIT SERVICING THEM IS ABANDONED AND REMOVE. PROVIDE BLANK COVER FOR ABANDONED OUTLETS WHICH ARE NOT REMOVED.</div><div>9. DISCONNECT AND REMOVE ABANDONED LUMINAIRES. REMOVE BRACKETS, STEMS, HANGERS, AND OTHER ACCESSORIES.</div><div>10. REPAIR ADJACENT CONSTRUCTION AND FINISHES DAMAGED DURING DEMOLITION AND EXTENSION WORK.</div><div>11. MAINTAIN ACCESS TO EXISTING ELECTRICAL INSTALLATIONS WHICH REMAIN ACTIVE. MODIFY INSTALLATION OR PROVIDE ACCESS PANEL AS APPROPRIATE.</div><div>12. BEGINNING OF DEMOLITION MEANS CONTRACTOR ACCEPTS EXISTING CONDITIONS.</div></div><div><div>D. EXCAVATION</div><div><div>1. CAREFULLY PROTECT ALL WALLS, TRIM, FLOORS, EQUIPMENT UTILITY LINES AND MATERIALS. WHEN WORKING ON FINISHED SURFACES, LIMIT DAMAGE TO THE CONFINES AS MUCH AS POSSIBLE AND RESTORE TO THE ORIGINAL CONDITION ALL SURFACES WHICH ARE DAMAGED BECAUSE OF THE INSTALLATION OF THIS WORK.</div><div>2. EQUIPMENT, MATERIALS AND SUPPLIES REMOVED FOR PROTECTION SHALL BE REPLACED IN ORIGINAL LOCATIONS. ANY MATERIALS DAMAGED SHALL BE REPLACED WITH NEW MATERIALS OF LIKE KIND AND QUALITY.</div><div>3. DO ALL DRILLING, CUTTING, CHANNELING AND PATCHING REQUIRED TO INSTALL ELECTRICAL WORK AS INDICATED OR HEREIN SPECIFIED. ALL HOLES, CURBS, ETC., IN FLOORS, CEILINGS AND WALLS SHALL BE PATCHED, UNLESS INDICATED OTHERWISE. PAINT ALL ELECTRICAL RACEWAYS, CABINETS, ENCLOSURES AND FITTINGS PENETRATING INTO FIRE RATED ENVELOPES, SPACES, ETC.</div><div>4. ALL CONDUIT RUNS SHALL BE CONCEALED, UNLESS SHOWN OTHERWISE. PROVIDE A PULL WIRE IN ALL EMPTY CONDUITS.</div><div>5. EXISTING CONDITION SHOWN IS FROM AVAILABLE RECORD DRAWINGS AND VISUAL FIELD SURVEY AND SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL VERIFY ACTUAL EXISTING CONDITION AT SITE.</div><div>6. ALL WORK SHOWN IS NEW UNLESS SPECIALLY INDICATED AS EXISTING (Q). ALL ELECTRICAL EQUIPMENT MOUNTING AND ANCHORAGE MUST CONFORM WITH LOCAL AND STATE SEISMIC CODES.</div></div></div></div></div></div>	<div><div>E. TELEPHONE SYSTEMS</div><div>PROVIDE RACEWAYS, AND ALL MATERIAL INCLUDING PULLING CABLE IN EACH RACEWAY AS REQUIRED FOR THE TELEPHONE SYSTEM PER THE TELEPHONE REQUIREMENTS.</div><div>ALL CAT 6 CABLES SHALL BE TESTED & MEET CURRENT BICSI STANDARDS. A TEST REPORT SIGNED BY A RCDD SHALL BE PROVIDED WITH THE DOCUMENTATION.</div></div> <div><div>F. GROUNDING & BONDING</div><div>FURNISH AND INSTALL COMPLETE BONDING AND GROUNDING SYSTEM AS REQUIRED BY CODES. CONTINUITY OF GROUNDING SHALL BE MAINTAINED MECHANICALLY AND ELECTRICALLY THROUGHOUT THE SYSTEM. A GREEN GROUNDING CODE SIZED CONDUCTOR SHALL BE CARRIED IN ALL CONDUITS.</div></div> <div><div>G. INSTALLATION</div><div><div>1. IT IS THE INTENT OF THESE PLANS AND SPECIFICATIONS THAT A COMPLETE AND WORKABLE ELECTRICAL INSTALLATION BE PROVIDED FOR ALL THE EQUIPMENT DESCRIBED OR SHOWN AS BEING IN THIS CONTRACT. TOWARD THIS END FURNISH ALL LABOR AND TOOLS NECESSARY AND FURNISH AND INSTALL ALL APPARATUS, MATERIALS AND EQUIPMENT IN A FASHION COMPLYING WITH ALL APPLICABLE CODES, INCLUDING ITEMS REQUIRED BUT NOT NORMALLY SHOWN, SUCH AS LAMPS, COUPLINGS, HANGERS, BRACKETS, CLAMPS, BOXES, CONNECTORS AND HARDWARE. REFER ALSO TO WRITTEN SPECIFICATIONS FOR GENERAL, MECHANICAL AND ELECTRICAL SECTIONS.</div><div>2. PROCURE ALL PERMITS FROM LEGALLY CONSTITUTED AUTHORITIES, ARRANGE FOR ALL INSPECTIONS AND PAY ALL COSTS FOR FEES AND TESTS IN CONNECTION THEREWITH. COMPLY WITH CODES. NOTHING IN THESE PLANS AUTHORIZES DEVIATION FROM APPLICABLE CODES.</div><div>3. DETERMINE EXACT ROUTING OF CONCEALED FEEDERS AND BRANCH HOMERUNS IN COOPERATION WITH OTHER TRADES TO SIMPLIFY INSTALLATION WHEREVER POSSIBLE BUT SUBJECT TO APPROVAL OF ARCHITECT FOR VISUAL AND STRUCTURAL REASONS.</div><div>4. PROVIDE A CODE APPROVED DISCONNECT SWITCH OR BREAKER WITHIN SIGHT OF EVERY MOTOR AND FEED MOTORS NOT EQUIPPED WITH "BUILT IN" PROTECTION THROUGH A MAGNETIC OR MANUAL STARTER WITH OVERLOAD HEATERS SIZED TO COMPLY WITH MOTOR MANUFACTURER'S RECOMMENDATIONS AND APPLICABLE CODES.</div><div>5. FOR CONNECTIONS TO EXHAUST FANS, PUMPS, COMPRESSORS, SPACE HEATERS, WATER HEATERS, ADJUSTATS, SOLENOID VALVES AND OTHER MECHANICAL EQUIPMENT AND FOR CONDUITS AND WIRE REQUIRED BUT NOT NECESSARILY SHOWN ON THESE DRAWINGS REFER TO MECHANICAL PLANS AND DETERMINE EXACT LOCATIONS UNDER DIRECTION OF HEATING AND VENTILATING CONTRACTOR.</div><div>6. DO NOT RUN ANY CONDUIT IN SLAB IF ITS OUTSIDE DIAMETER EXCEEDS 1/3 THE THICKNESS OF THE SLAB. LOCATE CONDUITS WITHIN THE MIDDLE OF THE SLAB. WHERE CONDUITS ARE GROURED IN PARALLEL RUNS, SPACE THEM 3" OR MORE APART. WHERE CONDUITS CROSS EACH OTHER, THICKEN SLAB PROPORTIONATELY OVER A HORIZONTAL AREA EQUAL TO TEN TIMES THE DIAMETER OF THE LARGEST CONDUIT. REFER ALSO TO DETAILS SHOWN.</div><div>7. SIZE OUTLET BOXES IN CONFORMITY WITH CODE FOR NUMBER AND GAUGE OF CONDUCTORS THEREIN, EXCEPT WHERE NOTED TO BE LARGER. MINIMUM BOX SIZE SHALL BE 4" SQUARE BY 1-1/2" DEEP.</div><div>8. EXAMINE PLANS TO DISCERN CEILINGS WITH A FIRE RATING OF ONE HOUR OR MORE. PROVIDE A ONE HOUR FIRE-RATED ENCLOSURE OVER EACH LIGHT FIXTURE RECESSED THEREIN.</div><div>9. ALL ELECTRICAL WORK SHALL BE INSTALLED SO AS TO BE READILY ACCESSIBLE FOR OPERATING, SERVICING, MAINTAINING AND REPAIRING. ALL CONDUIT SHALL BE CONCEALED WHERE POSSIBLE. EXPOSED CONDUIT SHALL BE IN STRAIGHT LINES PARALLEL WITH, OR AT RIGHT ANGLES TO, COLUMN LINES OR BEAMS AND SEPARATED BY AT LEAST THREE (3) INCHES FROM WATER LINES WHENEVER THEY RUN LONG SIDE OR ACROSS SUCH LINES. CONDUIT SHALL NOT BE RUN BELOW CABLE TRAYS OR LIGHT FIXTURES WITHOUT SPECIFIC APPROVAL OF THE OWNERS REPRESENTATIVE. HANGERS SHALL BE FASTENED TO STEEL, CONCRETE OR MASONRY, BUT NOT TO PIPING, HANGERS AND SUPPORT SYSTEMS ARE AN INTEGRAL PART OF THE VISUAL ENVIRONMENT. ALL HANGERS AND SUPPORTS EXPOSED TO PUBLIC VIEW MUST BE SHOWN IN DETAIL ON PLANS SUBMITTED TO ENGINEER FOR APPROVAL OF APPEARANCE. ALL HANGERS MUST BE UNIFORMY SPACED AND NEATLY INSTALLED WITH NO EXCESS MATERIAL BEYOND WHAT IS REQUIRED FOR THE SUPPORT FUNCTION. CONTRACTOR SHALL SELECT ACCESSORIES AND HARDWARE WITH A SMOOTH, NEAT FINISHED APPEARANCE AND PAINT ALL EXPOSED CONDUIT HANGERS TO MATCH THE ADJACENT FINISHES.</div><div>10. ALL WALL SWITCHES AND RECEPTABLES SHALL BE MOUNTED BETWEEN 18" AND 48" PER ADA REQUIREMENTS UNLESS NOTED OTHERWISE.</div><div>11. ALL DISTRIBUTION BOARDS, SWITCHBOARDS AND TRANSFORMERS THAT ARE FLOOR MOUNTED SHALL BE MOUNTED ON 2" THICK HOUSEKEEPING PAD. TRANSFORMER SHALL BE ON VIBRATION ISOLATION PADS AND CONNECTED WITH FLEXIBLE CONDUIT.</div><div>12. CONTRACTOR SHALL EXAMINE PLANS AND VERIFY IN FIELD LOCATIONS OF ALL FIRE RATED WALLS, CEILINGS AND FLOORS. CONTRACTOR SHALL SEAL ALL ELECTRICAL SYSTEM PENETRATIONS THROUGH FIRE RATED WALLS, CEILINGS AND FLOORS WITH U.L. LISTED MATERIAL APPROVED BY THE AUTHORITY HAVING JURISDICTION.</div></div></div> <div><div>H. FIRE ALARM SYSTEM</div><div><div>1. PROJECT SHALL REUSE EXISTING A FIRE ALARM SYSTEM FOR THE PROJECT AREA TO INCLUDE:</div><div><div>A) SMOKE AND CARBON MONOXIDE DETECTORS IN ALL REQUIRED AREAS</div><div>B) HEAT DETECTORS IN ALL REQUIRED AREAS</div><div>C) STROBES/SPEAKERS IN ALL REQUIRED AREAS</div><div>C) PULL STATIONS AT ALL LEGAL FIRE EXITS</div></div><div>2. CONTRACTOR SHALL SUBMIT FOR THE OWNERS SIGNED APPROVAL, APPROVED FIRE DEPARTMENT FIRE ALARM DRAWINGS FOR THE PROJECT SPACE.</div><div>3. CONTRACTOR SHALL BE SITE STANDARD, EDWARDS.</div><div>4. ALL DEVICES AND EQUIPMENT ARE CALIFORNIA STATE FIRE MARSHALL APPROVED AND CURRENTLY LISTED.</div><div>5. CONTRACTOR SHALL WARRANTY ALL DEVICES AND SYSTEMS FOR A PERIOD OF TWO YEARS.</div></div></div>														
<div><div>COLOR CODE FOR CONDUCTORS</div><div>PROVIDE CONDUCTOR COLOR CODE AS FOLLOWS: 120/208VAC, 3Ø, 4W, BLUE (BLACK) FOR PHASE CONDUCTORS AND WHITE FOR NEUTRAL, GREEN FOR GROUND.</div></div>	<div><div>DERATING TABLE</div><div>NEC #310-8 ADJUSTMENT FACTORS</div><div>(a) MORE THAN THREE CURRENT-CARRYING CONDUCTORS IN A RACEWAY OR CABLE, WHERE THE NUMBER OF CURRENT-CARRYING CONDUCTORS IN A RACEWAY OR CABLE EXCEEDS THREE, THE ALLOWABLE AMPACITIES SHALL BE REDUCED AS SHOWN IN THE FOLLOWING TABLE:</div><table><tr><th>NUMBER OF CURRENT-CARRYING CONDUCTORS</th><th>PERCENT OF VALUES IN TABLES AS ADJUSTED FOR AMBIENT TEMPERATURE IF NECESSARY</th></tr><tr><td>4 THROUGH 6</td><td>80</td></tr><tr><td>7 THROUGH 9</td><td>70</td></tr><tr><td>10 THROUGH 20</td><td>50</td></tr><tr><td>21 THROUGH 30</td><td>45</td></tr><tr><td>31 THROUGH 40</td><td>40</td></tr><tr><td>41 AND ABOVE</td><td>35</td></tr></table><div>WHERE SINGLE CONDUCTORS OR MULTICONDUCTOR CABLES ARE STACKED OR BUNDLED LONGER THAN 24 INCHES (610 mm) WITHOUT MAINTAINING SPACING AND ARE NOT INSTALLED IN RACEWAYS, THE ALLOWABLE AMPACITY OF EACH CONDUCTOR SHALL BE REDUCED AS SHOWN IN THE ABOVE TABLE.</div><div>EXCEPTION NO. 1: WHERE CONDUCTORS OF DIFFERENT SYSTEMS, AS PROVIDED IN SECTION 300-3, ARE INSTALLED IN A COMMON RACEWAY OR CABLE, THE DERATING FACTORS SHOWN ABOVE SHALL APPLY TO THE NUMBER OF POWER AND LIGHTING (ARTICLES 210, 215, 220, AND 230) CONDUCTORS ONLY.</div><div>EXCEPTION NO. 2: FOR CONDUCTORS INSTALLED IN CABLE TRAYS, THE PROVISIONS OF SECTION 310-11 SHALL APPLY.</div><div>EXCEPTION NO. 3: DERATING FACTORS SHALL NOT APPLY TO CONDUCTORS IN NIPPLES HAVING A LENGTH NOT EXCEEDING 24 INCHES (610mm).</div><div>EXCEPTION NO. 4: DERATING FACTORS SHALL NOT APPLY TO UNDERGROUND CONDUCTORS ENTERING OR LEAVING AN OUTDOOR TRENCH IF THOSE CONDUCTORS HAVE PHYSICAL PROTECTION IN THE FORM OF RIGID METAL CONDUIT, INTERMEDIATE METAL CONDUIT, OR RIGID NONMETALLIC CONDUIT HAVING A LENGTH NOT EXCEEDING 10 FEET (3.05m) ABOVE GRADE AND THE NUMBER OF CONDUCTORS DOES NOT EXCEED FOUR.</div><div>EXCEPTION NO. 5: FOR OTHER LOADING CONDITIONS, ADJUSTMENT FACTORS AND AMPACITIES SHALL BE PERMITTED TO BE CALCULATED UNDER SECTION 310-15(d).</div><div>(FNC): SEE APPENDIX B, TABLE B-310-11 FOR ADJUSTMENT FACTORS FOR MORE THAN THREE CURRENT-CARRYING CONDUCTORS IN A RACEWAY OR CABLE WITH LOAD DIVERSITY.</div><div>(b) MORE THAN ONE CONDUIT, TUBE, OR RACEWAY. SPACING BETWEEN CONDUITS, TUBING, OR RACEWAYS SHALL BE MAINTAINED.</div></div>	NUMBER OF CURRENT-CARRYING CONDUCTORS	PERCENT OF VALUES IN TABLES AS ADJUSTED FOR AMBIENT TEMPERATURE IF NECESSARY	4 THROUGH 6	80	7 THROUGH 9	70	10 THROUGH 20	50	21 THROUGH 30	45	31 THROUGH 40	40	41 AND ABOVE	35
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	MOLDED CASE CIRCUIT BREAKER - 200 AMP FRAME, 150 AMP TRIP RATING, 3 POLE																																																																																																																																																																																			
<div><div>MEP COMPONENT ANCHORAGE NOTE</div><div>ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2019 CBC SECTIONS 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7-16 CHAPTER 13, 26, AND 30.</div><div><div>1. ALL PERMANENT EQUIPMENT AND COMPONENTS.</div><div>2. TEMPORARY OR MOVEABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER. "PERMANENTLY ATTACHED" SHALL INCLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 110/220 VOLT RECEPTABLES HAVING A FLEXIBLE CABLE.</div><div>3. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.</div></div><div>THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE BUT NEED NOT DEMONSTRATE DESIGN COMPLIANCE WITH THE REFERENCES NOTED ABOVE. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT. FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS.</div><div><div>A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.</div><div>B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.</div></div><div>THE ANCHORAGE OF ALL MECHANICAL, ELECTRICAL AND PLUMBING COMPONENTS SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL. IN GENERAL, RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND ACCEPTANCE BY DSA. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH THE ABOVE REQUIREMENTS.</div><div><div>PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE</div><div>PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-16 SECTION 13.6.5, 13.6.6, 13.6.7, 13.6.8, AND 2019 CBC, SECTIONS 1617A.1.24, 1617A.1.25 AND 1617A.1.26.</div><div>THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PRE-APPROVED INSTALLATION GUIDE, (E.G. OSPHD OPM FOR 2013 CBC OR LATER), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.</div><div>MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E)</div><div><div>MP MD PP E OPTION 1: DETAILED ON APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS</div><div>MP MD PP E OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSPHD PRE-APPROVAL (OPMP)</div></div></div></div>																																																																																																																																																																																				
<div><div>JUNCTION BOX FILL</div><table><tr><th rowspan="2">JUNCTION BOX DIMENSION, INCHES TRADE SIZE OR TYPE</th><th rowspan="2">MIN. CL. IN. CAP.</th><th colspan="5">MAXIMUM NUMBER OF CONDUCTORS</th></tr><tr><th>NO. 14</th><th>NO. 12</th><th>NO. 10</th><th>NO. 8</th><th>NO. 6</th></tr><tr><td>4 x 1-1/4 ROUND OR OCTAGONAL</td><td>12.5</td><td>6</td><td>5</td><td>5</td><td>4</td><td>2</td></tr><tr><td>4 x 1-1/2 ROUND OR OCTAGONAL</td><td>15.5</td><td>7</td><td>6</td><td>6</td><td>5</td><td>3</td></tr><tr><td>4 x 2-1/8 ROUND OR OCTAGONAL</td><td>21.5</td><td>10</td><td>9</td><td>8</td><td>7</td><td>4</td></tr><tr><td>4 x 1-1/4 SQUARE</td><td>18.0</td><td>9</td><td>8</td><td>7</td><td>6</td><td>3</td></tr><tr><td>4 x 1-1/2 SQUARE</td><td>21.0</td><td>10</td><td>9</td><td>8</td><td>7</td><td>4</td></tr><tr><td>4 x 2-1/8 SQUARE</td><td>30.3</td><td>15</td><td>13</td><td>12</td><td>10</td><td>6</td></tr><tr><td>4 x 1 1/16 x 1-1/4 SQUARE</td><td>25.5</td><td>12</td><td>11</td><td>10</td><td>8</td><td>5</td></tr><tr><td>4 x 1 1/16 x 1-1/2 SQUARE</td><td>29.5</td><td>14</td><td>13</td><td>11</td><td>9</td><td>5</td></tr><tr><td>4 x 1 1/16 x 2-1/8 SQUARE</td><td>42.0</td><td>21</td><td>18</td><td>16</td><td>14</td><td>8</td></tr><tr><td>3 x 2 x 1-1/2 DEVICE</td><td>7.5</td><td>3</td><td>3</td><td>3</td><td>2</td><td>1</td></tr><tr><td>3 x 2 x 2 DEVICE</td><td>10.0</td><td>5</td><td>4</td><td>4</td><td>3</td><td>2</td></tr><tr><td>3 x 2 x 2-1/4 DEVICE</td><td>10.5</td><td>5</td><td>4</td><td>4</td><td>3</td><td>2</td></tr><tr><td>3 x 2 x 2-1/2 DEVICE</td><td>12.5</td><td>6</td><td>5</td><td>5</td><td>4</td><td>2</td></tr><tr><td>3 x 2 x 3-1/4 DEVICE</td><td>14.0</td><td>7</td><td>6</td><td>5</td><td>4</td><td>2</td></tr><tr><td>3 x 2 x 3-1/2 DEVICE</td><td>18.0</td><td>9</td><td>8</td><td>7</td><td>6</td><td>3</td></tr><tr><td>4 x 2-1/8 x 1-1/2 DEVICE</td><td>10.3</td><td>5</td><td>4</td><td>4</td><td>3</td><td>2</td></tr><tr><td>4 x 2-1/8 x 1-7/8 DEVICE</td><td>13.0</td><td>6</td><td>5</td><td>5</td><td>4</td><td>2</td></tr><tr><td>4 x 2-1/8 x 2-1/8 DEVICE</td><td>14.5</td><td>7</td><td>6</td><td>5</td><td>4</td><td>2</td></tr><tr><td>3/4 x 4 x 2-1/2 MASONRY BOX / GANG</td><td>14.0</td><td>7</td><td>6</td><td>5</td><td>4</td><td>2</td></tr><tr><td>3/4 x 4 x 3-1/2 MASONRY BOX / GANG</td><td>21.0</td><td>10</td><td>9</td><td>8</td><td>7</td><td>4</td></tr><tr><td>FS - MINIMUM INTERNAL DEPTH 1-3/4 SINGLE COVER / GANG</td><td>13.5</td><td>6</td><td>6</td><td>5</td><td>4</td><td>2</td></tr><tr><td>FD - MINIMUM INTERNAL DEPTH 2-3/8 SINGLE COVER / GANG</td><td>18.0</td><td>9</td><td>8</td><td>7</td><td>6</td><td>3</td></tr><tr><td>FS - MINIMUM INTERNAL DEPTH 1-3/4 MULTIPLE COVER / GANG</td><td>18.0</td><td>9</td><td>8</td><td>7</td><td>6</td><td>3</td></tr><tr><td>FD - MINIMUM INTERNAL DEPTH 2-3/8 MULTIPLE COVER / GANG</td><td>24.0</td><td>12</td><td>10</td><td>9</td><td>8</td><td>4</td></tr></table></div>	JUNCTION BOX DIMENSION, INCHES TRADE SIZE OR TYPE	MIN. CL. IN. CAP.	MAXIMUM NUMBER OF CONDUCTORS					NO. 14	NO. 12	NO. 10	NO. 8	NO. 6	4 x 1-1/4 ROUND OR OCTAGONAL	12.5	6	5	5	4	2	4 x 1-1/2 ROUND OR OCTAGONAL	15.5	7	6	6	5	3	4 x 2-1/8 ROUND OR OCTAGONAL	21.5	10	9	8	7	4	4 x 1-1/4 SQUARE	18.0	9	8	7	6	3	4 x 1-1/2 SQUARE	21.0	10	9	8	7	4	4 x 2-1/8 SQUARE	30.3	15	13	12	10	6	4 x 1 1/16 x 1-1/4 SQUARE	25.5	12	11	10	8	5	4 x 1 1/16 x 1-1/2 SQUARE	29.5	14	13	11	9	5	4 x 1 1/16 x 2-1/8 SQUARE	42.0	21	18	16	14	8	3 x 2 x 1-1/2 DEVICE	7.5	3	3	3	2	1	3 x 2 x 2 DEVICE	10.0	5	4	4	3	2	3 x 2 x 2-1/4 DEVICE	10.5	5	4	4	3	2	3 x 2 x 2-1/2 DEVICE	12.5	6	5	5	4	2	3 x 2 x 3-1/4 DEVICE	14.0	7	6	5	4	2	3 x 2 x 3-1/2 DEVICE	18.0	9	8	7	6	3	4 x 2-1/8 x 1-1/2 DEVICE	10.3	5	4	4	3	2	4 x 2-1/8 x 1-7/8 DEVICE	13.0	6	5	5	4	2	4 x 2-1/8 x 2-1/8 DEVICE	14.5	7	6	5	4	2	3/4 x 4 x 2-1/2 MASONRY BOX / GANG	14.0	7	6	5	4	2	3/4 x 4 x 3-1/2 MASONRY BOX / GANG	21.0	10	9	8	7	4	FS - MINIMUM INTERNAL DEPTH 1-3/4 SINGLE COVER / GANG	13.5	6	6	5	4	2	FD - MINIMUM INTERNAL DEPTH 2-3/8 SINGLE COVER / GANG	18.0	9	8	7	6	3	FS - MINIMUM INTERNAL DEPTH 1-3/4 MULTIPLE COVER / GANG	18.0	9	8	7	6	3	FD - MINIMUM INTERNAL DEPTH 2-3/8 MULTIPLE COVER / GANG	24.0	12	10	9	8	4
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DIVISION OF THE STATE ARCHITECT	
MOORPARK COLLEGE	
7075 CAMPUS RD MOORPARK, CA 93021 TEL: (805) 378 - 1400	
PROJECT TITLE AND SCHOOL LOCATION	
<div><div>STADIUM RESTROOMS & CONCESSION STAND</div><div>7075 CAMPUS ROAD, MOORPARK, CA 93021</div></div>	
COMMISSIONED ARCHITECT	
<div><div>AMADOR</div><div>28328 AGOURA RD, 203 AGOURA HILLS CA, 91301 805-558-4334</div></div>	
<div><div>CONSULTANT</div><div>LUCCI & ASSOCIATES INC.</div><div>CONSULTING ELECTRICAL ENGINEERS</div><div>3251 CORTE MALPASO, #511</div><div>CAMARILLO, CA 93012-8094</div><div>(805) 389-6520 FAX (805) 389-6519</div><div>LUCCI & ASSOCIATES, INC. reserve their commonlaw copyright and other property rights in these plans. These plans and drawings are not to be reproduced, changed, or copied in any form or manner whatsoever without first obtaining the expressed written permission and consent of LUCCI & ASSOC. INC. nor are they to be assigned to any third party without obtaining said written permission and consent.</div></div>	
STAMPS/SEALS	
SHEET TITLE:	
<div><div>GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND DRAWING LIST</div></div>	
PROJECT NO: 20-MPC-036	PROJECT ARCH: Designer
DRAWN: Author	CHECKED: Checker
SHEET NUMBER:	
<div><div>E100</div></div>	
DATE: 11/10/2022	SHEET: ____ OF ____

Drawing Date: 11/09/2022
Drawing Title: 20-MPC-036
Drawing Number: 20-MPC-036
Drawing Scale: 1/8" = 1'-0"
Drawing Author: CM01
Drawing Checker: CM01
Drawing Date: 11/09/2022

TIME: 4:36 pm

DATE: 10 November 2022

PATHNAME: G:\22557\EL\Sheets\

DRAWING FILENAME: 22-557E101

DRAFTER: CM01

Drafter: CM01, Sheet Size: 36" x 24"
Drawing: 22-557E101.dwg, Date: 10/11/2022, 16:36:00
Author: CM01, Title: INDOOR LIGHTING, Scale: 1:1
Appr: CM01, Date: 10/11/2022, 16:36:00
Mod: CM01, Date: 10/11/2022, 16:36:00

STATE OF CALIFORNIA

Indoor Lighting

NRCC-LTI-E (Created 7/19)

CALIFORNIA ENERGY COMMISSION

NRCC-LTI-E

CERTIFICATE OF COMPLIANCE

Project Name: MOORPARK COLLEGE CONCESSION STAND

Report Page: Page 5 of 5

Project Address: 7075 CAMPUS ROAD, MOORPARK, CA. 93021

Date Prepared: 09-23-2022

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

Documentation Author Name: KEN LUCCI

Documentation Author Signature:

Company:

Signature Date:

Address: 3251 CORTE MALPASO, SUITE 511

CEA/ HERS Certification Identification (if applicable):

City/State/Zip: CAMARILLO, CA. 93012

Phone: (805) 389-6520

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.

2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)

3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.

4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.

5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: KEN LUCCI

Responsible Designer Signature:

Company : LUCCI & ASSOCIATES

Date Signed:

Address: 3251 CORTE MALPASO, SUITE 511

License: E 8340

City/State/Zip: CAMARILLO, CA. 93012

Phone: (805) 389-6520

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: <http://www.energy.ca.gov/title24/2019standards>

July 2019

STATE OF CALIFORNIA

Indoor Lighting

NRCC-LTI-E (Created 7/19)

CALIFORNIA ENERGY COMMISSION

NRCC-LTI-E

CERTIFICATE OF COMPLIANCE

Project Name: MOORPARK COLLEGE CONCESSION STAND

Report Page: Page 4 of 5

Project Address: 7075 CAMPUS ROAD, MOORPARK, CA. 93021

Date Prepared: 09-23-2022

<input type="radio"/>	<input checked="" type="radio"/>	NRCL-LTI-04-E - Must be submitted for two interlocked systems serving an auditorium, a convention center, a conference room, a multipurpose room, or a theater to be recognized for compliance.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCL-LTI-05-E - Must be submitted for a Power Adjustment Factor (PAF) to be recognized for compliance.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCL-LTI-06-E - Must be submitted for additional wattage installed in a video conferencing studio to be recognized for compliance.	<input type="checkbox"/>	<input type="checkbox"/>

U. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and any with "A" in the form name must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: <http://www.energy.ca.gov/title24/attcp/providers.html>

YES	NO	Form/Title	Field Inspector	
			Pass	Fail
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-LTI-02-A - Must be submitted for occupancy sensors and automatic time switch controls.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-LTI-03-A - Must be submitted for automatic daylight controls.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-LTI-04-A - Must be submitted for demand responsive lighting controls.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-LTI-05-A - Must be submitted for institutional tuning power adjustment factor (PAF).	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-ENV-03-F - Must be submitted for daylighting design power adjustment factors (PAF).	<input type="checkbox"/>	<input type="checkbox"/>

STATE OF CALIFORNIA

Indoor Lighting

NRCC-LTI-E (Created 7/19)

CALIFORNIA ENERGY COMMISSION

NRCC-LTI-E

CERTIFICATE OF COMPLIANCE

Project Name: MOORPARK COLLEGE CONCESSION STAND

Report Page: Page 3 of 5

Project Address: 7075 CAMPUS ROAD, MOORPARK, CA. 93021

Date Prepared: 09-23-2022

M. ADDITIONAL LIGHTING ALLOWANCE: TAILORED FLOOR AND TASK LIGHTING

This Section Does Not Apply

N. ADDITIONAL LIGHTING ALLOWANCE: TAILORED ORNAMENTAL/SPECIAL EFFECTS

This Section Does Not Apply

O. ADDITIONAL LIGHTING ALLOWANCE: TAILORED VERY VALUABLE MERCHANDISE

This Section Does Not Apply

P. POWER ADJUSTMENT: LIGHTING CONTROL CREDIT (POWER ADJUSTMENT FACTOR (PAF))

This Section Does Not Apply

Q. RATED POWER REDUCTION COMPLIANCE FOR ALTERATIONS

This Section Does Not Apply

R. 80% LIGHTING POWER FOR ALTERATIONS - CONTROLS EXCEPTIONS

This Section Does Not Apply

S. DAYLIGHT DESIGN POWER ADJUSTMENT FACTOR (PAF)

This Section Does Not Apply

T. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www2.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCL

YES	NO	Form/Title	Field Inspector	
			Pass	Fail
<input checked="" type="radio"/>	<input type="radio"/>	NRCL-LTI-01-E - Must be submitted for all buildings	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCL-LTI-02-E - Must be submitted for a lighting control system, or for an Energy Management Control System (EMCS), to be recognized for compliance.	<input type="checkbox"/>	<input type="checkbox"/>

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: <http://www.energy.ca.gov/title24/2019standards>

July 2019

STATE OF CALIFORNIA

Indoor Lighting

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CALIFORNIA ENERGY COMMISSION

NRCC-LTI-E

CERTIFICATE OF COMPLIANCE

Project Name: MOORPARK COLLEGE CONCESSION STAND

Report Page: Page 2 of 5

Project Address: 7075 CAMPUS ROAD, MOORPARK, CA. 93021

Date Prepared: 09-23-2022

Controls Compliance (See Table H for Details)

Rated Power Reduction Compliance (See Table Q for Details)

Not Applicable

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

No exceptional conditions apply to this project.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. INDOOR LIGHTING FIXTURE SCHEDULE

This Section Does Not Apply

G. MODULAR LIGHTING SYSTEMS

This Section Does Not Apply

H. INDOOR LIGHTING CONTROLS (Not Including PAFs)

This Section Does Not Apply

I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS

This Section Does Not Apply

J. ADDITIONAL LIGHTING ALLOWANCE: AREA CATEGORY METHOD QUALIFYING LIGHTING SYSTEM

This Section Does Not Apply

K. TAILORED METHOD GENERAL LIGHTING POWER ALLOWANCE

This Section Does Not Apply

L. ADDITIONAL LIGHTING ALLOWANCE: TAILORED WALL DISPLAY

This Section Does Not Apply

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: <http://www.energy.ca.gov/title24/2019standards>

July 2019

STATE OF CALIFORNIA

Indoor Lighting

NRCC-LTI-E (Created 7/19)

CALIFORNIA ENERGY COMMISSION

NRCC-LTI-E

CERTIFICATE OF COMPLIANCE

Project Name: MOORPARK COLLEGE CONCESSION STAND

Report Page: Page 1 of 5

Project Address: 7075 CAMPUS ROAD, MOORPARK, CA. 93021

Date Prepared: 09-23-2022

A. GENERAL INFORMATION

01 Project Location (city)

02 Climate Zone

03 Occupancy Types Within Project (select all that apply):

04 Total Conditioned Floor Area (ft²)

05 Total Unconditioned Floor Area (ft²)

06 # of Stories (Habitable Above Grade)

☐ Office ☐ Retail ☐ Warehouse ☐ Hotel/Motel ☐ School ☐ Support Areas

☐ Parking Garage ☐ High-Rise Residential ☐ Relocatable ☐ Healthcare ☐ Other (write in):

B. PROJECT SCOPE

Table Instructions: Include any lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.5 or §141.0(b)(2) for alterations. WARNING: Changing the Calculation Method in this table will result in the deletion of data previously input. If you need to change the calculation method, please open a new form or use "Save As".

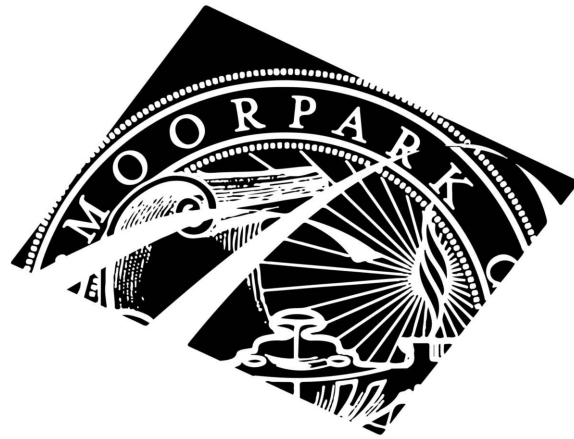
Scope of Work		Conditioned Spaces		Unconditioned Spaces	
01	02	03	04	05	06
My Project Consists of (check all that apply):		Calculation Method		Area (ft²)	
<input type="checkbox"/> New Lighting System					
<input type="checkbox"/> Altered Lighting System					
Total Area of Work (ft²)					

C. COMPLIANCE RESULTS

Table Instructions: If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

Lighting in conditioned and unconditioned spaces must not be combined for compliance per §140.6(b)(1).	Allowed Lighting Power per §140.6(b) (Watts)				Adjusted Lighting Power per §140.6(a) (Watts)	Compliance Results			
	01 Complete Building §140.6(c)(1)	02 Area Category §140.6(c)(2)	03 Area Category §140.6(c)(2)(+) (+)	04 Tailored §140.6(c)(3) (+)					
				Total Allowed (Watts)	≥	Total Designed (Watts)	Adjustments PAF Control Credits §140.6(a)(2) (-)	Total Adjusted (Watts) *Includes Adjustments	05 Must be ≥ 08 §140.6
	(See Table I)	(See Table I)	(See Table J)	(See Table K)		≥	(See Table F)	(See Table P)	
Conditioned:						≥			
Unconditioned:						≥			
Table Continued									

DIVISION OF THE STATE ARCHITECT



MOORPARK COLLEGE

7075 CAMPUS RD
MOORPARK, CA 93021
TEL: (805) 378 - 1400

PROJECT TITLE AND SCHOOL LOCATION

STADIUM RESTROOMS & CONCESSION STAND

7075 CAMPUS ROAD, MOORPARK, CA 93021

COMMISSIONED ARCHITECT

AMADOR

28328 AGOURA RD, 203 | AGOURA HILLS CA, 91301 | 805-558-4334

CONSULTANT
LUCCI & ASSOCIATES INC.
CONSULTING ELECTRICAL ENGINEERS
3251 CORTE MALPASO, #511
CAMARILLO, CA 93012-8094
(805) 389-6520 FAX (805) 389-6519
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STAMPS/SEALS



SHEET TITLE:

INDOOR TITLE 24 PAGE 1

PROJECT NO: 20-MPC-036 PROJECT ARCH: Designer
DRAWN: Author CHECKED: Checker
SHEET NUMBER:

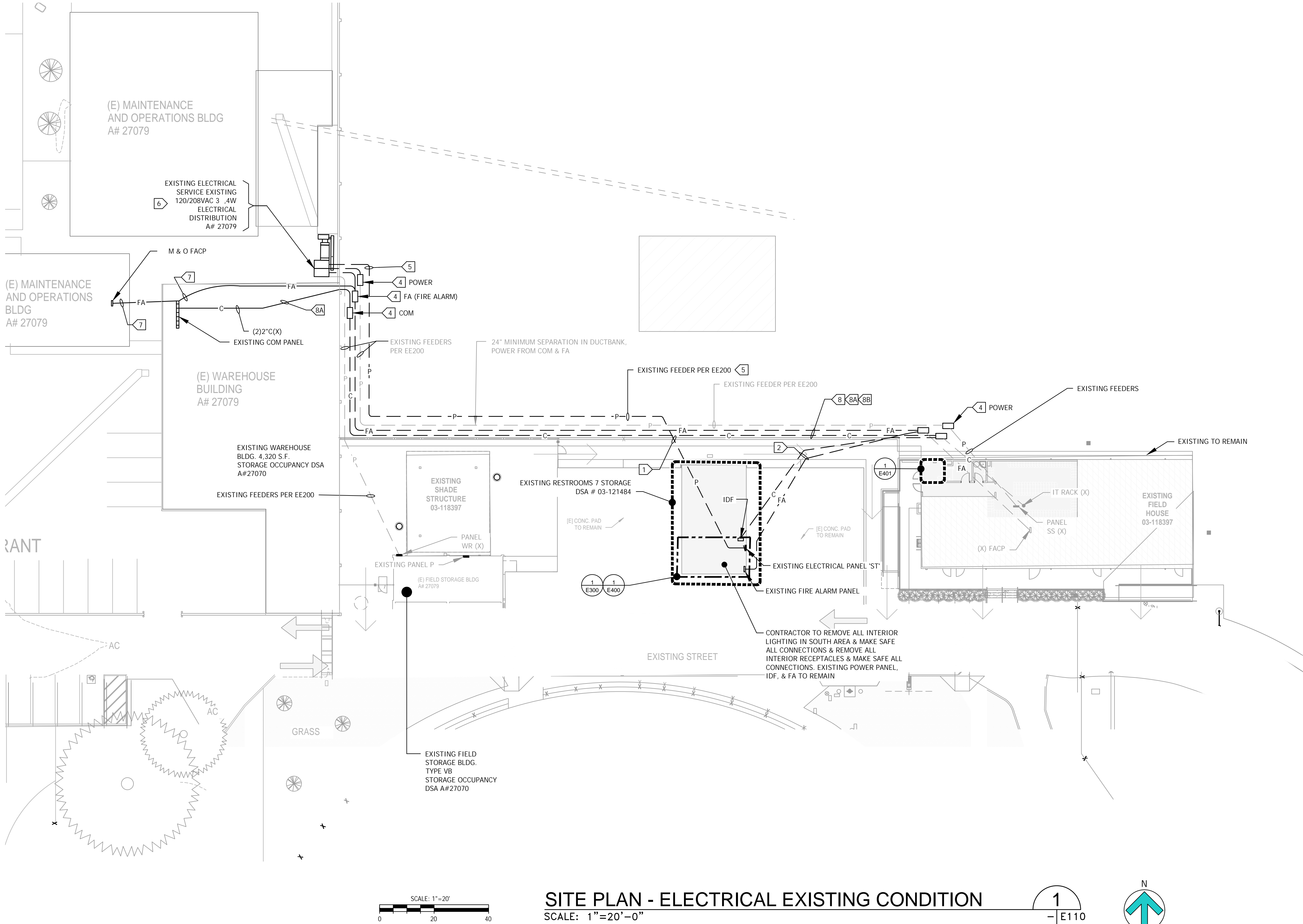
E101

DATE: 11/10/2022 SHEET: OF

DATE: 10 November 2022
PATHNAME: G:\22\557\EL\Sheets
DRAWING FILENAME: 22-557E110
DRAFTER: CM01


LEGEND	
	POWER @ 120/208VAC, 3Ø, 4W
	COMMUNICATIONS
	FIRE ALARM

- KEY NOTES:
- EXISTING FEEDERS.
 - EXISTING CONDUITS & CABLING.
 - EXISTING OPTICAL FIBER 6 STRAND SM & EXISTING GEL FILLED FIRE ALARM CABLE FROM FIRE ALARM CABINET PER FA SERIES PLANS, ONE IN EACH OF (2) 2" CONDUITS.
 - EXISTING BROOKS #3 CONCRETE BOX WITH TRAFFIC RATED LID.
 - POWER FEEDER PER E200.
 - SEE E200 FOR ELECTRICAL SINGLE LINE DIAGRAM FOR BUILDING SERVICE AND LOAD SUMMARY.
 - SEE FA SERIES PLANS FOR FA CABLE/CONDUIT REQUIREMENTS.
 - EXISTING CONDUITS (EXISTING 2" C WITH F.A. GEL FIELD CABLE & EXISTING 2" C WITH OPTICAL FIBER 6 STRAND SINGLE MODE WET LOCATION RATED).
 - EXISTING F.A. GEL FILLED F.A. CABLE FROM EXISTING M & O FACP TO PROJECT BUILDING FACP. CONDUIT IS EXISTING 2" C FROM FIELD HOUSE BUILDING PULLBOX TO PROJECT BUILDING.
 - EXISTING 2" C - 6 STRAND SINGLE MODE OPTICAL FIBER WET LOCATION RATED FROM EXISTING M & O IDF TO PROJECT BUILDING IDF WITH 2" CONDUIT FROM FIELD HOUSE PULLBOX TO PROJECT BUILDING IDF.



SITE PLAN - ELECTRICAL EXISTING CONDITION
SCALE: 1"=20'-0"

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7075 CAMPUS ROAD, MOORPARK, CA 93021

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28328 AGOURA RD, 203 | AGOURA HILLS CA, 91301 | 805-558-4334

CONSULTANT

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CONSULTING ELECTRICAL ENGINEERS
3251 CORTE MALPASO, #511
CAMARILLO, CA 93012-8094
(805) 389-6520 FAX (805) 389-6519

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SITE PLAN - ELECTRICAL EXISTING CONDITION

PROJECT NO: 20-MPC-036	PROJECT ARCH: Designer
DRAWN: Author	CHECKED: Checker
SHEET NUMBER:	

E110

DATE: 11/10/2022	SHEET: OF
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DATE: 10 November 2022
PATHNAME: G:\22\557\EL\Sheets
DRAWING FILENAME: 22-557E300
DRAFTER: CM01

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	7.3	8.4	8.5	8.2	8.1	8.1	8.1	8.2	8.4	8.4	7.3
	5.9	6.8	7.4	8.1	8.8	9.2	8.8	8.1	7.4	6.8	5.9
	4.6	5.4	6.3	7.5	8.8	9.4	8.8	7.5	6.3	5.4	4.6
	3.8	4.3	5.2	6.3	7.5	8.1	7.6	6.3	5.2	4.3	3.7

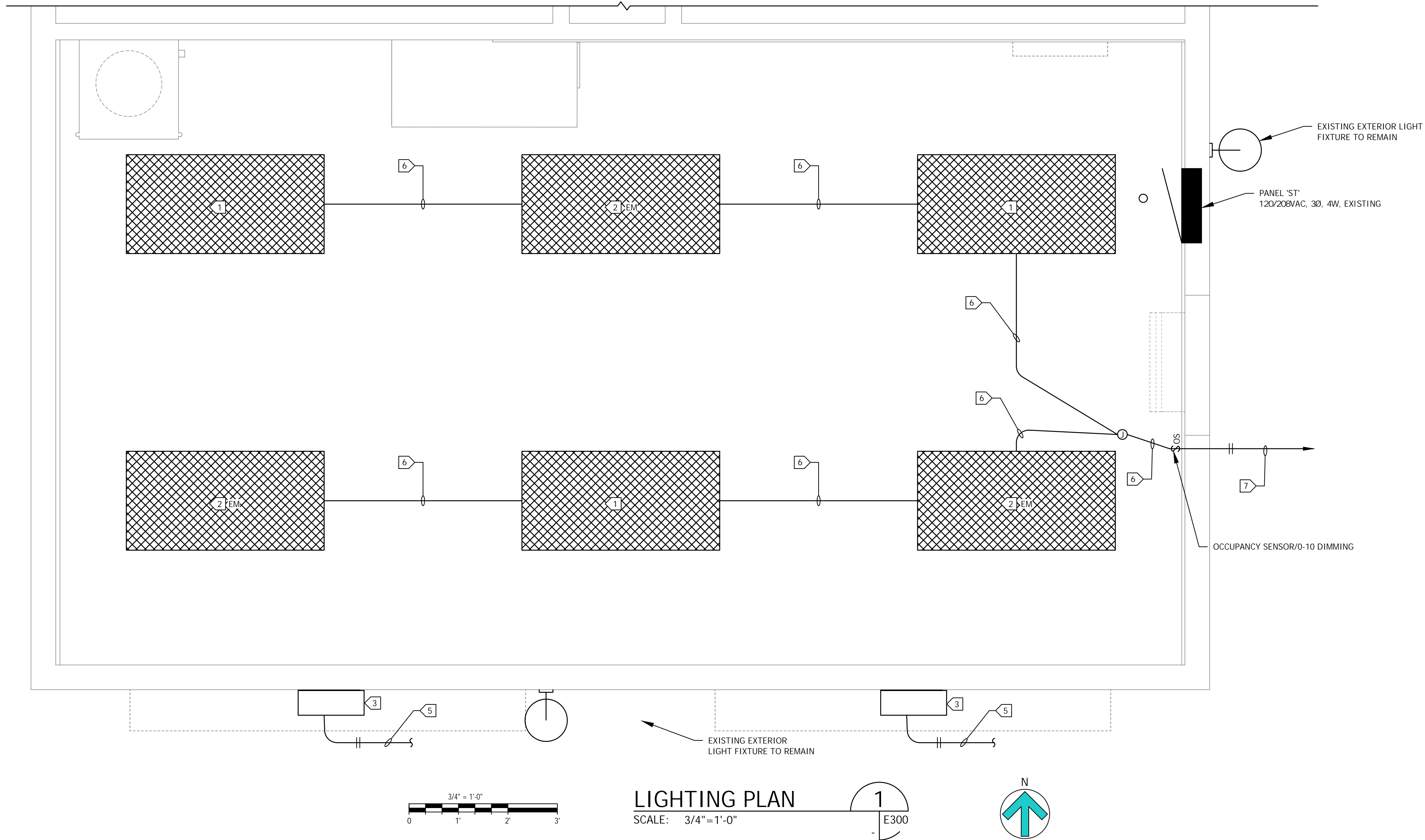
PHOTOMETRIC LIGHTING PLAN - EMERGENCY POWER
SCALE: NONE

3
E300

	47.1	52.8	54.8	55.6	57.4	58.5	57.4	55.6	54.8	52.8	47.1
	53.9	60.8	62.9	63.7	65.9	67.4	66.0	63.7	62.9	60.8	53.6
	56.0	63.6	66.2	67.1	69.4	71.0	69.5	67.1	66.2	63.7	56.1
	55.8	63.4	65.9	66.8	69.1	70.7	69.1	66.8	65.9	63.4	55.9
	62.8	69.8	61.8	62.5	64.6	68.1	64.7	62.5	61.7	59.8	52.7
	45.5	50.9	52.8	53.6	55.3	56.4	55.3	53.6	52.8	50.9	45.6

PHOTOMETRIC LIGHTING PLAN - NORMAL POWER
SCALE: NONE

2
E300



LIGHTING PLAN
SCALE: 3/4"=1'-0"

1
E300

- SHEET NOTES:**
- CONTRACTOR SHALL VERIFY LOCATION AND REQUIREMENTS OF ALL DEVICES PRIOR TO BID PROPOSAL, ROUGH-IN, AND FINISH INSTALLATION.
 - 3/4" CONDUIT MINIMUM UNLESS OTHERWISE NOTED, 1" MINIMUM UNDERGROUND.
- KEY NOTES:**
- NEW LITHONIA EPANL LED 2X4-4800LM-80CRI-35K-MIN1-EZT-120.
 - NEW LITHONIA EPANL LED 2X4-4800LM-80CRI-35K-MIN1-EZT-120-E10WCP (BATTERY PACK).
 - NEW LITHONIA DSXW1 LED 20C-530-40K-T3M-120V-PE PIR-DBED-(MATCH EXISTING FIXTURE COLOR, MOUNTING HEIGHT PER ARCHITECTURAL PLANS).
 - NOT USED.
 - CONNECT TO EXISTING EXTERIOR FIXTURE POWER.
 - NEW 3/4" C-3#12 7 1#12 GROUND & 2#14 PURPLE & GRAY (DIMMING).
 - CONNECT TO EXISTING LIGHTING CIRCUIT PER PANEL SCHEDULE.



MOORPARK COLLEGE

7075 CAMPUS RD
MOORPARK, CA 93021
TEL: (805) 378 - 1400

PROJECT TITLE AND SCHOOL LOCATION

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7075 CAMPUS ROAD, MOORPARK, CA 93021

COMMISSIONED ARCHITECT

AMADOR

28328 AGOURA RD, 203 | AGOURA HILLS CA, 91301 | 805-558-4334

CONSULTANT
LUCCI & ASSOCIATES INC.
CONSULTING ELECTRICAL ENGINEERS
3251 CORTE MALPASO, #511
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STAMPS/SEALS

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▲
▲
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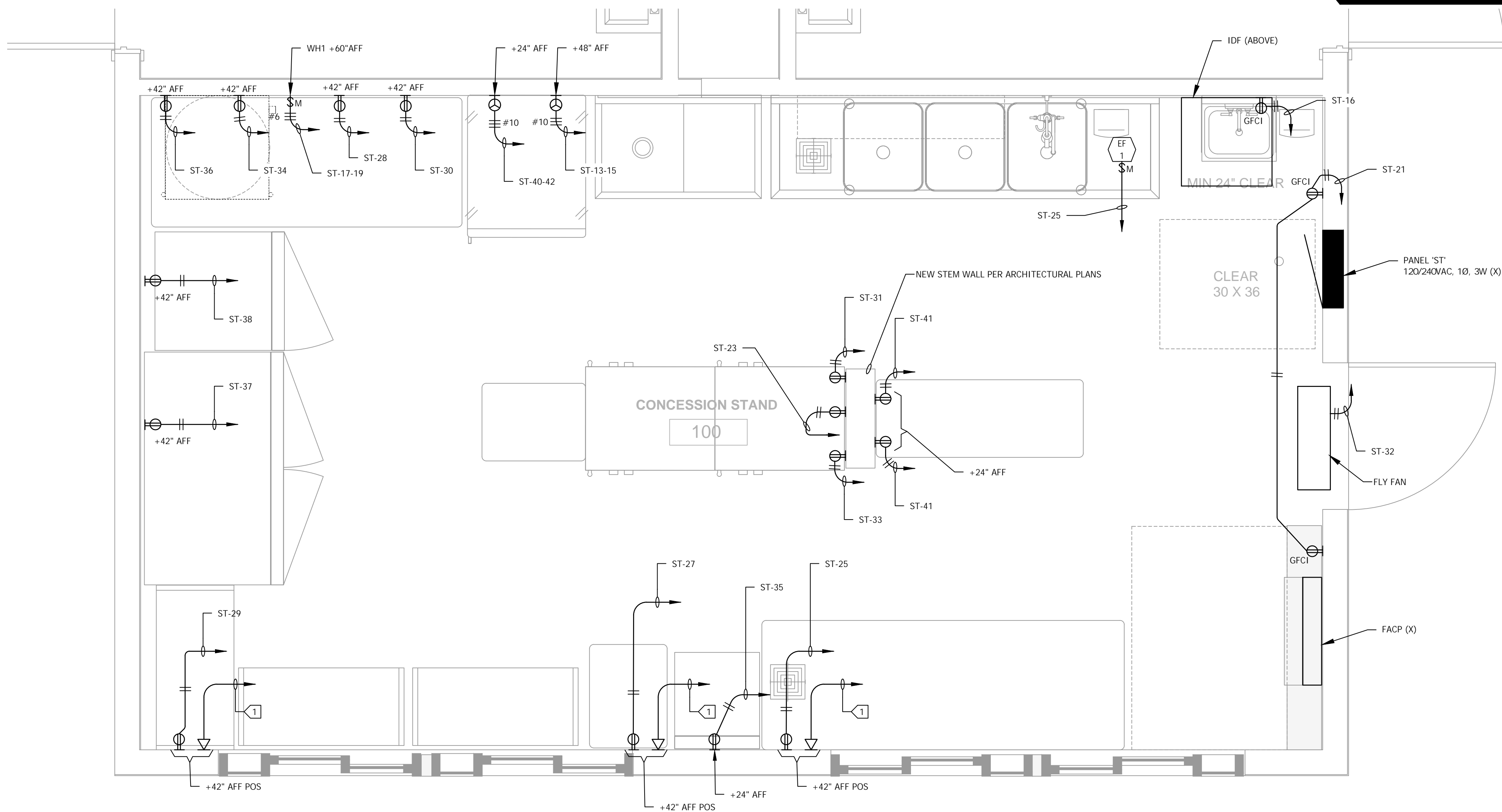
LIGHTING AND PHOTOMETRIC PLAN

PROJECT NO: 20-MPC-036	PROJECT ARCH: Designer
DRAWN: Author	CHECKED: Checker
SHEET NUMBER:	
E300	
DATE: 11/10/2022	SHEET: OF

EQUIPMENT SCHEDULE						EQUIPMENT DETAILS				
NO.	TYPE	DESCRIPTION	BASE	COUNT	COMMENTS	WATTS	VOLTS	AMPS	PLUG	CIRCUIT #
1	WARMING OVEN TWO SIDED	FLAV-R-SAVOR TALL DRY HOLDING CABINETS	CASTERS	2	NEW EQUIPMENT - OWNER PROVIDED & INSTALLED	1767W	120V	14.7	NEMA 5-15P	ST-33 & 31
2	UNDERCOUNTER ICE MAKER	MANITOWOC 65/80 UNDERCOUNTER ICE MACHINE		1	NEW EQUIPMENT - OWNER PROVIDED & INSTALLED		115V	5.3	NEMA 5-15P	ST-35
4	WAREWASHING SINK	REGENCY 16 GAUGE STAINLESS STEEL THREE COMPARTMENT SINK	20" LEGS	1	NEW EQUIPMENT - CONTRACTOR PROVIDED & INSTALLED					
5	HAND SINK	HS-2L WALL HUNG HAND WASH SINK W/1" RADIUS CORNERS	WALL MOUNTED	1	NEW EQUIPMENT - CONTRACTOR PROVIDED & INSTALLED					
14	FOOD REFRIGERATOR	AVANTOCO A SERIES SOLID DOOR REACH IN REFRIGERATORS	6" LEGS	1	NEW EQUIPMENT - OWNER PROVIDED & INSTALLED	60 H	115V	4.56	NEMA 5-15P	ST-37
16	RUBBERMAID PLASTIC HOT WATER WARMER		COUNTERTOP	2	NEW EQUIPMENT - OWNER PROVIDED & INSTALLED	60 H	120V		NEMA 5-15P	ST-39 & 41
17	CANOPY SNEEZE GUARD		COUNTERTOP	1	NEW EQUIPMENT - OWNER PROVIDED & INSTALLED					
18	MOIST HEAT HOT DOG BUN WARMER	NEMCO 8045W	COUNTERTOP	1	NEW EQUIPMENT - OWNER PROVIDED & INSTALLED	550W	120V	4.6	NEMA 5-15P	ST-28
19	HOT DOG ROLLER GRILL 45	NEMCO 8045N	COUNTERTOP	1	NEW EQUIPMENT - OWNER PROVIDED & INSTALLED	1520W	120 V	12.7	NEMA 5-15P	ST-32
21	FLY FAN	CURTTRON AP-2-24-1SS	WALL MOUNTED	1	NEW EQUIPMENT - CONTRACTOR PROVIDED & INSTALLED	60 H	120V		NEMA 5-15P	ST-30
23	FOOD PREPARATION SINK	WELDBILT SINGLE COMPARTMENT SCULLERY SINKS, RIGHT DRAINBOARD	20" LEGS	1	NEW EQUIPMENT - CONTRACTOR PROVIDED & INSTALLED					
24	CROCK POT	AVANTCO S600 14 QT	COUNTERTOP	2	NEW EQUIPMENT - OWNER PROVIDED & INSTALLED	600W	110V		NEMA 5-15P	ST-36 & 34
25	SPLASH GUARD KIT	FRANKLIN MACHINE PRODUCT 117-1474 14" X 10"	SINK MOUNTED	1	NEW EQUIPMENT - CONTRACTOR PROVIDED & INSTALLED					
26	STACKABLE FREEZER	TRUE T-23DT-HC	6" LEGS	1	NEW EQUIPMENT - OWNER PROVIDED & INSTALLED	60 H	115V	4.1	NEMA 5-15P	ST-38
27	STACKED OVEN	WINSTON CHV7-05US-ST CVAP COOK/HOLD CABINET	6" LEGS	1 (TOP/BOT)	NEW EQUIPMENT - OWNER PROVIDED & INSTALLED	4992	208	24	NEMA 6-30P EACH	ST-40-42 & ST-13-15
31.A	30" x 96"	REGENCY 18 GAUGE STAINLESS STEEL WORKTABLE	CASTERS	1	NEW EQUIPMENT - OWNER PROVIDED & INSTALLED					
31.B	30" x 72"	REGENCY 18 GAUGE STAINLESS STEEL WORKTABLE	CASTERS	1	NEW EQUIPMENT - OWNER PROVIDED & INSTALLED					
31.C	30" x 84"	REGENCY 18 GAUGE STAINLESS STEEL WORKTABLE	CASTERS	1	NEW EQUIPMENT - OWNER PROVIDED & INSTALLED					
32.B	18" x 24"	REGENCY 18 GAUGE STAINLESS STEEL WORKTABLE	CASTERS	1	NEW EQUIPMENT - OWNER PROVIDED & INSTALLED					
32.C	18" X 30"	REGENCY 18 GAUGE STAINLESS STEEL WORKTABLE	CASTERS	1	NEW EQUIPMENT - OWNER PROVIDED & INSTALLED					
32.D	18" X 48"	REGENCY 18 GAUGE STAINLESS STEEL WORKTABLE	CASTERS	1	NEW EQUIPMENT - OWNER PROVIDED & INSTALLED					
33.A	12" x 96"	REGENCY STAINLESS STEEL SOLID WALL WORK SHELVES	WALL MOUNTED	2	NEW EQUIPMENT - OWNER PROVIDED & INSTALLED					
33.B	12" x 72"	REGENCY STAINLESS STEEL SOLID WALL WORK SHELVES	WALL MOUNTED	1	NEW EQUIPMENT - OWNER PROVIDED & INSTALLED					
33.C	12" x 60"	REGENCY STAINLESS STEEL SOLID WALL WORK SHELVES	WALL MOUNTED	1	NEW EQUIPMENT - OWNER PROVIDED & INSTALLED					
33.D	12" x 36"	REGENCY STAINLESS STEEL SOLID WALL WORK SHELVES	WALL MOUNTED	3	NEW EQUIPMENT - OWNER PROVIDED & INSTALLED					
40	EXISTING SPLIT SYSTEM HVAC			1	EXISITING EQUIPMENT					

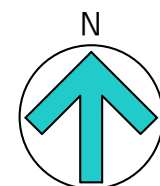
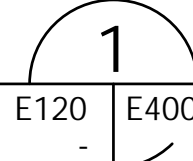
PLUMBING FIXTURES		
No.	DESCRIPTION	CIRCUIT #
P019	(N) WATER HEATER - ELECTRIC (9KW)	ST-17-19

ALL EQUIPMENT SHOWN IS NEW U.O.N.



POWER & COMMUNICATIONS PLAN

SCALE: 3/4"=1'-0"



ELECTRICAL NOTES

1. REFER TO KITCHEN PLANS FOR EQUIPMENT DESCRIPTION, LOCATION, MOUNTING ELEVATION AND CONNECTION REQUIREMENTS OF FOOD SERVICE EQUIPMENT.
2. PRIOR TO BID, AND ROUGH-IN, VERIFY AND PROVIDE ALL FOOD SERVICE EQUIPMENT CONNECTIONS AND DEVICES AS REQUIRED ON KITCHEN PLANS AND APPROVED EQUIPMENT SHOP DRAWINGS.
3. CONTRACTOR TO PROVIDE CAPS AND CORDS FOR ALL KITCHEN ITEMS WHERE THEY ARE NOT STANDARD WITH MANUFACTURER AND SHORTEN ANY CORDS IF REQUESTED, I.E., FRYERS, TOASTER, ETC.
4. CONTRACTOR TO CONNECT ALL KITCHEN EQUIPMENT AND FIXTURES AND DO ANY INTERNAL WIRING IN FIXTURES.
5. FIXTURE FABRICATOR WILL CUT ACCESS HOLES TO CONVENIENCE RECEPTACLES IN BACK SPLASHES, ETC., BUT ELECTRICAL CONTRACTOR TO PROVIDE EXTENSION RINGS, IF REQUIRED.
6. CONTRACTOR TO MAKE ALL FINAL CONNECTIONS, TO KEC EQUIPMENT
7. CONTRACTOR TO SUPPLY ALL LAMPS, WIRING, SWITCHES AND DISCONNECTS AS PER LOCAL CODES.
8. CONTRACTOR TO MAKE CONNECTIONS BETWEEN FIXTURE MOUNTED COMPONENTS AND REMOTE SWITCHES.
9. CONTRACTOR TO SUPPLY AND INSTALL ALL FIXTURE MOUNTED BOXES FROM STUB AS NOTED.
10. ALL COVER PLATES SHALL BE STAINLESS STEEL UNLESS OTHERWISE NOTED.
11. ALL DUPLEX AND SINGLE CONVENIENCE RECEPTACLES IN KITCHEN AND SERVICE AREAS ABOVE 36" TO BE MOUNTED HORIZONTALLY AND GFCI TYPE.
12. CONTRACTOR TO SUPPLY AND INSTALL PLUG MOLD WHERE INDICATED
13. ALL RECEPTACLES WITHIN 6'-0" OF SINKS SHALL BE GFI TYPE.

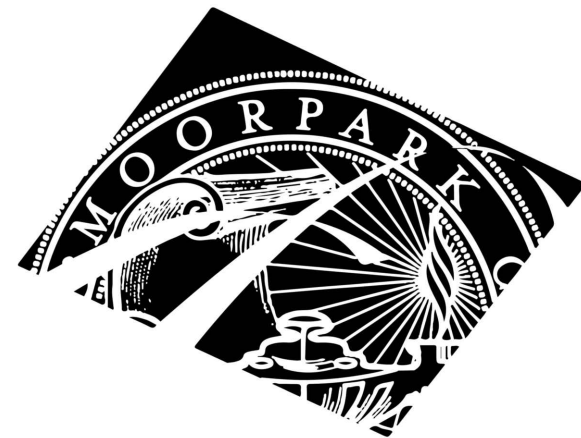
SHEET NOTES:

1. CONTRACTOR SHALL VERIFY LOCATION AND REQUIREMENTS OF ALL DEVICES PRIOR TO BID PROPOSAL, ROUGH-IN, AND FINISH INSTALLATION.
2. 3/4" CONDUIT MINIMUM UNLESS OTHERWISE NOTED, 1" MINIMUM UNDERGROUND.
3. ALL RECEPTACLES SHALL BE GFCI TYPE & NOT FEED THRU DEVICES.

KEY NOTES:

- 1 3/4"C-(2) CAT 6 TO IDF.

DIVISION OF THE STATE ARCHITECT



MOORPARK COLLEGE

7075 CAMPUS RD
MOORPARK, CA 93021
TEL: (805) 378 - 1400

PROJECT TITLE AND SCHOOL LOCATION

STADIUM RESTROOMS & CONCESSION STAND

7075 CAMPUS ROAD, MOORPARK, CA
93021

COMMISSIONED ARCHITECT

AMADÓR

28328 AGOURA RD, 203 | AGOURA HILLS CA, 91301 | 805-558-4332

CONSULTANT

LUCCI & ASSOCIATES INC.
CONSULTING ELECTRICAL ENGINEERS
3251 CORTE MALPASO, #511
CAMARILLO, CA 93012-8094
(805) 389-6520 FAX (805) 389-6519

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POWER AND COMMUNICATIONS PLAN

PROJECT NO.: 20-MPC-036

DRAWN: Author	CHECKED: Checker
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SHEET NUMBER:

E400

DATE: 11/10/2022

SHEET: _____ OF _____

PAPER SIZE 36"x24"

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DATE: 10 November 2022

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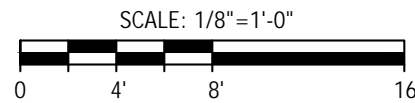
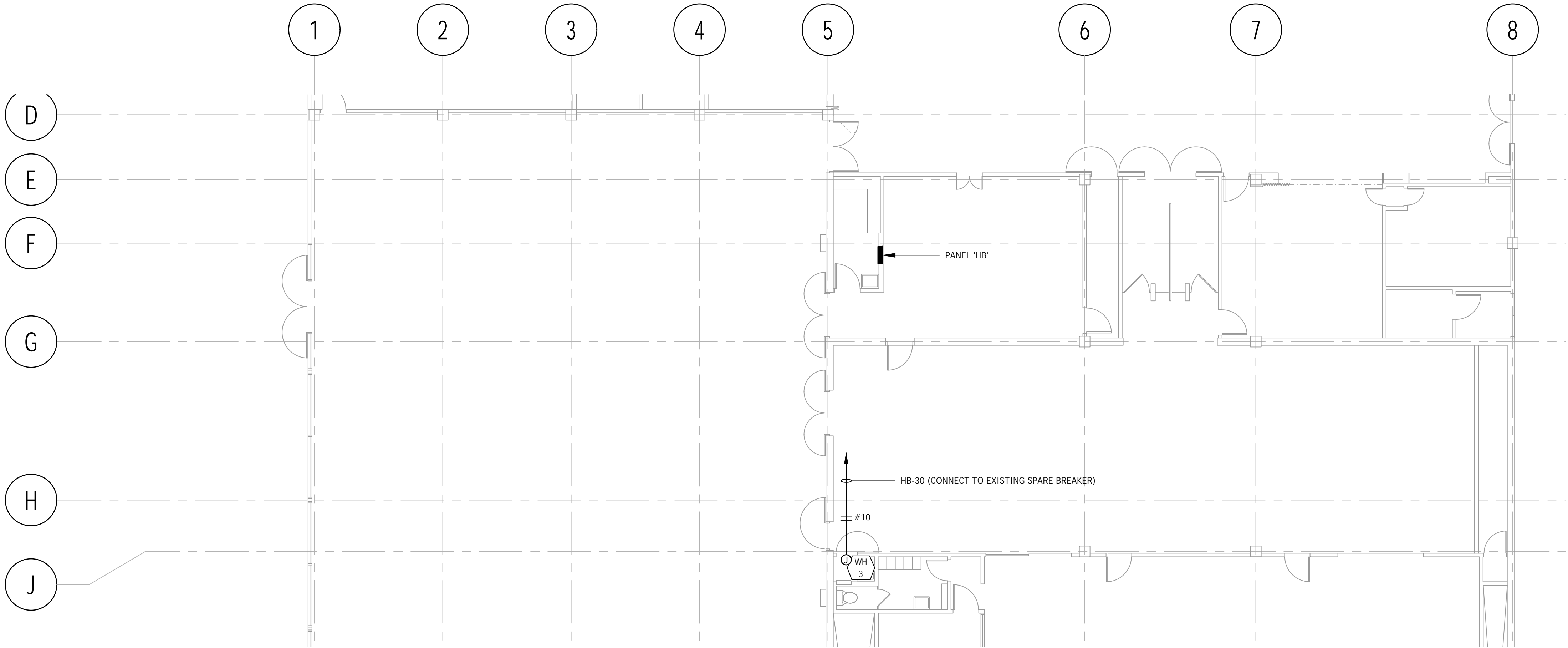
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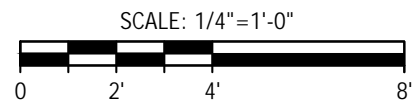
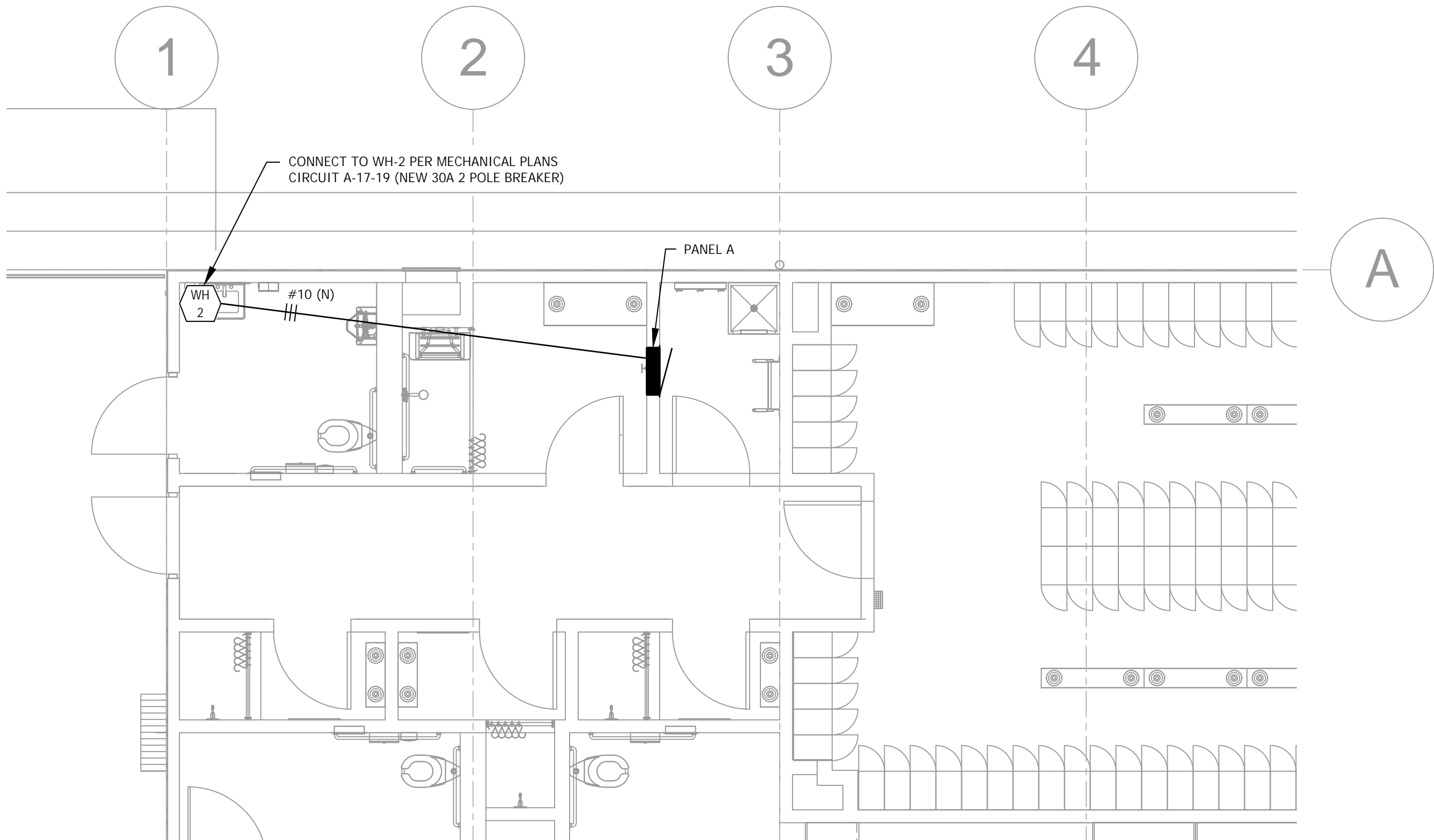
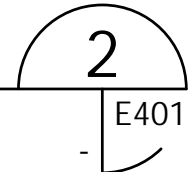
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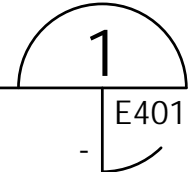
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DATE: 11/10/2022
TIME: 1:51 PM
DRAFTER: CM01



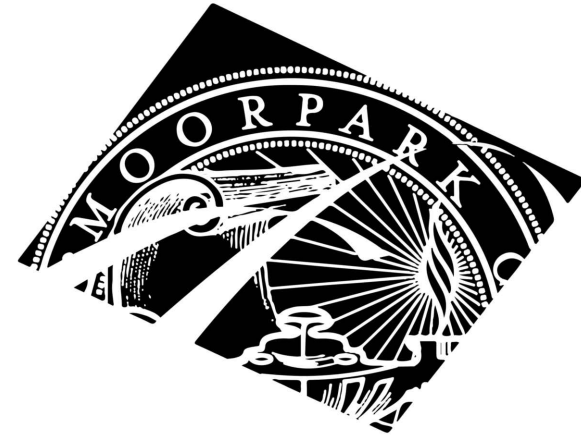
CAMPUS CENTER HOT WATER HEATER POWER PLAN
SCALE: 1/4"=1'-0"



FIELD HOUSE NEW INSTA HOT WATER HEATER POWER PLAN
SCALE: 1/4"=1'-0"



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CONSULTING ELECTRICAL ENGINEERS

3251 CORTE MALPASO, #511
CAMARILLO, CA 93012-8094
(805) 389-6520 FAX (805) 389-6519

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STAMPS/SEALS



SHEET TITLE:

FIELD HOUSE & CAMPUS CENTER HOT WATER HEATER POWER PLAN

PROJECT NO: 20-MPC-036

PROJECT ARCH: Designer

DRAWN: Author

CHECKED: Checker

SHEET NUMBER:

E401

DATE: 11/10/2022

SHEET: OF

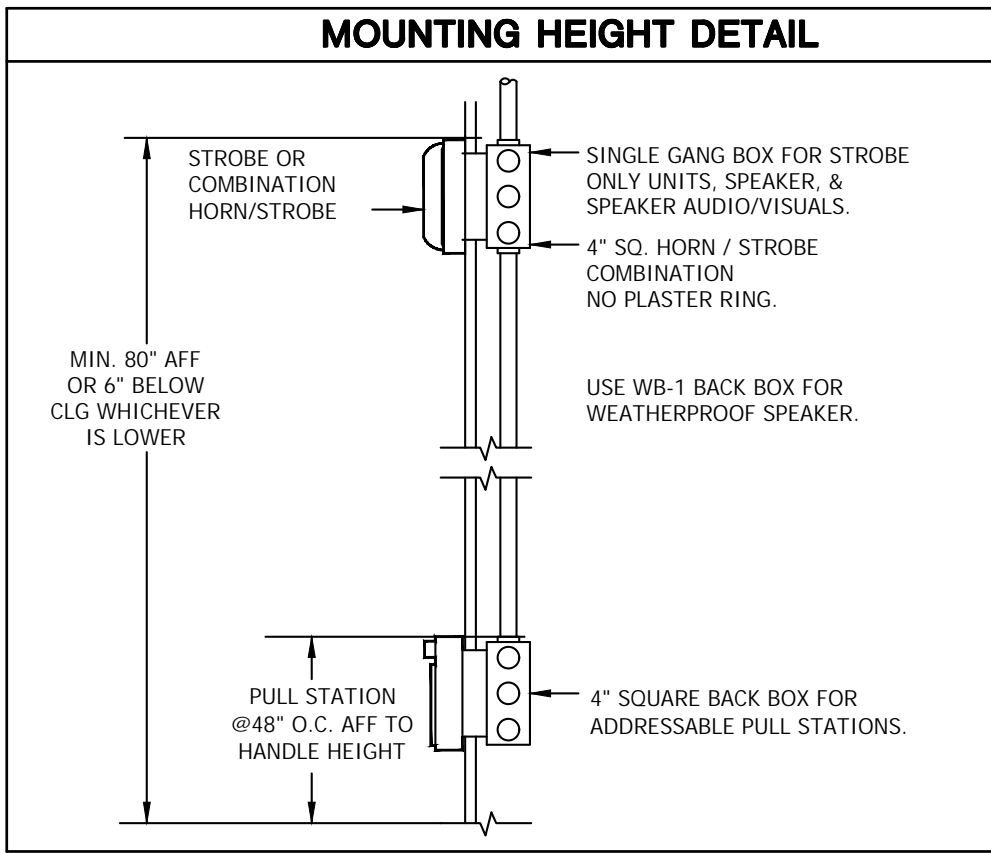
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DRAFTER: CM01

DEVICE LEGEND ALL DEVICES ARE EXISTING

SYMBOL	QTY.	MODEL	MAKE	DESCRIPTION	CSFM #	MOUNTING
[FACP]		EST3	EST	-NEW MAIN FIRE ALARM CONTROL PANEL	7165-1657:0186	-WALLBOX PROVIDED
	1	3-CAB14B	EST	-ENCLOSURE	7165-1657:0186	-MOUNTS TO WALL
	1	3-CAB14D	EST	-DOOR ASSEMBLY FOR 3-CAB7	7165-1657:0186	-MOUNTS ON 3-CAB7B
	1	3-CHAS7	EST	-CHASSIS ASSEMBLY FOR 7 LRMS	7165-1657:0186	-1 CHASSIS SPACE IN WALLBOX
	1	3-CPU3	EST	-CENTRAL PROCESSING UNIT	7165-1657:0186	-MOUNTS ON RAIL
	1	3-LCD	EST	-CPU LCD DISPLAY	7165-1657:0186	-MOUNTS ON RAIL
	1	3-RS485B	EST	-NETWORK COMMUNICATION CARD	7165-1657:0186	-MOUNTS ON RAIL
	1	3-DACT-E3	EST	-DIGITAL ALARM COMMUNICATOR	7165-1657:0186	-MOUNTS ON RAIL
	1	3-SSDC1	EST	-SINGLE SIGNATURE DRIVER CONTROLLER	7165-1657:0186	-MOUNTS ON RAIL
	1	3-LRMF	EST	-BLANK LRM FILLER	N/A	-MOUNTS ON RAIL
	2	3-PPS/M	EST	-PRIMARY POWER SUPPLY	7165-1657:0186	-MOUNTS IN WALLBOX SEE RISER
	1	SLA1116	POWER PATROL	-7.0 AH BATTERY	N/A	-MOUNTS IN WALLBOX MINIMUM 10/17 MANUFACTURER DATE STAMP
CD [SPK]	2	G4HFW-S7VMC	EST	-SPEAKER/STROBE 15 CANDELA (W=WALL C=CEILING)	7320-1657:0211	-4"SQUARE BOX WITH SINGLE GANG RING
	1	G4HFW-S7VMC	EST	-SPEAKER/STROBE 30 CANDELA (W=WALL C=CEILING)	7320-1657:0211	-4"SQUARE BOX WITH SINGLE GANG RING
	2	G4HFW-S7VMC	EST	-SPEAKER/STROBE 75 CANDELA (W=WALL C=CEILING)	7320-1657:0211	-4"SQUARE BOX WITH SINGLE GANG RING
	2	G1-FVM	EST	-STROBE 15 CANDELA (W=WALL C=CEILING)	7125-1657:0218	-4"SQUARE BOX WITH SINGLE GANG RING
	1	G1-FVM	EST	-STROBE 30 CANDELA (W=WALL C=CEILING)	7125-1657:0218	-4"SQUARE BOX WITH SINGLE GANG RING
CD [P]	5	WG4WF-SVMC	EST	-STROBE/SPEAKER - WP = WEATHER PROOF	7320-1567:0289	WG4 (74347U) - 4" SQ BOX
	1	SIGA-270	EST	-MANUAL PULL STATION	7150-1657:0129	-4"SQUARE BOX WITH SINGLE GANG RING -SINGLE GANG RING OR OUTLET - BREAK GLASS TYPE (NOT ACKNOWLEDGE)
SD	4	SIGA-PD	EST	-SMOKE DETECTOR	7272-1657:0331	-MOUNTS TO SIGA-SB BASE
	4	SIGA-SB	EST	-BASE	7300-1657:0120	-4" SQ. BOX WITH 3" "O" RING
HD	3	SIGA-HRD	EST	-HEAT DETECTOR	7270-1657:0333	-MOUNTS TO SIGA-SB BASE
	3	SIGA-SB	EST	-BASE	7300-1657:0120	-4" SQ. BOX WITH 3" "O" RING
SP [WP]	4	WG4RF-S	EST	-70V SPEAKER - 2W	7320-1657:0289	-4" SQ. DEEP ELECTRICAL BOX (74347U (WG4) WEATHER PROOF BOX WET LOCATION)
CO [CD]	1	SIGA-COD	EST	CO DETECTOR	5278-1657:0335	-SIGA-SB BASE 4SQ
AMP [MPT]			EST	VOICE COMMUNICATION ACCESSORIES	6912-1657:0237	ANS50MD2

WIRE LEGEND

TYPE	CONDUCTORS	SIZE	TYPE CABLE	CIRCUIT DESCRIPTION	WIRE COLOR SCHEME	LISTING
A	2	#18AWG	FPL	ADDRESSABLE DEVICE CIRCUIT	RED (+), BLACK (-)	UL AQ224 1424/581 WEST PENN
2A	4	#18AWG	FPL	ADDRESSABLE DEVICE LOOP	RED (+), BLACK (-), BLUE (+), BROWN (-)	UL AQ224 1424/581 WEST PENN
B	2	#12AWG	THHN	SPEAKER CIRCUIT	RED (+), BLACK (-)	UL 83
C	2	#14AWG	THHN	STROBE CIRCUIT	YELLOW (+), BLUE (-)	UL 83
2C	4	#14AWG	THHN	STROBE LOOP	YELLOW (+), BLUE (-), YELLOW STRIPED (+), BLUE STRIPED (-)	UL 83
N	4	#16AWG	THHN	NETWORK (RS484) CIRCUIT	RED (+), BLACK (-)	UL 83
P	2	#14AWG	THHN	AUXILIARY POWER CIRCUIT	ORANGE (+), BROWN (-)	UL 83
D	2	#12AWG	THHN	STROBE CIRCUIT	YELLOW (+), BLUE (-)	UL 83
2D	4	#12AWG	THHN	STROBE LOOP	YELLOW (+), BLUE (-), YELLOW STRIPED (+), BLUE STRIPED (-)	UL 83



REQUIRED NOTES

THE FIRE ALARM SYSTEM SHALL CONFORM TO ARTICLE 760 OF THE CALIFORNIA ELECTRIC CODE.

INSTALLATION OF THE FIRE ALARM SYSTEM SHALL NOT BE STARTED UNTIL DETAILED PLANS AND SPECIFICATIONS, INCLUDING CALIFORNIA STATE FIRE MARSHAL LISTING NUMBERS FOR EACH COMPONENT OF THE SYSTEM HAVE BEEN APPROVED BY THE CALIFORNIA DEPT. OF THE STATE ARCHITECT'S FIRE MARSHAL.

UPON COMPLETION OF THE INSTALLATION OF THE FIRE ALARM SYSTEM A SATISFACTORY TEST OF THE SYSTEM SHALL BE MADE IN THE PRESENCE OF THE FIRE MARSHAL, OWNER AND ENGINEER OF RECORD.

PROVIDE SMOKE DETECTOR SENSITIVITY TEST METHOD PER CFC 907.8.3 & 907.8.4

A MINIMUM OF 48 HOURS NOTICE SHALL BE REQUIRED FOR ANY INSPECTION AND/OR TESTING.

ALL DEVICES OF THE FIRE ALARM SYSTEM SHALL BE APPROVED AND LISTED BY THE CALIFORNIA STATE FIRE MARSHAL.

A STAMPED SET OF APPROVED FIRE ALARM PLANS SHALL BE ON THE JOB SITE AND USED FOR INSTALLATION. ANY DEVIATION FROM APPROVED PLANS, INCLUDING THE SUBSTITUTION OF DEVICES SHALL BE APPROVED BY THE FIRE MARSHAL.

ANY DISCREPANCIES BETWEEN THE DRAWINGS AND THE CODE, OR RECOGNIZED STANDARDS SHALL BE BROUGHT TO THE ATTENTION OF THE INSPECTOR OF RECORD.

A CERTIFICATE OF COMPLIANCE SHALL BE PREPARED BY THE INSTALLER AND GIVEN TO THE FIRE MARSHAL UPON COMPLETION OF THE INSTALLATION.

COMPLETE THE NFPA 72 RECORD OF COMPLETION, TESTING ALL DEVICES AND APPLIANCES. PROVIDE A COPY OF THE COMPLETED RECORD OF COMPLETION TO THE OWNER (SCHOOL DISTRICT), ARCHITECT, LOCAL FIRE AUTHORITY AND DSA VIA THE PROJECT INSPECTOR.

SEQUENCE OF OPERATION

ACTION	THROUGHOUT BUILDING SOUND GENERAL ALARM	SOUND TROUBLE BUZZER	ACTIVATE ADDRESSABLE MODULE FOR MONITORING	ANNUNCIATE AT PANEL	TRANSMIT TROUBLE SIGNAL FOR ALL APPLICABLE COMPONENTS TO SUPERVISING STATION	TRANSMIT ALARM SIGNAL TO SUPERVISING STATION	ACTIVE REMOTE POWER SUPPLY PANEL (FCPS)	DROP BREAKERS & VISUAL ALARMS FROM F.A. SYSTEM
MANUAL PULL STATION	●		●	●		●	●	●
INDICATING CIRCUIT FAILURE		●		●				
INITIATING CIRCUIT FAILURE		●		●				
AC / BATTERY FAILURE		●		●		●		
F.A. SYSTEM LOW BATTERY		●		●				
SMOKE DETECTORS	●			●		●	●	●
HEAT DETECTORS	●			●		●	●	●
ISOLATOR LINE TROUBLE		●		●				
EARTH GROUND FAULT		●			●			
NOTIFICATION APPLIANCE CIRCUIT OPEN		●		●	●	●		
SIGNAL LINE SHORT		●		●	●	●		

PROJECT NOTES

- GENERAL NOTES
1. ALL WIRE IS IN CONDUIT PER CFC 907.
 2. MANUAL PULL STATIONS ARE MOUNTED AT 48 IN. ABOVE FLOOR SURFACE TO THE CENTER OF THE STATION. (DETAIL 1)
 3. MOUNT AUDIO VISUAL 80 IN. ABOVE FINISHED FLOOR TO THE BOTTOM OF THE LIGHT OR 6" FROM BELOW CEILING WHICH EVER IS LOWEST. (DETAIL 2)
 4. MAINTAIN WIRING COLOR CODES.
 5. ALL WIRING TO BE AS CALLED FOR IN N.E.C. ARTICLE 760 & CFC 907.
 6. IDENTIFY THE FIRE ALARM CIRCUIT AT THE ELECTRICAL PANEL IN RED. PROVIDE A BREAKER LOCKON DEVICE.
 7. DEVICE TYPES AND LOCATIONS ARE SHOWN AS CALLED FOR ON THE BID DOCUMENTS.

APPLICABLE CODES

LIST OF 2019 CALIFORNIA CODE OF REGULATIONS (C.C.R.):
APPLICABLE CODES AS OF JANUARY 1, 2020

- PART 1- 2019 CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE, TITLE 24 C.C.R.
- PART 2- 2019 CALIFORNIA BUILDING CODE, TITLE 24 C.C.R. (2018 INTERNATIONAL BUILDING CODE OF THE INTERNATIONAL CODE COUNCIL, WITH CALIFORNIA AMENDMENTS)
- PART 3- 2019 CALIFORNIA ELECTRICAL CODE, TITLE 24 C.C.R. (2017 NATIONAL ELECTRICAL CODE OF THE NATIONAL FIRE PROTECTION ASSOCIATION, NFPA)
- PART 4- 2019 CALIFORNIA MECHANICAL CODE, TITLE 24 C.C.R. (2018 UNIFORM MECHANICAL CODE OF THE INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS, IAPMO)
- PART 5- 2019 CALIFORNIA PLUMBING CODE, TITLE 24 C.C.R. (2018 UNIFORM PLUMBING CODE OF THE INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS, IAPMO)
- PART 6- 2019 CALIFORNIA ENERGY CODE, TITLE 24 C.C.R.
- PART 7- CURRENTLY VACANT
- PART 8- 2019 CALIFORNIA HISTORICAL BUILDING CODE, TITLE 24 C.C.R.
- PART 9- 2019 CALIFORNIA FIRE CODE, TITLE 24 C.C.R. (2018 INTERNATIONAL FIRE CODE OF THE INTERNATIONAL CODE COUNCIL)
- PART 10- 2019 CALIFORNIA EXISTING BUILDING CODE (2018 INTERNATIONAL EXISTING BUILDING CODE OF THE INTERNATIONAL CODE COUNCIL, WITH AMENDMENTS)
- PART 11- 2019 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN CODE), TITLE 24 C.C.R.
- PART 12- 2019 CALIFORNIA REFERENCE STANDARDS CODE, TITLE 24 C.C.R.

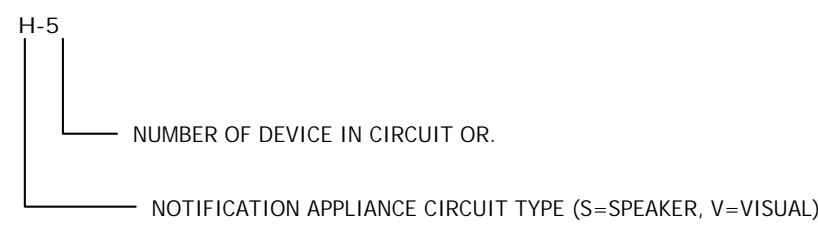
PARTIAL LIST OF APPLICABLE STANDARDS

2019 CALIFORNIA BUILDING CODE (FOR SFM) REFERENCED STANDARDS CHAP. 35

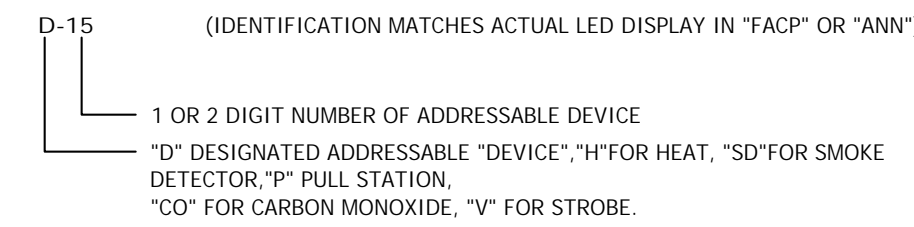
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|-----------|---|--------------|
| NFPA 13 | AUTOMATIC SPRINKLER SYSTEMS (CALIFORNIA AMENDED) | 2016 EDITION |
| NFPA 14 | STANDPIPE SYSTEMS (CALIFORNIA AMENDED) | 2016 EDITION |
| NFPA 17 | DRY CHEMICAL EXTINGUISHING SYSTEMS | 2017 EDITION |
| NFPA 17a | WET CHEMICAL EXTINGUISHING SYSTEMS | 2017 EDITION |
| NFPA 20 | STATIONARY PUMPS | 2016 EDITION |
| NFPA 24 | PRIVATE FIRE SERVICE MAINS (CALIFORNIA AMENDED) | 2016 EDITION |
| NFPA 72 | NATIONAL FIRE ALARM CODE (CALIFORNIA AMENDED) (NOTE: SEE UL STANDARD 1971 FOR "VISUAL DEVICES") | 2016 EDITION |
| NFPA 80 | FIRE DOOR AND OTHER OPENING PROTECTIVES | 2016 EDITION |
| NFPA 253 | CRITICAL RADIANT FLUX OF FLOOR COVERING SYSTEMS | 2015 EDITION |
| NFPA 2001 | CLEAN AGENT FIRE EXTINGUISHING SYSTEMS | 2015 EDITION |

DEPARTMENT OF JUSTICE REGULATIONS FOR TITLE II OF THE AMERICANS WITH DISABILITIES ACT OF 1990 WITH REVISED REGULATIONS AS PUBLISHED IN THE FEDERAL REGISTER ON SEPTEMBER 15, 2010, EFFECTIVE MARCH 15, 2012. TITLED ADA STANDARDS FOR ACCESSIBLE DESIGN.

FIRE ALARM N.A.C. DEVICE NUMBERING KEY

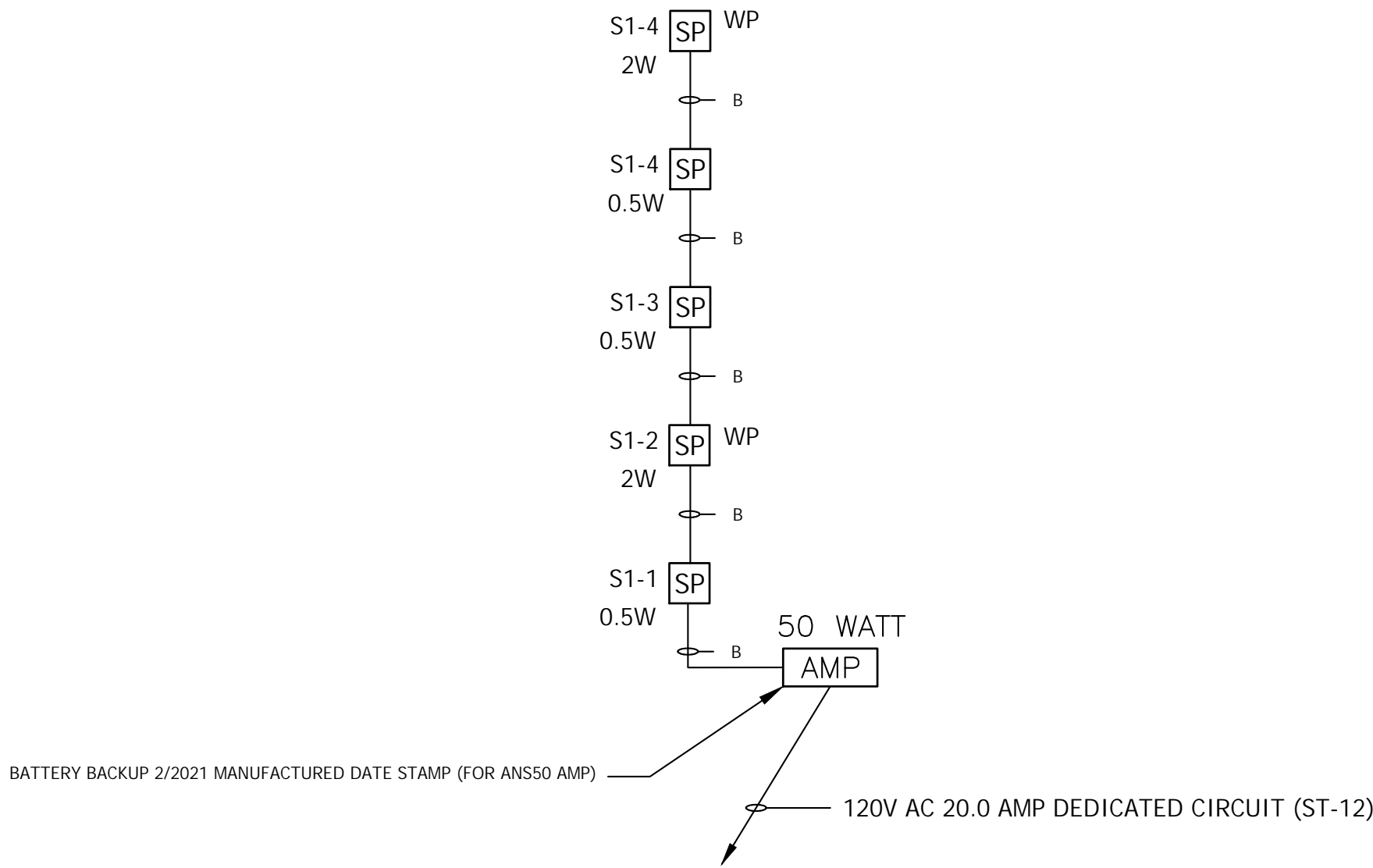


FIRE ALARM ADDRESSABLE DEVICE IDENTIFICATION KEY



ALL DEVICES ARE EXISTING - DSA #03-0121484, NO NEW DEVICES!

REUSE EXISTING FA SYSTEM - DSA #03-0121484

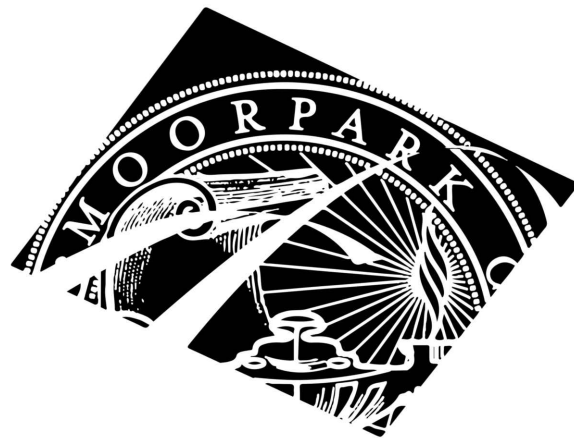


SPEAKER SYSTEM

SCALE: NONE



DIVISION OF THE STATE ARCHITECT



MOORPARK COLLEGE

7075 CAMPUS RD
MOORPARK, CA 93021
TEL: (805) 378 - 1400

PROJECT TITLE AND SCHOOL LOCATION

STADIUM RESTROOMS & CONCESSION STAND

7075 CAMPUS ROAD, MOORPARK, CA 93021

COMMISSIONED ARCHITECT

AMADOR

28328 AGOURA RD, 203 | AGOURA HILLS CA, 91301 | 805-558-4334

CONSULTANT

LUCCI & ASSOCIATES INC.
CONSULTING ELECTRICAL ENGINEERS

3251 CORTE MALPASO, #511
CAMARILLO, CA 93012- 8094
(805) 389 - 6520 FAX (805) 389 - 6519

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STAMPS/SEALS



SHEET TITLE:

FIRE ALARM
GENERAL NOTES
AND DEVICES
LEGEND

PROJECT NO: 20-MPC-036 PROJECT ARCH: Designer

DRAWN: Author CHECKED: Checker

SHEET NUMBER:

FA1.01

DATE: 11/10/2022 SHEET: ____ OF ____

TIME: 4:37 pm

DATE: 10 November 2022

PATHNAME: G:\22\557\EL\Sheets

DRAWING FILENAME: 22-557FA1-03

DRAFTER: CM01

Drawing: 22-557FA1-03.dwg
Author: CM01
Checked: CM01
Date: 11/10/2022
Project: 20-MPC-036
Sheet: 1 of 1
Title: FIRE ALARM PLAN
Scale: 3/8" = 1'-0"

ANS Audio Panel Battery Calculations

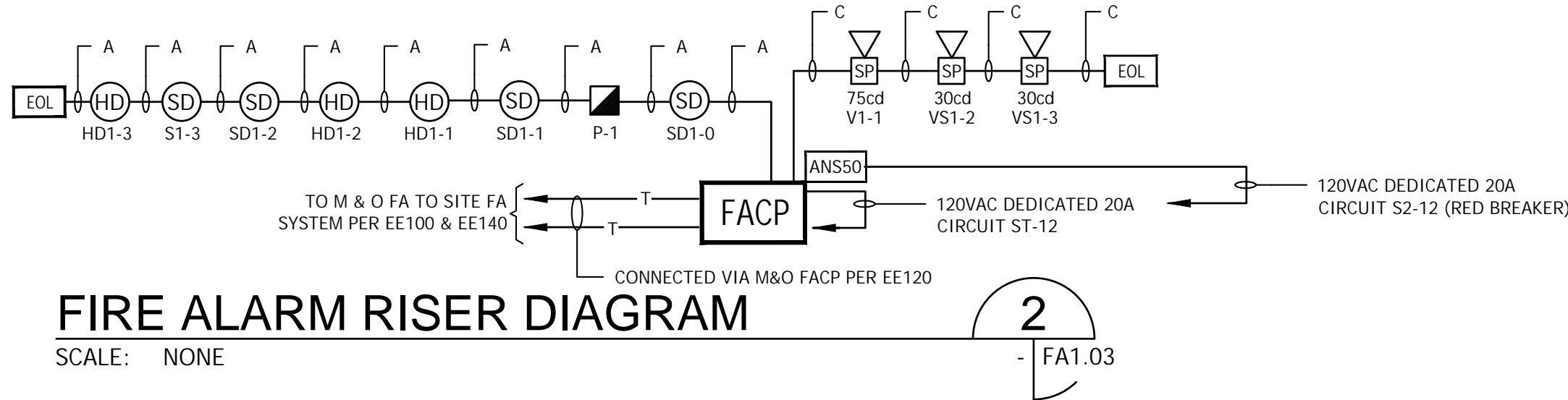
ANS50

Item	Qty		Standby Current (Amps)	Total Standby	Alarm Current (Amps)	Total Alarm
ANS50 - 50W Amp	1 x		0.13	0.13	1.0	1.0
ANSREMSUP - Remote Mic Sup Module	1 x		0.03	0.03	0.05	0.05
ANSREM - Remote Mic	1 x		0.02	0.02	0.04	0.04
ANSZSC4A - Class A Converter	1 x		0.038	0.038	0.048	0.048
ANSRSI8 - Remote Serial Interface	1 x		0.01	0.01	0.01	0.01
ANSAUX - Audio Matching I/O	1 x		0.015	0.015	0.035	0.035
ANSBKUP - Backup Amp Module	1 x		0.04	0.04	0.01	0.01

Totals = 0.283 Amps 1.193 Amps
24 Stdby Hrs. 15 Alarm Mins.
0.250 Alarm Hrs.

Batteries larger than 7AH require separate battery cabinet.
2 x 7AH IN SEPARATE BATTERY CABINET FOR ANS50

6.792 + 0.298 = 7.09 AH
x 1.2
REQUIRED Battery Size = 8.508 Amp Hours



SHEET NOTES:

- VERIFY LOCATION OF ALL DEVICES ON ARCHITECTURAL PLANS.
- 3/4" RED CONDUIT MINIMUM UNLESS OTHERWISE NOTED, 1" UNDER GROUND.
- CONTRACTOR SHALL FURNISH AND INSTALL PULL BOXES AS REQUIRED TO INSTALL COMMUNICATION CABLING PER CABLE MANUFACTURERS RECOMMENDATIONS.
- MAXIMUM 180 DEGREE OF BEND BETWEEN PULL POINTS.
- RUN COMMUNICATION CABLING IN CABLE TRAY TO MAXIMUM EXTENT POSSIBLE. WHERE CABLING IS NOT IN CABLE TRAY, CABLE SHALL BE IN CONDUIT.
- UNIQUELY LABEL BOTH ENDS OF ALL CABLING.

KEY NOTES:

- PROVIDE ACCESS PANEL AS REQUIRED.
- HEAT DETECTOR IN ATTIC UPPER STRUCTURE.
- ABOVE FACP & LESS THAN 50" FRONT FACP HORIZONTALLY.

DO NOT INSTALL SMOKE OR HEAT DETECTORS WITHIN 36" OF SUPPLY OR RETURN AIR REGISTERS

DIVISION OF THE STATE ARCHITECT



MOORPARK COLLEGE

7075 CAMPUS RD
MOORPARK, CA 93021
TEL: (805) 378 - 1400

PROJECT TITLE AND SCHOOL LOCATION

STADIUM RESTROOMS & CONCESSION STAND

7075 CAMPUS ROAD, MOORPARK, CA 93021

COMMISSIONED ARCHITECT

AMADOR

28328 AGOURA RD, 203 | AGOURA HILLS CA, 91301 | 805-558-4334

CONSULTANT

LUCCI & ASSOCIATES INC.

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3251 CORTE MALPASO, #511

CAMARILLO, CA 93012-8094

(805) 389-6520 FAX (805) 389-6519

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STAMPS/SEALS



SHEET TITLE:

FIRE ALARM PLAN

PROJECT NO: 20-MPC-036

PROJECT ARCH: Designer

DRAWN: Author

CHECKED: Checker

SHEET NUMBER:

FA1.03

DATE: 11/10/2022

SHEET: OF

TECHNICAL SPECIFICATIONS

SEPTEMBER 2022

FOR

**MOORPARK COLLEGE
STADIUM CONCESSION STAND
VENTURA COUNTY COMMUNITY COLLEGE DISTRICT**

BID No. 639

FOR

**MOORPARK COLLEGE
7075 CAMPUS ROAD
MOORPARK, CA 93021**



William J Amador AIA, ARCHITECT
AMADOR WHITTLE ARCHITECTS, INC



Hugh McTernan, ME
AE GROUP MECHANICAL INC.



Kenneth W. Lucci, EE
LUCCI & ASSOCIATES, INC.

**TECHNICAL SPECIFICATIONS
FOR
MOORPARK COLLEGE STADIUM CONCESSION STAND**

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SECTION 01 1100
SUMMARY OF WORK

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. The furnishing of all labor, materials, equipment, services, and incidentals necessary for Work of the Stadium Concession Stand Project at Moorpark College located at 7075 Campus Road, Moorpark, California 93021, as set forth in the Construction Documents which include, but are not limited to, the Drawings, Addenda and Specifications.

1.02 RELATED REQUIREMENTS:

- 1. Section 01 3113: Project Coordination.

PART 2 - PRODUCTS (Not used)

PART 3 - EXECUTION

3.01 USE OF PREMISES

- A. CONTRACTOR shall coordinate Work of all trades, Subcontractors, utility service providers, with OWNER and/or Separate Work Contract. CONTRACTOR shall sequence, coordinate, and perform the Work to impose minimum hardship on the operation and use of the existing facilities and/or Project site. CONTRACTOR shall install all necessary protection for existing improvements, Project site, property, and new Work against dust, dirt, weather, damage, vandalism, and maintain and relocate all protection to accommodate progression of the Work.
- B. CONTRACTOR shall confine entrance and exiting to the Project site and/or facilities to routes designated by the OWNER.
- C. Within existing facilities, OWNER will remove portable equipment, furniture, and supplies from Work areas prior to the start of Work. CONTRACTOR shall cover and protect remaining items in areas of the Work.
- D. CONTRACTOR is advised school may be in session during performance of the Work. CONTRACTOR shall utilize all available means to prevent generation of unnecessary noise and maintain noise levels to a minimum. When required by the OWNER, CONTRACTOR shall immediately discontinue noise-generating activities and/or provide alternative methods to minimize noise generation. CONTRACTOR shall install and maintain air compressors, tractors, cranes, hoists, vehicles, and other internal combustion engine equipment with mufflers, including unloading cycle of

compressors. CONTRACTOR shall discontinue operation of equipment producing objectionable noise as required by the OWNER.

- E. CONTRACTOR shall furnish, install, and maintain adequate supports, shoring, and bracing to preserve structural integrity and prevent collapse of existing improvements and/or Work modified and/or altered as part of the Work.
- F. CONTRACTOR shall secure building entrances, exits, and Work areas with locking devices as required by the OWNER.
- G. CONTRACTOR assumes custody and control of OWNER property, both fixed and portable, remaining in existing facilities vacated during the Work.
- H. CONTRACTOR shall cover and protect surfaces of rooms and spaces in existing facilities turned over for the Work, including OWNER property remaining within as required to prevent soiling or damage from dust, dirt, water, and/or fumes. CONTRACTOR shall protect areas adjacent to the Work in a similar manner. Prior to OWNER occupancy, CONTRACTOR shall clean all surfaces including OWNER property.
- I. CONTRACTOR shall not use or allow anyone other than OWNER employees to use facility telephones and/or other equipment, except in an emergency. CONTRACTOR shall reimburse OWNER for telephone toll charges originating from the facility except those arising from emergencies or use by OWNER employees.
- J. CONTRACTOR shall protect all surfaces, coverings, materials, and finished Work from damage. Mobile equipment shall be provided with pneumatic tires.
- K. CONTRACTOR is advised OWNER may award Separate Work Contracts at this Project site.
- L. CONTRACTOR shall not permit the use of portable and/or fixed radio's or other types of sound producing devices including walkmans and similar devices.

END OF SECTION

SECTION 01 2513

PRODUCT SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. This Section includes administrative and procedural requirements for handling requests for substitutions submitted 60 days after the date established in the Notice of Award.

1.02 RELATED REQUIREMENTS

- A. Section 01 3300: Submittal Procedures.

PART 2 - PRODUCTS (Not used)

PART 3 - EXECUTION

3.01 APPLICATION

- A. CONTRACTOR proposed changes in products or materials required by the Contract Documents 60 days or more after the Notice of Award are considered to be requests for substitutions. OWNER will consider requests for substitution if a product is no longer manufactured or the OWNER and ARCHITECT, after a diligent search have verified that product or material is not available to CONTRACTOR. The following are not considered to be valid requests for substitutions:
 - 1. Revisions to the Contract Documents requested by OWNER or ARCHITECT.
 - 2. Specified options of products included in the Contract Documents.
 - 3. Substitutions requested on a “or equal” basis.

3.02 SUBMITTALS

- A. Transmit submittals as described in related Sections for each request for substitution.
 - 1. Identify the product to be replaced in each request. Include related Specification Section and Drawing number.

2. Provide complete documentation denoting compliance with the requirements for substitutions, and the following information, as appropriate.
 - a. A detailed comparison of significant qualities of the proposed substitution with those specified in the Contract Documents. Significant qualities may include elements, such as performance, weight, size, durability, and visual effect.
 - b. Product Data, including Drawings, descriptions of products, fabrication, and installation procedures.
 - c. Samples, where applicable or requested.
 - d. CONTRACTOR certification the proposed substitution conforms to requirements of the Contract Documents in every respect and is appropriate for the applications indicated.
 - e. CONTRACTOR waiver of rights to an increase in the Contract Amount, Milestones and/or Contract Time that may subsequently become necessary because of the failure of the substitution to adequately perform.
3. If required, ARCHITECT will request additional information or documentation for evaluation. OWNER will notify CONTRACTOR of acceptance or rejection of the substitution.
4. ARCHITECT will review and consider request for substitution and provide a recommendation to OWNER
5. Where a proposed substitution involves and/or affects more than one Subcontractor, CONTRACTOR shall ensure each Subcontractor cooperates with the other Subcontractor involved to coordinate the Work, provide uniformity and consistency, and assure compatibility of all products.
6. CONTRACTOR submittal and ARCHITECT review of Shop Drawings, Product Data, material lists or Samples do not constitute an acceptable or valid request for substitution.

END OF SECTION

SECTION 01 2613
REQUEST FOR CLARIFICATION

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Procedure for requesting clarification of the intent of the Contract Documents.

1.02 RELATED REQUIREMENTS

- A. Section 01 1100: Summary of Work.
- B. Section 01 3113: Project Coordination.

1.03 GENERAL CONDITIONS

- A. Submit Request for Clarification to design team in case of inconsistencies between approved drawings and approved specifications in the descriptions work to be done, equipment to be provided or material to be used. It shall be that the more stringent, the more restrictive, the higher quality, and the greater quantity of Work shall apply.

PART 2 - PRODUCTS (Not used)

PART 3 - EXECUTION

3.01 PROCEDURE

- A. CONTRACTOR shall prepare a Request for Clarification on the form provided at the end of this section. CONTRACTOR shall transmit the Request for Clarification to ARCHITECT with a concurrent copy to the OWNER.
- B. ARCHITECT response is a clarification of the intent of the Contract Documents and does not authorize changes in the Contract Amount, Milestones and/or Contract Time.
- C. A Request for Clarification may be returned with a stamp or notation "Not Reviewed," if:
 - 1. The requested clarification is ambiguous or unclear.
 - 2. CONTRACTOR has not reviewed the Request for Clarification prior to submittal.
- D. Allow a minimum of five days for review and response time, after receipt by ARCHITECT and OWNER. CONTRACTOR shall verify and is responsible in verifying ARCHITECT and OWNER receipt of a Request for Clarification.

- E. Changes or alterations to the approved drawings or specifications shall be made by means of addenda or change orders as per section 4-338 of the California Building Standards Commission's, California Administrative Code.

END OF SECTION

SECTION 01 3113

PROJECT COORDINATION

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. This Section specifies administrative and procedural requirements necessary for coordinating Work operations including, but not limited to, the following:

1. General coordination procedures.
2. Coordination drawings.

1.02. RELATED REQUIREMENTS

- A. Division 1

PART 2 - PRODUCTS (Not used)

PART 3 - EXECUTION

3.01 COORDINATION

- A. CONTRACTOR shall coordinate operations included in various sections of Contract Documents to assure efficient and orderly installation of each part of Work. Coordinate Work operations included under related sections of Contract Documents that depend on each other for proper installation, connection, and operation of Work, including but not limited to:

1. Schedule construction operations in sequence required where installation of one part of Work depends on installation of other components, before or after its own installation.
2. Coordinate installation of different components to assure maximum accessibility for required maintenance, service, and repair.
3. Provide provisions to accommodate items scheduled for later installation.
4. Prepare and administer provisions for coordination drawings.

- B. Where necessary, prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required in notices, reports, attendance at meetings, and:
 - 1. Prepare similar memoranda for OWNER and Separate Work Contract where coordination of their Work is required.
- C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and assure orderly progress of Work. Such administrative activities include, but are not limited to, following:
 - 1. Preparation of schedules.
 - 2. Installation, relocation, and removal of temporary facilities.
 - 3. Delivery and processing of submittals.
 - 4. Progress meetings.
 - 5. Project closeout activities.
- D. Conservation: Coordinate Work operations to assure operations are carried out with consideration given to conservation of energy, water, materials, and:
 - 1. Salvage materials and equipment involved in performance of, but not actually incorporated into Work.

END OF SECTION

SECTION 01 3300
SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Administrative and procedural requirements for submittals required for the Work, including but not limited to; Shop Drawings, Product Data, Samples, material lists, and quality control items.
- B. Throughout the Contract Documents, the minimum acceptable quality of materials, fabrication, and execution have been defined by the name and catalog number of a manufacturer and by reference of recognized industry standards.
- C. To ensure that specified products are furnished and installed in accordance with the design intent, procedures have been established for submittal of design data and for its review by ARCHITECT, OWNER and others.

1.02 RELATED REQUIREMENTS

- A. Section 01 3113: Project Coordination
- B. Section 01 7329: Cutting and Patching.

PART 2 – PRODUCTS (Not used)

PART 3 - EXECUTION

3.01 PROCEDURES

- A. CONTRACTOR is required to review and approve every submittal and shop drawing prior to transmittal and delivery to ARCHITECT. Should CONTRACTOR determine a submittal contains errors, or does not meet the requirements of the contract, CONTRACTOR shall immediately return the submittals and shop drawings to the producer and expedite the corrections prior to transmitting the submittal to ARCHITECT. Submittals shall not be used by CONTRACTOR to request clarifications or submit questions. CONTRACTOR will affix stamp to each submittal certifying CONTRACTOR has performed, at minimum, the following:

1. Verified the submittal is complete in all respects and follows the requirements of the Contract Documents without variance.
 2. Confirmed that no substitutions have been included. If substitutions are included, CONTRACTOR shall eliminate them from the submittal and process them in accordance with the Contract Documents.
 3. Identified any variances from the requirements of the Contract Documents and confirmed that the identified variance meets, but does not exceed the allowable limitations or tolerances as defined in these specifications.
 4. Verified that all submitted materials, dimensions and tolerances are compatible with existing or planned conditions of the Work in order to erect, fabricate, or install the submitted assembly in conformance with the requirements of the Contract Documents.
 5. Coordinated and verified that the dimensions match CONTRACTOR measured field or installation conditions.
 6. Coordinated and verified that the products of separate manufacturers required within any field produced assembly are compatible in all respects for such assembly.
 7. Packaged together all related submittals or shop drawings where such is necessary for a comprehensive ARCHITECT review.
- B. CONTRACTOR shall package each submittal appropriately for transmittal and handling. Transmittal format shall be as required by OWNER. CONTRACTOR shall transmit and deliver six sets of each submittal or re-submittal to ARCHITECT, two of which shall be returned to CONTRACTOR. Some specifications may require additional copies be provided. CONTRACTOR shall provide the OWNER additional copies as specified or as requested by OWNER. ARCHITECT will not accept submittals received from sources other than from CONTRACTOR.
- C. After ARCHITECT'S review, ARCHITECT will transmit submittals to OWNER and OWNER shall further distribute to CONTRACTOR, INSPECTOR and others as required. Work shall not commence, unless otherwise approved by OWNER, until approved submittals are transmitted to CONTRACTOR.
- D. CONTRACTOR shall clearly identify any deviations from the Contract Documents on each submittal. Any deviation not so noted even though stamped reviewed is not acceptable.

- E. CONTRACTOR shall coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities requiring sequential activity.
- F. Timing of Submittals:
1. In accordance with General Conditions, CONTRACTOR shall submit to ARCHITECT, with copy of transmittal to the OWNER, those Shop Drawings, Product Data, diagrams, materials lists, Samples and other submittals required by the Contract Documents.
 2. The scheduling of submittals shall be sequenced to support the progress of the Work, and shall be:
 - a. Submitted sufficiently in advance of construction, fabrication or installation in order to allow time for transmittal, review, modification, correction, (and resubmission and re-review when required.)
 - b. Phased with adequate time between submittals in order to allow for proper review by the ARCHITECT without negative impact to the Milestones Schedule.
 3. CONTRACTOR shall coordinate submittal of related items and ARCHITECT reserves the right to withhold action on a submittal requiring coordination with other submittals until all related submittals are received by ARCHITECT.
 4. CONTRACTOR shall revise, update and submit submittal schedule to ARCHITECT and OWNER on the first of each month, or as required by OAR.
 5. CONTRACTOR shall allow in the Construction Schedule, at least sixteen days for ARCHITECT review following ARCHITECT receipt of submittal. For mechanical, plumbing, electrical, low voltage, fire sprinklers, door and hardware, and other submittals requiring joint review with OWNER, CONTRACTOR shall allow a minimum of eighteen days following ARCHITECT receipt of submittal.
 6. No adjustments to the Contract Time or Milestones will be authorized because of a failure to transmit submittals to ARCHITECT sufficiently in advance of the Work to permit review and processing or where CONTRACTOR fails to provide ARCHITECT submittals on related items.
 7. In case of product substitution, Shop Drawing preparation shall not commence until such time as OWNER accepts or rejects the proposed

substitution in accordance with the procedures described in the General Conditions.

- G. If required, resubmit submittals in a timely manner. Resubmit as specified for initial submittal but identify as such. Review times for re-submitted items shall be as per the time frames for initial submittal review.
- H. Shop Drawing preparation shall not commence until such time as CONTRACTOR receives Product Data acceptance.
- I. ARCHITECT will stamp each submittal with a uniform, action stamp. ARCHITECT will mark the stamp appropriately to indicate the action taken, as follows:
 - 1. Final Unrestricted Release: When ARCHITECT marks a submittal “Reviewed” or “Approved” the Work covered by the submittal may proceed provided it complies with requirements of the Contract Documents. Final payment depends on that compliance.
 - 2. Final-But-Restricted Release: When ARCHITECT, or authorized agent, marks a submittal “Reviewed as Noted” or “Furnish as Corrected”, the Work covered by the submittal may proceed provided it complies with notations or corrections on the submittal and requirements of the Contract Documents. Final payment depends on that compliance.
 - 3. Returned for Re-submittal: When ARCHITECT, or authorized agent, marks a submittal “Rejected” or “Revise and Resubmit,” do not proceed with Work covered by the submittal, including purchasing, fabrication, delivery, or other activity. Revise or prepare a new submittal according to the notations; resubmit without delay. Repeat as necessary to obtain different action mark. In case of multiple submittals covering same items of Work, CONTRACTOR is responsible for any time delays, schedule disruptions, out of sequence Work, or additional costs due to multiple submissions of the same submittal item. Do not use, or allow others to use, submittals marked “Rejected” or “Revise and Resubmit” at the Project site or elsewhere where Work is in progress.
 - 4. Other Action: Where a submittal is for information or record purposes or special processing or other activity, ARCHITECT, or authorized agent, will return the submittal marked “Action Not Required “.

3.02 SHOP DRAWINGS

- A. Shop Drawings are original drawings prepared by CONTRACTOR, Sub-contractor, supplier, or distributor illustrating some portion of Work by showing fabrication, layout, setting, or erection and shall not be based on reproduced Contract Documents or copied standard information.

- B. Produce Shop Drawings to an accurate scale that is large enough to indicate all pertinent features and methods. Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches but no larger than 24 by 36 inches.
- C. Shop Drawings shall include fabrication and installation drawings, setting diagrams, schedules, patterns, templates, and similar drawings. Include the following information:
 - 1. Dimensions.
 - 2. Identification of products and materials included by sheet and detail number.
 - 3. Compliance with specified standards.
 - 4. Notation of coordination requirements.
 - 5. Notation of dimensions established by field measurement.
- D. Provide a space of approximately 4 by 5 inches on the label or beside the title block on Shop Drawings to record CONTRACTOR and ARCHITECT review, and the action taken. Include the following information on the label for processing and recording action taken:
 - 1. Project name.
 - 2. Date.
 - 3. Name and address of ARCHITECT.
 - 4. Name and address of CONTRACTOR.
 - 5. Name and address of Subcontractor.
 - 6. Name and address of supplier.
 - 7. Name and address of manufacturer.
 - 8. Name and title of appropriate Specification section.
 - 9. Drawing number and detail references, as appropriate.

- E. Unless otherwise agreed to or indicated in individual Specification sections, submit a sufficient number of sets to allow for adequate distribution to CONTRACTOR, Sub-Contractor, supplier, manufacturer and fabricators plus four (4) sets (two sets to be retained by ARCHITECT, one set to the INSPECTOR and one set to OWNER). Electronic submittals are preferred except for material samples.

3.03 PRODUCT DATA

- A. Collect Product Data into a single submittal for each element of Work or system. Product Data includes printed information, such as manufacturer's installation instructions, catalog cuts, standard color charts, roughing-in diagrams and templates, wiring diagrams, schedules, illustrations, or performance curves.
 - 1. Mark each copy to show or delineate pertinent materials, products, models, applicable choices, or options. Where Product Data includes information on several products that are not required, clearly mark copies to indicate the applicable information. Include the following information:
 - a. Manufacturer's printed recommendations.
 - b. Compliance with trade association standards.
 - c. Compliance with recognized testing agency standards.
 - d. Application of testing agency labels and seals.
 - e. Notation of dimensions verified by field measurement.
 - f. Notation of coordination requirements.
 - g. Notation of dimensions and required clearances.
 - h. Indicate performance characteristics and capacities.
 - i. Indicate wiring diagrams and controls.
 - 2. Do not submit Product Data until compliance with requirements of the Contract Documents has been confirmed by CONTRACTOR.
- C. Required Copies and Distribution: Same as denoted in Article 3.02.E.

3.04 SAMPLES

A. Procedure:

1. Submit Samples of sufficient size, quantity, cured and finished and physically identical to the proposed product or material. Samples include partial or full sections or range of manufactured or fabricated components, cuts or containers of materials, color range sets, and swatches denoting color, texture, and/or pattern.
 - a. Mount or display Samples in the manner to facilitate review of qualities indicated. Include the following:
 - 1) Specification section number and reference.
 - 2) Generic description of the Sample.
 - 3) Sampling source.
 - 4) Product name or name of manufacturer.
 - 5) Compliance with recognized standards.
 - 6) Availability and delivery time.
2. Submit Samples for review of size, kind, color, pattern, and texture. Submit Samples for a final check of these characteristics with other elements and a comparison of these characteristics between the final submittal and the actual component as delivered and installed.
 - a. Where variations in color, pattern, texture, or other characteristic is inherent in the material or product represented, submit at least three (3) multiple units that show the approximate limits of the variations.
 - b. Refer to other Specification sections for requirements for Samples that illustrate materials, fabrication techniques, assembly details, connections, operation, and similar construction characteristics.
 - c. Refer to other sections for Samples to be returned to CONTRACTOR for incorporation into the Work. Such Samples must be undamaged at time of installation. On the transmittal indicate special requests regarding disposition of Sample submittals.
 - d. Samples not incorporated into the Work, or otherwise not designated as Owner property, remain the property of CONTRACTOR and shall be removed from the Project site prior to Substantial Completion.

3. Color and Pattern: Whenever a choice of color or pattern is available in a specified product, submit accurate color chips and pattern charts to OWNER for review and selection.
 4. Number Required: Submit six, minimum, of each. Two will be returned to CONTRACTOR.
- B. When specified, erect field Samples and mock-ups at the Project site to illustrate products, materials, fabrications, or execution and to establish standards by which completed Work shall be judged.
 - C. Maintain sets of Samples, as returned, at the Project site, for quality comparisons throughout the course of the Work. Sample sets may be used to obtain final acceptance of the Work associated with each set.

3.05 QUALITY CONTROL SUBMITTALS

- A. Submit quality control submittals, including design data, certifications, manufacturer's field reports, and other quality control submittals as required under other sections of the Contract Documents.
- B. When other sections of the Contract Documents require manufacturer's certification of a product, material, or installation complies with specified requirements, submit a notarized certification from the manufacturer certifying compliance with specified requirements.
- C. Certification shall be signed by an officer of the manufacturer or other individual authorized to sign documents on behalf of the represented company.
- D. Requirements for submittal of inspection and test reports are specified in other sections of the Contract Documents.

END OF SECTION

SECTION 01 5000

CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Temporary utilities, construction facilities and temporary controls to be provided, maintained, relocated, and removed by CONTRACTOR.
- B. Temporary office furnishings and office equipment.
- C. Project signage.

1.02 QUALITY ASSURANCE

- A. CONTRACTOR shall comply with applicable laws and regulations of authorities having jurisdiction including, but not limited to, the following:
 - 1. Building Code requirements.
 - 2. Health and safety regulations.
 - 3. Utility company regulations.
 - 4. Police, fire department and rescue squad requirements.
 - 5. Environmental protection regulations.
- B. CONTRACTOR shall arrange for the inspection and testing of each temporary utility prior to use. Obtain required certifications and permits and transmit to OWNER.

1.03 SUBMITTALS

- A. Temporary Utilities: Submit to OWNER reports of tests, inspections, meter readings, certifications, permits and similar procedures performed on temporary utilities.
- B. Project Signage / Banner: Submit to OWNER for review and approval.
 - 1. Shop Drawings: Elevation showing the text, OWNER sign and color of project signage, jointing, fittings and location of grommets.

2. Certification: Submit certification attesting fabric is certified as flame retardant, in accordance to NFPA 701, Standard Methods of Fire Tests for Flame Propagation of Textiles and Films.

1.05 TEMPORARY UTILITIES

- A. CONTRACTOR shall coordinate with college to install temporary services. CONTRACTOR shall provide and install required materials and equipment.
- B. Upon Substantial Completion of the Work, remove temporary systems, devices and appurtenances.

1.06 TEMPORARY OFFICES – NOT USED

1.07 TEMPORARY SANITARY FACILITIES

- A. CONTRACTOR shall provide portable chemical toilet facilities. Quantity of portable chemical toilet facilities shall be based on total number of workers and shall be in accordance with CAL/OSHA standards.
- B. CONTRACTOR employees shall not use school toilet facilities.
- C. At CONTRACTOR'S expense and without limitation remove and/or relocate portable chemical toilet facilities as rapidly as required in order to provide for progress of the Work.
- D. CONTRACTOR will contain their breaks and lunch periods to the areas designated by OWNER or any public area outside the Project site. CONTRACTOR shall provide a suitable container within the break/lunch area for the placement of trash. Areas used for break/lunch must be maintained clean and orderly. Once finish flooring has been installed in a particular area, no food or beverages will be permitted in that area.

1.08 TEMPORARY SECURITY FENCE / BARRICADE

- A. CONTRACTOR shall install temporary Project site security barricade(s) indicated on Drawings or as required for safety and as specified herein. New or used material may be furnished. Security of Project site and contents is a continuous obligation of CONTRACTOR.
- B. Unless otherwise indicated or specified, security fence shall be constructed of 8-foot high chain link fencing with an 8-foot high windscreen. Space posts not to exceed ten feet on centers. Posts shall be of following nominal pipe dimensions: terminal, corner, and gatepost 2 ½-inch, line posts 2-inch. Chain link fence shall be not less than #13 gauge, 2-inch mesh, and in one width. Posts, fence and accessories shall be galvanized and as follows:

1. Shall have galvanized steel pipe bases with rounded corners and anchored with snadbags or other weights to keep them securely in place, unless required otherwise in writing by OWNER.
2. Fence fabric shall be attached to posts with #14 gauge tie wire at 16 inches on center. A #6 gauge steel tension wire with turnbuckles shall be installed at top and bottom of barricade fencing. Wire tie fabric to tension wires at 18" centers.
3. Windscreen shall be attached to fence fabric and steel tension wires at 18-inch centers with a minimum of #14 gauge tie wire. Windscreen shall be maintained and all rips, tears, missing sections shall be corrected upon notification by OWNER.
4. Chain link fencing shall be free from barbs, icicles or other projections resulting from galvanizing process. Fence having such defects will be replaced even if it has been installed.
5. Gates shall be fabricated of steel pipe with welded corners, and bracing as required. Fence and fabric to be attached to frame at 12-inch centers. Provide all gate hardware of a strength and quality to perform satisfactorily until barricade is removed upon Substantial Completion of the Work. Each gate shall have a chain and padlock. Provide two gate keys to OWNER. At Substantial Completion of the Work, remove barricade from Project site, backfill and compact fence footing holes. Existing surface paving that is cut into or removed shall be patched and sealed to match surrounding areas.
6. At CONTRACTOR'S expense and without limitation remove or relocate fencing, fabric and barricades or other security and protection facilities as rapidly as required in order to provide for progress of the Work.

1.09 OTHER TEMPORARY ENCLOSURES AND BARRICADES

- A. Provide lockable, temporary weather-tight enclosures at openings in exterior walls to create acceptable working conditions, to allow for temporary heating and for security.
- B. Provide protective barriers around trees, plants and other improvements designated to remain.
- C. Temporary partitions shall be installed at all openings where additions connect to existing buildings, and where to protect areas, spaces, property, personnel, students and faculty and to separate and control dust, debris, noise, access, sight, fire areas, safety and security. Temporary partitions shall be as designated on the Drawings or as specified by ARCHITECT. At CONTRACTOR'S expense and without limitation remove and/or relocate enclosures, barriers and temporary partitions as rapidly as required in order to provide for progress of the Work.

- D. Since the Work of this Project may be immediately adjacent to existing occupied structures and vehicular and pedestrian right of ways, CONTRACTOR shall, in his sole judgment and in accordance with applicable safety standards, provide temporary facilities, additional barricades, protection and care to protect existing structures, occupants, property, pedestrians and vehicular traffic. CONTRACTOR is responsible for any damage, which may occur to the property and occupants of the property of OWNER or adjacent private or public properties which in any way results from the acts or neglect of CONTRACTOR.
- E. CONTRACTOR shall be responsible for cleaning up all areas adjacent to the construction site which have been affected by the construction; and for restoring them to at least their original condition- including landscaping; planting of trees, sod, and shrubs damaged by construction; and raking and disposal of debris such as roofing shingles, paper, nails, glass sheet metal, bricks, and waste concrete. Construction debris shall be removed and properly disposed of. Culverts and drainage ditches with sediment from the construction area shall be cleared routinely to maintain proper drainage and re-cleaned prior to completion of the contract.
- F. CONTRACTOR shall ensure sediment does not block storm drains. CONTRACTOR shall be responsible for cleaning storm drains blocked due to erosion or sediment from the work area.

1.10 TEMPORARY STORAGE YARDS

- A. CONTRACTOR shall fence and maintain storage yards in an orderly manner.
- B. Provide storage units for materials that cannot be stored outside.
- C. At CONTRACTOR'S expense and without limitation remove and/or relocate storage yards and units as rapidly as required in order to provide for progress of the Work.

1.11 TEMPORARY DE-WATERING FACILITIES AND DRAINAGE

- A. For temporary drainage and de-watering facilities and operations not directly associated with construction activities included under individual sections, comply with de-watering requirements of applicable Division 01 sections. CONTRACTOR shall maintain the Work, Project site and related areas free of water.
- B. For temporary drainage and de-watering facilities and operations directly associated with new buildings, additions or other construction activities, comply with Divisions 01 and 33 Sections. CONTRACTOR shall be responsible for, but not limited to, de-watering of excavations, trenches and below grade areas of buildings, structures, the Project site and related areas.

1.12 TEMPORARY PROTECTION FACILITIES INSTALLATION

- A. CONTRACTOR shall not change over from using temporary facilities and controls to permanent facilities until Substantial Completion, except as permitted by OWNER.
- B. Until permanent fire protection needs are supplied and approved by authorities having jurisdiction, CONTRACTOR shall provide, install and maintain temporary fire protection facilities of the types needed in order to adequately protect against fire loss. CONTRACTOR shall adequately supervise welding operations, combustion type temporary heating and similar sources of fire ignition.
- C. CONTRACTOR shall provide, install and maintain substantial temporary enclosures of partially completed areas of construction. Provide locking entrances to prevent unauthorized entrance, vandalism, theft and similar violations of security. Where materials, tools and equipment are stored within the Work area, CONTRACTOR shall provide secure lock up to protect against vandalism, theft and similar violations of security. OWNER accepts no financial responsibility for loss, damage, vandalism or theft.
- D. CONTRACTOR operations shall not block, hinder, impede or otherwise inhibit the use of required exits and/or emergency exits to the public way, except as approved by OWNER. CONTRACTOR shall maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire protection facilities, stairways and other access routes for firefighting equipment and/or personnel.
- E. With approval of OWNER and at the earliest feasible date in each area of the Work, complete installation of the permanent fire protection facilities including connected services and place into operation and use. Instruct OWNER personnel in use of permanent fire protection facilities.
- F. In the event of an emergency drill or an actual emergency, designated by the sounding of the fire alarm and/or other sounding device, all construction activities must cease. CONTRACTOR shall evacuate the Work area and remain outside the Work area until permitted to return. No Work shall be conducted during the evacuation of a building or during an emergency.

1.13 TEMPORARY SECURITY AND SAFETY MEASURES

- A. During performance of the Work in existing facilities and/or on a Project Site occupied by students, CONTRACTOR shall provide, install and maintain substantial temporary barriers and/or partitions separating all Work areas from areas occupied by students, faculty and/or administrative staff.
- B. During performance of the Work in existing facilities or on a Project site occupied by students and where temporary barriers or partitions are not physically feasible, CONTRACTOR shall provide an employee meeting the requirements of Education Code Section 45125.2.(2) to continually supervise and monitor all

employees of CONTRACTOR and Subcontractor. For the purposes of this Section, CONTRACTOR employee shall be someone whom the Department of Justice has ascertained has not been convicted of a violent or serious felony as listed in Penal Code Section 667.5(c) and/or Penal Code Section 1192.7(c). To comply with this Section, CONTRACTOR shall have his employee submit his or her fingerprints to the Department of Justice pursuant to Education Code Section 45125.1(a).

- C. Penal Code Sections 290 and 290.4 commonly known as “Megan’s Law”, require, among other things, individuals convicted of sexually oriented crimes, to register with the chief of police where the convicted individual resides or with a county sheriff or other law enforcement officials. CONTRACTOR shall check its own employees and require each Subcontractor to check its employees and report to CONTRACTOR if any such employees are registered sex offenders. CONTRACTOR shall check monthly during the life of the Contract to ascertain this information and report same to OWNER. Before starting the Work, and monthly thereafter during the life of Contract, CONTRACTOR shall notify OWNER in writing if any of its employees and/or if any Subcontractor’s employees is a registered sex offender. If so, CONTRACTOR shall proceed in accordance with paragraph B above.
- D. CONTRACTOR shall employ and maintain sufficient security and safety measures to effectively prevent vandalism, vagrancy, theft, arson, and all other such negative impacts to the Work. Any impacts to the progress of the Work of CONTRACTOR, OWNER, or OWNER’S forces, due to loss from inadequate security, will be the responsibility of CONTRACTOR.
- E. Until Substantial Completion of the Work, CONTRACTOR shall employ appropriate means to remove all graffiti from buildings, equipment, fences and all other temporary and/or permanent improvements on the Project site within twenty-four (24) hours from the date of report or forty-eight (48) hours of each occurrence.

1.14 TEMPORARY ACCESS ROADS AND STAGING AREAS

- A. Due to the limited amount of on and off Project site space for the parking of staff and school visitor’s vehicles there will be no parking of CONTRACTOR vehicles in areas designated for school use only. CONTRACTOR shall provide legal access to and maintain CONTRACTOR designated areas for the legal parking, loading, off-loading and delivery of all vehicles associated with the Work. CONTRACTOR shall be solely responsible for providing and maintaining these requirements whether on or off the Project site. CONTRACTOR shall provide and maintain ample on-site parking spaces designated for the exclusive use of OWNER. CONTRACTOR shall erect signs as required by OWNER each of these spaces and prevent all unauthorized vehicles from parking in the OWNER-reserved spaces.

- B. Temporary access roads are to be installed and maintained by CONTRACTOR to all areas of the Project site.
- C. CONTRACTOR will be permitted to utilize existing facility campus roads as designated by OWNER. CONTRACTOR shall only utilize those entrances and exits as designated by OWNER and CONTRACTOR shall observe all traffic regulations of OWNER.
- D. CONTRACTOR shall maintain roads and walkways in a clean condition including removal of debris and/or other deleterious material on a daily basis.

1.15 TRENCHES

- A. Open trenches for installation of utility lines (water, gas, electrical and similar utilities) and open pits outside barricaded working areas shall be barricaded at all times in a legal manner determined by CONTRACTOR. Trenches shall be backfilled and patch-paved within twenty-four (24) hours after approval of installation by authorities having jurisdiction or shall have "trench plates" installed. Required access to buildings shall be provided and maintained. CONTRACTOR shall comply with all applicable statutes, codes and regulations regarding trenching and trenching operations. Open trenches deeper than 3'-6", and not located within a public street access, shall be enclosed within an 8'-0" high chain-link fence.

1.16 DUST CONTROL

- A. CONTRACTOR is responsible for dust control on and off the Project site. When Work operations produce dust the Project site and/or streets shall be sprinkled with water to minimize the generation of dust. CONTRACTOR shall clean all soils and debris from construction vehicles and cover both earth and debris loads prior to leaving the Project site. CONTRACTOR shall, on a daily basis, clean all streets and/or public improvements within the right of way of any and all debris, dirt, mud and/or other materials attributable to operations of CONTRACTOR.

1.17 WASH OUT

- A. CONTRACTOR shall provide and maintain a minimum of four (4) wash out boxes of sufficient size and strength to provide for concrete mixer wash out. CONTRACTOR shall locate and relocate both the wash out boxes and wash out areas in order to accommodate the progression of the Work. The wash out area shall be located as to minimize the amount of potential run off onto adjacent private and/or public property. CONTRACTOR shall legally dispose of the contents of the wash out boxes and area on an as needed basis or as required by OAR.

1.18 WASTE DISPOSAL

- A. CONTRACTOR shall provide and maintain trash bins on the Project site. Trash bins shall be serviced on an as needed basis and CONTRACTOR is responsible for the transportation of and the legal disposal of all contents.

1.19 ADVERSE WEATHER CONDITIONS

- A. Should warnings of adverse weather conditions such as heavy rain and/or high winds be forecasted, CONTRACTOR shall provide every practical precaution to prevent damage to the Work, Project site and adjacent property. CONTRACTOR precautions shall include, but not be limited to, enclosing all openings, removing and/or securing loose materials, tools, equipment and scaffolding.
- B. CONTRACTOR shall provide and maintain drainage away from buildings and structures.
- C. CONTRACTOR shall implement all required storm water mitigation measures as required under related Division 01 Sections.

1.20 DAILY AND MONTHLY REPORTS

- A. CONTRACTOR shall provide and maintain in the Project site office of CONTRACTOR, a daily sign in sheet for use by all employees of CONTRACTOR and all Subcontractors at whatever tier. At the beginning of each work day, the foreman, project manager, superintendent of CONTRACTOR and/or Subcontractors shall visit the site office of CONTRACTOR and shall enter onto the daily sign in sheet: all employee names; trade classification; and represented company. The completed sign in sheet shall serve as the basis of and shall be submitted with the daily construction report as set forth in Paragraph B below.
- B. By the end of each workday, CONTRACTOR shall submit to OWNER and INSPECTOR a daily construction report denoting the daily manpower counts and a brief description/location of the workday activities. Manpower shall be broken down by trade classification such as foreman, journeyman or apprentice. The report shall also note the date, day of the week, weather conditions, deliveries, equipment on the Project site whether active and/or idle, visitors, inspections, accidents and unusual events, meetings, stoppages, losses, delays, shortages, strikes, orders and requests of governing agencies, Construction Directive and/or Change Orders received and implemented, services disconnected and/or connected, equipment start up or tests and partial use and/or occupancies. CONTRACTOR shall also include on the daily construction report the above information for all Subcontractors at whatever tier.
- C. CONTRACTOR shall submit on a monthly basis the forms found in Sections 01 3239 and 01 7416 certifying CEQA Mitigations and Storm Water Pollution Prevention (SWPP) compliances.

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PART 2 – PRODUCTS – Not Used

PART 3 – EXUTION – Not Used

END OF SECTION

SECTION 01 7329
CUTTING AND PATCHING

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. This Section specifies procedural requirements for cutting and patching.

1.02 RELATED REQUIREMENTS

- A. Section 02 4116 - Demolition.

1.03 SUBMITTALS

- A. The word “cutting” as used in the Contract Documents includes, but is not limited to, cutting, drilling, chopping, and other similar operations and the word “patching” includes, but is not limited to, patching, rebuilding, reinforcing, repairing, refurbishing, restoring, replacing, or other similar operations.
- B. Cutting and Patching Proposal: CONTRACTOR shall submit a proposal describing procedures well in advance of the time cutting and patching will be performed if the Contract Documents requires approval of these procedures before proceeding. Include the following information, as applicable, in the proposal:
1. Describe the extent of cutting and patching required. Denote how it will be performed and indicate why it cannot be avoided.
 2. Describe anticipated results in terms of changes to existing construction. Include changes to structural elements and operating components as well as changes in the building’s appearance or other significant visual elements.
 3. List products to be used and firms or entities that will perform this Work.
 4. Indicate dates when cutting and patching will be performed.
 5. Utilities: List utilities that cutting and patching operations will disturb or affect. List utilities to be relocated and those that will be temporarily out-of-service. Indicate how long service will be disrupted.

6. Where cutting and patching involves adding reinforcement to structural elements, submit details and engineering calculations showing integration of reinforcement with the original structure.
7. Review by ARCHITECT prior to proceeding with cutting and patching does not waive ARCHITECT right to later require complete removal and replacement of defective Work.

1.04 QUALITY ASSURANCE

- A. Requirements for structural Work: Do not cut and patch structural elements in a manner that would change their load-carrying capacity or load-deflection ratio.
 1. Obtain approval from ARCHITECT of the cutting and patching proposal before cutting and patching the following structural elements:
 - a. Foundation construction.
 - b. Bearing and retaining walls.
 - c. Structural concrete.
 - d. Structural steel.
 - e. Lintels.
 - f. Timber and primary wood framing.
 - g. Structural decking.
 - h. Stair systems.
 - i. Miscellaneous structural metals.
 - j. Exterior curtain-wall construction.
 - k. Equipment supports.
 - l. Piping, ductwork, vessels, and equipment.
 - m. Structural systems of special construction in Division 13 Sections.
- B. Operational Limitations: Do not cut and patch operating elements or related components in a manner that would result in reducing their capacity to perform as intended. Do not cut and patch operating elements or related components in a

manner that would result in increased maintenance or decreased operational life or safely.

1. Obtain review of the cutting and patching proposal before cutting and patching the following operating elements or safety related systems:
 - a. Primary operational systems and equipment.
 - b. Air or smoke barriers.
 - c. Water, moisture, or vapor barriers.
 - d. Membranes and flashings.
 - e. Fire protection systems.
 - f. Noise and vibration control elements and systems.
 - g. Control systems.
 - h. Communication and/or data systems.
 - i. Conveying systems.
 - j. Electrical wiring systems.
 - k. Operating systems of special construction in Division 13 Sections.

C. Visual Requirements: Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in the opinion of ARCHITECT, reduce the building's aesthetic qualities. Do not cut and patch construction in a manner that would result in visual evidence of cutting and patching. Remove and replace Work cut and patched in a visually unsatisfactory manner.

1. If possible, retain the original installer or fabricator to cut and patch the exposed Work listed below. If it is impossible to engage the original installer or fabricator, engage another recognized experienced and specialized firm.
 - a. Firestopping.
 - b. Acoustical ceilings.
 - c. Acoustical panels.
 - d. Finished wood flooring.
 - e. Synthetic sports flooring.

- f. Carpeting.
- g. HVAC enclosures, cabinets, or covers.
- h. Ceramic and quarry tile.
- i. Gypsum board.
- j. Masonry (exterior and interior where exposed).
- k. Tack boards.
- l. Casework.
- m. Finish carpentry.

1.05 WARRANTY

- A. Existing Warranties: Replace, patch, and repair material and surfaces cut or damaged by methods and with materials in such a manner as not to void any warranties required or existing.

PART 2 - PRODUCTS (Not applicable)

PART 3 - EXECUTION

3.01 INSPECTION

- A. Examine surfaces to be cut and patched and conditions under which cutting and patching is to be performed before cutting. If unsafe or unsatisfactory conditions are encountered, take corrective action before proceeding.
 - 1. Before proceeding, meet at the Project site with parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

3.02 PREPARATION

- A. Temporary support: Provide adequate temporary support of existing improvements or Work to be cut.
- B. Protection: Protect existing improvements and Work during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of existing improvements or Work that might be exposed during cutting and patching operations.

- C. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
- D. Where the Work requires sandblasting of existing surfaces in order to receive new materials secured by cementitious, adhesive or chemical bond, completely remove existing finishes, stains, oil, grease, bitumen, mastic and adhesives or other substances deleterious to the new bonding or fastening of new Work. Utilize wet sand blasting for interior surfaces and for exterior surfaces where necessary to prevent objectionable production of dust.

3.03 PERFORMANCE

- A. General: Employ skilled workmen to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time and complete without delay. Carefully remove existing Work to be salvaged and/or reinstalled. Protect and store for reuse into the Work. Verify compatibility and suitability of existing substrates before starting the Work.
- B. Cutting: Cut existing construction using methods least likely to damage elements retained or adjoining Work. Where possible, review proposed procedures with the original installer; comply with the original installer's recommendations.
 - 1. In general, where cutting, use hand or small power tools designed for sawing or grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
 - 2. To avoid marring existing finished surfaces, cut or drill from the exposed or finished side into concealed surfaces.
 - 3. Cut through concrete and masonry using a cutting machine, such as a carborundum saw or a diamond-core drill. Saw cut reinforcing bars and paint ends with bituminous paint except where bonded into new concrete or masonry.
 - 4. Comply with requirements of applicable Sections of Divisions 31, 32, and 33 where cutting and patching requires excavating, backfill, and recompaction.
 - 5. Woodwork: Cut and or remove to a panel or joint line.
 - 6. Sheet Metal: Remove back to joint, lap, or connection. Secure loose or unfastened ends or edges and seal watertight.
 - 7. Glass: Remove cracked, broken, or damaged glass and clean rebates and stops of setting materials.

8. Plaster: Cut back to sound plaster on straight lines, and back bevel edges of remaining plaster. Trim existing lath and prepare for new lath.
 9. Gypsum Wallboard: Cut back on straight lines to undamaged surfaces with at least two opposite cut edges centered on supports.
 10. Acoustical ceilings: Remove hanger wires and related appurtenances where ceilings are not scheduled to be installed.
 11. Tile: Cut back to sound tile and backing on joint lines.
 12. Flooring: Completely remove flooring and clean backing of prior adhesive. Carefully remove wood flooring for patching and repairing of existing wood flooring scheduled to remain.
- C. Patching: Patch with durable seams that are as invisible as possible. Comply with required tolerances.
1. Where feasible, inspect and test patched areas to demonstrate integrity of the installation. Verify conditions of existing substrates prior to executing Work.
 2. Restore exposed finishes of patched areas and extend finish restoration into retaining adjoining construction in a manner that will eliminate all evidence of patching and refinishing.
 3. Concrete: Maintain cut edges in a moist condition for twenty four hours prior to the placement of new concrete. In lieu of this an epoxy adhesive may be provided. Finish placed concrete to match existing unless noted otherwise. Concrete shall have a compressive strength of 3,000 psi where installed to repair and match existing improvements, unless noted otherwise.
 4. Metal Fabrications: Items to remain exposed shall have their edges cut and ground smooth and rounded.
 5. Sheet Metal: Replace removed or damaged sheet metal items for new Work.
 6. Glass: Install matching glass and re-seal exterior window assemblies.
 7. Lath and Plaster: Install new lath materials to match existing and fasten to supports at 6-inch centers. Provide a 6-inch lap where new lath to adjoins existing lath. Fasten new lath as required for new Work. Restore paper backings as required. Apply a bonding agent on cut edges of existing plaster. Apply three coat plaster of the type, thickness, finish, texture, and color to match existing.

8. Gypsum Wallboard: Fasten cut edges of wallboard. Install patches with at least two opposite edges centered on supports and secure at 6-inch centers. Tape and finish joints and fastener heads. Patching shall be non-apparent when painted or finished.
9. Acoustical Ceilings: Comply with the requirements for new Work specified in related sections of the Contract Documents.
10. Resilient Flooring: Completely remove flooring and prepare substrate for new material.
11. Painting: Prepare areas to be patched, patch and paint as specified under related sections of the Contract Documents.

3.04 CLEANING

- A. Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar items. Thoroughly clean piping, conduit, and similar features before applying paint or other finishing materials. Restore damaged coverings to their original condition.

END OF SECTION

SECTION 01 7419

CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes: Preparation and implementation, including reporting and documentation, of a Waste Management Plan for reusing, recycling, salvage or disposal of non-hazardous waste materials generated during demolition and new construction (Construction and Demolition (C&D) Waste), to foster material recovery and re-use and to minimize disposal in land fills.
- B. Related Requirements
 - 1. Section 01 3300 - Submittal Procedures.

1.02 REFERENCES

- A. California Integrated Waste Management Act of 1989 (AB 939).
- B. California Code of Regulations Title 14, Section 18700 et seq.
- C. California Green Building Standards Code.

1.03 SYSTEM DESCRIPTION

- A. Collection and separation of all C&D waste materials generated on-site, reuse or recycling on-site, transportation to approved recyclers or reuse organizations, or transportation to legally designated landfills, for the purpose of recycling salvaging and reusing a minimum of 75 percent of the C&D waste generated.

1.04 SUBMITTALS

- A. C&D Waste Management Plan (Exhibit 1): Within 10 calendar days after the Notice to Proceed and prior to any waste removal, submit the following to the OWNER for review and approval. Update quarterly. Include:
 - 1. Materials to be recycled, reused, or salvaged, either onsite or offsite.
 - 2. Estimates of C&D waste quantity (in tons) by type of material. (If waste is measured by volume, give factors for conversion to weight in tons.)
 - 3. Procedures for recycling and reuse program.
 - 4. Permit or license and location of Project waste-disposal areas.
 - 5. Site plan for placement of waste containers.

- B. C&D Waste Management Monthly Progress Report (Exhibit 2): Summary of waste generated by Project, monthly with Application for Payment. Include:
 - 1. Firms accepting the recovered or waste materials.
 - 2. Type and location of accepting facilities (landfill, recovery facility, used materials yard, etcetera). If materials are reused or recycled on the Project site, location should be designated as “on-site reuse and recycling”.
 - 3. Type of materials and net weight (tons) of each.
 - 4. Value of the materials or disposal fee paid.
 - 5. Attach weigh bills and other documentation confirming amount and disposal location of waste materials.
- C. C&D Waste Management Final Compliance Report: Final update of Waste Management Plan to provide summary of total waste generated by Project.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION

3.01 IMPLEMENTATION

- A. Implement approved Waste Management Plan including collecting, segregating, storing, transporting and documenting each type of waste material generated, recycled or reused, or disposed in landfills.
- B. Designate an on-site person to be responsible for instructing workers and overseeing the sorting and recording of waste/ recyclable materials.
- C. Include waste management and recycling in worker orientation and as an agenda item for regular Project meetings.
- D. Recyclable and waste bin areas shall be limited to areas approved on the Waste Management Plan. Keep recycling and waste bins neat and clearly marked to avoid contamination of materials.

3.02 ATTACHMENTS

- A. Exhibit 1: Waste Management Plan
- B. Exhibit 2: Waste Management Monthly Progress Report.

EXHIBIT 1

WASTE MANAGEMENT PLAN
CONSTRUCTION/ MAINTENANCE/ALTERATION & DEMOLITION PROJECTS

PROJECT NAME:	«PROJECTTITLE» «CONTRACTTITLE»
PROJECT NO:	«Project Number»
NAME OF COMPANY:	
CONTACT PERSON:	
TELEPHONE:	
PROJECT SITE LOCATION:	
PROJECT TYPE:	<input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> DEMOLITION <input type="checkbox"/> MAINTENANCE/ALTERATION PROJECTS
PROJECT SIZE (SQ. FT.):	
DATE & ESTIMATED PERIOD	

(1) Material Type	(2) Tons Estimated Recycle	(3) Tons Estimated Reuse	(4) Tons Estimated Salvage	(5) Tons Estimated Landfill	(6) Proposed Disposal or Recycling Facility (e.g., Onsite, Name of Facility)
Total					
Diversion Rate: Columns [(2)+(3)+(4)] / [(2)+(3)+(4)+(5)]					=

Signature	Title	Date
-----------	-------	------

- Column 1 "Material Types" – Enter type of materials targeted for recycling, reuse, and/or salvage, either on- or off-site, and include a category for waste materials requiring disposal.
- Columns 2 thru 4 "Estimated Generation" - Enter estimated quantities (tons) of recyclable, reusable, or salvageable waste materials anticipated to be generated and state number of salvageable items.
- Column 5 "Estimated Landfill" - Enter quantities (tons) of materials to be disposed in landfill.
- Column 4 "Disposal Location" - Enter end-destination of recycled, salvaged, and disposed materials.
- General : (1) Attach proposed Recycling and Waste Bin Location Plan.
 (2) Attach name and contact data for each recycling or disposal destination to be used.

EXHIBIT 2

WASTE MANAGEMENT PROGRESS REPORT
CONSTRUCTION/ MAINTENANCE/ALTERATION & DEMOLITION PROJECTS

PROJECT NAME:	«PROJECTTITLE» «CONTRACTTITLE»
PROJECT NO:	«Project Number»
NAME OF COMPANY:	
CONTACT PERSON:	
TELEPHONE:	
PROJECT SITE LOCATION:	
PROJECT TYPE:	<input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> DEMOLITION <input type="checkbox"/> MAINTENANCE/ALTERATION PROJECTS
PROJECT SIZE (SQ. FT.):	
PERIOD	to

(1) Material Type	(2) Tons Actual Recycle	(3) Tons Actual Reuse	(4) Tons Actual Salvage	(5) Tons Actual Landfill	(6) Disposal or Recycling Facility (e.g., Onsite, Name of Facility)
Total					
Diversion Rate: Columns [(2)+(3)+(4)] / [(2)+(3)+(4)+(5)]					=

Signature	Title	Date
-----------	-------	------

- Column 1 "Material Types" – Enter type of materials targeted for recycling, reuse, and/or salvage, either on- or off-site, and include a category for waste materials requiring disposal.
- Columns 2 thru 4 "Estimated Generation" - Enter estimated quantities (tons) of recyclable, reusable, or salvageable waste materials anticipated to be generated and state number of salvageable items.
- Column 5 "Estimated Landfill" - Enter quantities (tons) of materials disposed.
- Column 4 "Disposal Location" - Enter end-destination of recycled, salvaged, and disposed materials.
- General : (1) Attach proposed Recycling and Waste Bin Location Plan.
 (2) Attach name and contact data for each recycling or disposal destination to be used.

END OF SECTION.

SECTION 02 4116

DEMOLITION

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes: Furnishing labor, materials and equipment necessary for demolition, dismantling, cutting and alterations as indicated, specified, or required for completion of the Work. Includes items such as the following:
1. Protection of existing improvements to remain.
 2. Cleaning existing improvements to remain.
 3. Disconnecting and capping utilities.
 4. Removing debris, waste materials, and equipment.
 5. Removal of items for performance of the Work.
 6. Salvageable items to be retained by the Owner.
- B. Related Requirements:
1. Division 01 - General Requirements.
 2. Section 01 1100 - Summary of Work.
 3. Section 01 5000 – Construction Facilities and Temporary Controls.
 3. Section 01 7419 - Construction and Demolition Waste Management.
 4. Division 26 — Electrical.

1.02 SUBMITTALS

- A. Shop Drawings: Submit Shop Drawings indicating the extent of items and systems to be removed. Indicate items to be salvaged or items to be protected during demolition. Indicate locations of utility terminations and the extent of abandoned lines to be removed. Include details indicating methods and location of utility terminations.

1.03 QUALITY ASSURANCE

- A. Perform the Work of this section by workers skilled in the demolition of buildings and structures. Perform the Work of this section under direct superintendence at all times.
- B. Prior to commencement of Work, schedule a walkthrough with the OWNER, to confirm Owner property items have been removed from scheduled Work areas. Identify and mark remaining property items and schedule their removal.
- C. Coordinate demolition for the correct sequence, limits, and methods. Schedule demolition Work to create least possible inconvenience to the public and facility operations.
- D. Related Standards:
 - 1. ANSI/ASSE A10.6.
 - 2. CBC Chapter 33.
 - 3. CFC Chapters 11 and 33.
 - 4. NFPA 241

1.04 PROJECT CONDITIONS

- A. Drawings may not indicate in detail all demolition Work to be performed. Examine existing conditions to determine the full extent of required demolition.
- B. Repair damage to existing improvements or damage due to excessive demolition.
- C. Provide all measures to avoid excessive damage from inadequate or improper means and methods, improper shoring, bracing or support.
- D. If conditions are encountered that varies from those indicated, promptly notify the Architect for clarification before proceeding.

PART 2 - PRODUCTS

2.01 HANDLING OF MATERIALS

- A. Items scheduled for salvage by the Owner shall be delivered to a location designated by the OWNER. Items shall be cleaned, packaged and labeled for storage.
- B. Items scheduled for reuse shall be stored on the Project site and protected from damage, theft and other deleterious conditions.

PART 3 - EXECUTION

3.01 GENERAL

- A. Protection:

1. Do not commence demolition until safety partitions, barricades, warning signs and other forms of protection are installed. Refer to Section 01 5000 - Construction Facilities and Temporary Controls.
 2. Provide safeguards, including warning signs, lights and barricades, for protection of workers, occupants, and the public.
- B. If safety of existing construction appears to be endangered, take immediate measures to correct such conditions; cease operations and immediately notify the OWNER.

3.02 DEMOLITION

- A. Do not throw or drop materials. Furnish ramps or chutes as required by the Work.
- B. Remove existing construction only to extent necessary for proper installation of Work and interfacing with existing construction. Cut back finished surfaces to straight, plumb or level lines as required for a smooth transition.
- C. Where openings are cut oversize or in improper locations, replace or repair to required condition.

3.03 CUTTING EXISTING CONCRETE

- A. Cutting of existing concrete shall be performed by skilled workers familiar with the requirements and space necessary for placing concrete. Perform concrete cutting with concrete cutting wheels and hand chisels. Do not damage concrete intended to remain.
- B. Extent of cutting of structural concrete shall be as indicated on Drawings. Cutting of non-structural concrete shall be as indicated on Drawings or as reviewed by the Architect or structural engineer. Replace concrete demolished in excess of amounts indicated.
- C. Prior to cutting or coring concrete, determine locations of hidden utilities or other existing improvements and provide necessary measures to protect them from damage.

3.04 REMOVAL OF EXISTING PLUMBING AND ELECTRICAL EQUIPMENT AND SERVICES

- A. Remove existing plumbing and electrical equipment fixtures and services not indicated for reuse and not necessary for completion of the Work. Remove abandoned lines and cap unused portions of existing lines.

3.05 REMOVAL OF OTHER MATERIALS

- A. Masonry: Cut back to joint lines and remove mortar without damaging units to remain. Allow space for repairs to backing where applicable.
- B. Woodwork: Cut or remove to a joint or panel line.
- C. Roofing: Remove as required, including accessory components such as insulation and flashings. At penetrations through existing roofing, trim cut edges back to sound roofing with openings restricted to the minimum size necessary to receive Work.

- D. Sheet Metal: Remove back to joint, lap, or connection. Secure loose and unfastened ends or edges and provide a watertight condition. Re-seal as required.
- E. Glass: Remove broken or damaged glass and clean rebates and stops of glazing channels.
- F. Modular materials such as acoustical ceiling panels, resilient tile, or ceramic tile: Remove to a natural joint without leaving damaged or defective Work where joining new Work. After flooring removal, clean substrates to remove setting materials and adhesives.
- G. Gypsum Board: Remove to a panel joint line on a stud or support line.
- H. Plaster: Saw cut plaster on straight lines, leaving a minimum 2-inch width of firmly attached metal lath for installing new lath and plaster.
- I. Remove existing improvements not specifically indicated or required but necessary to perform Work. Cut to clean lines, allowing for installation of Work.

3.06 PATCHING

- A. Patch or repair materials to remain when damaged by the performance of the Work of this section. Finish material and appearance of patch and/or repair Work shall match existing.

3.07 CLEANING

- A. Clean existing materials to remain with appropriate tools and equipment.
- B. Protect existing improvements during cleaning operations.
- C. Debris shall be dampened by fog water spray prior to transporting by truck.
- D. Debris pick-up area shall be kept broom-clean and shall be washed daily with clean water.
- E. Remove waste and debris, other than items to be salvaged. Turn over salvaged items to Owner, or store and protect for reuse where required. Continuously clean up and remove items as demolition Work progresses.
- F. Remove rubbish, debris, and waste materials and legally dispose of off the Project site.

END OF SECTION

SECTION 06 1000
ROUGH CARPENTRY

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Rough carpentry Work.
- B. Related Requirements:
 - 1. Section 09 2900: Gypsum Board.

1.02 SYSTEM DESCRIPTION

- A. Regulatory Requirements:
 - 1. Work of this Section shall comply with CBC Chapter 23.

1.03 QUALITY ASSURANCE

- A. Comply with the following as a minimum requirement:
 - 1. Douglas fir, larch or hemlock structural and framing lumber shall be graded in accordance with the Standard Grading Rules of the West Coast Lumber Inspection Bureau (WCLIB) or the Western Lumber Grading Rules of the Western Wood Products Association (WWPA).
 - 2. Plywood shall conform to requirements of Product Standard PS 1, and shall be grade marked by a recognized grading agency (APA and PTL).
- B. Lumber shall bear official grade mark of the association under whose rules it was graded or official grade mark of another recognized grading agency.
- C. Structural and framing members 2-inch thick (nominal) and larger shall be air-dried to moisture content not to exceed 19 percent before installation.
- D. Each piece of preservative treated lumber shall be identified by the Quality Mark of an approved inspection agency in accordance with CBC Chapter 23; refer to Section 01 4523: Testing and Inspection.
- E. Lumber showing visible signs of mold growth:

1. Lumber showing visible signs of mold growth shall be removed from the project site or cleaned as outlined below.
2. The contractor is responsible for all costs associated with cleaning, post-cleaning testing, and reporting for lumber with mold.
 - a. Lumber that shows visible signs of mold growth prior to, or after installation, shall be cleaned pursuant to the current edition of USEPA's guidance publication "Mold Remediation in Schools and Commercial Buildings (EPA 402-K-01-001).
 - b. A minimum of 10 percent of the total locations cleaned must be sampled (tape lift method) post cleaning to ensure cleaning effort was successful. Cleaning will be considered acceptable when tape lift sample results evaluated by direct microscopic examination determine that the general abundance of mold is non-detect or rare (normal trapping to 1+).
 - c. A report prepared by a Certified Industrial Hygienist (CIH) that details the sampling and cleaning results shall be prepared and submitted to the OWNER.
 - d. Cleaned lumber shall not be installed or enclosed by finish materials until approval of test results. Cleaned lumber must meet moisture content requirements as required elsewhere in this specification prior to installation or application of finishes.

1.04 STORAGE, HANDLING AND PROTECTION

- A. The materials supplied as part of the Work of this section shall be protected from exposure to inclement weather before being covered by other Work.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Lumber: Structural and framing lumber shall be of following species and grades:

	<u>INSTALLATION</u>	<u>SPECIES</u>	<u>GRADE</u>
1.	Subfloor, wall sheathing, roof sheathing and ceiling furring	Douglas fir and larch	Construction Board, WCLIB; WWPA
2.	Posts, (5-inch by 5-inch and larger,	Douglas fir	No. 1 or better Structural

	width not more than 2 inches greater than thickness).	and larch	Posts and Timbers, WCLIB. No. 1 or better Post and Timbers, WWPA.
3.	Beams, girders and truss members (5-inch and thicker, rectangular, width more than 2-inches greater than thickness) where exposed as finish members.	Douglas fir and larch	No. 1 or better Structural Beams and Stringers, WCLIB; WWPA.
4.	Joists, rafters, lintels, posts, mullions and members (2 to 4-inch thick, 2 to 4-inch wide)	Douglas fir and larch	No. 1 or better; Structural Light Framing, WCLIB;
5.	Other lumber (2 to 4-inch thick, 2 to 4-inch wide) not specified in subparagraph 5 above.	Douglas fir and larch	Construction Light Framing WCLIB; WWPA
6.	Framing lumber (2 to 4-inch thick, 5-inch and wider).	Douglas fir and Larch	No. 1 or better Structural Joists and Planks, WCLIB; WWPA.
7.	Mudsills and plates in contact with earth.	Douglas fir and Larch Treated	Same as subparagraphs 5 and 6.
8.	Sills or plates installed on concrete or masonry surfaces 6 inches or less above earth or finish grade.	Douglas fir and Larch Treated	Same as subparagraphs 5 and 6.
9.	Sills, foundation plates and sleepers installed on concrete, masonry foundations, or installed on concrete slab in direct contact with earth.	Douglas fir and Larch treated	Same as subparagraphs 5 and 6.
10.	Miscellaneous nailing strips and blocks embedded in concrete or masonry.	Douglas fir and Larch treated	Same as subparagraphs 5 and 6.
B.	Plywood: Plywood furnished for structural purposes, when exposed outdoors, shall be exterior type plywood. Other plywood furnished for structural purposes shall be exterior type, or Exposure 1.		
C.	Preservative Treated Wood:		

1. Wood and plywood specified; as treated wood shall be pressure treated wood in accordance with CBC requirements.
 2. Seasoning: Treated lumber shall be air seasoned after treatment, for a minimum of two weeks before installation. Moisture content shall be 15 percent maximum.
 3. Creosote or arsenic is not permitted for treating wood.
 4. When treated wood member have been notched, dapped, drilled, or cut, such newly cut surfaces shall be painted with a heavy coat of the same preservative material originally provided for treatment of wood member.
- D. Adhesive: Elastomeric adhesive – follow manufacturer’s installation instructions. Product must be approved by OWNER Office of Environmental Health and Safety and conform to ASTM D 3498 or APA-AFG-01.

PART 3 - EXECUTION

3.01 FASTENINGS

A. Nails and Spikes:

1. Furnish only common wire nails or spikes whenever indicated, specified or required.
2. Whenever necessary to prevent splitting, holes shall be pre-drilled for nails and spikes.
3. Nails in plywood shall not be overdriven.
4. Machine Applied Nailing: Use of machine nailing is subject to a satisfactory Project site demonstration for each Project and approval by the Architect or structural engineer retained by the Architect as an Architect Consultant and DSA. Installation is subject to continued satisfactory performance. Machine nailing is not permitted for 5/16 inch plywood. Do not permit nail heads to penetrate outer ply. Maintain minimum allowable edge distances when installing nails.

B. Lag Screws:

1. When installing lag screws in a wood member, pre-drill hole as required by the CBC.
2. Lag screws, which bear on wood, shall be fitted with standard steel plate washers under head. Lag screws shall be screwed and not driven into place.

C. Bolts:

1. Lumber and timber to be fastened together with bolts shall be clamped together with holes for bolts bored true to line.
2. Bolts shall be fitted with steel plates or standard cut washers under heads and nuts. Bolts shall be tightened when installed and again before completion of the Work of this section.

D. Wood Screws: When installing wood screws, pre-drill holes as required by the CBC.

E. Metal Framing Devices: Framing anchors, joist hangers, ties, and other mechanical fastenings shall be galvanized or furnished with a rust inhibitive coating. Nails and fastenings shall be of the type recommended by manufacturer.

F. Powder Driven Fasteners:

1. Loads shall not exceed 75 pounds unless indicated on the Drawings or when reviewed by the Architect.
2. The operator, tool, and fastener shall perform the following as observed by the Inspector.
 - a. Observe installation of first 10 fasteners.
 - b. Test the first 10 fasteners by performing a pullout test. Load shall be at least twice the design load, or 150 pounds, whichever is greater.
 - c. Random testing:
 - 1) Load less than 75 pounds - approximately 1 in 10 pins.
 - 2) Load 75 pounds or greater - 1/2 of the pins.
3. Failure of any test will result in testing of all installed pins.
4. Nail heads shall not break the outer skin of sheathing.
5. Non-compliant pins shall be replaced.

3.02 INSTALLATION

A. Stud Walls, Partitions and Furring:

1. Wood stud walls, partitions and vertical furring shall be constructed of members of size and spacing indicated. Provide single treated plate at bottom and double plate at top unless otherwise indicated. Interior, nonbearing non-shear partitions may be framed with a single top plate, installed to provide

overlapping at corners and at intersections with other wall and partitions or by metal ties as detailed.

2. Walls and partitions shall be provided with horizontal staggered blocking at least 2 inch nominal thickness and same width as studs, fitted snugly, and nailed into studs. Blocking shall be installed at mid-height of partition or not more than 7 feet on center vertically. Install wood backing on top of top plate wherever necessary for nailing of lath or gypsum board.
3. Walls, partitions and furred spaces shall be provided with 2-inch nominal thickness wood firestops, same width as space to be firestopped, at ceiling line, mid-height of partition and at floor line. Firestops at floor line are not required when floor is concrete. If width of opening is such that more than one piece of lumber is necessary, provide two thicknesses of one inch nominal material installed with staggered joints.
4. Firestops shall be installed in stud walls and partitions, including furred spaces, so the maximum dimension of any concealed space is not over 10 feet.
5. Corners, and where wood stud walls and wood vertical furring meet, shall be constructed of triple studs. Openings in stud walls and partitions shall be provided with headers as indicated and a minimum of 2 studs at jambs, one stud of which may be cut to support header in bearing.

B. Furring:

1. Rafters or ceiling joists indicated to be furred for support of materials other than acoustical tile shall be furred with 2 by 4 wood members installed at right angles to supports, spaced as indicated and nailed in place. Furring shall be aligned, and bottoms shall be leveled by installing wood shims as required, and nailed as indicated.
2. Furring for protective wall padding in gymnasium shall be 1 by 3 Douglas fir, Construction Boards, S1S1E; applied horizontally to concrete walls at top and bottom of padding panels; and at uniform intermediate spacing not more than 18 inches on center. Stripping shall be shimmed where required, aligned to a true plane, and secured to concrete walls with concrete nails at not more than 18 inches on center.

- C. Furring: Where metal furring is not indicated or specified, provide wood furring at points indicated and required for concealing conduit, piping, structural framing or other unfinished materials. Wood furring shall be 2-by studs of required width. Vertical members contacting concrete or masonry shall be attached as specified for anchoring interior wood stud partitions.

D. Nailing Strips and Plates:

1. Provide wood nailing strips, plates and blocking indicated or required. Nailing strips in connection with metal work shall be bolted to metal. Wood nailing blocks for securing grounds shall be built into concrete, or masonry.
 2. Nailing schedule shall comply with CBC requirements.
 3. Treated wood nailing strips for lightweight insulated concrete roof decks at eaves, ridges, rakes, base of curbs and wherever else indicated, shall be provided and installed. Strips shall be treated Douglas fir, 4 inches (nominal) width by thickness of insulated concrete.
- E. Wood Backing: Provide wood backing as indicated and as required to receive plumbing, electrical fixtures and equipment, cabinets, door stop plates and other fixed equipment.

3.03 CLEAN UP

- A. Remove rubbish, debris and waste materials and legally dispose of off the Project site.

3.04 PROTECTION

- A. Protect the Work of this section until Substantial Completion.

END OF SECTION

SECTION 06 8316

FIBERGLASS REINFORCED PANELS

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Fiberglass reinforced plastic panels and accessories.

B. Related Requirements:

1. Division 01 - General Requirements.
2. Section 09 2900 - Gypsum Board.

1.02 PROJECT REQUIREMENTS

- A. Fiberglass reinforced plastic panels and accessories for service areas as indicated on the Drawings.

1.03 SUBMITTALS

- A. Shop Drawings: Indicate location and dimension of joints and fastener attachments
- B. Samples: Submit 8 inch by 10 inch sample of each type, color, and accessories to be installed.
- C. Certificate of Compliance: Submit certificate from manufacturer the installed wall surfacing meets Specification requirements.

1.04 QUALITY ASSURANCE

- A. Comply with the following as a minimum requirement:
 1. Class A Interior Finish Material as defined by the National Fire Protection Association Life Safety Code 101.
 2. Underwriters Laboratories, Inc. listed, in accordance with ASTM E84, Standard Test Method for Surface Burning Characteristics of Building Materials.
 3. USDA/FSIS Requirements.
 4. FMRC (Factory Material Research Center) approved.

1.05 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials in manufacturer's cartons properly labeled and identified.

- B. Store materials flat in a clean, dry storage area where temperature shall be maintained above 50 degrees F. Do not store rolls on end.

1.06 PROJECT CONDITIONS

- A. Installation environment shall be stable and controlled.
- B. Room temperature shall be controlled to 75 degrees F plus or minus 5 degrees, during and after installation.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Wall and/or ceiling panels: Crane Composites, Fire-X Glasbord FM with Surfaseal, , Marlite FRP Panel P-100 Class A, Panolam Industries International Inc., or equal.
 - 1. Wall Panels: Class 1 (A) Interior Finish. Thickness to be .09 inch, embossed, color as selected by Architect.
 - 2. Class A Flame Spread: Less than 25, with Smoke Developed less than 450, per ASTM E84.
 - 3. Barcol Hardness scratch resistance: 39 as per ASTM D2583, Standard Test Method for Indentation Hardness of Rigid Plastics by Means of a Barcol Impressor.
 - 4. IZOD Impact per ASTM D256: 11.
- B. Stainless steel trim. Provide inside corner and outside corners, panel division and edge trim.
- C. Adhesive and Sealants: VOC compliant, as recommended by manufacturer.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Examine backup surfaces to determine corners are plumb and straight, surfaces are smooth, uniform, clean and free from foreign matter, nails countersunk, joints and cracks filled flush and smooth with the adjoining surface.
- B. Do not begin installation until backup surfaces are in satisfactory condition.

3.02 APPLICATION

- A. Perform cutting with carbide tipped saw blades or drill bits, or cut with snips.
- B. Install panels with manufacturer's recommended gap for panel field and corner joints.
- C. Fastener holes in the panels shall be predrilled 1/8 inch oversize.

- D. For trowel type and application of adhesive, follow adhesive manufacturer's recommendations.
- E. Utilizing products acceptable to manufacturer, install the system in accordance with panel manufacturer's printed instructions.

3.03 CLEANING

- A. Remove rubbish, debris, and waste materials and legally dispose of off the Project site.

3.04 PROTECTION

- A. Protect the Work of this section until Substantial Completion.

END OF SECTION

SECTION 07 9200

JOINT SEALANTS

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Joint sealants.
 - 2. Preparation for application of sealants.
- B. Related Requirements:
 - 1. Division 01 - General Requirements.
 - 2. Section 03 3000 – Cast-in-Place Concrete

1.02 SUBMITTALS

- A. Shop Drawings: Submit Shop Drawings indicating sealant joint locations, with full-size sealant joint details.
- B. Product Data: Submit manufacturer's literature for each sealant material.
- C. Material Samples: Submit Samples indicating color range available for each sealant material intended for installation in exposed locations.
- D. Certifications: Submit manufacturer's certification materials comply with requirements specified.
- E. Site Samples: At locations required, provide a Sample of sealant for each typical installation, approximately 24 inches long, including joint preparation, backing, sealant and tooling. Allow backing to extend 6 inches beyond end of sealant for inspection of substrate.
- F. Test Reports: Submit manufacturer's adhesion compatibility test reports according to ASTM C794 for each substrate.

1.03 QUALITY ASSURANCE

- A. Qualifications of Installer: The Work of this section shall be installed by a firm which has been in the business of installing similar materials for at least five consecutive years; and can show evidence of satisfactory completion of five projects of similar size and scope. Installer shall have applicators trained and approved by manufacturer for performing this Work.

1.04 DELIVERY, STORAGE AND HANDLING

- A. Store in accordance with manufacturer's recommendations. Provide a uniform ambient temperature between 60 and 80 degrees F.

1.05 WARRANTY

- A. Manufacturer: five year material warranty.
- B. Installer: two year installation/application warranty.

PART 2 - PRODUCTS

2.01 GENERAL

- A. Furnish sealants meeting following in-service requirements:
 - 1. Normal curing schedules are permitted.
 - 2. Non-staining, color fastness (resistance to color change), and durability when subjected to intense actinic (ultraviolet) radiation are required.
- B. Furnish the products of only one manufacturer unless otherwise required, sealant colors as selected to match the adjoining surfaces.

2.03 MATERIALS

- A. Sealants:
 - 1. Sealant 1: Acrylic latex, one-part, non-sag, mildew resistant acrylic emulsion compound complying with ASTM C834, Type S, Grade NS, formulated to be paintable.
 - a. Tremco Inc., Acrylic Latex Caulk.
 - b. Pecora Corporation, AC-20.
 - c. Equal.
 - 2. Sealant 2: Butyl sealant, one-part, non-sag, solvent-release-curing sealant complying with ASTM C1311, gun grade and formulated with a minimum of 75 percent solids.
 - a. Tremco Inc., Tremco Butyl Sealant.
 - b. Pecora Corp., BC-158.
 - c. Equal.
 - 3. Sealant 3: Silicone sealant, one-part non-acid-curing silicone sealant complying with ASTM C920, Type S, Grade NS, Class 25.
 - a. Dow Corning Corp., Dow Corning 790, 791, 795.

- b. General Electric Co., Silpruf.
 - c. Tremco, Inc., Spectrem 1.
 - d. Pecora Corp., 864.
 - e. Equal.
- 4. Sealant 4: One-part mildew-resistant silicone sealant, complying with ASTM C920, Type S, Grade NS, Class 25.
 - a. Dow Corning Corp., Dow Corning 786.
 - b. General Electric Co., Sanitary 1700.
 - c. Tremco, Inc., Proglaze White.
 - d. Equal.
- 5. Sealant 5: One-part non-sag urethane sealant, complying with ASTM C920, Type S, Grade NS, Class 25.
 - a. Sika Corporation, Sikaflex -221e.
 - b. Equal.
- 6. Sealant 6: Multi-part pouring urethane sealant, complying with ASTM C920, Type M, Grade P, Class 25.
 - a. Sika Corporation, Sikaflex 2C NS/SL.
 - b. Equal.
- 7. Sealant 7: Acoustical sealant, non-drying, non-hardening permanently flexible conforming to ASTM D217.
 - a. Pecora Corp., BA-98 Acoustical Sealant.
 - b. Equal.
- B. See 07 8413 - Penetration Firestopping for rated sealants.
- C. .Joint Backing: ASTM D1056; round, closed cell Polyethylene Foam Rod; oversized 30 to 50 percent larger than joint width, reticulated polyolefin foam.
- D. Primer: Non-Staining Type. Provide primer as required and shall be product of manufacturer of installed sealant.
- E. Bond Breaker: Pressure sensitive tape recommended by sealant manufacturer.
- F. Sealants shall have normal curing schedules, shall be nonstaining, color fast and shall resist deterioration due to ultraviolet radiation.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify that joint openings are ready to receive Work and field tolerances are within the guidelines recommended by sealant manufacturer.

3.02 SURFACE PREPARATION

- A. Joints and spaces to be sealed shall be completely cleaned of all dirt, dust, mortar, oil, and other foreign materials which might adversely affect sealing Work. Where necessary, degrease with a solvent or commercial degreasing agent. Surfaces shall be thoroughly dry before application of sealants.
- B. If recommended by manufacturer, remove paint and other protective coatings from surfaces to be sealed before priming and installation of sealants.
- C. Preparation of surfaces to receive sealant shall conform to the sealant manufacturer's specifications. Provide air pressure or other methods to achieve required results. Provide masking tape to keep sealants off surfaces that will be exposed in finished Work.
- D. Etch concrete or masonry surfaces to remove excess alkalinity, unless sealant manufacturer's printed instructions indicate that alkalinity does not interfere with sealant bond and performance. Etch with 5 percent solution of muriatic acid; neutralize with dilute ammonia solution, rinse thoroughly with water and allow to dry before sealant installation.
- E. Perform preparation in accordance with ASTM C804 for solvent release sealants, and ASTM C962 for elastomeric sealants.
- F. Protect elements surrounding Work of this section from damage or disfiguration.

3.03 SEALANT APPLICATION SCHEDULE

	<u>Location</u>	<u>Type</u>	<u>Color</u>
A.	Exterior and Interior joints in horizontal surfaces of concrete; between metal and concrete masonry and mortar.	Sealant 6	To match adjacent material
B.	Exterior door, entrance and window frames. Exterior and interior vertical joints in concrete and masonry metal flashing.	Sealant 3 or 5	To match adjacent material
C.	Joints within glazed curtain wall system. Skylight framing system. Aluminum entrance system glass and glazing.	Sealant 3	Translucent or Black

D.	Interior joints in ceramic tile and at plumbing fixtures.	Sealant 4	Translucent or White
E.	Under thresholds.	Sealant 2	Black
F.	All interior joints not otherwise scheduled	Sealant 1	To Match Adjacent Surfaces
G.	Heads and sills, perimeters of frames and other openings in insulated partitions	Sealant 7	Match Adjacent Surfaces

3.04 APPLICATION

- A. Provide sealant around all openings in exterior walls, and any other locations indicated or required for structure weatherproofing and/or waterproofing.
- B. Sealants shall be installed by experienced mechanics using specified materials and proper tools. Preparatory Work (cleaning, etc.) and installation of sealant shall be as specified and in accordance with manufacturer's printed instructions and recommendations.
- C. Concrete, masonry, and other porous surfaces, and any other surfaces if recommended by manufacturer, shall be primed before installing sealants. Primer shall be installed with a brush that will reach all parts of joints to be filled with sealant.
- D. Sealants shall be stored and installed at temperatures as recommended by manufacturer. Sealants shall not be installed when they become too jelled to be discharged in a continuous flow from gun. Modification of sealants by addition of liquids, solvents, or powders is not permitted.
- E. Sealants shall be installed with guns furnished with proper size nozzles. Sufficient pressure shall be furnished to fill all voids and joints solid. In sealing around openings, include entire perimeter of each opening, unless indicated or specified otherwise. Where gun installation is impracticable, suitable hand tools shall be provided.
- F. Sealed joints shall be neatly pointed on flush surfaces with beading tool, and internal corners with a special tool. Excess material shall be cleanly removed. Sealant, where exposed, shall be free of wrinkles and uniformly smooth. Sealing shall be complete before final coats of paint are installed.
- G. Comply with sealant manufacturer's printed instructions except where more stringent requirements are indicated on Drawings or specified.
- H. Partially fill joints with joint backing material, furnishing only compatible materials, until joint depth does not exceed 1/2 inch joint width. Minimum joint width for metal to metal

joints shall be 1/4 inch. Joint depth, shall be not less than 1/4 inch and not greater than 1/2 inch.

- I. Install sealant under sufficient pressure to completely fill voids. Finish exposed joints smooth, flush with surfaces or recessed as indicated. Install non-tracking sealant to concrete expansion joints subject to foot or vehicular traffic.
- J. Where joint depth prevents installation of standard bond breaker backing rod, furnish non-adhering tape covering to prevent bonding of sealant to back of joint. Under no circumstances shall sealant depth exceed 1/2 inch maximum, unless specifically indicated on Drawings.
- K. Prime porous surfaces after cleaning. Pack joints deeper than 3/4 inch with joint backing to within 3/4 inch of surface. Completely fill joints and spaces with gun applied compound, forming a neat, smooth bead.

3.05 MISCELLANEOUS WORK

- A. Sealing shall be provided wherever required to prevent light leakage as well as moisture leakage. Refer to Drawings for condition and related parts of Work.
- B. Install sealants to depths as indicated or, if not indicated, as recommended by sealant manufacturer but within following general limitations:
 - 1. For joints in concrete walks, slab and paving subject to traffic, fill joints to a depth equal to 75 percent of joint width, but not more than 3/4 inch deep or less than 3/8 inch deep, depending on joint width.
 - 2. For building joints, fill joints to a depth equal to 50 percent of joint width, but not more than 1/2 inch deep or less than 1/4 inch deep.

3.06 CLEANING

- A. Remove rubbish, debris, and waste materials and legally dispose of off the Project site.

3.07 CURING

- A. Sealants shall cure in accordance with manufacturer's printed recommendations. Do not disturb seal until completely cured.

3.08 PROTECTION

- A. Protect the Work of this section until Substantial Completion.

END OF SECTION

SECTION 08 3116
ACCESS PANELS AND FRAMES

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Steel access panels, except those specified under Divisions 22 - Plumbing, 23 - HVAC, or 26 - Electrical.

B. Related Sections:

1. Division 01 - General Requirements.
2. Section 06 1000 - Rough Carpentry.
3. Section 09 2423 - Cement Plaster and Metal Lath.
4. Section 09 2900 - Gypsum Board.
5. Section 09 3000 - Ceramic Tiling.
6. Section 09 9000 - Painting and Coating.
7. Division 22 - Plumbing.
8. Division 23 - HVAC.
9. Division 26 - Electrical.

1.02 SUBMITTALS

A. Shop Drawings:

1. Indicate sizes, materials, thickness, fabrication methods, panel door and frame reinforcement, anchorage, and installation details.
2. Provide layout drawings, indicating dimensioned locations of proposed access panels, size of each panel, and installation details. Determine and indicate required access panels in finished surfaces, whether furnished under this section or as part of Work of Divisions 22-Plumbing, 23- HVAC, and 26-Electrical.

1.03 QUALITY ASSURANCE

- A. Panels shall be provided with UL listings and labels.

- B. Access panels and frames shall be products of one manufacturer.
- C. Coordinate access panels with plumbing, HVAC, and electrical work.

1.04 DELIVERY, STORAGE AND HANDLING

- A. Panels and Frames: Provide protection as required by manufacturer to protect panels from damage during storage.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Access Panels:

<u>Non-Rated</u>	<u>Milcor</u>	<u>Karp</u>	<u>Nystrom</u>
Ceramic Tile	MS	DSC214M	NT
Plaster	K	DSC214M	NP
Drywall, Plaster Veneer	DW	DSC214M	NW
<u>Fire Rated</u>			
Ceramic Tile	MS	KRP150FR	IT
Plaster	M	KRP150PR	IP
Drywall, Plaster Veneer	M	KRP150FR	IW

Equal.

- B. Unless otherwise indicated, provide brushed stainless-steel finish for panels installed in ceramic tile. Provide prime coat finish suitable for field painting for panels installed in other finishes.
- C. Access Panels shall be 18 gage minimum with vandal-proof lock operated by Allen wrench or other special tool. Exposed fastenings shall be secured with vandal-proof screws.

PART 3 - EXECUTION

3.01 GENERAL

- A. Provide access panels in finish construction, where indicated on Drawings, wherever required for access to concealed mechanical and electrical equipment, and where required by codes. Panels indicated on architectural Drawings shall be furnished under this section. Required panels for access to equipment, but not indicated on architectural Drawings, shall be furnished as part of Work requiring access.

3.02 INSTALLATION

- A. Install panels accurately in location, perfect alignment, plumb, straight and true. Brace to prevent displacement by adjacent Work.

- B. Examine panels after installation for proper opening, closing and clearances. Replace damaged or defective panels.

3.03 CLEAN UP

- A. Remove rubbish, debris and waste materials and legally dispose of off Project site.

3.04 PROTECTION

- A. Protect Work of this section until Substantial Completion.

END OF SECTION

SECTION 09 2900

GYPSUM BOARD

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Gypsum board walls.
- B. Related Requirements:
 - 1. Division 01 - General Requirements.
 - 2. Section 06 1000 - Rough Carpentry.
 - 3. Section 07 9200 - Joint Sealants.
 - 4. 09 9000 Painting Coating.

1.02 PROJECT REQUIREMENTS

- A. Design Requirements: Provide systems capable of resisting deflection as required by CBC and authorities having jurisdiction.
- B. Regulatory Requirements: Comply with CBC requirements for design and installation.

1.03 SUBMITTALS

- A. Shop Drawings: Submit Shop Drawings indicating complete suspension system including connections, anchorage, and trim features.
- B. Material Samples: Submit 18 inch by 18 inch Samples of the texture coat of gypsum board panels with edges taped.
- C. Product Data: Submit manufacturer's catalog data for each product proposed for installation.

1.04 QUALITY ASSURANCE

- A. Comply with following as a minimum requirement:
 - 1. ASTM C475 – Standard Specification for Joint Compound and Joint Tape for finishing Gypsum Board.
 - 2. ASTM C840 - Standard Specification for Application and Finishing of Gypsum Board.
 - 3. ASTM C919 - Standard Practice for Use of Sealants in Acoustical Applications.

4. ASTM C1002 - Standard Specification for Steel Self-Piercing Tapping Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs.
 5. ASTM C1047 - Standard Specification for Accessories for Gypsum Wallboard and Gypsum Veneer Base.
 6. ASTM C1325 - Standard Specification for Non-Asbestos Fiber-Mat Reinforced Cementitious Backer Units.
 7. ASTM C1396 - Standard Specification for Gypsum Board.
 8. ASTM C1629 - Standard Classification for Abuse-Resistant Nondecorated Interior Gypsum Panel Products and Fiber-Reinforced Cement Panels.
 9. ASTM D3273 - Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber.
 10. ASTM D3274 – Standard Test Method for Evaluating Degree of Surface Disfigurement of Paint Films by Microbial (Fungal or Algal) Growth or Soil and Dirt Accumulation.
 11. Underwriters Laboratories (ULI) requirements and listings for fire-rated materials and products classification.
 12. GA 214 - Gypsum wallboard finish shall conform to requirements of GA 214, Application and Finishing of Gypsum Panel Products, published by the Gypsum Association, and as specified herein.
 13. GA 600 - Gypsum wallboard shall conform to requirements of GA 600 Fire Resistance Design Manual, published by the Gypsum Association.
 14. American National Standards for the Installation of Ceramic Tile.
 15. ANSI A118.9 - Specification for Cementitious Backer Units.
- B. Qualifications: Installer shall have a minimum 5 years experience in installing and finishing gypsum board.

1.05 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials in original, factory sealed packages, containers or bundles bearing brand name and name of manufacturer.
- B. Materials shall be kept dry. Gypsum wallboard shall be neatly stacked flat; avoid sagging and damage to edges, ends, and surfaces.
- C. Fire-rated materials shall have fire classifications numbers attached and legible.
- D. Provide all means necessary to protect gypsum board systems before, during, and after installation.

- E. Gypsum wallboard showing any evidence of water damage shall not be installed. Gypsum wallboard showing evidence of water damage after installation shall be removed and replaced.

PART 2 – PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Georgia-Pacific.
- B. National Gypsum Co.
- C. U.S. Gypsum Co.
- D. Or equal.

2.02 MATERIALS

- A. Impact Resistant Gypsum Board, Type X (fire-resistant): 5/8 inch thick or Type C as required by fire rated design and acoustic requirements, 4-foot wide and up to 16-foot long complying with the following:
 - 1. Fire resistant rated gypsum core with additives to enhance impact resistance, faced with moisture and mold resistant paper and reinforcing fiber mesh. Comply with ASTM C1629 level 3 hard body impact resistance.

2.03 ACCESSORIES

- A. Metal Trim: Paper-faced metal drywall beads and trim meeting ASTM C1047, as manufactured by USG/Beadex, or equal. Trim units shall be of size and type to fit gypsum board construction and shall include corner beads, casings, edge trim and other shapes indicated and required. Provide 30 year warranty against edge cracking.
- B. Joint Compound for gypsum board products: meeting the following requirements:
 - 1. Shall conform to ASTM C475.
 - 2. In areas subject to moisture after installation such as bathrooms and locker areas use setting type joint compound.
 - 3. Interior areas not subject to moisture after installation use drying Type Joint compound.
- C. Joint Tapes for gypsum boards: Shall conform to ASTM C475.
- D. Finishing Materials: Texture coat finish material shall be manufactured by U.S. Gypsum, Hamilton, or Highland Stucco and Lime Products, Inc., or equal.
- E. Acoustical Sealant: Non-hardening, non-shrinking, for use in conjunction with gypsum board, as recommended by Board Manufacturer and conforming to ASTM C919. Sealant shall maintain fire and sound rating assembly.

F. Fasteners:

1. Wood framing: Screws: Type W 1 5/8-inch minimum length for single-layer panels. Screws shall be furnished with a corrosion-resistant treatment.
2. Adhesive: as recommended by board manufacturer and in compliance to ASTM C557.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Metal Trim:

1. Provide corner beads at outside corners and angles, metal casing where gypsum board terminates at uncased openings, metal edge trim where board edges abut horizontal and vertical surfaces of other construction.
2. Install trim in accordance with manufacturer's directions with appropriate joint compound. Install trim in longest practical pieces.

B. Gypsum Board:

1. Install gypsum board in conformance with ASTM C840, fire rated design, and sound rating.
2. Gypsum board shall be cut by scoring and breaking or by sawing, working from face side. Where board meets projecting surfaces it shall be scribed and neatly cut. Unless conditions require otherwise, gypsum board shall be installed first to ceilings, then to walls. End joints shall occur over a support. Install panels of maximum practical length so a minimum number of end joints occur.
3. End joints shall be staggered and joints on opposite sides of a partition shall be arranged to occur on different studs. Joint layout at openings shall be installed so no end joints will align with edges of openings.
4. Except where specified otherwise, fasteners shall be spaced not less than 3/8 inch from edges and ends of gypsum board. Do not stagger fasteners at adjoining edges and ends.
5. Install gypsum board vertically or horizontal as permitted by specific UL Design at walls. Fasten board with drywall screws spaced not to exceed 8 inches on centers around perimeter of boards and 8 inches on centers on intermediate studs. Space screws at 8 inches on centers along top and bottom runners. Screws shall be driven to provide screwhead penetration just below gypsum board surface without breaking surface paper. Where electrical outlet and switch boxes are indicated, provide adjustable attachment brackets between studs.
6. Install access doors, furnished under another section, in correct location, plumb, or level, flush with adjacent construction, and securely fastened to framing.

3.02 TOLERANCES

- A. System shall appear flat and monolithic with no exposed joints.

3.03 JOINT TREATMENT AND FINISHING

*At completion of specified taping and finishing, install one coat of drywall primer as specified hereafter

- B. Levels: Install tape bedding compound, tape, and finishing cement on joints in wallboard as required for specified levels of finish.

- C. Levels 2 through 5:

1. Install joint cement and finishing cement over screw heads. Treat all inside corners with joint cement, tape, and finishing cement. Treat outside corners with corner beads and finishing cement.
2. Provide metal casing beads at all edges of gypsum wallboard, which abut ceiling, wall, or column finish, and elsewhere as required, such as openings, offsets, etc. Install all exposed joints, trims, and attachments non-apparent following installation of paint or other finishes. If joints and fasteners are visibly apparent, correct defects as required.
3. Seal raw edges of plumbing openings and boards that have been cut to fit with sealing compound brushed on.
4. When entire installation is completed, correct and repair broken, dented, scratched or damaged wallboard before installation of finish materials by other trades.

- D. Levels 3 and 4: Install one coat of drywall primer over entire surface prior to painting.

- E. Level 5: Install one coat of skim coat over entire surface, followed by one coat of drywall primer over entire surface prior to painting.

3.04 REQUIRED LEVELS OF FINISH

- A. Finishes shall conform to GA 214

- B. Unless otherwise indicated or specified, levels of finish required shall be as follows:

1. Level 1: Plenum areas above ceilings, insides of shafts, and other concealed areas. Taping to be as required for fire rated assemblies.
2. Level 4: Exposed painted wallboard.

3.06 CLEAN-UP

- A. Remove rubbish, debris, and waste materials and legally dispose of off Project site.

3.07 PROTECTION

- A. Protect Work of this section until Substantial Completion.

END OF SECTION

SECTION 09 5113

ACOUSTICAL PANEL CEILINGS

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Lay-in acoustical ceiling systems and metal suspension system.
- B. Related Requirements:
 - 1. Division 01 - General Requirements.
 - 2. Section 09 2900 - Gypsum Board.
 - 3. Division 23 - HVAC.
 - 4. Division 26 - Electrical.

1.02 QUALITY ASSURANCE

- A. Ceiling systems shall consist of lay-in acoustical ceiling panels by a single manufacturer and suspension systems by a single manufacturer for the entire project.
- B. Qualifications of Installer: Minimum five years experience in installing acoustical ceiling systems of the types specified.
- C. Design Criteria:
 - 1. Deflection of finished surface to 1/360 of span or less.
 - 2. 1/8 inch maximum permissible variation from true plane measured from 10 foot straightedge placed on surface of finished acoustical fiber units.
- D. Requirements of Regulatory Agencies:
 - 1. Conform to CBC requirements and UL - Tunnel Test for Fire Hazard Classification of Building Materials.
 - 2. Cisca: Acoustical Ceilings Use and Practice.
 - 3. Division of the State Architect: Comply with requirements of IR 25-2.10.
- E. American Society for Testing and Materials (ASTM):
 - 1. ASTM A641 - Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire.
 - 2. ASTM A653 - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
 - 3. ASTM C423 - Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method.

4. ASTM C635 - Standard Specification for the Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings.
5. ASTM C636 - Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels.
6. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
7. ASTM E580 – Standard Practice for Installation of Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels in Areas Subject to Earthquake Ground Motions.
8. ASTM E1264 - Standard Classification for Acoustical Ceiling Products.
9. ASTM E1414 - Standard Test Method for Airborne Sound Attenuation Between Rooms Sharing a Common Ceiling Plenum.
10. ASTM E1477 - Standard Test Method for Luminous Reflectance Factor of Acoustical Materials by Use of Integrating-Sphere Reflectometers.

F. American Society of Civil Engineers (ASCE):

1. ASCE 7 - Minimum Design Loads for Buildings and Other Structures, as amended by CBC 1615A.1.16.

1.03 SUBMITTALS

A. Samples:

1. Lay-in panels of each specified type, 6-inch by 6-inch minimum size.
2. Suspension System: 12-inch long samples of suspension system members, connections, moldings and wall angles, for each color specified.

B. Shop Drawings:

1. Indicate complete plan layouts and installation details.
2. Indicate related Work of other sections which is installed in, attached to, or penetrates ceiling areas, such as air distribution and electrical devices.

C. Product Data:

1. Suspension System for Lay-in Ceiling: Printed data for suspension system components, including load tests, indicating conformance to specified tests and standards.
2. Acoustical units: Printed data indicating conformance to specified tests and standards.

D. Maintenance Materials: Provide extra panels equal to 10 percent of the area of each typical module size of acoustical panel, but not less than 8 of each specified size, style and color.

1.04 DELIVERY, STORAGE AND HANDLING

A. Deliver materials to the Project site in original sealed packages.

- B. Storage: Store materials in building area where they will be installed, in original package. Keep clean and free from damage due to water or deteriorating elements.
- C. Handle in a manner to prevent damage during storage and installation.

1.05 PROJECT CONDITIONS

- A. Installation of acoustical ceiling system shall not begin until the building is enclosed, permanent heating and cooling is in operation, and residual moisture from plaster and concrete work has dissipated. Building areas to receive ceilings shall be free of construction dust and debris.
- B. Environmental Requirements: Maintain temperature in space at 55 degrees F or above for 24 hours before, during, and after installation of materials.
- C. Scheduling:
 - 1. Before concealing Work of other sections, verify required tests and inspections have been completed.
 - 2. Coordinate with related Work of other sections. Coordinate location and symmetrical placement of air distribution devices, electrical devices, and penetrations with related Work section.

1.06 WARRANTY

- A. Manufacturer shall provide a 10 year material warranty.
- B. Installer shall provide a two year fabrication and installation warranty.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Armstrong World Industries.
- B. USG Corporation.
- C. CertainTeed Ceilings Corp.
- D. Equal.

2.02 SUSPENSION SYSTEM

- A. Metal suspension system for acoustical lay-in tile shall be hot-dipped galvanized steel conforming to ASTM A653. Main beams and cross tees shall be double-web steel construction with exposed flange design, with factory punched cross tee slots, hanger holes and integral couplings.
- B. Metal suspension system for acoustical lay-in tile shall conform with ASTM C635, C636 and E580 and section 13.5.6 of ASCE 7, as amended by CBC Section 1615A.1.16, for installation in high seismic areas.
- C. Structural classification of suspension systems shall be heavy-duty in conformance to ASTM C635.
- D. Vertical Strut: USG Donn Compression Post, or equal, or as indicated; types and designs complying with requirements of authorities having jurisdiction and seismic

Zones D, E and F requirements. Provide base attachment clip for connection of vertical strut to main beams.

- E. Wall Molding: Fabricated from galvanized steel with 2-inch horizontal leg and hemmed edges, same finish as main and cross tees.
- F. Spacer/Stabilizer Bars: Provide for tying together the ends of main runners and cross tees that are not attached to wall molding.
- G. Hanger Wire: 0.106 inch diameter (0.144 inch diameter for pendant fixtures), galvanized soft annealed mild steel wire as defined in ASTM A641, Class 1 coating.
- H. Provide attachment devices and any other required accessories for a complete suspended ceiling system installation.

2.03 ACOUSTICAL CEILING PANELS

- A. Acoustical ceiling panels shall be class A in accordance to ASTM E1264.
- B. Acoustical panels shall meet the following surface-burning characteristics when tested in accordance to ASTM E84 for Class A materials:
 - 1. Maximum Flame Spread: 25.
 - 2. Maximum Smoke Developed: 50.
- C. Mold and Mildew Resistance: Panels and faces shall be treated with a biocide paint additive or an antimicrobial solution to inhibit mold and mildew.

2.04 CEILING TYPES

B. ACT 2 - KITCHEN:

- 1. Acoustical Ceiling Panels:
 - a. Panel Name: Armstrong Clean Room VL Unperforated Square Lay-in 870, or equal.
 - b. Panel Size: 2-foot by 4-foot.
 - c. Panel Thickness: 5/8 inch.
 - d. Edge Detail: Lay-in.
 - e. Light Reflectance: 0.80 minimum, in accordance with ASTM E1477.
 - f. CAC: Minimum 40, UL Classified, complying with ASTM E1414.
 - g. Sag/Humidity Resistance: HumiGuard Plus
 - h. Color: White.
 - i. Durability: Water repellent, soil resistance, scrubbability, washability.
- 2. Suspension System:
 - a. Suspension System Name: Prelude Plus XL by Armstrong, or equal.
 - b. Color: White.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Furnish layouts for inserts, clips or other supports and struts required to be installed by the Work of other trades that depend on the suspended ceiling system for support.
- B. Coordinate related Work to ensure completion prior to installation of clips or fasteners.
- C. Compare layouts with construction conditions. Tile shall be spaced symmetrically about the centerlines of the room or space, and shall start with a tile or joint line as required to avoid narrow tiles at the finish edges unless indicated otherwise. Joints shall be tight with joint lines straight and aligned with the walls. Ceiling moldings shall be provided where tile abuts wall with matching caulking to eliminate any space.

3.02 INSTALLATION OF SUSPENSION SYSTEMS

A. General:

- 1. Install suspension system in accordance with ASTM C636 and ASTM E580.
- 2. System shall be complete; with joints neatly and tightly joined and securely fastened; suspension members shall be installed in a true, flat, level plane.
- 3. Hanger Wires: 0.106 inch diameter minimum; larger sizes as indicated or required.
 - a. Fasten wires to panel points and structure above per most stringent requirements of fabricator and CBC and as indicated on Drawings.
 - b. Wires exceeding 1:6 out-of-plumb shall be braced with counter-sloping wires.
 - c. Maintain wires at least 6 inches from non-braced ducts, pipes, conduits, and other items.
 - d. Install wire along main runners at 4 feet on center. Terminal ends of each main runner and cross tee must be supported within 8 inches of each wall with a perimeter wire or within one-fourth (1/4) of the length of the end tee, whichever is least, for the perimeter of the ceiling area.
 - e. Where obstructions prevent direct suspension, provide trapezes or equivalent devices; 1 1/2-inch minimum cold rolled channels back to back may be installed for spans to 6 feet maximum.
 - f. Wire shall be straight, without extraneous kinks or bend. Hanger wire connections must be capable of carrying a 200 - pound pull without stretching or shifting the suspension clip.
- 4. Bracing Wires to Resist Seismic Forces: 0.106 inch diameter minimum, larger sizes as indicated or required.
 - a. System for Bracing Ceilings: Lay-In Ceiling Systems: Install one four-wire set of sway-bracing wires and a vertical strut for each 144 square feet maximum of ceiling area. Locate wire-sets and struts at 12

feet maximum on center. At ceiling perimeters, wire-sets shall be installed within 6 feet of walls.

- b. Install four-wire sets and struts within 2 inches of cross-runner intersection with main runner; space wires 90 degrees from each other.
 - c. Do not install sway bracing wires at an angle greater than 45 degrees with the ceiling plane.
 - d. Wires shall be tight, without causing ceiling to lift.
 - e. Fasten struts in accordance with CBC requirements.
 - f. Maintain wires at least 6 inches from non-braced ducts, pipes, conduit, and other items.
5. Provide additional wires, 0.106 inch diameter minimum, necessary to properly support suspension at electrical devices, air distribution devices, vertical soffits, and other concentrated loads.
6. Suspension:
 - a. Suspension members shall be fastened to two adjacent walls per ASTM 580; but shall be at least 3/4 inches minimum clear of other walls.
 - b. Any suspension members not fastened to walls shall be interconnected to prevent spreading, near their free end, with a horizontal metal strut or stabilizer bar or 0.064 inch diameter taut tie wire.
 - c. Provide additional tees or sub-tees to frame openings for lights, air distribution devices, electrical devices, and other items penetrating through ceiling, which do not have an integral flange to support and conceal cut edges of acoustic panels. Provide cross bracing necessary to securely support any surface mounted fixtures or other items.
7. Attachment of Wires:
 - a. To Metal Deck or Steel Framing Members: Install as required by current code.
 - b. To Suspension Members: Insert through holes in members or supporting clips.
 - c. Wires shall be fastened with three tight turns minimum for hanger wires and four tight turns minimum bracing wires. Turns shall be made in a 1 1/2-inch maximum distance.
- B. Suspension System for 2-foot by 4-foot Lay-in Acoustical Ceilings:
 1. Main Runners: Install main runners 48 inches apart; 0.106 inch diameter hanger wires space 48 inches on center maximum along runners, and within 8 inches of ends.
 2. Install wall moldings with fasteners to studs. Install corner caps at molding intersections.

3. Cross-Tees: Install between main runners in a repetitive pattern of 2-foot spacings.
4. Sub-Tees: Install at edges of penetrations.

3.03 INSTALLATION OF ACOUSTICAL PANELS

- A. Install panels into suspension system. Partial panels shall be neatly cut and fitted to suspension and around penetrations and/or obstructions. Duplicate tegular edges at partial panels; cuts to be straight. Repaint cut tiles to match color or as directed by manufacturer for mylar facing at visually exposed conditions or as required by the Architect.
- B. Penetrations through the ceilings for sprinkler heads and other similar devices that are not integrally tied to the ceiling system in the lateral direction shall have a 2 inch oversized ring, sleeve or adapter through the ceiling tile to allow free movement of one inch in horizontal directions. Alternatively per ASTM E580, a flexible sprinkler hose fitting that can accommodate one inch of ceiling movement shall be permitted to be used in lieu of the oversized ring, sleeve or adapter.

3.04 AIR DISTRIBUTION DEVICES

- A. Refer to and coordinate with Division 23 - HVAC.
- B. Install air distribution grilles and other devices into suspension system. Install 4 taut wires, each 0.106 inch diameter minimum, to each device within 3 inches of device corners, to support their weight independent of the suspension system.

3.05 LIGHT FIXTURES

- A. Refer to and coordinate with Division 26 - Electrical.
- B. Fixtures weighing less than 56 pounds: Install fixtures into suspension systems and fasten earthquake clips to suspension members. Install minimum 2 slack safety wires, each 0.106 inch diameter minimum, to each fixture at diagonally opposite corners, to support their weight independent of the system.
- C. Fixtures weighing 56 Pounds or more: Install fixtures into suspension system and fasten earthquake clips to suspension system members as required by the Drawings and/or code. Install not less than 4 taut 0.106 inch diameter wires capable of supporting four times the fixture load.
- D. Support pendant-mounted light fixtures directly from the structure above with hanger wires or cables passing through each pendant hanger and capable of supporting two times the weight of the fixture. Brace the pendant-mounted light fixtures by either a bracing assembly at the ceiling penetration or below the ceiling to the walls, as indicated in the drawings.

3.06 CLEANING

- A. General: After installation of acoustical material has been completed, clean surfaces of the material, removing any dirt or discolorations. Replace panels as required.
- B. Acoustical Panels: Minor abraded spots and cut edges shall be touched up with the same paint as was used for factory applied finish of the lay-in panels.

- C. Remove and replace work that can not be successfully cleaned and repaired to eliminate evidence of damage.

3.07 CLEAN UP

- A. Remove rubbish, debris, and waste materials and legally dispose off of the Project site.

3.08 PROTECTION

- A. Protect the Work of this section until Substantial Completion.

END OF SECTION

SECTION 09 6513

RUBBER BASE

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Topset coved rubber base for installation with surface flooring.

B. Related Requirements:

1. Division 01 - General Requirements.
2. Section 09 2900 – Gypsum Board.

1.02 SUBMITTALS

- A. Product Data: Submit manufacturer's published technical data describing materials, construction and recommended installation instructions. Submit technical data and installation instructions for each adhesive material.
- B. Maintenance Instructions: Submit manufacturer's recommendations for maintenance, care and cleaning of base.
- C. Samples: Submit Samples of top set base in each available color. Following color selections, submit Samples, not less than 12 inches long of each selected color and type. Submit pint cans of each type adhesive.
- D. Maintenance Materials: Before Substantial Completion, deliver at least 20 lineal feet and two outside corner units of each color of rubber base installed. Deliver the materials in unopened factory containers or in sealed cartons with labels identifying the contents, matching installed materials. Include unopened cans of adhesives adequate to install the maintenance materials.

1.03 QUALITY ASSURANCE

- A. Qualifications of Installer: Minimum five years experience in successfully installing the same or similar flooring materials.
- B. Comply with the following as a minimum requirement:
 1. ASTM E84: Standard Test Method for Surface Burning Characteristics of Building Materials.
 2. ASTM F1861: Standard Specification for Resilient Wall Base.
 3. Comply with current CHPS requirements, www.chps.net.

4. Each selected color and configuration shall be from same dye lot and color.

1.04 DELIVERY, STORAGE AND HANDLING

- A. Materials shall be delivered to the Project site in original unopened manufacturer's packaging clearly labeled with manufacturer's name. Store materials at room temperature, but not less than 70 degrees F, for a minimum of 48 hours before installation, unless otherwise indicated in manufacturer's printed instructions.

1.05 PROJECT CONDITIONS

- A. Ventilation and Temperature: Verify areas that are to receive rubber base are ventilated to remove fumes from installation materials, and areas are within temperature range recommended by the various material manufactures for site installation conditions.

1.06 WARRANTY

- A. Manufacturer shall provide a five year material warranty.
- B. Installer shall provide a two year fabrication and installation warranty.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Burke/Mercer Wall Base.
- B. Roppe, Pinnacle Rubber Base.
- C. Flexco Company, Wallflower Premium Rubber Wall Base.
- D. Johnsonite.
- E. Equal.

2.02 MATERIALS

- A. Rubber base: Conform to ASTM F 861; Group 2, solid (homogeneous); Type 1, TS, (thermoset) vulcanized rubber, Style A, 4-inch high unless otherwise indicated, integral colors as selected, non-shrinking, 1/8 inch thick, with matching molded outside corners.
- B. Base Adhesive: Water based, low odor type, as recommended by manufacturer of rubber base.

PART 3 - EXECUTION

3.01 COORDINATION

- A. Coordinate the Work of this section with other sections to provide a level, smooth and clean finish surfaces to receive rubber base.

3.02 EXAMINATION

- A. Field verify dimensions and other conditions affecting the Work of this section before commencing the Work of this section.
- B. Before Work is started, examine surfaces that are to receive rubber base. Deficiencies shall be corrected before starting the Work of this section.

3.03 PREPARATION

- A. Do not start preparation until adjacent concrete floor slabs are at least 90 days old and finish flooring is installed.
- B. Install rubber base when ambient temperature is 70 degrees F. or higher.

3.04 INSTALLATION

- A. Install top set base at hard floors, including resilient flooring, concrete and wood, carpet and other soft floors.
- B. Securely fasten cement base to backing in long lengths in accordance with manufacturer's recommendations. Lay out lengths so that not less than 18 inches long filler pieces are provided. Assure that top and toe continuously contact the wall and floor, and that all joints are tight. Install matching factory formed external corners at all offsets. Inside corners shall be coped; wrapped corners are not acceptable.
- C. Use of adhesive gun is prohibited. Apply adhesive directly to substrate using the appropriate notched trowel or spreader according to manufacturer's instructions. Maintain 1/8 inch gap from top of base to prevent adhesive oozing onto adjacent surfaces.
- D. Base and outside corners shall be rolled with a seam roller before adhesive sets.

3.05 CLEANING

- A. Maintain surfaces of base clean as installation progresses. Clean rubber base when sufficiently seated and remove foreign substances.
- B. Clean adjacent surfaces of adhesive or other defacement. Replace damaged and/or defective Work to the specified condition.

3.06 CLEAN UP

- A. Remove rubbish, debris and waste materials and legally dispose of off the Project site.

3.07 PROTECTION

- A. Protect the Work of this section until Substantial Completion.

END OF SECTION

SECTION 09 9000
PAINTING AND COATING

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Interior and exterior painting.

B. Following items shall not be painted:

1. Brass valves, chromium or nickel-plated piping and fittings.
2. Boiler control panels and control systems.
3. Fabric connections to fans.
4. Flexible conduit connections to equipment, miscellaneous name plates, stamping, and instruction labels and manufacturer's data.
5. Mechanical and electrical utility lines, piping and heating and ventilation ductwork in tunnels, under-floor excavated areas or crawl spaces, attic spaces and enclosed utility spaces.
6. Flag, floodlight, parking light poles and loudspeaker poles, metal stairs, handrails and chain-link fence with a galvanized finish, unless otherwise noted.
7. Structural and miscellaneous steel, open web steel joists and metal floor decking, which will not be exposed in final construction, shall have no finish other than one coat of shop primer.
8. Hardboard covering on tops and backs of counters and benches.
9. Brass, bronze, aluminum, lead, stainless steel and chrome or nickel-plated surfaces.
10. Non-metallic walking surfaces unless specifically shown or specified to be painted.

1.02 REGULATORY REQUIREMENTS

- A. Paint materials shall comply with the Food and Drug Administration's (F.D.A.) Lead Law and the current rules and regulations of local, state and federal agencies governing the use of paint materials.

1.03 SUBMITTALS

- A. List of Materials: Before submittal of samples, submit a complete list of proposed paint materials, identifying each material by distributor's name, manufacturer's name,

product name and number, including primers, thinners, and coloring agents, together with manufacturers' catalog data fully describing each material as to contents, recommended installation, and preparation methods. Identify surfaces to receive various paint materials.

- B. Material Samples: Submit manufacturer's standard colors samples for each type of paint specified. Once colors have been selected, submit Samples of each color selected for each type of paint accordingly:
 - 1. Samples of Paint and Enamel must be submitted on standard 8 ½" x 11" Leneta Opacity-Display Charts. Each display chart shall have the color in full coverage. The sample shall be prepared from the material to be installed on the Work. Identify the school on which the paint is to be installed, the batch number, the color number, the type of material, and the name of the manufacturer.
 - 2. Elastomeric shall be submitted in duplicate samples of the texture coating. Samples will be not less than 2 ½ by 3 ½ in size and installed upon backing. Finished Work will match the reviewed Sample in texture.
 - 3. Materials and color samples shall be reviewed before starting any painting.
- C. For transparent and stained finishes, prepare samples on same species and quality of wood to be installed in the Work, with written description of system used.

1.04 QUALITY ASSURANCE

- A. Certification of Materials: With every delivery of paint materials, the manufacturer shall provide written certification the materials comply with the requirements of this section.
- B. Coats: The number of coats specified is the minimum number. If full coverage is not obtained with the specified number of coats, install additional coats as required to provide the required finish.
- C. Install coats and undercoats for finishes in strict accordance with the recommendations of the paint manufacturer as reviewed by the Architect.
- D. Paint materials shall comply with the following as a minimum requirement:
 - 1. Materials shall be delivered to Project site in original unbroken containers bearing manufacturer's name, brand number and batch number.
 - 2. Open and mix ingredients on premises in presence of the Project Inspector.

1.05 DELIVERY, STORAGE AND HANDLING

- A. Storage and Mixing of Materials: Store materials and mix only in spaces suitable for such purposes. Maintain spaces clean and provide necessary precautions to prevent fire. Store paint containers so the manufacturer's labels are clearly displayed.

1.06 SITE CONDITIONS

- A. Temperature: Do not install exterior paint in damp, rainy weather or until surface has thoroughly dried from effects of such weather. Do not install paint, interior, or exterior, when temperature is below 50 degrees F, or above 90 degrees F, or dust conditions are unfavorable for installation.

1.07 WARRANTY

- A. Manufacturer shall provide a three year material warranty.
- B. Installer shall provide a three year application warranty.

1.08 MAINTENANCE

- A. Provide at least one gallon of each type, color and sheen of paint coating installed. Label containers with color designation indicated on Drawings.

PART 2 - PRODUCTS

2.01 PAINT MATERIALS

- A. Furnish the products of only one paint manufacturer unless otherwise specified or required. Primers, intermediate and finish coats of each painting system must all be the products of the same manufacturer, including thinners and coloring agents, except for materials furnished with shop prime coat by other trades.
- B. Factory mix paint materials to correct color, gloss, and consistency for installation to the maximum extent feasible.
- C. Paint materials to be minimum "Architectural Grade".
- D. Gloss degree standards shall be as follows:

HIGH GLOSS	70 and above	EGGSHELL	30 to 47
SEMI-GLOSS	48 to 69	SATIN	15 to 29

2.02 MANUFACTURERS

- A. Acceptable manufacturers, unless otherwise noted:
 1. Dunn-Edwards Corporation Paints
 2. Frazee Paints and Wall coverings
 3. Vista Paints
 4. Sherwin Williams
 5. ICI Paints
 6. Equal.

- B. Exterior steel:
 - 1. Carboline
 - 2. Equal.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Examine surfaces to receive paint finish. Surfaces which are not properly prepared and cleaned or which are not in condition to receive the finish specified shall be corrected before prime coat is installed.
- B. New woodwork shall be thoroughly cleaned, hand sandpapered, and dusted off. Nail holes, cracks or defects in Work shall be filled. On stained woodwork, fill shall be colored to match stain. Filling shall be performed after the first coat of paint, shellac or varnish has been installed.
- C. Plaster surfaces except veneer plaster shall be allowed to dry at least 3 weeks before painting. Veneer plaster shall be allowed to dry sufficiently to receive paint as determined by moisture meter tests.
- D. Metal surfaces to be painted shall be thoroughly cleaned of rust, corrosion, oil, foreign materials, blisters, and loose paint.
- E. Do not install painting materials to wet, damp, dusty, dirty, finger marked, rough, unfinished or defective surfaces.
- F. Concrete surfaces shall be dry, cleaned of dirt and foreign materials and in proper condition to receive paint. Neutralize spots demonstrating effects of alkali.
- G. Mask off areas where necessary.

3.02 APPLICATION

- A. Backpainting: Immediately upon delivery to the Project site, finish lumber and millwork shall be backpainted on surfaces that will be concealed after installation. Items to be painted shall be backpainted with priming coat specified under "Priming".
- B. Priming: New wood and metal surfaces specified to receive paint finish shall be primed. Surfaces of miscellaneous metal and steel not embedded in concrete, and surfaces of unprimed plain sheet metal Work shall be primed immediately upon delivery to the Project site. Galvanized metal Work and interior and exterior woodwork shall be primed immediately after installation. Priming of surfaces and priming coat shall be as follows:
 - 1. Knots, Pitch and Sap Pockets: Shellac before priming.
 - 2. Exterior Woodwork and Wood Doors: Prime with one coat of exterior waterborne emulsion wood primer.

3. Interior Woodwork: Where indicated to be painted, prime with one coat of waterborne wood primer.
 4. Stain: Woodwork indicated to receive a stain and varnish finish shall be stained to an even color with water borne stain. On open-grained hardwood, mix stain with paste filler and completely fill pores in wood.
 5. Galvanized Metal Work: Remove all soluble and insoluble contaminants and corrosion. Remove any storage stains per Section 6.2 of ASTM D6386. Chemically treat with Krud Kutter ME or Great Lakes Laboratories Clean & Etch or Equal, in accordance with manufacturer's written instructions. Ensure that all surfaces have been effectively and uniformly treated per the manufacturer's recommendation. Follow manufacturer's instructions for drying time, and then prime with one coat of Cycloaliphatic Amine Epoxy.
 6. Unprimed Iron, Steel, and Other Uncoated Metals: Where specified to be painted, prime with one coat of metal primer.
 7. Shop Primed Metal Items: Touch up bare and abraded areas with metal primer before installation of second and third coats.
 8. Coats shall be installed evenly and with full coverage. Finished surfaces shall be free of sags, runs and other imperfections.
- C. Allow at least 24 hours between coats of paint.
- D. Rollers shall not be used on wood surfaces.
- E. Each coat of painted woodwork and metal, except last coat, shall be sandpapered smooth when dry. Texture-coated gypsum board shall be sanded lightly to remove surface imperfections after first coat of paint has been installed.
- F. Each coat of paint or enamel shall be a slightly different tint as required. Each coat of paint, enamel, stain, shellac, and varnish will be inspected by the IOR before next coat is applied. Notify the Project Inspector that such Work is ready for inspection.
1. Tinting Guideline: The first coat, primer/undercoat(s) to be untinted or tinted up to 50 percent lighter or darker (at the discretion of the installer) than the finish coat. The second coat (or third coat if a seal coat and undercoat have been specified) is to be factory tinted in the range of 10 percent to 15 percent lighter or darker (at the discretion of the installer) than the finish coat. The final coat is to be factory tinted to the required color selected. These tinting guidelines shall be provided on all surfaces receiving paint.
- G. Do not "paint-out" UL labels, fusible links and identification stamps.
- H. Paint Roller, brush and spray.
1. Only Paint rollers shall be used on interior plaster, drywall, masonry/plaster and plywood surfaces, nap shall not exceed one half inch in length.

2. First coat on wood overhang and ceilings shall have material applied by roller and then brushed out in a professional manner to leave surface free of imperfections. Finish coat may be sprayed.
3. Other surfaces shall have all coatings applied with brushes of proper size.
4. Spray work is permitted only on radiators, acoustic plaster, masonry and plaster.
- I. Where ceilings are specified to be painted, beams, cornices, coves, ornamental features, plaster grilles, etc. shall be included.
- J. Ceilings shall be white, including classrooms, storage rooms, offices, arcades, etc. Boiler room and fan room ceiling color shall match adjacent walls.

3.03 CLEANING

- A. Remove rubbish, waste, and surplus material and clean woodwork, hardware, floors, and other adjacent Work.
- B. Remove paint, varnish and brush marks from glazing material and, upon completion of painting Work, wash and polish glazing material both sides. Glazing material, which is damaged, shall be removed and replaced with new material.
- C. Clean hardware and other unpainted metal surfaces with recommended cleaner. Do not furnish abrasives or edged tools.

3.04 SCHEDULE

- A. Interior:
 1. Plaster: 4 coats.
 - a. First Coats: Pigmented wall sealer.
 - b. Second coat: Enamel under coater.
 - c. Third and Fourth Coats – Interior enamel, semi-gloss or gloss as indicated.
 2. Gypsum Board: 4 coats.
 - a. First Coat: Drywall sealer.
 - b. Second Coat: Enamel under coater.
 - c. Third and Fourth Coats: Interior enamel, semi-gloss or gloss as indicated.
 3. Metal: Shall be cleaned, pre-treated and painted with 3 coats. Items to be painted include, but are not limited to: exposed structural and miscellaneous steel, railings and handrails, metal doors and frames, ladders, table and bench legs.

- a. First Coat: Cycloaliphatic Amine Epoxy.
- b. Second and Third Coats: Aliphatic Acrylic-Polyester Polyurethane.

B. Exterior:

- 1. Plaster and Stucco: 3 coats. Flat 100 percent acrylic.
 - a. Prime Coat: Alkali resistant primer/sealer.
 - b. Exterior 100 percent acrylic.
- 2. Concrete: 3 coats. Flat 100 percent acrylic.
 - a. First Coat: Concrete sealer.
 - b. Second and Third Coats: Exterior 100 percent acrylic.
- 3. Metal: 3 coats. Shall be cleaned and pre-treated. Items to be painted include, but are not limited to: steel columns and miscellaneous steel items, railings and handrails gravel stops, metal doors and frames, hoods and flashings.
 - a. First Coat: Cycloaliphatic Amine Epoxy.
 - b. Second and Third Coats: Aliphatic Acrylic-Polyester Polyurethane.

C. Mechanical and Electrical Work:

- 1. Except where interior mechanical and electrical Work to be painted is specified to receive another paint finish, Work occurring in finished rooms and spaces shall be cleaned, pre-treated, and painted with 3 coats. Items to be painted include, but are not limited to: steel and copper piping, pipes, vents, fittings, ducts, plenums, miscellaneous supports and hangers, electrical conduit, fittings, pull boxes, outlet boxes, unfinished surfaces of plumbing fixtures, miscellaneous metal cabinets, panels, and access doors and panels.
 - a. First Coat: As specified in this section under Priming.
 - b. Second and Third Coats: Interior enamel, semi-gloss or gloss to match adjacent wall or ceiling finish.
- 2. Insulation and Taping on Pipes and Ducts: 3 coats.
 - a. Finished Rooms:
 - 1) First Coat: Interior waterborne primer.
 - 2) Second and Third Coats: Interior semi-gloss or gloss enamel to match adjoining wall or ceiling finish.
 - b. Building Exterior:
 - 1) First Coat: Exterior waterborne primer.

2) Second and Third Coats: Exterior gloss enamel.

3. Inside surfaces of ducts, vents, dampers and louvers as far back as visible from room in which they open shall be painted with 2 coats of flat black paint.

3.05 PROTECTION

A. Protect the Work of this section until Substantial Completion.

3.06 CLEANUP

A. Remove rubbish, debris, and waste materials and legally dispose of off the Project site.

END OF SECTION

SECTION 09 9013

PAINTING OF EXISTING FACILITIES

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Interior and exterior painting.
- B. Related Requirements:
 - 1. Division 01 - General Requirements.
 - 2. Section 06 1000 - Rough Carpentry.
 - 3. Section 07 9200 - Joint Sealants.
 - 4. Section 09 2900 - Gypsum Board.

1.02 REGULATORY REQUIREMENTS

- A. Workers shall be trained in EPA's (Environmental Protection Agency); Renovation, Repair and Painting (RRP), the lead-related construction course that satisfies the requirements specified in 40 CFR, Part 745, Section 745.90.
- B. The Lead Related Construction Work, specified herein, shall be performed by a company, partnership, corporation, sole proprietorship or individual doing business, association, or other business entity; a Federal, State, Tribal, or local government agency; or a nonprofit organization, shall satisfy the requirements specified in 40 CFR, Part 745, Section 745.89, as a Lead-Safe Certified Firm.
- C. Prior to commencement of Asbestos Related Construction Work, personnel required to construct and enter the Work Area or handle Asbestos Containing Materials shall have received adequate training, in accordance with the requirements by 40 CFR, Part 763, Subpart E (ASHERA) and Title 8, Section 1529, of the California Code of Regulations.
- D. Paint materials shall comply with Food and Drug Administration's (FDA) Lead Law and current rules and regulations of local, state and federal agencies governing use of paint materials.
- E. Paint color requirements for CALOSHA: CALOSHA requires the following items be painted as prescribed:
 - 1. Gas Mains and Valves shall be painted "gun metal gray" (medium gray).

2. Fire Valves and Raisers shall be painted OSHA's "safety red".

1.03 SUBMITTALS

- A. Submit in accordance with Section 01 3300: Submittal Procedures.
 1. Submit a complete list of materials to be furnished stating supplier and distributor's names with product recommendations.
 2. Submit manufacturer's standard color samples for each type of paint specified. Once colors have been selected, submit six samples of each color selected for each type of paint, on standard 8 ½ by 11 spray-out panel.
 3. Before any coating is applied, submit to Project Inspector samples of each color to be used on contract. If more than one batch of material and color is to be used, samples from each batch shall be submitted.
- B. Paint and Enamel Spray-Outs:
 1. Samples of Paint and Enamel shall be submitted on standard 8 ½ by 11 Leneta Opacity-Display Charts. Each display chart shall have color in full coverage. Sample shall be prepared using material from batch to be used on actual job. Identify school on which paint is to be used, batch number, color number, type of material, name of manufacturer and name of CONTRACTOR.
 2. Furnish samples of colors to Project Inspector. Samples shall be kept on the job until painting is completed.
 3. CONTRACTOR shall be responsible for finish color on surface to be painted; where different materials of same color are specified to be applied on same, or adjoining surfaces, final color match shall match color sample on those surfaces.
- C. Elastomeric coating shall be submitted in duplicate samples of texture coating. Samples shall be not less than 2 ½-inch by 3 ½-inch in size and on adequate backing.
- D. Provide the current SCAQMD permit for each HEPA Vacuum and Portable Mechanical Ventilation System before they are brought onto the Project site.
- E. Materials and color samples shall be approved before a job start meeting will be scheduled.

1.04 QUALITY ASSURANCE

- A. Certification of Materials: With every delivery of paint materials, manufacturer shall certify, on form supplied by OWNER that materials comply with requirements of this Section.

- B. Paint materials shall comply with applicable requirements of Food and Drug Administration's (FDA) Lead Law and South Coast Air Quality management District (SCAQMD).
- C. Painters working on Lead related work shall be trained at a minimum, in EPA's Renovation, Repair and Painting (RRP) Rule.

1.05 DELIVERY, STORAGE AND HANDLING

- A. Materials shall be delivered to project site in original unbroken containers bearing manufacturer's name, brand number, batch number, and Safety Data Sheets.
- B. Open and mix ingredients on premises in presence of Project Inspector. Immediately remove rejected materials from premises.

1.06 METAL STORAGE CONTAINER

- A. Storage and Mixing of Materials: Store materials and mix only in spaces designated for purpose by Project Inspector. Keep such spaces clean and take necessary precautions to prevent fire. Hang out oily rags singly in open air. Stack paint containers so that manufacturer's labels are clearly displayed.
- B. Paint, combustible materials, gasoline driven equipment, etcetera shall not be stored or left in any school building overnight.
- C. In event that equipment and material storage sheds must be placed on asphalt pavement less than six months old, each wheel, leg or other supporting member shall be centered on a 4-foot by 8-foot by $\frac{3}{4}$ inch thick sheet of plywood. Shed shall be set down in such a manner as to prevent damage to pavement. CONTRACTOR shall be responsible for any damage to pavement caused by improper placement of shed.

1.07 ENVIRONMENTAL CONDITIONS

- A. Temperature: Do not apply exterior paint in damp, rainy weather or until surface has dried from effects of such weather. Do not apply paint, interior or exterior, when temperature is below 55 degrees F., humidity is above 80%, or above manufacturer's stated recommended temperature, or when dust conditions are unfavorable to proper workmanship.

1.08 WARRANTY

- A. Manufacturer shall provide a three year material warranty from date of Substantial Completion.
- B. CONTRACTOR warrants work executed and materials furnished under contract shall be free from defects of materials and application for a period of three years from date of Substantial Completion.

- C. Elastomeric coating shall be warranted for a period of five years from date of Substantial Completion.

1.09 PROTECTION

- A. Fire alarm boxes, fire sprinkler heads, smoke detectors and intrusion alarm systems shall be uncovered and available to perform function that it was designed for each and every night.
- B. Pressure relief grilles with barometric damper leading to a corridor or an exterior shall be masked off before spraying and then uncovered immediately after spraying.
- C. Conspicuously post sufficient "Wet Paint" signs continuously to alert public and school personnel to existing conditions until paint is completely dried.
- D. Provide and maintain barriers, guards, lights, warning signs, etcetera for complete protection and as directed by the Project Inspector.
- E. Do not impede emergency egress.

1.10 DEFINITION OF TERMS

- A. Work shall include labor, material, equipment and scaffolding required for cleaning and preparation of surfaces to receive painters finish and for painting and varnishing, as herein specified. Perform work unless specifically noted otherwise.
- B. Painting shall include complete preparation and finish or refinishing in accordance with requirements specified herein. Drywall shall be treated same as specified for plaster.
- C. Wherever woodwork is specified to be refinished, it will include wood finish member (trim), movable cabinets with doors and center cut doors, windows and sash, screen doors, screens, sash poles, movable and fixed bulletin boards and chalkboards, etcetera.
- D. Plastic, impregnated plywood, hardwood, metal, asbestos board (if painted), and mastic coated wood surfaces shall be treated in same manner as specified for "woodwork".
- E. Whenever "Paint or Enamel" is referred to in these specifications, it shall be taken to mean types of waterborne materials and water reducible materials.
- F. Whenever "edges" are referred to in these specifications, it shall be taken to mean every edges, (which include tops and bottoms).
- G. Work shall be done by skilled and experienced painters in a professional manner. Painters must wear presentable white uniforms consistent with industry standard and personal ID Badges.

PART 2 - PRODUCTS

2.01 PAINT MATERIALS

- A. Factory mix paint materials to correct color, gloss, and consistency for installation to maximum extent feasible.
- B. Paint materials shall be by one manufacturer.
- C. Paint materials shall be "Premium Plus or Ultra Premium Grade".
- D. Acceptable manufacturers, unless otherwise noted:
 - 1. Dunn-Edwards Corporation Paints.
 - 2. Vista Paints.
 - 3. Frazee Paints and Wall coverings.
 - 4. Sherwin Williams.
 - 5. PPG Paints.
 - 6. Equal.
- E. Gloss degree standards shall be as follows:

High Gloss	70 and above	Eggshell	30 to 47
Semi-Gloss	48 to 69	Satin	15 to 29

PART 3 – EXECUTION

3.01 GENERAL PREPARATION OF EXISTING PAINTED SURFACES

- A. Examine surfaces to receive paint finish. Surfaces which are not properly prepared, and cleaned or which are not in condition to receive finish specified, shall be corrected before paint is applied. Painting shall not be done on existing painted surfaces until surfaces are approved by the Project Inspector.
- B. Remove items fastened to existing painted surfaces and patch holes with a material, and re-fasten in original location upon completion of painting work.
- C. Existing painted surfaces indicated to be painted, shall be prepared as follows:
 - 1. Wood, plaster and metal surfaces shall be washed with TSP (tri-sodium phosphate) substitute to remove dirt, grease and other foreign materials and rinsed with clean water and then sand papered and dusted off. Surfaces

shall have wax completely removed before washing, which includes base, shoe base, and concrete base.

2. Checked, cracked, blistered, scaled, peeling, and alligatored paint on wood and metal surfaces shall have paint removed down to original finished surface, then hand-sanded and dusted clean.
 - a. Surfaces shall then be considered as new work.
 - b. Woodwork shall be hand sanded smooth after each and every coat, except last coat. Coats shall be free from dust, dirt or other imperfections.
 - c. Steel sash and aluminum sash to be painted must be steel-wooled and dusted off. Sash putty shall be hand sanded smooth and dusted off.
 - d. Remove lint and grease from screens, vents, hoods, et cetera that are to be painted.

3.02 OTHER SURFACE PREPARATION REQUIREMENTS

- A. Existing painted surfaces shall be prepared and made ready to receive new coat of paint or other finish coating materials by any of following methods:
 1. Checked, cracked, blistered, scaled loose, and alligator paint on wood and metal surfaces on exterior or interior of facilities shall be wet scraped and wet sanded to a smooth solid surface, H.E.P.A. vacuumed, wet wiped as specified per EPA RRP and then painted as specified. Wet scraping and or wet sanding shall be performed only when school is not in session, and students and staff are not on site.

3.03 CRACKS AND VOIDS

- A. Voids between wall and ceiling surfaces and wood or metal trim or scribed edges where finish exists or is specified to be applied and including picture molding, must be filled with putty, filler or latex sealing compound.
- B. Areas where finish plaster coat is loose must have that portion removed to a solid surface. Surfaces that are broken, cracked, or damaged and areas where finish plaster coat has been removed must be coated with compatible bonding agent. Surface will then be given a cement plaster finish coat consisting of one-part Plastic Portland Cement to three parts sand to match existing finish. Cracks shall be "V-ee'd" out, filled, finished flush with and textured to match adjoining surfaces, per OWNER Representative's approval.
- C. Neutralize walls showing effects of alkali.

3.04

REPAIR OF PLASTER

- A. Exterior areas, where finish plaster coat is loose, shall have that portion removed to a solid surface. Surfaces that are broken, cracked, or damaged and areas where finish plaster coat has been removed shall be coated with compatible bonding agent. Surface will then be given a cement plaster finish coat consisting of one-part Plastic Portland Cement to three parts plaster sand to match existing finish. Cracks shall be “veed-out”, filled, finished flush with and textured to match adjoining surfaces, per Project Inspector’s approval.
 - 1. If existing plaster was a machine applied, dash coat, apply final application of finish coat over patched areas by machine to match existing adjacent machine texture. Use a finish plaster material with a bonding admixture mixed according to manufacturer's recommendation.
 - 2. Cracks, holes, and damaged spots larger than ½ inch, see Article Mastic Repair and Elastomeric Repair.
- B. Exterior plaster designated to be painted shall receive three coats. First coat shall be sealer. Second and third coats shall 100 percent acrylic gloss enamel unless otherwise indicated.
- C. Interior plaster patching shall receive four coats. First coat shall be pigmented sealer. Second coat shall be enamel undercoat. Third and fourth coats shall gloss or semi-gloss enamel as indicated.

3.05

REPAIR OF SPALLING CONCRETE

- A. Remove surface contamination, broken and spalled concrete to a sound concrete base. Concrete shall be removed to a depth of one-half inch minimum around rebar. Sides of areas to be repaired shall be straight, not tapered or sloped.
- B. Spalled or loose concrete shall be removed using an electric or compressed air chipping hammer.
- C. Clean exposed rebar by sand/media blasting, remove debris and dust and treat steel with a sealant compatible to patching materials same day. Project Inspector shall approve sealant application prior to any patching materials being applied.
- D. Repair concrete to match existing concrete surfaces using Sika Top 123 Gel Mortar, DAP Concrete Patch, Quikrete Fast-Setting Concrete, or equal.
- E. Sealant and patching materials shall be applied by qualified applicator.

3.06

MIXING AND APPLICATION

- A. Colors of coatings shall be as directed by Project Inspector.
- B. Three coats of paint shall be applied as follows:

1. First coat: primer or undercoat, shall be white or may be tinted up to 50% lighter or darker than the finish coat at the discretion of the installer.
 2. Second coat shall be factory tinted in range of 10 percent to 15 percent lighter or darker than finish coat.
 3. Third coat shall be factory tinted to color selected, but allowing for tint variations in more than one color for application to different surfaces. Color combinations in rooms and for surfaces shall be varied in accordance with color letter.
- C. Any number of colors may be used on any portion of work. OWNER reserves right to change colors before work is started in an area or on a particular surface.
- D. Various colors may require additional coats of paint complete coverage. No additional allowances will be made. CONTRACTOR is responsible for consulting color letter and knowing color and coverage.
- E. Surfaces to be finished and each coating shall be separately inspected by Project Inspector and checked for mill thickness. The requirements are two mils each coat wet and three mils dry after three coats. Notice that such work is ready for inspection shall be given to Project Inspector. Should such notice not be given before succeeding coat is put on, finish applied shall be removed or an additional coat shall be applied, as directed by Project Inspector. Allow at least one day drying time between coats for exterior work or as directed by Project Inspector for proper drying.

3.07 PAINT ROLLERS, BRUSH AND SPRAY

- A. Paint rollers may be used on interior plaster, drywall, masonry, stucco and plywood surfaces, nap not to exceed 1/2 inch in length.
- B. First coat on wood overhang and ceilings must have material applied by roller and then must be brushed out in a professional manner to leave surface free of imperfections. Finish coat may be sprayed.
- C. Other surfaces shall have coatings applied with brushes of proper size.
- D. Spray work shall be permitted only on acoustic plaster, acoustic tile, fiberboard, wood fiber acoustical units, masonry and plaster or as directed by Project Inspector.

3.08 PRIMING

- A. Surfaces from which paint finish have been removed down to original wood or metal surfaces shall be primed as follows:
1. Wood shall be sealed or primed with a non-water borne material on both sides and edges. Wood completely sealed with a non-water borne material shall be top coated with a water borne material as specified herein. Finish

material (water borne) shall be compatible with non-water borne primer per manufacturer's recommendations. Hardwood shall be filled and stained to an even color.

3.09 DOORS

- A. Painted or refinished interior and exterior wood or metal doors must be finished on both sides and edges with three coats of paint consisting of first coat of primer, second coat and third coat of exterior high gloss enamel.
- B. Where doors open into rooms or spaces having different finishes, communicating doors must have edges finished according to industry standard or as directed by Project Inspector.
 - 1. Strike edge of door shall be same color as inside face of door.
 - 2. Hinged edge of door shall be same finish as outside face of door.
- C. Exterior hardwood doors and frames where varnish finish has been removed shall be built-up to match adjoining finish with stain, filler and one coat of exterior varnish. Then surfaces, including edges must be given specified number of coats of exterior varnish as detailed under "Stain and Varnish Finish".

3.10 ENAMEL FINISH

- A. Interior woodwork having an existing enameled finish must have areas where painter's finish has been removed and where spackling has been done in repairing defects in surface, built-up with undercoat. Wood surfaces shall then be given one coat of undercoat, a second coat and third coat of finish paint to match room finish. Paint shall be applied as specified under "Colors and Number of Coats".
- B. Unpainted plaster surfaces to receive an enamel finish, must receive four coats of paint. First coat of pigmented sealer, second coat of enamel undercoat, third and fourth coats of gloss or semi-gloss enamel as specified herein.
- C. Previously painted interior surfaces must have patching and places where painted finish has been removed, built up with one coat of a pigmented sealer. Then entire surface including patching shall be given one coat of an enamel undercoat, a second and third coat of gloss or semi-gloss enamel as specified herein.

3.11 INTERIOR PLASTER AND DRYWALL WORK - WALLS AND CEILINGS

- A. Where ceilings are specified to be painted, beams, cornices, coves, ornamental features, staff work, plaster grilles, etcetera shall be included.
- B. Ceilings shall be white, unless otherwise noted. Includes classrooms, storage rooms, offices, arcades, etcetera. Boiler room and fan room ceiling color shall match adjacent walls.

- C. Where walls are specified to be painted, columns, staff work, piers, returns, reveals, soffits of stairs, both sides of stair railings, soffits and reveals of windows and other openings shall be included.
- D. Grease, ink spots and marks of indelible pencils shall be completely removed by use of water and abrasive soap powder without injury to finished surface.
- E. First coat may be thinned per paint manufacturer's recommendation with a thinner prepared specifically for material used. Coats shall be flowed on freely. First coat must be prepared so as to stop suction, and should any dead spots appear, they shall be touched up before next coat is applied. The last coat shall be a uniform surface, free of defects.

3.12 PAINTED METAL

- A. Exposed structural steel, miscellaneous/ornamental iron, sheet metal work, guards, steel sash, gates, painted aluminum, basketball rims, etcetera shall have surfaces cleaned and prepared as specified. The areas from which original painter's finish has been removed shall be spot primed with metal primer to match adjoining surfaces and then surfaces shall be given a prime coat of metal primer, second and third coats as specified. Copper pipe shall be painted with one coat of enamel undercoat per manufacturer's recommendation, a second and third coat of enamel as specified.
- B. Painted ornamental iron rails and gates, metal ceilings (metal decking, etcetera) stairs, pipe columns, and pipe rails shall be prepared and finished as specified herein. Metal decking and metal roll-up doors may be sprayed.
- C. Exterior surfaces (except bottom) of exterior metal storage containers, including both sides of door(s) and edges shall be prepared, and painted with three coats of paint consisting of first coat of primer, second coat and third coat of exterior high gloss enamel. Exterior metal storage container(s) must be sprayed.

3.13 METAL COVERED DOORS, RADIATORS

- A. Metal Covered Doors: Bare metal must be primed with a metal primer. Doors and edges shall then be painted with one coat of enamel undercoat, a second coat and third coat of exterior gloss enamel as specified.
- B. Fly screens and hardware cloth of copper, bronze or galvanized wire must be painted with one coat of exterior enamel.
- C. Radiator guards must be removed, painted with three coats of enamel to match adjoining surface and replaced after radiators have been painted.

3.14 METAL SURFACES

- A. Clean by wire-brushing and sanding to remove foreign debris, loose paint, rust, etcetera. After removing loose paint, feather-edge sand surrounding areas of existing finish. Remove dust.
- B. Exterior bare metal surfaces shall be primed with a metal primer then painted with a first coat of enamel undercoat, then a second coat and third coat of exterior gloss enamel.
- C. Hardware having a painted finish shall have paint removed. Doors closers shall be finished with a leather brown or aluminum paint. Aluminum paint shall be applied in sanitary areas such as cafeterias, dining rooms and toilet rooms. Leather brown (N-2501) paint shall be used in other areas.

3.15 HARDWARE AND AUTOMATIC DOOR CLOSERS

- A. Hardware having a painted finish must have paint removed. Doors closers must be finished with a leather brown or aluminum paint. Aluminum paint shall be applied in sanitary areas such as cafeterias, dining rooms, toilet rooms. Leather brown (N-2501) paint shall be used in other areas. Where both sides of doors are specified to be painted, door closers shall be included.

3.16 CLEANING

- A. Glass, polycarbonate and fiberglass on interior and exterior where painting has been done shall be cleaned of paint and varnish. Glass, fiberglass and polycarbonate that are scratched or damaged by painting work, shall be replaced with material to match original.
- B. Finished bronze, copper, brass fittings, plated work, name plate and fusible links and chains shall be cleaned of paint.
- C. Before applying finish coat of material to exterior sash with security grilles, CONTRACTOR shall clean window panes with a cleaner.
- D. Dispose of debris, waste or unused materials, off site. Use of school dumpsters is strictly prohibited.
- E. Remove paint from hardware, including paint from previous painting.
- F. CONTRACTOR shall free sash and leave it in an easy operating condition.
- G. Glass, fiberglass and polycarbonate on exterior shall be traced neat and clean with no more than 1/16 inch overlay. Paint specks, smears or splatters shall be immediately removed and surface cleaned.
- H. Rooms, Buildings, and Campuses must be cleaned of paint debris, including dust caused by painting project to approval of Project Inspector and OAR.

3.17 POST OCCUPANCY WORK

- A. Two months after substantial completion, OAR will arrange a date and time when the CONTRACTOR must return to the site to check and free sashes that were painted so they are in proper operating condition.

END OF SECTION

SECTION 10 2813

TOILET ACCESSORIES

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Toilet accessories.
- B. Related Requirements:
 - 1. Division 01 - General Requirements.
 - 2. Section 06 1000- Rough Carpentry.

1.02 REGULATORY REQUIREMENTS

- A. Comply with CBC Chapter 11B requirements and ADAAG recommendations for accessibility.

1.03 SUBMITTALS

- A. Shop Drawings: Submit a schedule of accessories and Shop Drawings indicating installation methods and fasteners.

1.04 QUALITY ASSURANCE

- A. Coordinate related Work as required to ensure proper and adequate provision in framing of backing and wall finish for installation of accessories.

1.05 DELIVERY, STORAGE AND HANDLING

- A. Protect accessories from damage.

PART 2 - PRODUCTS

2.01 GENERAL

- A. Accessories shall be provided with necessary anchoring devices and fasteners appropriate for surfaces on which items are to be fastened.

2.02 TOILET ACCESSORIES

- A. Liquid Soap Dispenser: 20 gage stainless steel, 40-ounce. capacity, tamper-proof cap and concealed vandal-proof mounting. Continental V 444SS, ASI 0347, Bobrick B-2111, or equal. Fasten with minimum 3 - #8 x 2" long stainless steel sheet metal screws.
- B. Paper Towel Boxes: Type 304 stainless steel, satin finish. Door with tumbler lock and piano hinge. Fasten with minimum 4 - #8 x 2" long stainless steel sheet metal screws.
 - 1. Surface mounted: ASI 0245-SS, Bobrick B-263, Bradley 252, or equal.
- C. Mop and Broom Holder Rack: Provide two 24-inch long minimum, stainless steel mop and broom holder racks at each janitor room. ASI 8215-3, Bobrick B223 by 24, Bradley, or equal. Fasten with minimum 6 - #8 x 2" long stainless steel sheet metal screws.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Check openings in substrates to receive accessories. Verify openings are correctly located and sized to receive accessories, and that locations will comply with disability access requirements. Confirm that blocking, backing or support is properly located and adequate for the accessory installation.
- B. Verify spacing of plumbing fixtures and toilet partitions. Confirm spacing and locations are compatible with proposed accessory locations and will allow compliance with disability access requirements.

3.02 INSTALLATION

- A. Install toilet accessories in accordance with manufacturer's written recommendations and accessibility requirements. Fasten components firmly in place.
- B. Drill holes to correct size and application that is concealed by item with ¼ inch tolerance.
- C. Install recessed accessories into wall openings with sheet metal screws into metal frames.
- D. Install surface-mounted accessories to backing plates with machine screws, plumb, and aligned.
- E. Before Substantial Completion, deliver keys and maintenance instructions and product data to OWNER.

3.03 ADJUSTING AND CLEANUP

- A. Adjust accessories for proper operation.
- B. Remove rubbish, debris, and waste material and legally dispose of off the Project site.

3.04 PROTECTION

- A. Protect the Work of this section until Substantial Completion.

END OF SECTION

SECTION 10 4413

FIRE EXTINGUISHERS AND CABINETS

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Fire Extinguishers and Cabinets.

B. Related Requirements:

1. Division 01 - General Requirements.
2. Section 04 2200 - Concrete Unit Masonry.
3. Section 09 2900 - Gypsum Board.

1.02 SUBMITTALS

- A. Shop Drawings: Indicate materials, sizes, anchorage, and installation details.
- B. Product Data: Submit manufacturer's product literature, indicating product characteristics.
- C. Material Samples: Submit manufacturer's standard cabinet color Samples for selection by Architect.

1.03 QUALITY ASSURANCE

- A. Installer shall be manufacturer trained and certified to install the Work of this section.

1.04 DELIVERY, STORAGE AND HANDLING

- A. Deliver products in manufacturer's wrapping to protect items.
- B. Store items in a dry, enclosed area.

PART 2 - PRODUCTS

2.01 FIRE EXTINGUISHERS AND CABINETS

- A. Location: Fire extinguisher cabinets and fire extinguishers shall be installed where indicated on Drawings or as required by authorities having jurisdiction.

- B. Manufacturer: Fire extinguishers and cabinets shall be manufactured by one of the following:
1. Potter-Roemer.
 2. J. L. Industries.
 3. Larsen's Manufacturing.
 4. Modern Metal Products.
 5. Waltrous.
 6. Amerex (fire extinguishers).
 7. Equal.
- C. Fire Extinguisher Type: Provide a legally appropriate rechargeable fire extinguisher for every fire extinguisher cabinet and as otherwise indicated.
1. Classrooms, Corridors, Administration and Special Use Rooms, Cabinet mounted:
 - a. Type ABC multi-purpose dry chemical with UL rating 2A:10B:C, 5-pound size, also with red glossy polyester coated steel cylinder, pressure gage, hose, and horn. Maximum Height: 15 ¼-inch. Maximum Cylinder Diameter: 4 ½-inch.
 2. Electrical, Science Rooms, Boiler, Fan, Heating Rooms, bracket mount:
 - a. Type CO₂, carbon dioxide gas, with UL rating 5B:C. 10B:C, (5 pounds with red glossy polyester coated aluminum cylinder, hose and horn. Maximum Height, (not exceed): 17 ¾-inch. Maximum Cylinder Diameter, (not to exceed): 5 ¼-inch.
- D. Fire Extinguisher Requirements:
1. Design Specification:
 - a. Finish: Corrosion and impact resistant red epoxy.
 - b. Valve Stem Assembly: Metal, reusable, connects to cylinder by threaded pipefitting, aluminum or steel siphon tube, and shatter resistant plastic face gage.

- c. Gage (if applicable) to Indicate: “Recharge,” “fully charged (195 PSI),” and “over charge.”
 - d. Pull Pin: Metal, reusable and securely fastened to unit with metal, aluminum chain or very heavy plastic line approximately 4 ½-inch long.
 - e. Mechanical Operation: Pistol grip, heavy duty metal handle (plastic not permitted), and shall be operated by a grip and squeeze lever.
- 2. Manufacturer Identification/Information: Manufacturer’s name, date manufactured, model number, U.L. approval seal and number, contents operating instructions, Fire Marshall approval, etcetera shall be identified on the Fire Extinguisher.
- 3. Warning and First Aid Label: Fire extinguisher must indicate all standard warnings concerning breathing, eyes, skin and ingestion. Provide emergency and first aid procedures.
- 4. Property Identification: Label affixed at front of unit, size 2-inch by 4-inch, shall read “PROPERTY OF SIMI VALLEY UNIFIED SCHOOL DISTRICT”.
- 5. Repair Parts: The manufacturer and/or their representative shall maintain within the Ventura County an adequate stock of replacement parts, available for immediate delivery.
- 6. Warranty:
 - a. Manufacturer shall provide a five-year material warranty.
 - b. Installer shall provide a five-year installation warranty.
- 7. Material Safety Data Sheet: Provide an MSDS sheet with every shipment.
- E. Fire Extinguisher Cabinet: Potter-Roemer cabinets are listed as the standard of quality, products by other listed manufacturers are acceptable.
 - 1. Surface mounted cabinet: Provide surface mounted, square trim edge cabinet:
 - a. Potter-Roemer Fire Extinguisher Cabinet 7024:
 - 1) Door Style: either DVL (Duo Vertical Panel with lock) or E (Center Break Glass with lock), glass to be clear tempered safety glass.
 - 2) Cabinet Door and Frame: Cold rolled steel with electrostatically applied, thermally fused polyester coating with recoatable white finish.

- 3) Identification Lettering: Cabinet door to be furnished with die cut lettering indicating "FIRE EXTINGUISHERS" in contrasting color to cabinet finish, and either vertical or horizontal lettering depending upon door style.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Installation shall be in accordance with manufacturer's recommendations.
- B. Cabinets shall be installed plumb and level, where indicated on Drawings, at heights required by authorities having jurisdiction.

3.02 PROTECTION

- A. Protect the Work of this section until Substantial Completion.

3.03 CLEANUP

- A. Remove rubbish, debris, and waste materials and legally dispose of off Project site.

END OF SECTION

SECTION 22 0500

COMMON WORK RESULTS FOR PLUMBING

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Plumbing work includes the following: relocate existing plumbing fixtures, install new lavatories, piping and valves shown on the plumbing drawings and described in these specifications. In connection with this work, contractor shall also furnish and install all necessary work and hardware required to make said systems properly and safely operable, including, but not limited to, hardware and miscellaneous parts.

1.2 WORK SEQUENCE

- A. Install work in phases to accommodate District's construction requirements. Refer to Architectural and Plumbing Drawings for the construction details. Order the work of this division so that all work will proceed expeditiously. During the construction period, coordinate plumbing schedule and operations with District.

1.3 SUBMITTALS

- A. Submit on the following:
 - 1. All pipe, fittings, supports, fixtures, adhesives and sealants and equipment that are planned to be installed on this project.
- B. Proposed Products List: Include Products specified in the following Sections:
 - 1. Division 22 - Plumbing.
 - 2. Project Drawings.
- C. Equipment and materials shall be ordered only after satisfactory review by Architect and Engineer.
- D. The following statement applies to all items reviewed: "Checking is only for general conformance with the design concept of the project and general compliance with the information given in the contract documents. Any action shown is subject to the requirements of the plans and specifications. Contractor is responsible for dimensions which shall be confirmed at the job site; fabrication processes and techniques of construction; coordination of his work with that of other trades; and the satisfactory performance of his work."
- E. Maintain a complete set of the most current reviewed submittal and shop drawings on site during construction.

- F. The first submittal shall be comprehensive and complete. Partial submittals will be returned without review.

1.4 REGULATORY REQUIREMENTS

- A. Conform to 2019 California Building Code.
- B. Fire Protection: Conform to 2019 California Fire Code, and California State Fire Marshall Regulations, Title 19, Public Safety.
- C. Plumbing: Conform to 2019 California Plumbing Code.
- D. Mechanical: Conform to 2019 California Mechanical Code.
- E. Electrical: Conform to 2019 California Electrical Code.
- F. Obtain approved inspections from authority having jurisdiction.
- G. Conflicts: Where conflict or variation exists amongst Codes, the most stringent shall govern.

1.5 PROJECT / SITE CONDITIONS

- A. Install work in locations shown on drawings, unless prevented by project conditions.
- B. Prepare drawings showing proposed rearrangement of work to meet project conditions, including changes to work specified in other Sections. Obtain permission of District before proceeding.
- C. Piping Locations: Piping locations shown are diagrammatic only. Contractor shall verify locations of all lateral stubs, offsets, etc. required in the field. The actual locations of lines, cleanouts and connections may vary provided that complete systems are installed in compliance with codes.
- D. Construction Observation: In addition to the requirement for obtaining inspections by the local jurisdiction, Contractor shall notify Engineer and commissioning agent at appropriate times during the construction process so that they can visit site to become generally familiar with the progress and quality of Contractor's work and to determine if the work is proceeding in general accordance with the contract documents.
- E. Scaling of Drawings: In no case shall working dimensions be scaled from plans, sections, or details from the working drawings. If no dimension is shown on the architectural drawings, the prime Contractor shall request in writing that the Architect or the Engineer provide clarification or the specific dimension.

1.6 QUALITY ASSURANCE

- A. Qualification of Manufacturer: Products used in work shall be produced by manufacturers regularly engaged in the manufacture of similar items.
- B. Qualification of Installer: Use adequate number of skilled workmen, thoroughly trained and experienced in the necessary crafts, and completely familiar with the specified requirements contained in the plans and specifications.
- C. Drawings and specifications are intended to complement each other. Where a conflict exists between the requirements of the drawings and/or specifications, the contractor shall immediately and before commencing work, request clarification from Engineer.
- D. The Engineer shall interpret the drawings and the specifications, and the Engineer's decision as to the true intent and meaning thereof and the quality, quantity, and the sufficiency of the materials and workmanship furnished there under shall be accepted as final and conclusive.
- E. In case of conflicts not clarified prior to bidding deadline, use the most costly alternative (better quality, greater quantity, or larger size) in preparing the Bid. A clarification will be issued to the successful Bidder as soon as feasible after the Award, and if appropriate a deductive change order will be issued.
- F. All provisions shall be deemed mandatory except as expressly indicated as optional by the word "may" or "option".
- E. Examine and compare the contract drawings and specifications with the drawings and specifications of other trades. Report any discrepancies to the architect. Install and coordinate the work in cooperation with the other trades.

1.7 DEFINITIONS

- A. Finished Spaces: Spaces other than mechanical and electrical equipment rooms, furred spaces, pipe chases, unheated spaces immediately below roof, spaces above ceilings, unexcavated spaces, crawlspaces, and tunnels.
- B. Exposed, Interior Installations: Exposed to view indoors. Examples include finished occupied spaces and mechanical equipment rooms.
- C. Exposed, Exterior Installations: Exposed to view outdoors or subject to outdoor ambient temperatures and weather conditions. Examples include rooftop locations.
- D. Concealed, Interior Installations: Concealed from view and protected from physical contact by building occupants. Examples include above ceilings and in chases.

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- E. Concealed, Exterior Installations: Concealed from view and protected from weather conditions and physical contact by building occupants but subject to outdoor ambient temperatures. Examples include installations within unheated shelters.

PART 2 - PRODUCTS

2.1 PRODUCTS

- A. Maintain uniformity of manufacturer for equipment used in similar applications and sizes.
- B. Provide products and materials that are new, clean, free from defects, damage, and corrosion.
- C. Protect materials stored at site and installed from damage. Verify dimensions of equipment and fixtures prior to ordering. Install all equipment per the manufacturer's instructions for installing, connecting, and adjusting. A copy of the instructions shall be kept at the equipment during installation and provided to the engineer at his/her request.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install all equipment per the manufacturer's instructions for installing, connecting, and adjusting. A copy of the instructions shall be kept at the equipment during installation and provided to the engineer at his/her request.

END OF SECTION

SECTION 22 0510

PLUMBING PIPING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings, notes, and general provisions of the Contract, including General and Supplemental Conditions apply to this section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Pipe and fittings for domestic water, condensate drains, waste and vent.
 - 2. Escutcheons.
 - 3. Cleanouts.
 - 4. Vandal-proof vent caps.
 - 5. Supply Tubes & Angle Stops.

1.3 REFERENCES

- A. ANSI B31.9 - Building Service Piping.
- B. ASME B16.3 - Malleable Iron Threaded Fittings.
- C. ASME B16.22 - Wrought Copper and Bronze Solder-Joint Pressure Fittings.
- D. ASTM A47 - Ferritic Malleable Iron Castings.
- E. ASTM A53 - Pipe, Steel, Black and Hot-Dipped Zinc Coated, Welded and Seamless.
- F. ASTM A74 - Cast Iron Soil Pipe and Fittings.
- G. ASTM A120 - Pipe, Steel, Black and Hot-Dipped Zinc Coated (Galvanized), Welded and Seamless, for Ordinary Uses.
- H. ASTM B32 - Solder Metal.
- I. ASTM B88 - Seamless Copper Water Tube.
- J. ASTM C564 - Rubber Gaskets for Cast Iron Soil Pipe and Fittings.
- K. ASTM D1785 - Poly Vinyl Chloride (PVC) Plastic Pipe, Schedules 40, 80, and 120.

- L. ASTM D2241 - Poly Vinyl Chloride (PVC) Plastic Pipe (SDR-PR).
- M. ASTM D2466 - Poly Vinyl Chloride (PVC) Plastic Pipe Fittings, Schedule 40.
- N. ASTM D2564 - Solvent Cements for Poly Vinyl Chloride (PVC) Plastic Pipe and Fittings.
- O. ASTM D2855 - Making Solvent-Cemented Joints with Poly Vinyl Chloride (PVC) Pipe and Fittings.
- P. ASTM D3034 - Poly Vinyl Chloride (PVC) Plastic Sewer Pipe SDR-35.
- Q. CISPI 301 - Cast Iron Soil Pipe and Fittings for Hubless Cast Iron Sanitary Systems.
- R. CISPI 310 - Joints for Hubless Cast Iron Sanitary Systems.
- S. NSF – Third Party Testing for No-hub Couplings.
- T. ASTM D2513 - SDR11.5 Polyethylene Gas Pipe.
- U. ASTM D1784 – Low Extractable Polyvinyl Chloride for filtered water.
- V. ASTM D2513 – SDR11.5.

1.4 SUBMITTALS

- A. Product Data: For the following products:
 - 1. Piping and fittings.
 - 2. Escutcheons.
 - 3. Cleanouts.
 - 4. Vandal-proof vent caps.
 - 5. Supply tubes & angle stops.
- B. Project Record Documents
 - 1. Submit the following:
 - 2. Record actual locations of valves and piping.
- C. Operation and Maintenance Data
 - 1. Submit the following:
 - 2. Maintenance Data: Include installation instructions, spare parts lists, exploded assembly views.

1.5 REGULATORY REQUIREMENTS

- A. Perform Work in accordance with 2019 California Plumbing Code.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, protect and handle products to site under provisions of the general requirements.
- B. Accept valves on site in shipping containers with labeling in place. Inspect for damage.
- C. Provide temporary protective coating on cast iron and steel valves.
- D. Provide temporary end caps and closures on piping and fittings. Maintain in place until installation.
- E. Protect piping systems from entry of foreign materials by temporary covers, completing sections of the work, and isolating parts of completed system.

1.7 ENVIRONMENTAL REQUIREMENTS

- A. Do not install underground piping when bedding is wet or frozen.

PART 2 - PRODUCTS

2.1 DOMESTIC WATER PIPING, ABOVE GROUND

- A. Hard Copper Tube: ASTM B88, Type L water tube, drawn temper, US - Manufactured.
 - 1. Wrought-copper solder-joint fittings: ASME B16.22, wrought-copper pressure fittings, with lead-free solder.
 - 2. Bronze Flanges: ASME B16.24, class 150, with solder-joint ends.
 - 3. Copper Unions: MSS SP-123, cast-copper-alloy, hexagonal-stock body, with ball-and-socket, metal-to-metal seating surfaces, and solder-joint or threaded ends.
 - 4. All copper and fittings shall be made in the United States.

2.2 CONDENSATE DRAIN PIPING

- A. Hard Copper Tube: ASTM B88, type L water tube, drawn temper, US - Manufactured.
 - 1. Wrought-copper solder-joint fittings: ASME B16.22, wrought-copper pressure fittings.
 - 2. Non-lead bearing solder
 - 3. Provide cleanouts with threaded plugs every 30 feet and at changes of direction.
 - 4. Slope a minimum of 1/8" per foot to drain with no bellies in the pipe slope.

2.3 SANITARY WASTE AND VENT PIPING

A. Within the building and out 5 feet

1. Hubless cast-iron pipe and fittings: ASTM A888 or CISPI 301 of US manufacture.
2. Standard shielded couplings, stainless steel: CISPI 310, NSF-certified.
3. Heavy-duty couplings, stainless steel: ASTM C564, NSF - certified. Use four-band clamps at all rainwater piping and sanitary waste piping greater than 2".
4. All cast-iron pipe and fittings and couplings shall be manufactured in the U.S.
5. Minimum slope $\frac{1}{4}$ " per foot to drain with no bellies in piping.
6. All underground waste piping shall be in a pipe trench.

2.5 ESCUTCHEONS

A. Escutcheons for gas, condensate, water and waste, and vent piping penetrations.

1. Manufacturers: subject to compliance with requirements, provide products by the following:
 - a. Brasscraft or equal
2. Description: chrome-plated cast brass with set screws.

2.6 CLEANOUTS

A. Cleanouts for waste piping.

1. Manufacturers: subject to compliance with requirements, provide products by one of the following:
 - a. J.R. Smith
 - b. Zurn.
2. Description: cast-iron with threaded bronze plug. 18 gage stainless cover with vandal-proof screws for wall cleanout. Polished brass non-slip cover for floor cleanout. Concrete box for cleanout to grade.

2.7 VANDAL-PROOF VENT CAPS

A. Vandal-proof vent caps

1. Manufacturers: subject to compliance with requirements, provide products by one of the following:
 - a. J.R. Smith
 - b. Zurn.

2. Description: cast-iron dome secured with recessed Allen Key Set screws.

2.9 SUPPLY TUBES

A. Supply tubes:

1. Manufacturers: subject to compliance with requirements, provide products by the following:
 - a. Brasscraft Speedi Plumb Plus.
2. Description: braided stainless steel with PVC inner hose, 1/2" FIP x 3/8" COMP.
3. IAMPO Listed.
4. Lead-free.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that excavations are to required grade, dry, and not over-excavated.

3.2 PREPARATION

- A. Ream pipe and tube ends. Remove burrs.
- B. Remove scale and dirt, on inside and outside, before assembly.
- C. Prepare piping connections to equipment with flanges or unions.

3.3 INSTALLATION

- A. Install in accordance with Manufacturer's instructions.
- B. Provide non-conducting dielectric connections wherever jointing dissimilar metals.
- C. Route piping in orderly manner and maintain gradient.
- D. Install piping to conserve building space and not interfere with use of space.
- E. Group piping whenever practical at common elevations.
- F. Install piping to allow for expansion and contraction without stressing pipe, joints, or connected equipment.
- G. Provide clearance for installation of insulation and access to valves and fittings.

- H. Provide access where valves and fittings are not exposed. Coordinate size and location of access doors.
- I. Establish elevations of buried piping outside the building to ensure not less than 30 inch of cover. Exception: Localized areas may be 18" deep to accommodate existing conditions.
- J. Where pipe support members are welded to structural building framing, scrape, brush clean, and apply one coat of zinc rich primer to welding.
- K. Provide support for utility meters in accordance with requirements of utility companies.
- L. Prepare pipe, fittings, supports, and accessories not pre-finished, ready for finish painting.
- M. Test all piping per 2019 California Plumbing Code Requirements

3.4 APPLICATION

- A. Install unions downstream of valves and at equipment or apparatus connections.
- B. Install brass male adapters each side of valves in copper piped system. Sweat solder adapters to pipe.
- C. Install gate valves for shut-off and to isolate equipment, part of systems, or vertical risers.

3.5 ERECTION TOLERANCES

- A. Establish invert elevations, slopes for drainage to 1/4 inch per foot minimum. Maintain gradients.
- B. Slope water piping and arrange to drain at low points.

END OF SECTION

SECTION 220523

GENERAL-DUTY VALVES FOR PLUMBING PIPING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Bronze ball valves.
2. Bronze swing check valves.
3. Brass angle stops.
4. Hydrants.

B. Related Sections:

1. Division 22 plumbing piping Sections for specialty valves applicable to those Sections only.
2. Division 22 Section "Identification for Plumbing Piping and Equipment" for valve tags and schedules.

1.3 DEFINITIONS

- A. CWP: Cold working pressure.
- B. EPDM: Ethylene propylene copolymer rubber.
- C. NBR: Acrylonitrile-butadiene, Buna-N, or nitrile rubber.
- D. NRS: Nonrising stem.
- E. OS&Y: Outside screw and yoke.
- F. RS: Rising stem.

1.4.1 SUBMITTALS

- A. Product Data: For each type of valve indicated.

1.5 QUALITY ASSURANCE

- A. Source Limitations for Valves: Obtain each type of valve from single source from single manufacturer.
- B. ASME Compliance:
 - 1. ASME B16.10 and ASME B16.34 for ferrous valve dimensions and design criteria.
 - 2. ASME B31.1 for power piping valves.
 - 3. ASME B31.9 for building services piping valves.
- C. NSF Compliance: NSF 61 for valve materials for potable-water service.
- D. Lead-free construction per California requirements.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Prepare valves for shipping as follows:
 - 1. Protect internal parts against rust and corrosion.
 - 2. Protect threads, flange faces, grooves, and weld ends.
 - 3. Set angle, gate, and globe valves closed to prevent rattling.
 - 4. Set ball and plug valves open to minimize exposure of functional surfaces.
 - 5. Set butterfly valves closed or slightly open.
 - 6. Block check valves in either closed or open position.
- B. Use the following precautions during storage:
 - 1. Maintain valve end protection.
 - 2. Store valves indoors and maintain at higher than ambient dew point temperature. If outdoor storage is necessary, store valves off the ground in watertight enclosures.
- C. Use sling to handle large valves; rig sling to avoid damage to exposed parts. Do not use handwheels or stems as lifting or rigging points.

PART 2 - PRODUCTS

2.1 GENERAL REQUIREMENTS FOR VALVES

- A. Refer to valve schedule articles for applications of valves.
- B. Valve Pressure and Temperature Ratings: Not less than indicated and as required for system pressures and temperatures.
- C. Valve Sizes: Same as upstream piping unless otherwise indicated.
- D. Valves in Insulated Piping: With 2-inch (50-mm) stem extensions and the following features:

1. Ball Valves: With extended operating handle of non-thermal-conductive material, and protective sleeve that allows operation of valve without breaking the vapor seal or disturbing insulation.

E. Valve-End Connections:

1. Flanged: With flanges according to ASME B16.1 for iron valves.
2. Grooved: With grooves according to AWWA C606.
3. Solder Joint: With sockets according to ASME B16.18.
4. Threaded: With threads according to ASME B1.20.1.

2.2 BRONZE BALL VALVES

A. Two-Piece, Full-Port, Bronze Ball Valves with Bronze Trim:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Conbraco Industries, Inc.; Apollo Valves.
 - b. NIBCO INC. S-685-80-LF to 2”.
2. Description:
 - a. Standard: MSS SP-110.
 - b. SWP Rating: 150 psig.
 - c. CWP Rating: 600 psig.
 - d. Body Design: Two piece.
 - e. Body Material: Bronze.
 - f. Ends: Sweat.
 - g. Seats: PTFE or TFE.
 - h. Stem: Bronze.
 - i. Ball: Chrome-plated brass.
 - j. Port: Full.

2.3 BRONZE SWING CHECK VALVES

A. Class 125, Bronze Swing Check Valves with Bronze Disc:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. NIBCO INC.
 - b. Watts Regulator Co.; a division of Watts Water Technologies, Inc.
2. Description:
 - a. Standard: MSS SP-80, Type 3.

- b. CWP Rating: 200 psig.
- c. Body Design: Horizontal flow.
- d. Body Material: ASTM B 62, bronze.
- e. Ends: Threaded.
- f. Disc: Bronze.
- g. Crispin Valve.
- h. DFT Inc.

2.4 BRASS ANGLE STOPS

A. Brass angle stops, heavy pattern.

1. Subject to compliance with requirements, provide products by the following:
 - a. Brasscraft.
 - b. Chicago Faucet.
2. Description: Lead-Free, heavy pattern, angle, ½" FIP inlet x ½" compression, loose key.

2.7 HYDRANTS

A. Hydrants

1. Manufacturer: subject to compliance with requirements, provide products by the following:
 - a. J.R. Smith.
 - b. Zurn.
 - c. Nibco.
 - d. Watts.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine valve interior for cleanliness, freedom from foreign matter, and corrosion. Remove special packing materials, such as blocks, used to prevent disc movement during shipping and handling.
- B. Operate valves in positions from fully open to fully closed. Examine guides and seats made accessible by such operations.
- C. Examine threads on valve and mating pipe for form and cleanliness.
- D. Examine mating flange faces for conditions that might cause leakage. Check bolting for proper size, length, and material. Verify that gasket is of proper size, that its material composition is suitable for service, and that it is free from defects and damage.

- E. Do not attempt to repair defective valves; replace with new valves.

3.2 VALVE INSTALLATION

- A. Install valves with unions or flanges at each piece of equipment arranged to allow service, maintenance, and equipment removal without system shutdown.
- B. Locate valves for easy access and provide separate support where necessary.
- C. Install valves in horizontal piping with stem at or above center of pipe.
- D. Install valves in position to allow full stem movement.
- E. Anchor seismic valves to building per listing.

3.3 ADJUSTING

- A. Adjust or replace valve packing after piping systems have been tested and put into service but before final adjusting and balancing. Replace valves if persistent leaking occurs.

3.4 GENERAL REQUIREMENTS FOR VALVE APPLICATIONS

- A. If valve applications are not indicated, use the following:
 - 1. Domestic Water Shutoff Service: Ball valves.
 - 2. Throttling Service: Globe valves.
- B. If valves with specified SWP classes or CWP ratings are not available, the same types of valves with higher SWP classes or CWP ratings may be substituted.
- C. Select valves, except wafer types, with the following end connections:
 - 1. For Copper Tubing, 2" and Smaller: Soldered ends.
 - 2. For Copper Tubing, 2-1/2" to NPS 4". Flanged ends except where threaded valve-end option is indicated in valve schedules below.
 - 3. For Steel Piping, 2-1/2" and Smaller: Threaded ends.
 - 4. For Steel Piping, 2-1/2" TO 4". Flanged ends except where threaded valve-end option is indicated in valve schedules below.
 - 5. For Steel Piping, NPS 5 and Larger: Flanged ends.

END OF SECTION

SECTION 22 0529

HANGERS AND SUPPORTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions apply to this Section.

1.2 SUMMARY

- A. This Section includes the following hangers and supports for plumbing system piping and equipment:
 - 1. Steel pipe hangers and supports.
 - 2. Trapeze pipe hangers.
 - 3. Metal framing systems.
 - 4. Thermal-hanger shield inserts.
 - 5. Fastener systems.
 - 6. Pipe stands.
 - 7. Equipment supports.

1.3 DEFINITIONS

- A. MSS: Manufacturers Standardization Society for The Valve and Fittings Industry Inc.
- B. Terminology: As defined in MSS SP-90, "Guidelines on Terminology for Pipe Hangers and Supports."

1.4 PERFORMANCE REQUIREMENTS

- A. Equipment supports shall be capable of supporting combined operating weight of supported equipment and connected systems and components.
- B. Design seismic-restraint hangers and supports for piping and equipment per 2007 SMACNA Seismic Restraint Manual Guidelines for Mechanical Systems. Hazard level is "A."
- C. All exterior steel support components shall be hot-dipped galvanized. All welds shall be ground smooth and painted with three coats of zinc-rich paint.

1.5 SUBMITTALS

- A. Product Data: For the following:
 - 1. Steel pipe hangers and supports.
 - 2. Thermal-hanger shield inserts.

3. Mechanical fastener systems.
4. Pipe positioning systems.
5. Trapeze pipe hangers. Include Product Data for components.
6. Metal framing systems. Include Product Data for components.
7. Pipe stands. Include Product Data for components.
8. Equipment supports.

B. Welding certificates.

1.6 QUALITY ASSURANCE

A. Welding: Qualify procedures and personnel according to AWS D1.1, "Structural Welding Code--Steel." Welding: Qualify procedures and personnel according to the following:

1. AWS D1.1, "Structural Welding Code--Steel."
2. AWS D1.2, "Structural Welding Code--Aluminum."
3. AWS D1.4, "Structural Welding Code--Reinforcing Steel."
4. ASME Boiler and Pressure Vessel Code: Section IX.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers specified.

2.2 STEEL PIPE HANGERS AND SUPPORTS

A. Description: MSS SP-58, Types 1 through 58, factory-fabricated components. Refer to Part 3 "Hanger and Support Applications" Article for where to use specific hanger and support types.

B. Manufacturers:

1. B-Line Systems, Inc.; a division of Cooper Industries.
2. ERICO/Michigan Hanger Co.
3. Unistrut
4. Superstrut

C. Galvanized, Metallic Coatings: Hot dipped.

D. Padded Hangers: Hanger with fiberglass or other pipe insulation pad or cushion for support of bearing surface of piping.

2.3 TRAPEZE PIPE HANGERS

- A. Description: MSS SP-69, Type 59, shop- or field-fabricated pipe-support assembly made from structural-steel shapes with MSS SP-58 hanger rods, nuts, saddles, and U-bolts.

1. Manufacturers:

- a. B-Line Systems, Inc.; a division of Cooper Industries.
- b. Unistrut Corp.; Tyco International, Ltd.

2.4 METAL FRAMING SYSTEMS

- A. Description: MFMA-3, shop- or field-fabricated pipe-support assembly made of steel channels and other components.

B. Manufacturers:

1. B-Line Systems, Inc.; a division of Cooper Industries.
2. ERICO/Michigan Hanger Co.; ERISTRUT Div.
3. Power-Strut Div.; Tyco International, Ltd.
4. Unistrut Corp.; Tyco International, Ltd.

- C. Coatings: Manufacturer's standard finish unless bare metal surfaces are indicated. Exterior components shall be hot-dipped galvanized.

- D. Nonmetallic Coatings: Plastic coating, jacket, or liner.

2.5 THERMAL-HANGER SHIELD INSERTS

- A. Description: 100-psig- minimum, compressive-strength insulation insert encased in sheet metal shield.

- B. For Trapeze or Clamped Systems: Insert and shield shall cover entire circumference of pipe.

- C. For Clevis or Band Hangers: Insert and shield shall cover lower 180 degrees of pipe.

- D. Insert Length: Extend 2 inches beyond sheet metal shield for piping operating below ambient air temperature.

- E. Provide submittal.

2.6 FASTENER SYSTEMS

- A. Mechanical-Expansion Anchors: Insert-wedge-type zinc-coated (interior use) Type 304 stainless steel (exterior use), for use in hardened portland cement concrete with pull-out, tension, and shear capacities appropriate for supported loads and building materials where used.

- B. Anchor must have ICC report. Provide report with submittal and one copy to the inspector. See State Architect Requirements for testing.

- 1. Manufacturers:

- a. Hilti, Inc.
 - b. ITW Ramset/Red Head.
 - c. Or equal.

- C. Pre-placed concrete inserts

- 1. Manufacturers:

- a. B-Line Systems, Inc.; a division of Cooper Industries.
 - b. or equal.

2.7 PIPE STAND FABRICATION

- A. Pipe Stands, General: Shop or field-fabricated assemblies made of manufactured corrosion-resistant components to support roof-mounted piping. See plans for details.
- B. All exterior steel supports shall be hot dipped galvanized.
- C. No piping supports shall be mounted directly on roof membrane.

2.8 EQUIPMENT SUPPORTS

- A. Description: Welded, shop- or field-fabricated equipment support made from structural-steel shapes.

2.9 MISCELLANEOUS MATERIALS

- A. Structural Steel: ASTM A 36/A 36M, steel plates, shapes, and bars; black and galvanized. All exterior steel supports shall be hot dipped galvanized.
- B. Grout: ASTM C 1107, factory-mixed and -packaged, dry, hydraulic-cement, nonshrink and nonmetallic grout; suitable for interior and exterior applications.
 - 1. Properties: Nonstaining, noncorrosive, and nongaseous.
 - 2. Design Mix: 5000-psi, 28-day compressive strength.

PART 3 - EXECUTION

3.1 HANGER AND SUPPORT APPLICATIONS

- A. Specific hanger and support requirements are specified in Sections specifying piping systems and equipment.

- B. Comply with MSS SP-69 for pipe hanger selections and applications that are not specified in piping system Sections.
- C. Use hangers and supports with galvanized, metallic coatings for piping and equipment that will not have field-applied finish.
- D. Use nonmetallic coatings on attachments for electrolytic protection where attachments are in direct contact with copper tubing.
- E. Use padded hangers for piping that is subject to scratching.
- F. Horizontal-Piping Hangers and Supports: Unless otherwise indicated and except as specified in piping system Sections, install the following types:
 - 1. Adjustable, Steel Clevis Hangers (MSS Type 1): For suspension of noninsulated or insulated stationary pipes, NPS 1/2 to NPS 30 .
 - 2. Steel Pipe Clamps (MSS Type 4): For suspension of cold and hot pipes, NPS 1/2 to NPS 24, if little or no insulation is required.
 - 3. Pipe Hangers (MSS Type 5): For suspension of pipes, NPS 1/2 to NPS 4, to allow off-center closure for hanger installation before pipe erection.
 - 4. Adjustable, Swivel Split- or Solid-Ring Hangers (MSS Type 6): For suspension of noninsulated stationary pipes, NPS 3/4 to NPS 8.
 - 5. Adjustable, Steel Band Hangers (MSS Type 7): For suspension of noninsulated stationary pipes, NPS 1/2 to NPS 8.
 - 6. Adjustable Band Hangers (MSS Type 9): For suspension of noninsulated stationary pipes, NPS 1/2 to NPS 8.
 - 7. Adjustable, Swivel-Ring Band Hangers (MSS Type 10): For suspension of noninsulated stationary pipes, NPS 1/2 to NPS 2.
 - 8. Split Pipe-Ring with or without Turnbuckle-Adjustment Hangers (MSS Type 11): For suspension of noninsulated stationary pipes, NPS 3/8 to NPS 8.
- G. Vertical-Piping Clamps: Unless otherwise indicated and except as specified in piping system Sections, install the following types:
 - 1. Extension Pipe or Riser Clamps (MSS Type 8): For support of pipe risers, NPS 3/4 to NPS 20.
 - 2. Carbon- or Alloy-Steel Riser Clamps (MSS Type 42): For support of pipe risers, NPS 3/4 to NPS 20, if longer ends are required for riser clamps.
- H. Hanger-Rod Attachments: Unless otherwise indicated and except as specified in piping system Sections, install the following types:
 - 1. Swivel Turnbuckles (MSS Type 15): For use with MSS Type 11, split pipe rings.
 - 2. Malleable-Iron Sockets (MSS Type 16): For attaching hanger rods to various types of building attachments.
 - 3. Steel Weldless Eye Nuts (MSS Type 17): For 120 to 450 deg F piping installations.

- I. Building Attachments: Unless otherwise indicated and except as specified in piping system Sections, install the following types:
 - 1. Steel or Malleable Concrete Inserts (MSS Type 18): For upper attachment to suspend pipe hangers from concrete ceiling.\
 - 2. Steel bolts with nylon lock nuts and washers
 - 3. Lagscrews
 - 4. Simpson SDS Screws
- J. Saddles and Shields: Unless otherwise indicated and except as specified in piping system Sections, install the following types:
 - 1. Protection Shields (MSS Type 40): Of length recommended in writing by manufacturer to prevent crushing insulation.
 - 2. Thermal-Hanger Shield Inserts: For supporting insulated pipe.
- K. Comply with MSS SP-69 for trapeze pipe hanger selections and applications that are not specified in piping system Sections.
- L. Comply with MFMA-102 for metal framing system selections and applications that are not specified in piping system Sections.
- M. Use mechanical-expansion anchors or inserts instead of building attachments where required in concrete construction.
- N. Use pipe positioning systems in pipe spaces behind plumbing fixtures to support supply and waste piping for plumbing fixtures.

3.2 HANGER AND SUPPORT INSTALLATION

- A. Steel Pipe Hanger Installation: Comply with MSS SP-69 and MSS SP-89. Install hangers, supports, clamps, and attachments as required to properly support piping from building structure.
- B. Trapeze Pipe Hanger Installation: Comply with MSS SP-69 and MSS SP-89. Arrange for grouping of parallel runs of horizontal piping and support together on field-fabricated trapeze pipe hangers.
 - 1. Pipes of Various Sizes: Support together and space trapezes for smallest pipe size or install intermediate supports for smaller diameter pipes as specified above for individual pipe hangers.
 - 2. Field fabricate from ASTM A 36/A 36M, steel shapes selected for loads being supported. Weld steel according to AWS D1.1.
- C. Metal Framing System Installation: Arrange for grouping of parallel runs of piping and support together on field-assembled metal framing systems.

- D. Thermal-Hanger Shield Installation: Install in pipe hanger or shield for insulated piping.
- E. Fastener System Installation:
 - 1. Install concrete inserts prior to concrete placement per manufacturer's listing.
 - 2. Install mechanical-expansion anchors in concrete after concrete is placed and completely cured. Install fasteners according to manufacturer's written instructions.
- F. Install hangers and supports complete with necessary inserts, bolts, rods, nuts, washers, and other accessories.
- G. Equipment Support Installation: Fabricate from welded-structural-steel shapes.
- H. Install hangers and supports to allow controlled thermal and seismic movement of piping systems, to permit freedom of movement between pipe anchors, and to facilitate action of expansion joints, expansion loops, expansion bends, and similar units.
- I. Install lateral bracing with pipe hangers and supports to prevent swaying.
- J. Install building attachments within concrete slabs or attach to structural steel. Install additional attachments at concentrated loads, including valves, flanges, and strainers, and at changes in direction of piping. Install concrete inserts before concrete is placed; fasten inserts to forms and install reinforcing bars through openings at top of inserts.
- K. Load Distribution: Install hangers and supports so piping live and dead loads and stresses from movement will not be transmitted to connected equipment.
- L. Pipe Slopes: Install hangers and supports to provide indicated pipe slopes and so maximum pipe deflections allowed by ASME B31.9 (for building services piping) are not exceeded.
- M. Insulated Piping: Comply with the following:
 - 1. Attach clamps and spacers to piping.
 - a. Piping Operating above Ambient Air Temperature: Clamp may project through insulation.
 - b. Piping Operating below Ambient Air Temperature: Use thermal-hanger shield insert with clamp sized to match OD of insert.
 - c. Do not exceed pipe stress limits according to ASME B31.9 for building services piping.
 - 2. Install MSS SP-58, Type 39, protection saddles if insulation without vapor barrier is indicated. Fill interior voids with insulation that matches adjoining insulation.

- a. Option: Thermal-hanger shield inserts may be used. Include steel weight-distribution plate for pipe NPS 4 and larger if pipe is installed on rollers.
- 3. Shield Dimensions for Pipe: Not less than the following:
 - a. NPS 1/4 to NPS 3-1/2: 12 inches long and 0.048 inch thick.
- 4. Insert Material: Length at least as long as protective shield.
- 5. Thermal-Hanger Shields: Install with insulation same thickness as piping insulation.

3.3 EQUIPMENT SUPPORTS

- A. Provide 20 gauge sheet metal backing as needed to support equipment and fixture.

3.4 METAL FABRICATIONS

- A. Cut, drill, and fit miscellaneous metal fabrications for trapeze pipe hangers and equipment supports.
- B. Fit exposed connections together to form hairline joints. Field weld connections that cannot be shop welded because of shipping size limitations.
- C. Field Welding: Comply with AWS D1.1 procedures for shielded metal arc welding, appearance and quality of welds, and methods used in correcting welding work, and with the following:
 - 1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
 - 2. Obtain fusion without undercut or overlap.
 - 3. Remove welding flux immediately.
 - 4. Finish welds at exposed connections so no roughness shows after finishing and contours of welded surfaces match adjacent contours.

3.5 ADJUSTING & PERSONNEL PROTECTION

- A. Hanger Adjustments: Adjust hangers to distribute loads equally on attachments and to achieve indicated slope of pipe.
- B. Trim excess length of continuous-thread hanger and support rods to 1/2 inches below nut.
- C. Provide personnel protection at mechanical rooms, equipment areas and any equipment maintenance area from strut and threaded rods ends. Install soft protective materials to prevent skin and skull injuries. Install protection as soon as practicable after installation.

3.6 PAINTING

- A. Touch Up: Cleaning and touchup painting of field welds, bolted connections, and abraded areas of shop paint on miscellaneous metal are specified in Division 09
- B. Galvanized Surfaces: Clean welds, bolted connections, and abraded areas and apply galvanizing-repair paint to comply with ASTM A 780.

END OF SECTION

SECTION 22 4000

PLUMBING FIXTURES AND EQUIPMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions apply to this Section.

1.2 SUMMARY

- A. This Section includes the following plumbing fixtures, equipment, and related components:
 - 1. Grease Interceptor
 - 2. Floor Sink
 - 3. Trap Primers
 - 4. Water Heater
 - 5. Tempering Valves
 - 6. Kitchen Fixtures

1.3 DEFINITIONS

- A. ABS: Acrylonitrile-butadiene-styrene plastic.
- B. Accessible Fixture: Plumbing fixture that can be approached, entered, and used by people with disabilities.
- C. Cast Polymer: Cast-filled-polymer-plastic material. This material includes cultured-marble and solid-surface materials.
- D. Cultured Marble: Cast-filled-polymer-plastic material with surface coating.
- E. Fitting: Device that controls the flow of water into or out of the plumbing fixture. Fittings specified in this Section include supplies and stops, faucets and spouts, shower heads and tub spouts, drains and tailpieces, and traps and waste pipes. Piping and general-duty valves are included where indicated.
- F. FRP: Fiberglass-reinforced plastic.

- G. PMMA: Polymethyl methacrylate (acrylic) plastic.
- H. PVC: Polyvinyl chloride plastic.
- I. Solid Surface: Nonporous, homogeneous, cast-polymer-plastic material with heat-, impact-, scratch-, and stain-resistance qualities.

1.4 SUBMITTALS

- A. Product Data: For each type of plumbing fixture indicated. Include selected fixture and trim, fittings, accessories, appliances, appurtenances, equipment, and supports. Indicate materials and finishes, dimensions, construction details, and flow-control rates.
- B. Operation and Maintenance Data: For plumbing fixtures to include in emergency, operation, and maintenance manuals.
- C. Warranty: Special warranty specified in this Section.

1.5 QUALITY ASSURANCE

- A. Accessible Plumbing Fixture Regulatory Requirements: Accessible plumbing fixtures shall comply with all of the requirements of 2019 CBC Chapter 11B.
- B. Source Limitations: Obtain plumbing fixtures, faucets, and other components of each category through one source from a single manufacturer.
 - 1. Exception: If fixtures, faucets, or other components are not available from a single manufacturer, obtain similar products from other manufacturers specified for that category.
- C. Electrical Components, Devices, and Accessories: Listed and labeled as defined in 2019 CEC, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- D. Regulatory Requirements: Comply with requirements in ICC A117.1, "Accessible and Usable Buildings and Facilities" "Americans with Disabilities Act"; for plumbing fixtures for people with disabilities.
- E. Regulatory Requirements: Comply with requirements in Public Law 102-486, "Energy Policy Act," about water flow and consumption rates for plumbing fixtures.
- F. Select combinations of fixtures and trim, faucets, fittings, and other components that are compatible.
- G. Comply with the following applicable standards and other requirements specified for lavatory and sink faucets:
 - 1. Faucets: ASME A112.18.1.

2. Integral, Atmospheric Vacuum Breakers: ASSE 1001.
3. NSF Potable-Water Materials: NSF 61.
4. Pipe Threads: ASME B1.20.1.
5. Sensor-Actuated Faucets and Electrical Devices: UL 1951.
6. Supply Fittings: ASME A112.18.1.
7. Brass Waste Fittings: ASME A112.18.2.

H. Comply with the following applicable standards and other requirements specified for miscellaneous fittings:

1. Brass Waste Fittings: ASME A112.18.2.
2. Sensor-Operation Flushometers: ASSE 1037 and UL 1951.

I. Comply with the following applicable standards and other requirements specified for miscellaneous components:

1. Flexible Water Connectors: ASME A112.18.6.
2. Floor Drains: ASME A112.6.3.
3. Hose-Coupling Threads: ASME B1.20.7.
4. Hot-Water Dispensers: ASSE 1023 and UL 499.
5. Off-Floor Fixture Supports: ASME A112.6.1M.
6. Pipe Threads: ASME B1.20.1.
7. Plastic Toilet Seats: ANSI Z124.5.
8. Supply and Drain Protective Shielding Guards: ICC A117.1.

1.6 EXTRA MATERIALS

A. Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Faucet Cartridges and O-Rings: Provide two repair kits for each type faucet & flushometer except for the mop sink faucet.
2. Flushometer Valve, Repair Kits: Equal to 10 percent of amount of each type installed, but no fewer than 2 of each type.

PART 2 - PRODUCTS

2.1 GREASE INTERCEPTOR

A. Grease Interceptor:

1. Manufacturers: subject to compliance with requirements, provide products by the following:
 - a. JR Smith

- b. Zurn

- 2. Description: mount beneath sink, install per manufacturer's manual.

2.2 FLOOR SINKS

A. Floor Sinks:

- 1. Manufacturers: subject to compliance with requirements, provide products by the following:
 - a. J.R. Smith.
 - b. Zurn.
- 2. Description: cast iron body, nickel bronze rim, half grate with sediment bucket, and with trap primer connection.

2.3 TRAP PRIMERS

A. Trap Primers:

- 1. Manufacturers: subject to compliance with requirements, provide products by the following:
 - a. Mifab.
 - b. Precision Plumbing Products.
- 2. Description: with distribution unit and air gap. Behind J.R. Smith 4730-UNB stainless access panel.

2.4 WATER HEATER

- 1. Manufacturers: subject to compliance with requirements, provide products by the following:
 - a. American Lowboy Water Heater
 - b. Electric
 - c. Holdrite pan, mounted to the wall.
 - d. Flexible water connections

2.5 TEMPERING VALVE

A. Manufacturer – Watts Model LFN170-M3

B. Dial Thermometer

2.6 KITCHEN FIXTURES

1. Install and Connect all plumbing fixtures shown on architect and plumbing plans. Provide and install all stops, valves, connections, drains, traps, etc. for complete and functional installation

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine roughing-in of water supply and sanitary drainage and vent piping systems to verify actual locations of piping connections before plumbing fixture installation.
- B. Examine cabinets, counters, floors, and walls for suitable conditions where fixtures will be installed.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Assemble plumbing fixtures, trim, fittings, and other components according to manufacturers' written instructions.
- B. Install back-outlet, wall-mounting fixtures onto waste fitting seals and attach to supports.
- C. Install wall-mounting fixtures with tubular waste piping attached to supports.
- D. Install counter-mounting fixtures in and attached to casework.
- E. Install fixtures level and plumb according to roughing-in drawings.
- F. Install water-supply piping with stop on each supply to each fixture to be connected to water distribution piping. Attach supplies to supports or substrate within pipe spaces behind fixtures. Install stops in locations where they can be easily reached for operation.
 1. Exception: Use ball, gate, or globe valves if supply stops are not specified with fixture.
- G. Install trap and tubular waste piping on drain outlet of each fixture to be directly connected to sanitary drainage system.
- H. Install tubular waste piping on drain outlet of each fixture to be indirectly connected to drainage system.

- I. Install faucet-spout fittings with specified flow rates and patterns in faucet spouts if faucets are not available with required rates and patterns. Include adapters if required.
- J. Install water-supply flow-control fittings with specified flow rates in fixture supplies at stop valves.
- K. Install faucet flow-control fittings with specified flow rates and patterns in faucet spouts if faucets are not available with required rates and patterns. Include adapters if required.
- L. Install traps on fixture outlets.
 - 1. Exception: Omit trap on fixtures with integral traps.
- M. Install escutcheons at piping wall ceiling penetrations in exposed, finished locations and within cabinets and millwork. Use deep-pattern escutcheons if required to conceal protruding fittings.
- N. Set service basins in leveling bed of cement grout.
- O. Seal joints between fixtures and walls, floors, and countertops using sanitary-type, one-part, mildew-resistant silicone sealant. Match sealant color to fixture color.
- P. Install Temperature and Pressure Relief Valve drain to floor sink or exterior. Install union at valve to allow for replacement of valve. Install drain piping from tank to floor sink or to exterior.

3.3 CONNECTIONS

- A. Piping installation requirements are specified in other Division 22 Sections. Drawings indicate general arrangement of piping, fittings, and specialties.
- B. Connect fixtures with water supplies, stops, and risers, and with traps, soil, waste, and vent piping. Use size fittings required to match fixtures.

3.4 FIELD QUALITY CONTROL

- A. Verify that installed plumbing fixtures are categories and types specified for locations where installed.
- B. Check that plumbing fixtures are complete with trim, faucets, fittings, and other specified components.
- C. Inspect installed plumbing fixtures for damage. Replace damaged fixtures and components.

- D. Test installed fixtures after water systems are pressurized for proper operation. Replace malfunctioning fixtures and components, then retest. Repeat procedure until units operate properly.

3.5 ADJUSTING

- A. Operate and adjust faucets and controls. Replace damaged and malfunctioning fixtures, fittings, and controls.
- B. Adjust water pressure at faucets and flushometer valves to produce proper flow and stream.
- C. Replace washers and seals of leaking and dripping faucets and stops.

3.6 CLEANING

- A. Clean fixtures, faucets, and other fittings with manufacturers' recommended cleaning methods and materials. Do the following:
 - 1. Remove faucet spouts and strainers, remove sediment and debris, and reinstall strainers and spouts.
 - 2. Remove sediment and debris from drains.
- B. After completing installation of exposed, factory-finished fixtures, faucets, and fittings, inspect exposed finishes and repair damaged finishes.

3.7 PROTECTION

- A. Provide protective covering for installed fixtures and fittings.
- B. Do not allow use of plumbing fixtures for temporary facilities unless approved in writing by District.

END OF SECTION

SECTION 26 0000

GENERAL PROVISIONS

PART 1 - GENERAL

- A. The general contract provisions apply to this section and take precedent over this section in case of conflict.

1.01 GENERAL PROVISIONS

- A. This division supplements the applicable requirements of other divisions.

1.02 DEFINITIONS

- A. For the purposes of Division 260000, the following definitions apply:
 - 1. Provide: Furnish and install.
 - 2. Indicated: As shown on the drawings or specified herein.
 - 3. Circuit Designation: Panel designation and circuit number, i.e., LA-13.
 - 4. Approved equal: Approved by the engineer of record as equal in his sole determination.

1.03 SCOPE OF WORK

- A. The Specifications for Work of Division 260000 include, but are not limited to the following sections:

26 0000–General Provisions
26 0030–Tests and Identification
26 0050–Basic Electrical Materials and Methods
26 0060–Minor Electrical Demolition for Remodeling
26 0080–Technical Services Division Start-Up Service
26 0111–Conduits
26 0120–Conductors
26 0130–Electrical Boxes
26 0140–Wiring Devices
26 0142–Nameplates and Warning Signs
26 0170–Disconnects
26 0190–Support Devices
26 2450–Grounding
26 2510–Lighting Fixtures

26 4721–Fire Alarm and Detection System
26 4745–Networking & Data Communications
26 4901–General Control Devices
26 4920–Motor Control

- B. Work Included: All labor, materials, appliances, tools, equipment, facilities, transportation and services necessary for and incidental to performing all operations in connection with furnishing, delivery and installation of the work of this division, complete, as shown on the drawings and/or specified herein. Work includes, but is not necessarily limited to the following:
1. Examine all divisions for related work required to be included as work under this division.
 2. General provisions for electrical work.
 3. Site observation including existing conditions.
- C. Related Work Specified Elsewhere but included in the scope of work:
1. Motors and their installation.
 2. Control wiring and conduit for heating, ventilating and air conditioning.
- D. Work Not In Contract (N.I.C.):
1. Telephone instruments.
- E. Coordination
1. The following supplements are additional General Requirements pertaining to work of this Division. Provisions of Division 1 - General Requirements shall remain in effect.
 - a) Coordinate work of various sections of Division 26 and 27.
 - b) Coordinate work of this Division 26 with work of Divisions 2 through 25.

1.04 REFERENCE STANDARDS

- A. American National Standards Institute (ANSI).
- B. Association of Edison Illuminating Companies (AEIC).
- C. Electrical Testing Laboratories (ETL).
- D. Illuminating Engineering Society (IES).

- E. Institute of Electrical and Electronic Engineers (IEEE).
- F. Insulated Cable Engineers Association (ICEA).
- G. National Electrical Manufacturers Association (NEMA).
- H. National Fire Protection Association (NFPA).
- I. Underwriters Laboratories, Inc. (UL).
- J. California State Fire Marshal (CSFM).
- K. California Energy Commission (CEC) Title 24.

1.05 QUALITY ASSURANCE

- A. Regulations: All the electrical equipment and materials, including their installations, shall conform to the following applicable latest codes and standards:
 - 1. California Electric Code, Latest Adopted Edition (NEC), 2014 unless a more current version has been adopted.
 - 2. Local and State Fire Marshal.
 - 3. Occupational Safety and Health Act (OSHA).
 - 4. Requirements of the Serving Utility Company.
 - 5. Local Codes and Ordinances.
 - 6. Requirements of the Office of the California State Architect (OSA).
 - 7. California Administrative Code, Title 8, Chapter 4, Industrial Safety Orders.
 - 8. California Administrative Code, Title 24.
 - 9. County of Ventura Codes and Regulations.
- B. Variances: In instances where two or more codes are at variance, the most restrictive requirement shall apply. In instances where plans and specifications are at variance or conflict the most restrictive requirement shall apply. Contractor shall be responsible for all his associated work and materials and also the work and materials of related or affected trades.
- C. Contractor's Expense: Obtain and pay for all required bonds, insurance, licenses, and pay for all taxes, fees and utility charges required for the electrical work.
- D. Testing and Adjustment:

1. Perform all necessary tests required to ascertain that the electrical system has been properly installed, that the power supply to each item of equipment is correct, and that the system is free of grounds, ground faults, and open circuits, that all motors are rotating in the proper directions, and such other tests and adjustments as may be required for the proper completion and operation of the electrical system. Contractor shall provide a copy of all test reports to prove these tests have been performed.
2. If, during the course of testing, it is found that system imbalance is in excess of 20%, rearrange single-pole branch circuit in lighting and receptacle panels to bring system balance to within 20% on all phases. Record all such changes on the typewritten panelboard schedule and submit a summary of changes to the Engineer on the record drawings.

1.06 SUBMITTALS

- A. Procedure: In accord with the Submittal Section.
- B. Shop drawings: Detailed shop drawings for the following equipment:
 1. Distribution panelboards.
 2. Branch circuit panelboards.
 3. Circuit breaker.
 4. Cable trays and accessories.
 5. Switchboards.
 6. Ground fault protection.
 7. Fire alarm system.
 8. Motor control centers.
 9. Contactors and cabinet.
 10. Low voltage cabling riser diagram
- C. Product data: Detailed manufacturer's data for:
 1. Cable tray.
 2. Cabinets.
 3. Concrete pull boxes.

4. Disconnects.
 5. Individually mounted circuit breakers.
 6. Transformers.
 7. Lighting fixtures and associated equipment including control.
 8. Electric door strikes.
 9. Audio systems.
- D. Test results for the following:
1. Fire alarm system.
 2. Circuit breakers.
 3. Grounding systems.
 4. Cables.
- E. Include sufficient information to indicate complete compliance with Contract Documents. Include illustrations, catalog cuts, installation instructions, drawings, and certifications. On each sheet show manufacturer's name or trademark.
- F. Operating, maintenance, and instruction data for:
1. Switchboards.
 2. Ground fault protection.
 3. Alarm and detection.
 4. Audio equipment.
- G. Instruction materials:
1. Provide at the time of personnel instruction period three bound copies of instruction manuals for the systems as listed in Subparagraph 1.04.A.4.f.
 2. Include the following (minimum) information in each copy of instruction manual:
 - a) Manufacturers' names and addresses including phone numbers.
 - b) Serial numbers of items furnished.

- c) Catalog cuts, exploded views and brochures, complete with technical and performance data for all equipment, marked to indicate actual items furnished and intended use.
- d) Recommended spare parts.

1.07 **OWNER'S PERSONNEL INSTRUCTIONS**

Commented [C1]:

- A. Prior to completion of the contract, and at the Owner's convenience, instruct verbally and demonstrate to the Owner's personnel, the operation of the systems as listed under operating, maintenance, and instructional data and/or emergency generator, automatic transfer switch and fire alarm annunciator panel.

1.08 **CLEANING**

- A. Clean exterior surfaces and interiors of equipment and remove all dirt, cement, plaster and other debris. Protect interior of equipment from dirt during construction and clean thoroughly before energizing.
- B. Clean out cracks, corners and surfaces on equipment to be painted. Remove grease and oil spots so that paint may be applied without further preparation.

1.09 **PROJECT RECORD DOCUMENTS - Prepare the following and submit to the engineer before final acceptance:**

- A. Mark Project Record Documents daily to indicate all changes made in the field.
 - 1. In addition to general requirements of Project Record Drawings, indicate on drawings, changes of equipment locations and ratings, trip sizes, and settings on circuit breakers, alterations in raceway runs and sizes, changes in wire sizes, circuit designations, installation details, one-line diagrams, control diagrams and schedules.
- B. Use green to indicate deletions and red to indicate additions.
 - 1. Use the same symbols and follow the same drafting procedures used on the Contract Drawings.
- C. Locate dimensionally off of contract drawings all underground conduit stubbed-out for future use, underground feeder conduits, and feeder pull box locations using building lines by indicating on the Project Record Drawings.
- D. At the completion of underground conduit installation provide underground conduit record documents to owner's representative.
- E. Two copies, in binder form, of all test results as required by these specifications - 260030.

- F. Two copies of local and/or state code enforcing authorities final inspection certificates.
 - G. Two copies, in binder form, of electrical equipment cut sheets, manufacturer's installation instructions, warranty certificates, and product literature for all products utilized on project.
- 1.10 SERVICE INTERRUPTIONS AND UTILITY
- A. Coordinate with the Owner the interruption of services necessary to accomplish the work.
 - B. Coordinate with the utility company all work associated with power and communications distribution systems and service entrance equipment.
 - C. Electrical contractor shall supply temporary power for all trades.
- 1.11 MINIMUM SPECIFICATION REQUIREMENTS (ALL WORK OF DIVISION 260000)
- A. As a minimum Specification requirement, all materials and methods shall comply with applicable governing codes.
- 1.12 PENETRATION SEALING
- A. Seal penetration through exterior walls and fire rated walls, floors, ceilings, and roofs with 3M Firestopping materials of fire rating capacity rated per architectural plans and UBC or prevailing building code requirements.
- 1.13 PLACING EQUIPMENT IN SERVICE
- A. Do not energize or place electrical equipment in service until all interested parties have been duly notified and are present or have waived their rights to be present. Where equipment to be placed in service involves service or connection from another contractor of the owner, notify the owner in writing when the equipment will be ready for final testing/connection and schedule to the owner's satisfaction of this service connection. Notify the owner two weeks in advance of the date the various items of equipment will be complete.
- 1.14 OWNER-FURNISHED ITEMS
- A. Pick up Owner-furnished items and handle, deliver, install, and make all final connections.
 - 1. Assume responsibility for the items when consigned at the storage facility or in the field in accord with requirements of the Contract Documents.

1.15 ELECTRIC ITEM LOCATION

- A. Electrical drawings are generally diagrammatic. Verify equipment sizes with shop drawings and manufacturers' data and coordinate location layout with other trades. Notify owner and engineer of any changes of location requirements prior to installation and obtain engineer's written acceptance for all changes/revisions.

1.16 DEMOLITION

- A. Scope: Provide and perform demolition, preparatory and miscellaneous work as indicated and specified, complete.
- B. Principle Items of Work:
 - 1. Demolition and removal of existing electrical conduit, wiring and equipment required to complete the project.
 - 2. Preparation of the existing building to receive or connect the new work.
 - 3. Miscellaneous demolition, cutting, alteration, and repair work in and around the existing building necessary for the completion of the entire project.
 - 4. Disconnecting and reconnection of electrical equipment as required by the construction modifications.
- C. Existing Conditions: Make a detailed survey of the existing conditions pertaining to the work. Check the locations of all existing structures, equipment and wiring (branch circuiting and controls). Provide at bid time any exclusions for existing conditions work.
- D. Salvage and Disposal: All removed material other than items to be reused shall be returned to the owner or disposed of in accordance with instructions from the owner's representative. Disposal shall be done in accordance with EPA and governing body requirements and regulations. Contractor shall pay all fees and charges for disposal.

1.17 ELECTRICAL WORKMANSHIP REQUIREMENTS

- A. It is required that all electrical construction of this Contract be performed by journeyman electricians. All journeyman electricians shall have a minimum of 4 years of apprenticeship training and hold a valid Certificate of Completion from an apprenticeship training course approved by the State of California Department of Industrial Relations, Division of Apprenticeship Standards. This is intended to mean that a person who does not hold a valid Certificate of Completion from an apprenticeship training course approved by the State of California Department of Industrial Relations, Division of Apprenticeship Standards will not be permitted to do electrical work of any kind that involves new construction, nor make repairs,

alterations, additions, or changes of any kind to any existing system of electrical wiring, apparatus, equipment, light, heat, or power.

- B. Contractor may employ electrical helpers or apprentices on any job of electrical construction, new or existing, when the work of such helpers or apprentices is performed under direct and constant personal supervision of a journeyman electrician holding a valid Certificate of Completion from an apprenticeship training course approved by the State of California Department of Industrial Relations, Division of Apprenticeship Standards.
 - 1. Each journeyman electrician will be permitted to be responsible for quality of workmanship for a maximum of eight helpers or apprentices during any same time period, provided the nature of work is such that good supervision can be maintained and quality of workmanship achieved is the best, as expected by Owner and as implied by the latest edition of the California Electrical Code (National Electrical Code with State of California amendments).
 - 2. Before each journeyman electrician commences work, deliver to Owner at project site a photocopy of journeyman's valid Certificate of Completion from an apprenticeship training course approved by the State of California Department of Industrial Relations, Division of Apprenticeship Standards.
- C. All electrical systems shall be installed in a neat and workmanlike manner per National Electrical Code requirements and ANSI approved NEIS National Electrical Installation Standards.

1.18 DESIGN CHANGES AFTER AWARD OF BID

- A. When a change in the quantity or size of conductors is made, the conduit size will remain in accordance with that indicated in the original contract drawings rather than the drawing symbol conduit table. When code permits, provide conductor insulation 'THWN' where required to maintain conduit fill conformance with the National Electrical Code.

1.19 MATERIAL AND EQUIPMENT SUBSTITUTION

- A. Where two or more trade names or manufacturers are mentioned, selection shall be made from the group listed for use in the base bid. The order in which names are listed is not intended to be any indication of preference.
- B. Where a single manufacturer, product or trade name is stated, that manufacturer, product or trade name shall be used in the base bid. The use of other manufacturers, products or trade names will be considered by the engineer of record (unless that product is indicated for no substitution) only if submitted as alternate items at the time of bidding, with evidence of equality and a statement of net price difference as compared to the specified item. After approval by the engineer of record, the architect

and owner reserve the right to review such submittals and to determine the acceptability for use.

- C. Equipment other than that specified will be accepted only when written approval is given by the engineer of record and architect, in accordance with Division 1.
- D. The contractor shall be held responsible for all physical changes in piping, equipment, etc. resulting from equipment substitution and likewise bear any increased cost of other trades in making said substitution. Approval by the architect of equipment other than that specified does not relieve this contractor of this responsibility.

1.20 REQUESTS FOR INFORMATION

- A. The contractor shall submit all requests for information (RFI's) typewritten on the attached form.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION

SECTION 26 0030

TESTS AND IDENTIFICATION

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Tests and identification.

1.02 SUBMITTALS

- A. In accord with Section 260000.
- B. All test values.

1.03 DEFINITION

- A. Circuit designation: This term is construed to mean panel designation and circuit number; i.e., LA-13.

1.04 TESTS AND ADJUSTMENTS

- A. Prior to energizing, test all systems. Test to ensure systems are:
 - 1. Free from short circuits and grounds.
 - 2. Free from mechanical and electrical defects.
- B. Circuit breakers (main and feeder circuits that are adjustable only): Testing and adjustments of circuit breakers shall be made by Owner-approved independent testing firm. Testing firm shall meet the criteria for full membership of the International Electrical Testing Association (NETA).
 - 1. Visual and mechanical inspection:
 - a) Compare nameplate data with Drawings and Specifications.
 - b) Inspect circuit breaker for correct mounting.
 - c) Operate circuit breakers to ensure smooth operation.
 - d) Inspect case for cracks or other defects.
 - e) Verify tightness of accessible bolted connections and/or cable connections by calibrated torque-wrench method in accord with manufacturer's published data.

- f) Inspect mechanism contacts and arc chutes in unsealed units.
2. Electrical tests:
- a) Perform a contact-resistance test.
 - b) Perform an insulation-resistance test at 1000 volts dc from pole-to-pole and from each pole-to-ground with breaker closed and across open contacts of each phase.
 - c) Perform adjustments for final settings in accord with coordination study supplied by Owner.
 - d) Perform long-time delay time-current characteristic tests by passing 300% rated current through each pole separately with ground fault functions defeated.
 - e) Determine short-time pickup and delay by primary current injection.
 - f) Determine ground-fault pickup and time delay by primary current injection. This test shall be done after short time and instantaneous testing are complete.
 - g) Determine instantaneous pickup current by primary injection using run-up or pulse method.
 - h) Verify correct operation of any auxiliary features such as trip and pickup indicators, zone interlocking, electrical close and trip operation, trip-free, and anti-pump function.
3. Test values:
- a) Record all test values “as-found” and “as-left” conditions and provide certified copies to Owner.
 - b) Compare microhm or millivolt drop values to adjacent poles and similar breakers. Investigate deviations of more than 25%. Investigate any value exceeding manufacturer’s recommendations.
 - c) Insulation resistance shall not be less than 100 megohms.
 - d) Trip characteristic of breakers shall fall within manufacturer’s published time-current characteristic tolerance band, including adjustment factors. Circuit breakers not within tolerance band shall be tagged defective.

- C. Adjust all installation and equipment for their intended use and rating as defined in manufacturer's specifications and test procedures.
 - 1. Contractor recognizes and understands that the show and character lighting, electronic control equipment, special effects, etc., must have a minimum 4-week adjustment period, occurring after installation and verification of said equipment, for each area or facility. Contractor shall provide appropriate personnel (i.e., electricians, carpenters, laborers) as necessary to support Owner during this adjustment period. Adjustment is defined as orientation of adjustable lighting fixtures, installation of color filters to any lighting fixtures requiring same, location adjustment 6 ft., control system setting including programming of control functions, system debugging (i.e., cross-wiring). Contractor shall assume day and night activities during the adjustment period.
- D. Adjust transformer taps under full load operating conditions, to provide nominal operating voltages at the loads.
- E. Hi-Pot test procedures:
 - 1. Test 25 pair, 10 pair, or 4 pair, multi-conductor cables installed in conduit, in the following manner and in presence of Owner:
 - a) Special Owner-furnished equipment: Hi-Pot Cable Tester & Adapters Model 500.
 - b) Perform visual inspection to verify:
 - 1) Proper cable identification tags are installed.
 - 2) Connector is installed properly and screws and clamps properly tightened.
 - 3) Elco connector is keyed correctly.
 - c) Continuity and Hi-Pot:
 - 1) Using the Hi-Pot cable tester and all necessary adapters:
 - (a) Set tester on 1500 VDC, S.C. (short continuity), 50 pos.
 - (b) Hook up cable to "Y" adapter if testing a cable in a conduit or tray.
 - (c) Attach turnaround Elco test plug to opposite end of cable to be tested.

- (d) Attach ground lead of tester to center metal hold-down screw of Elco connector.
 - (e) Push reset button until tester dial points to zero. Release reset button.
 - (f) Press start button. Tester will step through all pairs and stop at bottom half of dial. This is because when using the turn-around plug, tester is checking 2-pair runs.
- d) Error indication:
 - 1) No-error dial will make 1/2 revolution and stop. Press reset button. Tester will step to top position.
 - 2) Fault lights "short" or "open" dial will stop at a pin location indicated on face plate of dial. See chart on side of unit to give correct pin assignments. Press start buttons. Tester will step on through. If another "short" or "open" is found, tester will halt again.
- e) Fault correction:
 - 1) When a fault is indicated, remove both connector shells of cable under test and check indicated pins.
 - 2) Repair fault using procedure steps as specified in Section 16121, paragraph "Repairing damaged pin-wire assembly."
- f) Marking of accepted cable:
 - 1) Record acceptance of all cables on inspection copy of cable schedule provided by Owner's representative, and submit in accord with Section 260010.
 - 2) Place inspection stamp of Owner or dot sticker with initials on either white cable tag indicating cable assembly, or on connector shell.

F. Ground systems:

- 1. Visual and mechanical inspection: Verify ground system is in compliance with Drawings and Specifications.
- 2. Electrical tests:
 - a) Perform fall-of-potential test or alternative in accord with IEEE 81 on the main ground electrode or system.

- b) Perform point-to-point tests to determine resistance between main ground system and all major electrical equipment frames, system neutral, and/or derived neutral points.
 3. Test values:
 - a) Resistance between main ground electrode and ground shall be no greater than 10 ohms. Additional rods shall be installed and bonded to grounding system and driven to a depth of 50 ft. or refusal, whichever comes first.
 - b) Investigate point-to-point resistance values which exceed 0.5 ohm.
 - c) Record all test values and provide certified copies to Owner.

G. Cables:

1. Make insulation resistance tests on all power cables, using a self-contained instrument such as the direct-indicating ohmmeter of the generator type, or “megger” such as manufactured by J.G. Biddle Company, or Owner-approved equivalent. Insulation resistance values shall be at least 75% of shop test records.
 - a) Apply the following test voltages for 1 minute, except where specified otherwise herein, in accord with procedure recommended by manufacturer of test equipment and as specified herein.

Minimum Rated Circuit Voltage	Megger Voltage (DC)	Megger Reading
600 volts	500 volts	600 kilohms
1000 volts	500 volts	1 megohm
15,000 volts	1000 volts	15 megohms

2. Record all test values and provide certified copies to Owner.
3. Replace cables not meeting specified resistance values.

H. Miscellaneous tests:

1. Wiring: check all control circuits for continuity and conformance with wiring diagrams furnished by Owner and manufacturers.
2. Polarity tests: Make continuity and polarity tests on all current and potential transformers to determine whether polarity is as indicated on drawings, and the circuit is continuous.

3. Phasing tests: Identify phases of all switchgear and power cables by stenciling switchgear and tagging cables with approved tags, so that phases can be identified for connecting to proper phase sequence.

1.05 LABELING AND IDENTIFICATION

- A. Provide engraved plastic nameplates on all electrical distribution equipment shown on single-line diagram, and on control panels, dimmer panels, terminal cabinets, and separately mounted circuit breakers, disconnects, and starters.
- B. Provide equipment and circuit designation on nameplates with minimum letter and plate sizes as indicated.
- C. Provide engraved plastic nameplates with 1/4 in. minimum height letters indicating:
 1. Circuit designation at branch overcurrent devices in distribution panelboards, switchboards, and motor control centers.
 2. Circuit designation of panel, equipment-controlled or device-controlled on disconnect switches and on circuit breakers, starters, and controls which are individually enclosed.
 3. Voltage rating and circuit designation of all outlets larger than 120V, 20A rating and more than 2 poles.
 4. Designation of control and terminal cabinets including CUTC, as indicated.
 5. Designation of each contactor and relay in control cabinets.
 6. Designate area controlled for each dimmer in dimmer cabinet or rack.
 7. Circuit designation at all ground fault detectors and ground fault test receptacles.
 8. Equipment designation on front of switchboards, distribution panelboards, branch circuit panelboards, and load centers.
- D. Secure nameplates with at least two rivets. Cementing and adhesive installation is not acceptable.
- E. Provide two copies of a typewritten directory for each branch circuit panelboard, showing each circuit and its use. Attach one copy to panelboard door and deliver the other copy to Owner.
- F. Provide caution label on branch circuit panelboards with integral control compartments. Caution label shall be red with white letters reading "CAUTION, EXTERNAL CONTROL VOLTAGE CIRCUIT WITHIN THIS PANEL."

G. Conductor identification:

1. Feeders: Identify with the corresponding circuit designation at over-current device and load ends, at all splices, and in pull boxes.
2. Branch circuits: Identify with corresponding circuit designation at overcurrent device and at all splices.
3. Control wires: Identify with indicated number and or letter designation at all terminal points and connections, including manufacturer pre-wired control sections and cabinets.
4. Alarm and detection wires: Identify with indicated wire and mnemonics numbers at all connections, terminal points, and coiled conductors within cabinets for future termination by Owner.
5. For identification of conductors, use heat shrinkable white marking sleeves such as Brady Permasleeve with type written identification.

END OF SECTION

SECTION 26 0060

MINOR ELECTRICAL DEMOLITION FOR REMODELING

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Electrical demolition.

PART 2 - PRODUCTS

2.01 MATERIALS AND EQUIPMENT

- A. Materials and equipment for patching and extending work: As specified in individual Sections.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify field measurements and circuiting arrangements are as shown on Drawings.
- B. Verify that abandoned wiring and equipment serve only abandoned facilities.
- C. Demolition Drawings are based on casual field observation and existing record documents. Report discrepancies to Owner and Architect/Engineer before disturbing existing installation.
- D. Beginning of demolition means installer accepts existing conditions.

3.02 PREPARATION

- A. Disconnect and make safe all electrical systems in walls, floors, and ceilings scheduled for removal.
- B. Coordinate utility service outages with Utility Company and Owner's representative.
- C. Provide temporary wiring and connections to maintain required existing systems in service during construction. When work must be performed on energized equipment or circuits, use personnel experienced in such operations.

- D. Existing Electrical Service: Maintain existing system in service until new system is complete and ready for service. Disable system only to make switchovers and connections. Obtain permission from Owner at least 72 hours before partially or completely disabling system. Minimize outage duration. Make temporary connections to maintain service in areas adjacent to work area when outage affects business operation.
- E. Existing Fire Alarm System: Maintain existing system in service until new system is accepted. Disable system only to make switchovers and connections. Notify Owner and local fire service at least 72 hours before partially or completely disabling system. Minimize outage duration. Make temporary connections to maintain service in areas adjacent to work area.
- F. Existing Telephone System: Maintain existing system in service until new system is complete and ready for service and new system is accepted. Disable system only to make switchovers and connections. Notify Owner and Telephone Utility Company at least 72 hours before partially or completely disabling system. Minimize outage duration. Make temporary connections to maintain service in areas adjacent to work area.
- G. Existing Security System: Maintain existing system in service until new system is complete and ready for service and new system is accepted. Disable system only to make switchovers and connections. Obtain permission from the Owner and security company at least 72 hours before partially or completely disabling system. Minimize outage duration. Make temporary connections to maintain service in areas adjacent to work area.

3.03 DEMOLITION AND EXTENSION OF EXISTING ELECTRICAL WORK

- A. Demolish and extend existing electrical work under provisions of this Section.
- B. Remove, relocate, and extend existing installations to accommodate new construction.
- C. Remove abandoned wiring to source of supply and re-label devices as spares.
- D. Remove exposed abandoned conduit, including abandoned conduit above accessible ceiling finishes. Cut conduit flush with walls and floors, and patch surfaces.
- E. Disconnect abandoned outlets and remove devices. Remove abandoned outlets if conduit servicing them is abandoned and removed. Provide blank cover for abandoned outlets which are not removed.
- F. Disconnect and remove abandoned panelboards and distribution equipment.
- G. Disconnect and remove electrical devices and equipment serving utilization equipment that has been removed.

- H. Disconnect and remove abandoned luminaires. Remove brackets, stems, hangers, and other accessories.
- I. Disconnect and remove abandoned conduit.
- J. Repair adjacent construction and finishes damaged during demolition and extension work.
- K. Maintain access to existing electrical installations which remain active. Modify installation or provide access panel as appropriate.
- L. Extend existing installations using materials and methods compatible with existing electrical installations, and in compliance with new project specifications.
- M. Modify existing as-built drawings to note changes.

3.04 CLEANING AND REPAIR

- A. Clean and repair existing materials and equipment which remain or are to be reused.
- B. Panelboards: Clean exposed surfaces and check tightness of electrical connections. Replace damaged circuit breakers and provide closure plates for vacant positions. Provide typed circuit directory showing revised circuiting arrangement.
- C. Luminaires: Remove existing luminaires for cleaning. Use mild detergent to clean all exterior and interior surfaces; rinse with clean water and wipe dry. Replace lamps, ballasts, and broken electrical parts.

3.05 INSTALLATION

- A. Install relocated materials and as required by this section and Owner's representative.

END OF SECTION

SECTION 26 0111

CONDUITS

PART 1 - GENERAL

- A. The general provisions apply to this section.

1.1 WORK INCLUDED

- A. Conduits; including:
 - 1. Rigid steel conduit.
 - 2. Intermediate metal conduit (IMC).
 - 3. Electrical metallic tubing (EMT).
 - 4. Rigid aluminum conduit.
 - 5. Polyvinyl chloride conduit (PVC).
 - 6. Flexible metal conduit.
 - 7. Liquid-tight flexible metal conduit.

1.2 DEFINITION

- A. Conduit: This term shall be construed to mean conduit and conduit fittings; and tubing and tubing fittings.

1.3 RELATED WORK SPECIFIED ELSEWHERE

- B. Support material: Section 260190.

PART 2 - PRODUCTS

2.1 MATERIAL AND FABRICATION - ALL MATERIALS SHALL BE MANUFACTURED IN THE USA.

- A. Rigid Steel Conduit: Hot-dipped galvanized or sherardized including the threads, manufactured in accordance with ANSI C80.1 and UL6.
 - 1. Threaded, hot-dipped galvanized or sherardized fittings manufactured in accordance with ANSI C80.4.
- B. Intermediate Metal Conduit: Hot-dipped galvanized including the threads, manufactured in accordance with UL 1242.
- C. Electrical Metallic Tubing: Manufactured in accordance with ANSI C80.3 and UL 797.
 - 1. Provide compression fittings in walls, ceiling spaces or exposed construction areas.
 - 2. Provide compression (water tight) fittings in damp areas or areas exposed to weather.
- D. Rigid Aluminum Conduit: Manufactured in accordance with ANSI C80.5.
 - 1. Threaded fittings, manufactured in accordance with ANSI C80.4.
- E. Polyvinyl Chloride Conduit: Schedule 40 and schedule 80, manufactured in accordance with ANSI C33.91, UL 651, and Nema TC-2.
 - 1. Cemented type fittings of the same manufacturer as the conduit.
- F. Polyvinyl Chloride Conduit: Type EB, heavy wall, manufactured in accordance with ANSI C33.91, UL651, and Nema TC-8.
 - 1. Cemented fittings of the same manufacturer as the conduit.
- G. Flexible Metal Conduit: Hot-dipped galvanized steel, manufacturer in accordance with UL 1.
 - 1. Squeeze type, malleable iron, cadmium plated, straight and angle connectors for all sizes and twist-in connectors for 1/2-inch and 3/4-inch flexible metal conduit.
- H. Liquid-Tight Flexible Conduit: Hot-dipped galvanized with liquid-tight vinyl jacket.
 - 1. Liquid-tight fittings.

PART 3 - EXECUTION

3.1 USE

- A. EMT for all exposed and concealed work except as indicated in Paragraphs B, C, D, E, F, and G.
- B. Rigid steel, IMC, or rigid aluminum conduit in areas where exposed conduit could be subject to physical damage or where conduit is exposed and conductor phase to ground voltage exceeds 300 volts.
- C. Rigid aluminum conduit may be used for all feeder runs exposed or concealed in stud walls and spaces above suspended ceilings.
- D. PVC Conduit:
 - 1. Schedule 40 for runs below grade in direct contact with earth.
 - 2. Schedule 40 in concrete floors, walls or roofs.
- E. Flexible Conduit (steel only permitted):
 - 1. For connection to equipment subject to vibration, maximum length 18 inches. In wet locations use liquid-tight flexible conduit.
 - 2. For connection to lighting fixtures above suspended ceilings. Lengths limited to 72 inches.
 - 3. Install ground conductors in all flexible conduits.
- F. Where 3/4-inch conduit runs are concealed in walls or ceilings and these runs are through wood studs and wood joists, flexible steel conduit may be used up to a maximum length of 6'0".
- G. All risers shall be PVC coated RGS with bushings.
- H. In concrete or below grade use conduit not smaller than 1 inch. Maximum size in concrete slab: 1 inch. Run larger sizes under slab.
- I. Use long sweep elbows with minimum radius 10 times nominal conduit diameter for all telephone and communication runs.

3.2 INSTALLATION

- A. Provide conduit support and bracing in accordance with the latest published SMACNA guidelines.
- B. Perform excavating, trenching, backfilling, and compacting as specified in Division 2.

- C. Minimum cover for runs below finished grade outside buildings: 24 inches except where noted or required by the serving utility. Minimum cover for conduit in concrete floors, walls or roof: 1/3 thickness of slab. Minimum cover under building slabs is 12-inches.
- D. Minimum separation from uninsulated hot water pipes, steam pipes, heater flues or vents: 6 inches. Avoid running conduit directly under water lines.
- E. Protect inside of conduit from dirt and rubbish during construction by capping all openings with plastic caps intended for the purpose.
- F. Provide conduit bodies for exposed conduit runs at junctions, bends or offsets where required. Do not use elbows or bends around outside corners of beams, walls or equipment. Make conduit body covers accessible.
- G. Make conduit field cuts square with saw and ream out to full size. Shoulder conduits in couplings.
- H. Run a minimum of one 3/4-inch empty conduit for every three single pole spare circuit breakers, spaces or fraction thereof and not less than two 3/4-inch conduits from every flush mounted panel to an accessible space above the ceiling and below the floor.
- I. Make conduit projections from covered areas to areas exposed to the weather watertight by proper flashing. Extend flashing a minimum of 6 inches in all directions from conduit.
- J. Where conduit is to remain empty, install polypropylene or nylon pull-line 3/16" minimum diameter from end to end with tag at each end designating opposite terminations.
- K. Run conduit parallel and at right angle to building lines, when visible in finished construction.
- L. Cap conduits indicated to be stubbed-out underground using glued-on PVC caps intended for this purpose.
- M. Install a coupling flush with the floor on all conduits stubbed up through floors on grade.
- N. Make no bends with a radius less than 12 times the diameter of the cable it contains nor more than 90 degrees. Make field bends with tools designed for conduit bending. Heating of metallic conduit to facilitate bending is not permitted.
- O. Where conduit installed in concrete or masonry extends across building construction joints, provide expansion fittings as manufactured by O.Z.; Crouse-Hinds; Appleton; or equal, with approved ground straps and clamps.

- P. Concrete Wall or Slab Penetrations: All core drilling, sleeves, blockouts or other penetrations must be approved by the Structural Engineer prior to installation.
1. Space sleeves and core drills to insure a minimum dimension of 3 times the nominal trade diameter of the largest adjacent conduit between sleeves or core drills.
 2. Use blockouts for concentrations of conduits in a confined area.
- Q. Do not penetrate walls with flexible conduit where subject to physical damage. Use recessed box with extension ring for transition from interior to exterior of wall.
- R. All homeruns shown shall be run to the panel indicated independently of all other homeruns. Provide pull points so as not to exceed total bends of 360 degrees between them unless otherwise indicated.
- S. At switchboards, manholes and floor standing distribution panelboards, provide insulated throat bushings or bell ends on all non-metallic conduit entries and bushings on all metallic conduit entries.
- T. Provide bushings on all conduit terminations sized 1" and larger.
- U. Provide weatherproof boxes and connectors for all exposed parking structure raceways and boxes.
- V. Provide bell ends on all conduits into pullboxes and manholes, seal all conduits after conductors are pulled.
- W. Cap all unused conduits with end cap. Do not tape.
- X. All Fire Alarm Conduits shall be painted red.

END OF SECTION

SECTION 26 0120

CONDUCTORS

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Conductors; for power, lighting, sound, communication and control, including conductors for general wiring, flexible cords and cables, and ground conductors.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Submittals: Section 260000.

PART 2 - PRODUCTS

2.01 MATERIAL AND FABRICATION

- A. Conductors for General Wiring: Thermoplastic insulated rated for 600V manufactured in accordance with UL 83.
 - 1. Provide 3/4 hard drawn copper conductors. Provide solid conductor for #12 AWG and smaller. Provide stranded conductors for #10 AWG and larger.
- B. Conductor Connectors for General Wiring:
 - 1. Sizes No. 14 to No. 8: Splice with insulated spring wire connectors.
 - a) Ideal No. 451, 455 and 453.
 - b) Minnesota Mining: Types Y, R, G, and B.
 - c) Buchanan No. B1, B2 and B4.
 - 2. Size No. 6 or Larger, Copper: Splice and terminate with compression or pressure type connectors and terminal lugs.
- C. Provide connector sealing packs for all area lighting and exterior box splices which require complete protection from dampness and water.
 - 1. Scotchlok No.'s 3576, 3577 and 3578, by 3M Company.

PART 3 - EXECUTION

3.01 USE

A. Conductors for General Wiring:

1. Minimum 75 degrees C temperature rated insulation on conductors, except use minimum 90 degrees C temperature rated insulation on conductors in conduits exposed on roof, or where required due to ambient temperature.
2. Stranded conductors at motors, audio video and other applications where subject to vibration.
3. Minimum size conductors for power and lighting #12 AWG, except where noted.
4. Minimum size conductors for control circuits #14 AWG stranded with THHN/THWN insulation.

B. Use flexible cords and cables for connection of special equipment as indicated. Length not to exceed 72 inches.

C. Ground Conductors:

1. Provide an insulated green ground conductor for all branch circuit wiring where indicated.
2. Bare copper conductor may be used.
 - a) Install ground conductors in all non-metallic conduits as required by code. Install ground conductors in all motor branch circuits and all feeders. Where ground conductor size is not indicated, provide size as required for an equipment ground conductor by the National Electrical Code.
 - b) Install ground conductors in all flexible metal conduits.

D. Install XHHW – 2, 90°C copper conductors for all underground installations unless noted otherwise on the plans.

E. Install for all dimmers, stranded THHN/THWN – 2 copper 90°C conductors with dedicated neutrals.

3.02 INSPECTION

A. Check conduit system for damage and loose connections, replace damaged sections.

B. Check for caps at conduit openings. Make sure that inside of conduit is free of dirt and moisture.

- C. Pull mandrel, one size smaller than the conduit, through entire length of all underground conduits prior to conductor installation.

3.03 INSTALLATION

A. Conductors for General Wiring:

1. Color code conductors insulation as follows:

CONDUCTOR	SYSTEM 208Y/120	VOLTAGE 480Y/277
Phase A	Black	Brown
Phase B	Red	Orange
Phase C	Blue	Yellow

2. For conductors #6 AWG or larger, permanent plastic colored tape may be used to mark conductor in lieu of coded insulation. Tape shall cover not less than 2 inches of conductor insulation within enclosure.
- a) Provide color tape on each end and at all terminal points and splices on wire enclosed in conduit.
- b) Provide color tape every 3 feet on wire not enclosed in a listed wireway.
3. When pulling conductors, do not exceed manufacturer's recommended values.
4. Use polypropylene or nylon ropes for pulling conductors.

B. Insulate splices with plastic electrical tape: Scotch No. 33+, Tomic No. 1T, or equal.

C. Terminate all control wires with terminal lugs on terminal boards not designed with pressure plates. If splices are needed, use same procedure, installing a terminal board in a junction box for protection.

D. All splices or connections shall be compression type Thomas & Betts or Burndy, no split bolt connections are allowed.

3.04 IDENTIFICATION

A. Feeders: Identify with the corresponding circuit designation at over-current device and load ends, at all splices and in pull boxes.

B. Branch Circuits: Identify with the corresponding circuit designation at the over-current device and at all splices and devices.

- C. Control Wires: Identify with the indicated number and/or letter designation at all terminal points and connections.
- D. Alarm and Detection Wires: Identify with the indicated wire and zone numbers at all connections, terminal points, and coiled conductors within cabinets.
- E. Conductors Terminated By Others: Indicate location of opposite end of conductor, i.e., Pull Box-Room 101.
- F. For identification of conductors, use heat shrinkable white marking sleeves such as Brady Permasleeve with type written identification.
- G. Circuit designation is construed to mean panel designation and circuit number, i.e., LA-13.

END OF SECTION

SECTION 26 0140

WIRING DEVICES

PART 1 - GENERAL

1.01 SECTION INCLUDES:

- A. Wiring devices.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Identification: Section 260030.
- B. Boxes: Section 260130.

1.03 SUBMITTALS

- A. In accord with Section 260010.

1.04 DEFINITION

- A. Wiring devices: This term includes all wall switches, pushbuttons, receptacles, and plates used for general purpose installation.

PART 2 - PRODUCTS

2.01 MATERIAL AND FABRICATION

- A. Wall switches:

Quiet toggle type, 20A – 120/277 VAC rated, with terminal screws to take up to No. 10 AWG conductors:

	SPST	DPST	3-WAY	SPST KEY SWITCH LOCK	4-WAY
Arrow-Hart	1991-I	1992-I	1993-I	1991-L	1994-I
Bryant	4901-I	4902-I	4903-I	4901-L	4904-I
General Electric	GE5951-2	GE5952-2	GE5953-2	GE5951-OL	GE5954-2
Hubbell	1221-I	1222-I	1223-I	1221-L	1224-I
Pass & Seymour/ Legrand	20AC1-I	20AC2-I	20AC3-I	20AC1-L	20AC4-I

Momentary contact type, 20A-120/277V, two-circuit, three-position, center off:

Arrow-Hart	1995-I
Bryant	4921-I
General Electric	GE5935-2
Hubbell	1557-I
Pass & Seymour/Legrand	1250-I

Passive infrared wall switch sensors: Ivory, 180° field of view, adjustable time out and ambient light, 1200 sq. ft. Coverage, 120 VAC, 60 Hz, 1500W. Maximum load, incandescent and fluorescent. As manufactured by Hubbell No. AT1201 or Owner- approved equivalent by Leviton or Pass & Seymour.

Fan speed controllers: AC unit rated 15A - 120V used to control up to twelve 56 in./52 in./48 in. ceiling fans or up to twenty 42 in. fans on a single circuit. Rinaudo's Reproductions No. 22394.

B. Passive infrared motion switching system:

1. Ceiling mount sensor, white, 500 sq. ft. coverage, requires control unit. Hubbell No. ATD500CRP.
2. Ceiling mount sensor, white, 2000 sq. ft. coverage, ceiling height dependent, requires control unit. Hubbell No. ATD2000CRP.
3. Ceiling or wall mount sensor, white, 1000 sq. ft. coverage, requires control unit. Hubbell No. ATD1000CRP.
4. Ceiling or wall mount hallway sensor, white, covers area 75 ft. long by 20 ft. wide, requires control unit. Hubbell No. PIR90HW1.
5. Low-voltage control unit, 120VAC, controls one to four sensors. Mount in 4 in. x 4in. enclosure. Hubbell No. CU120A.
6. Relay, 120VAC coil, used when load to be controlled exceeds capacity of a single circuit. Hubbell No. AAR

C. Receptacles, caps, and connectors:

1. 15A-125V, NEMA 5-15, parallel slot type with grounding pin:

	DUPLEX	SINGLE	GFI
Arrow-Hart	5252-I	5261-I	GF5242-I
Bryant	5252-I	5261-I	GFR52FT
General Electric	5252-2	5261-2	TGTR115F
Hubbell	5252-I	5251-I	GF5252-I
Pass & Seymour/Legrand	5252-I	5261-I	1591-SHG

2. 15A-250V, NEMA 6-15, straight blade grounding type:

	RECEPTACLE	CAP
Arrow-Hart	5661-I	6666
Bryant	5661-I	5666-N
General Electric	GE4069-2	GED0611
Hubbell	5661-I	5666-C
Pass & Seymour/Legrand	5662-I	5666-X

3. 15A-125V, NEMA L5-15, locking type with ground:

	RECEPTACLE	CAP	CONNECTOR
Arrow-Hart	4700	4721	4731
Bryant	4700	4721-NSY	4732-NSY
General Electric	GL4700	GLD0511	GLD0513
Hubbell	4700	4720-C	4729-C
Pass & Seymour/Legrand	4700	L515-P	L515-C

4. 20A-125V, NEMA 5-20, straight blade grounding type:

	RECEPTACLE	CAP
Arrow-Hart	5361-I	5362-I
Bryant	5361-I	5362-I
General Electric	GE4102-2	GE4108-2
Hubbell	5361-I	5362-I
Pass & Seymour/Legrand	5361-I	5362-I

5. 20A-125V, NEMA L5-20, two-pole, three-wire locking type, with ground:

	RECEPTACLE	CAP	CONNECTOR
Arrow-Hart	6200	6202	6204
Bryant	70520-FR	70520-NP	70520-NC
General Electric	GL0520	GLD0521	GLD0523
Hubbell	2310-A	2311	2313
Pass & Seymour/Legrand	L520-R	L520-P	L520-C

6. 20A-125V, NEMA 5-20, two-pole, three-wire, straight blade isolated grounding type receptacle:

	DUPLEX	SINGLE
Arrow-Hart	IG5362	IG5361
Bryant	5362-IG	5361-IG
General Electric	GE8300-IG	GE8310-IG
Hubbell	IG-5362	IG-5361
Pass & Seymour/Legrand	IG-6300	IG-5361

7. 20A-125 VAC, two-pole, three-wire, NEMA 5-20, straight blade, specification grade, ivory color, ground fault circuit interrupter receptacle (GFCI), rated for feed-through wiring, with LED indicator light:

	GFCI RECEPTACLE
Hubbell	GF-5362I
Pass & Seymour	2091-S-L-I
Leviton	6898-I

8. 20A-125/250V, NEMA 14-20, three-pole, four-wire straight blade grounding type:

	RECEPTACLE	CAP
Arrow-Hart	5759	5757
Bryant	-	-
General Electric	GE1420	GED1421
Hubbell	8410	8411-C
Pass & Seymour/Legrand	L1420-R	L1420-P

9. 20A-250V, NEMA 6-20, two-pole, three-wire straight blade grounding type:

	RECEPTACLE	CAP	CONNECTOR
Arrow-Hart	8510	6866	6869
Bryant	5461	5466N	5469N
General Electric	GE4182	GED0621	GED0623
Hubbell	5461	HBL5466-C	HBL5469-C
Pass & Seymour/Legrand	5871	5466-X	5469-X

10. 20A-120/208V, NEMA L21-20, four-pole, five-wire locking and grounding type:

	RECEPTACLE	CAP	CONNECTOR
Arrow-Hart	6470	6472	6474
Bryant	72120-FR	72120-NP	72120-NC
General Electric	GL2120	GLD2121	GLD2123
Hubbell	2510A	2511	2513
Pass & Seymour/Legrand	L2120R	L2120P	L2120C

11. 20A-250V, NEMA L6-20, two-pole, three-wire locking and grounding type:

	RECEPTACLE	CAP	CONNECTOR
Arrow-Hart	6210	6212	6214
Bryant	70620FR	70620NP	70620NC
General Electric	GL0620	GLD0621	GLD0623
Hubbell	2320A	2321	2323
Pass & Seymour/Legrand	L620-R	L620-P	L620-C

12. 20A-480V, NEMA L16-20, three-pole, four-wire locking type:

	RECEPTACLE	CAP	CONNECTOR
Arrow-Hart	6430	6432	6434
Bryant	71620-FR	71620-NP	71620-NC
General Electric	GL1620	GLD1621	GLD1623
Hubbell	2430A	2431	2433
Pass & Seymour/Legrand	L1620-R	L1620-P	L1620-C

13. 30A-125V, NEMA 5-30, two-pole, three-wire straight blade grounding type:

	RECEPTACLE	CAP	CONNECTOR
Arrow-Hart	5716N	5717N	6716N
Bryant	9530-FR	9630-RP	-
General Electric	GE4138-3	GED0531	GED0533
Hubbell	9308	9309	-
Pass & Seymour/Legrand	3802	5921	-

14. 30A-125V, NEMA L5-30, two-pole, three-wire grounding and locking type:

	RECEPTACLE	CAP	CONNECTOR
Arrow-Hart	6330	6332	6334
Bryant	70530-FR	70530-NP	70530-NC
General Electric	GL0530	GLD0531	GLD0533
Hubbell	2610	2611	2613
Pass & Seymour/Legrand	L530-R	L530-P	L530-C

15. 30A-125/250V, NEMA 14-30, three-pole, four-wire straight blade grounding type:

	RECEPTACLE	CAP
Arrow-Hart	5744N	5746N
Bryant	9430-FR	5746
General Electric	GE4191-3	GED1431
Hubbell	9430	9431
Pass & Seymour/Legrand	5740	5741-AN

16. 30A-125/250V, NEMA L14-30, three-pole, four-wire grounding and locking type:

	RECEPTACLE	CAP	CONNECTOR
Arrow-Hart	6510	6512	6514
Bryant	71430-FR	71430-NP	71430-NC
General Electric	GL1430	GLD1431	GLD1433
Hubbell	2710-A	2711	2713
Pass & Seymour/Legrand	L1430-R	L1430-P	L1430-C

17. 30A-250V, NEMA L6-30, two-pole, three-wire locking blade grounding type:

	RECEPTACLE	CAP	CONNECTOR
Arrow-Hart	6340	6342	6344
Bryant	70630-FR	70630-NP	70630-NC
General Electric	GL0630	GLD0631	GLD0633
Hubbell	2620-A	2621	2623
Pass & Seymour/Legrand	L630-R	L630-P	L630-C

18. 30A-250V, NEMA 6-30, two-pole, three-wire straight blade grounding type:

	RECEPTACLE	CAP	CONNECTOR
Arrow-Hart	5700N	5701N	6700N
Bryant	9630-FR	9630-ANP	-
General Electric	GE4139-3	GE4328-9	GE4373-9
Hubbell	9330	9331	-
Pass & Seymour/Legrand	3801	5931	-

19. 50A-208V (50A-600V), three-pole, four-wire locking type with ground:

	RECEPTACLE	CAP	CONNECTOR
Arrow-Hart	3769	3765	3764
Bryant	3769	3765	3764
General Electric	LD3769	LD3765	LD3764
Hubbell	3769	3765-C	3764-C
Pass & Seymour/Legrand	3769	3765	3764

20. 50A-125/250V, NEMA 15-50, three-pole, four-wire grounding straight blade type:

	RECEPTACLE	CAP
Arrow-Hart	5754N	5745N
Bryant	9450-FR	5745
General Electric	GE4181-3	GE4180-3
Hubbell	9450	9451
Pass & Seymour/Legrand	5750	5751-AN

21. 50A-125/250V, three-pole, four-wire grounding locking blade type:

	RECEPTACLE	CAP	CONNECTOR
Arrow-Hart	CS6369	CS6365	CS6364
Bryant	CS6369	CS6365	CS6364
General Electric	-	-	-
Hubbell	CS6369	CS6365	CS6364
Pass & Seymour/Legrand	-	-	-

22. 50A-250V, NEMA 6-50, two-pole, three-wire grounding straight blade type:

	RECEPTACLE	CAP	CONNECTOR
Arrow-Hart	5709N	5710N	6709N
Bryant	9650-FR	9650-RP	-
General Electric	GE4141-3	GED0651	GED0653
Hubbell	9367	9368	-
Pass & Seymour/Legrand	3804	3869	-

23. 60A-120/208V, three-phase, 60 Hz, five-pole, five-wire, watertight, with threaded cap:

	BOX	ANGLE ADAPTER	RECEPTACLE BODY	COMPLETE ASSEMBLY
Hubbell	26401	26404	26520	-
Crouse-Hinds	-	-	-	Area-6575
Russell Stoll	-	-	-	DS6516-FRAB-

24. 60A-480V, NEMA L16-20, three-pole, four-wire locking type:

	RECEPTACLE	CAP	CONNECTOR
Arrow-Hart	-	-	-
Bryant	-	-	-
General Electric	-	-	-
Hubbell	HBL 26410	HBL 26402	HBL 26418
Pass & Seymour/Legrand	-	-	-

- D. Safety receptacle: 15A-125V, NEMA 5-15, straight blade grounding safety receptacle, Hubbell No. SG-62H-1.
- E. Door monitoring switches:
1. General: Provide magnetic door switches (one per leaf) and key switches at specific door locations as indicated on Drawings. Refer to Electrical Drawings details for schematic installation details of door switches.
 2. Magnetic contact switches: Provide concealed magnetic SPDT switches with minimum 6-ft. wire leads, Sentrol No. 1076W-06 for hollow metal doors and frames. Where necessary, provide other similar Sentrol types to suit concealed installation conditions, as approved by Owner and compatible with Owner's ride control and/or existing security system equipment. Color of switches to closely match finish or paint color of door frame.
 3. Key switches: Arrow-Hart No. 1191L.
- F. Device cover plates:
1. Interior plates: Specification grade plastic, 0.1 in. thick, ivory in color, UL listed.
 - a) Plates in kitchens and restrooms to be polished stainless steel, 0.040 in. thick except in kitchens use double lift lid weatherproof gasketed plates for convenience receptacles.
 - b) MATV plate: RMS No. CA-4028.
 2. Exterior plates: Choose type of exterior cover plate in accord with the device location and/or manner in which device will be used. Device cover plates shall be die-cast aluminum with hinged cover, rated for respective type of use specified below, or as indicated on Drawings.
 - a) Outlet box weatherproof hoods: NEMA 3R rating, gasketed, for unattended use with cover closed, padlockable latching cover to meet OSHA lockout/tagout requirements, large cord opening and UL listed. As manufactured by Hubbell, Intermatic or Leviton.
 - b) Low profile weatherproof cover: Gasketed, approved for use with cover open, self-closing hinged covers (two independent self-closing lids for duplex receptacles which are horizontally mounted), UL listed. As manufactured by Hubbell, Leviton or Pass & Seymour.
 - c) Communication outlet weatherproof hoods: NEMA 3R rating for unattended use with cover closed, two-cord openings and UL listed. As manufactured by Red Dot.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Mount switches and receptacles in vertical position in building interiors.
- B. Mount receptacles with weatherproof plates in horizontal position.
- C. Install receptacles mounted vertically so that the ground contact falls on the top position, and horizontally-mounted receptacles with neutral pole in top position.
- D. Use plastic blank plates on J-boxes in public areas.
- E. Use mechanical type door switches for load control.
- F. Install receptacles for plug in lighting fixtures within 36 in. of fixture location.
- G. Use safety type receptacles with low profile weatherproof metal covers for all convenience outlets in guest accessible areas (i.e., queue lines, waiting areas, etc.).
- H. All GFI type exterior receptacles shall be provided with weatherproof metal hoods.
- I. GFI type receptacles shall not be fed-through wire.

END OF SECTION

SECTION 26 0142

NAMEPLATES AND WARNING SIGNS

PART 1 - GENERAL

Not Used.

PART 2 - PRODUCTS

2.01 NAMEPLATES

- A. Nameplate shall be plastic laminate with 3/4" high letters in white on black background screwed onto equipment designations shall clearly state:
 - 1. Equipment Enclosure Nameplates.
 - a) Manufacturer's nameplate including equipment design rating of current, voltage, KVA, HP, bus bracing rating, or as applicable.
 - b) Equipment nameplate designating system usage and purpose, system nominal voltage, equipment rating for KVA, amperes, HP and RPM as applicable. Designation data per drawings or to be supplied with shop drawings approval.
 - 2. Device nameplates: Device usage, purpose, or circuit number; manufacturer and electrical characteristic ratings including the following:
 - a) Circuit Breakers: Voltage, continuous current, maximum interrupting current and trip current.
 - b) Switches: Voltage, continuous current, horsepower or maximum current switching. If fused, include nameplate stating "Fuses must be replaced with current limiting type of identical characteristics."
 - c) Contactors: Voltage, continuous current, horsepower or interrupting current, and whether "mechanically-held" or "electrically-held".
 - d) Motors: Rated voltage, full load amperes, frequency, phases, speed, horsepower, code letter rating, time rating, type of winding, class and temperature.

- e) Controllers: Voltage, current, horsepower and trip setting of motor running over current protection.

2.02 WARNING SIGNS

- A. Warning signs shall be minimum 18 gauge steel, white porcelain enamel finish with red lettering. Lettering to read "DANGER - HIGH VOLTAGE" in 1" letters. Warning signs to be included on door or immediately above door of all electrical equipment rooms, vaults or closets containing equipment rooms, vaults or closets containing equipment energized above 150 volts to ground, except where such spaces are accessible from public areas.

2.03 WARNING SIGN DESIGNATION

- A. Warning designation in 1" red letters shall be painted by stencil or pre-printed adhesive on each pull box, cabinet or 1-foot length of exposed conduit stating "DANGER" and giving voltage of enclosed conductors such as "DANGER - 480 VOLTS", for all systems over 150 volts to ground.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Nameplates shall be mounted by self-tapping or threaded screws and bolts or by rivets.
- B. Signs shall be permanently mounted with cadmium plated steel screws or nickel-plated brass bolts.

END OF SECTION

SECTION 26 0170

DISCONNECTS

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Disconnects: Switches, fused or unfused.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Submittals: Section 260010.
- B. Fuses: Section 260180.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Square D Company
- B. General Electric

2.02 MATERIAL AND FABRICATION

- A. Provide heavy duty type, quick-make, quick-break disconnects with cover interlocks.
- B. Provide NEMA Type 1 enclosure for dry locations, provide the proper enclosure for other locations as indicated.
- C. Provide motor rated toggle switches where indicated.
- D. Provide fused disconnect for elevator drive motors.
- E. Provide rejection clips on disconnects where rejection type fuses are to be installed.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Securely fasten disconnects to structure to withstand wire pulling strains.

3.02 LABELING AND IDENTIFICATION

- A. Provide engraved plastic nameplates on individually mounted disconnects with minimum 1/4" height letters indicating the load served and the source feed designation.

EXAMPLE: LOAD: A/C-1

FED FROM: DHA-1

- B. Secure nameplates with at least two screws or rivets. Cementing and adhesive installation not acceptable.

END OF SECTION

SECTION 26 0190

SUPPORT DEVICES

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Support devices for conduit, boxes, lighting fixtures and equipment.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Hangers, Straps and Beam Clamps:
 - 1. Efcor.
 - 2. Raco, Inc.
 - 3. Steel City.
 - 4. O.Z./Gedney Co.
 - 5. Caddy Fastening System by ERICO Products Inc.
- B. Channels and Fittings:
 - 1. Kindorf.
 - 2. Unistrut Corp.
- C. Anchors:
 - 1. Acherman-Johnson Corp.
 - 2. Phillips Drill Co.
 - 3. Rawl Products Co.

2.02 MATERIAL AND FABRICATION

- A. Hangers: Steel cadmium plated.

- B. Straps: One-hole and two-hole malleable iron, hot-dipped galvanized or steel, cadmium or zinc plated.
- C. Beam Clamps: Malleable iron, hot-dipped galvanized or cadmium plated.
- D. Channels and Fittings:
 - 1. Channels: Hot-dipped galvanized.
 - 2. Fittings: Galvanized.
- E. Anchors: Self drilling and expansion bolt types. No wood or fiber plugs or concrete nails are acceptable.

PART 3 - EXECUTION

3.01 USE

- A. Use one-hole or two-hole straps for single conduit runs on walls or ceilings.
- B. Use hangers with solid steel rods for hanging single conduits.
- C. Use formed channel trapezes for groups of two or more conduits.
- D. To fasten boxes and supports to:
 - 1. Wood: Use wood screws or screw type nails of equal holding power.
 - 2. Brick and Concrete: Use bolts and expansion shields.
 - 3. Hollow Masonry Units: Use toggle bolts.
- E. Support sheet metal boxes from building structure directly or by bar hangers.
- F. Do not penetrate reinforced concrete beams with fastenings more than 1-1/2" or reinforced concrete joints with more than 3/4" fastenings to prevent contact with reinforcing steel.

END OF SECTION

SECTION 26 2450

GROUNDING

PART 1 - GENERAL

1.01 REFERENCES

- A. N.E.C.: Article 250 "Grounding".
- B. Underwriter's Laboratories (U.L.). Standard A67 - "Grounding and Bonding Equipment". STD 869 - Grounding and Bonding.
- C. ITEE - Standards 142 and 241.

1.02 DESCRIPTION OF SYSTEM:

- A. A permanent grounding system with methods and materials in accordance with applicable Codes and Standards, able to conduct ground fault currents to the grounded neutral of electrical distribution systems, and limit potential differences between grounding conductors, raceways and enclosures.

1.03 SUBMITTALS

- A. Product Data: Submit manufacturer's data on grounding systems and accessories.
- B. Shop Drawings: Submit layout drawings of grounding systems and accessories including, but not limited to, ground wiring, copper braid and bus, ground rods, and plate electrodes.

1.04 QUALITY ASSURANCE:

- A. Installer qualifies with at least 3 years of successful installation experience on projects with electrical grounding experience similar to that required for project.

1.05 DELIVERY, STORAGE, AND HANDLING:

- A. Handle electrical grounding accessories and components carefully to avoid damage. Store in location that will protect from dirt and weather.

PART 2 - PRODUCTS

2.01 GROUND RODS:

- A. Copper clad steel, unless indicated otherwise. Minimum dimension of 5/8" diameter by 8' long or larger if indicated and sectional rods with couplings where lengths exceeding 12' are specified or indicated, or where added driving depth is required to achieve a specified minimum resistance.
- 2.02 GROUNDING ELECTRODE:
- A. Bare stranded copper, 3/0 AWG unless indicated otherwise, for installation in soil or embedded in concrete and cable with type TW insulation when installed in raceway. Install without splice from connection to connection.
- 2.03 GROUNDING CONDUCTORS:
- A. Type TW insulation, unless specified or indicated otherwise with a continuous green outer insulating jacket for size #6 AWG and smaller and with green tape banding for #4 AWG and larger, marked at each access point (e.g.: Junction boxes, Enclosures).
- 2.04 CLAMPS AND PRESSURE CONNECTORS:
- A. Cast copper, copper alloy, or bronze alloy suitable for use with aluminum and copper. Double bolt type with formed shoe and "U" cable clamp for connection to pipe or conduit; Single bolt type with cable shoe and "U" clamp for connections to flat bar or metal; and double bolt, parallel conductor split clamp type for cable to cable connections.
- 2.05 WELDED CONNECTIONS:
- A. Exothermic process (Cadweld or Thermoweld).
- 2.06 EQUIPMENT ROOM GROUND TERMINAL BAR:
- A. Copper 1/4" X 2-1/2" X 24", unless otherwise indicated. Two rows of holes on 1-1/2" centers for 1/2" bolt, to receive cables from two directions.

PART 3 - EXECUTION

3.01 GENERAL:

- A. Ground conductive raceways, cable trays and enclosures for electrical systems wiring. Make ground circuits complete to form permanent conductive paths. Solidly ground each low voltage electrical system unless indicated or specified as ungrounded, or grounded through an impedance of a specified value. Provide bare conductors when in open air or soil and provide 600 volt, green, insulated conductors when in raceway.

3.02 MAIN GROUNDING JUMPER:

- A. Install a main grounding jumper between the system neutral and the enclosure ground bus (or directly to enclosure where ground bus is not present) at each location where system grounding is required. Main grounding jumper:
 - 1. Formed bus in switchboards and panelboards.
 - 2. Formed bus or copper cable in transformers not coupled in unitized assembly with distribution equipment.

3.03 GROUND CONNECTIONS:

- A. Make grounding electrode connections electrically ahead of any overcurrent or disconnect device or tap connection such that disconnection of neutral load conductors does not interfere with or remove the system ground connection. Use separate lugs on the transformer neutral terminals for neutral and main grounding jumpers when cable is used for transformer connections.

3.04 SEPARATELY DERIVED SYSTEMS:

- A. For each separately derived system, grounded or ungrounded, install a grounding electrode conductor between each system enclosure ground bus (or bolted connection to enclosure where ground bus is not present) and a cold water pipe or building structural steel of one (1) inch size or larger near the separately derived system ground connection. Make connections to water pipes or steel accessible for easy inspection. Provide a separate ground conductor for each audio, video, isolated panels and UPS as noted on the plans.

3.05 SERVICE GROUND:

- A. For each low voltage service, install a grounding electrode conductor between the system enclosure ground bus and the water service entrance to the building and install bonding jumpers around insulating unions and removable fittings in the water pipe between the grounding electrode conductor connection to the water pipe and the water service entrance.

3.06 GROUNDING ELECTRODE SYSTEM:

- A. Install a complete grounding electrode system with interconnecting cables and terminations at the equipment room ground terminal bar. Make connections to the grounding electrode system accessible. Install the following grounding electrode systems:
 - 1. Metal frame of building.
 - 2. Grounding electrode encased by at least two inches of concrete, within and near the bottom of the building foundation or footing of the type specified in Part 2 - Products, at least 20 feet in length without splice from connection to connection.

3. Connection of other metal piping systems as required by National Electrical Code Article 250.
4. Driven ground rods.
5. Driven steel piles.
6. Connection to water service with bonding jumper around water meter.

3.07 GROUNDING ELECTRODE CONDUCTORS:

- A. Install grounding electrode conductor in PVC or other non-conductive, non-metallic enclosure where a raceway system is indicated or necessary for conductor installation. Install grounding electrode conductors without splice from the enclosure ground bus to the connection at the grounding electrode system.

3.08 GROUND RODS:

- A. Install a vertical position, full length below grade unless specified otherwise, and with conductor and top of rod 6" minimum below grade. Provide exothermic welds at all connections.

3.09 EQUIPMENT ROOM GROUND TERMINAL BAR:

- A. Install in equipment rooms where indicated. Mount bar by anchors and bolts using 1-1/2" long segments of 1/2" rigid conduit as spacer between bar and wall. Use a minimum of two supports, 18" on center. Connect grounding electrode system conductors, system enclosure ground bus, and other indicated electrode systems to the terminal bar. Label permanently all ground conductors as to destination location, e.g. TR1, panel IPS, etcetera.

3.10 EQUIPMENT GROUND:

- A. Form the equipment ground circuits with rigid metallic raceways (e.g., EMT, rigid steel conduit) unless indicated otherwise. Make all threaded coupling connections wrench tight. Install bonding jumpers for continuity around fittings and terminations where the conductive raceway is made non-continuous. Where indicated or specified, install ground conductors in raceways to augment the circuits formed by the metallic raceway system. Bond the conductors to boxes or enclosures in which access is possible. Size conductors as specified, indicated, or required by code, whichever is larger. Install grounding bushings and bonding jumpers to enclosures or ground bussing for the following: Service entrance feeder; each location where multiple ring knockouts are damaged during conduit installation; each location where conduits are stubbed up into floor mounted and each conduit termination at a painted enclosure where paint is not removed before installation of raceway.

3.11 FLEXIBLE RACEWAY GROUNDING:

- A. Install a ground conductor inside all flexible raceways (e.g., Flexible steel, liquid tight) regardless of length. Bond the conductor to the enclosure or ground bus in the nearest box or access on either side of the flexible section. Size conductor as specified, indicated, or required by code, whichever is larger.
- 3.12 NON-CONDUCTIVE RACEWAY:
 - A. Install a ground conductor in raceways of non-conductive materials. Bond conductor to conductive enclosures in which access is possible. Bond non-current carrying conductive equipment contained in a non-conductive enclosure. Install insulated or bare conductors, sized as specified, indicated, or required by code, whichever is larger.
- 3.13 SECTIONAL RACEWAY:
 - A. Install a ground conductor in sectional raceways with removable covers for access (e.g., Plug-in strips, surface raceway systems, and wireways) unless specified otherwise. Size conductor in accordance with the N.E.C. for the largest phase conductor size installed in raceway, or as indicated. Bond sections of the raceway to the ground conductor. Connect receptacle ground terminals in the raceway to the ground conductor, and make other ground connections indicated on the drawings.
- 3.14 CABLE SUPPORT SYSTEMS:
 - A. Ground elements of the cable support system to panelboards, cabinets and switchboards from which their circuits originate. Install a ground conductor sized as required by code, as indicated, or #12 AWG, whichever is larger.
- 3.15 MULTI-CONDUCTOR CABLE, METALLIC SHEATH:
 - A. Use multi-conductor cable with metallic sheath or armor approved for use as ground circuit conductor or install ground conductor(s). Size ground circuit conductor as required by code, as specified, or as indicated on the drawings, whichever is larger. Terminating devices for cable using the sheath or armor as the ground circuit conductor shall be approved for use as the connecting device between the cable and the enclosure. Terminate internal ground circuit conductors by lug to the interior of the enclosure or to the contained ground bus where present. Use bare or clearly identified internal grounding conductors.
- 3.16 MULTI-CONDUCTOR CABLE, NON-METALLIC SHEATHED:
 - A. Use only non-metallic sheathed multi-conductor cables having a ground circuit conductor enclosed in the sheath the same size as the ungrounded conductors. Use bare or clearly identified internal grounding conductors. Terminate ground circuit conductor by lug to the enclosure ground bus where present or to the interior of the enclosure.
- 3.17 GROUND CONDUCTOR BONDING:

- A. Bond grounding conductors to boxes or enclosures at each access point. Do not use building steel as equipment grounding path. Use welded ground connections, at least where such are buried in soil, installed below slabs on grade, or embedded in concrete.

END OF SECTION

SECTION 26 2510

LIGHTING FIXTURES

PART 1 - GENERAL

1.01 SUMMARY

A. Section includes:

1. Lighting fixtures, including lamps, accessories and support materials.

B. Related work:

1. Submittals: Section 01 3300.
2. Outlet and Junction Boxes: Section 26 0130.
3. Supporting Devices: Section 26 0190.
4. Contactors, Relays, Time Switches, Photocontrols, etc.: Section 26 4901.

PART 2 - PRODUCTS

2.01 MATERIAL AND FABRICATION

A. Fixtures schedule lists one or more acceptable manufacturers for each fixture type.

B. Provide all lighting fixtures of each type from the same manufacturer.

C. Provide sockets for screw base lamps of plated steel, brass or bronze.

D. Lamps Acceptable Manufacturers:

1. General Electric.
2. Phillips.
3. Sylvania.
4. As indicated for specialty lamps.

E. Flexible metal conduit systems connecting individual tandem wired lighting fixtures.

1. Conductors carrying line voltage and current shall be sized in accordance with the overcurrent device protecting the circuit indicated.

2. Provide a #12 AWG minimum size ground conductor.
- F. Provide electronic ballasts for all fluorescent and HID fixtures.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Provide a lighting fixture for each lighting outlet indicated.
- B. Provide recessed and semi recessed fixtures with mounting frames compatible with the ceiling and wall systems employed and secure fixture mechanically to frame.
- C. Align rows of suspended and surface mounted fluorescent fixtures to form straight lines at uniform elevations.
- D. Provide swivel ball type hangers which will allow a minimum of 45 degrees angle for fixtures indicated as pendant mounted.
- E. Make recessed fixture fit snugly against ceiling to prevent light leakage.
- F. Support suspended and surface mounted LED fixtures as follows:
 1. Fixtures not over 12 inches wide and not over 50 inches long, a minimum of two fastenings.
 2. Fixtures not over 12 inches wide and over 50 inches long, a minimum of three fastenings.
 3. Fixtures over 12 inches wide and not over 50 inches long, a minimum of four fastenings.
- G. Support pendant mounted LED fixtures as follows:
 1. Single fixtures not over 12 inches wide, a minimum of two single pendants.
 2. Single fixtures over 12 inches wide, a minimum of two single pendants at each end or one double pendant at each end.
 3. Continuous rows of fixtures not over 12 inches wide, a minimum of one single pendant for each fixture plus one for each row.
 4. Continuous rows of fixtures over 12 inches wide, a minimum of two single pendants or one double pendant for each fixture plus one for each row.
 5. Locate pendants for continuous row fixtures at each joint and each end of row.

- 6. Rigidly fasten continuous row fixtures together with fixtures manufacturer supplied joiner.
- H. Provide each lighting fixture with the lamps indicated on the fixture schedule.
 - 1. Provide self extinguishing lamps in open bottom or unshielded metal halide fixtures.
- I. Clean and relamp existing fixtures to be reused.
- J. EMT shall not be used to support suspended fixtures of any type. Suspension shall be by means of standard hangers, where available and applicable, by rigid threaded conduit and fittings, or by rods.
- K. Where fixtures are to be mounted on, or suspended from concrete ceiling, provide cast in place inserts.
- L. Fixtures shall not be supported by outlet box cover screws alone; provide a fixture stud or “hickey” for added support.
- M. Provide a junction box at each exit light fixture indicated.
- N. Provide weatherproof boxes and connectors and liquid tight flexible conduit to each light fixture.
- O. All suspended fixtures will be installed with 1/8-inch safety cable and four Crosby clamps (two top and two bottom) to be used as a fixture support backup.

END OF SECTION

SECTION 26 4745

NETWORKING & DATA COMMUNICATIONS

PART 1 - GENERAL

1.01 SUMMARY

A. SCOPE

1. This section outlines the requirements for the Local Area Networks system switches, system hubs, networking modules (transceivers) and connectivity at the MC/MDF and at the various IC/IDF's throughout the owner's facility.
2. Administrative Network
 - a) The Administrative Network distribution components will be located in telecom room MDF and in various communications rooms throughout the facility. The system is connected via CAT 5e or 6e cabling to various server and workstation locations throughout the building.
 - b) Administrative Network nodes are located throughout the building.
 - c) These are fed by fiber optic cabling to the MDF and distributed locally via UTP CAT 6 (as noted on the plans) cabling infrastructure. The Administrative Network will be a Fast-EtherNet design providing switched 100Mbit speed to various workgroups in the facility.
 - d) The contractor will be responsible to install, program, test and document the system as installed, verifying throughput rates.
 - e) The contractor will be required to work in close coordination with the owner's information systems director and staff.

1.02 WORK INCLUDED

- A. Furnish and install all required system switches, system hubs, system 100/1000BASE-T modules, transceivers, patch cables and accessories for a complete system.
- B. The installation shall include interconnect/patching equipment (fiber and copper), jumpers (optical fiber and twisted-pair copper), hub & switch equipment, optical fiber transceivers, routers, asynchronous controllers, optical fiber transceivers, and any other equipment enumerated within. In addition to material and equipment, contractor shall provide labor and any incidental material required for installation. All active equipment shall be installed and connected to the cable system.

- C. Configuration, programming and testing of the local area networks.
- D. New local area network locations are listed on the drawings.

1.03 RELATED DOCUMENTS

- A. SECTION 260000 - GENERAL ELECTRICAL CONDITIONS;
- B. SECTION 264750 - CABLING & DISTRIBUTION SYSTEMS

1.04 FUNCTIONAL REQUIREMENTS

- A. Transmission Media. The example LAN will use both twisted-pair and fiber optic cable plant to provide connectivity between user workstations located in offices and network resources located in the facility computer room(s).
- B. Host/Server Access. The network will allow users to access all host/server resources, including future application servers, such as additional database servers. There should be full compatibility with existing initiatives (e.g., a new financial system, security system, and telephone and employee services database repository).
- C. Outside Communications. The network will need to support future access to external networks through routers. These communications will use the Transport Control Protocol/Internet Protocol (TCP/IP) protocol.
- D. Environment/Facility Considerations. The network architecture design must take into account existing space, power, and heat constraints.
- E. Flexible Architecture. The design must have sufficient flexibility to permit grouping users into distinct "workgroups" for office automation services. Physical features, such as a layered distribution scheme, redundant patching, and real-time configuration and topology modifications, will be included in the design. The overall transition strategy should minimize downtime and denial of service.
- F. Office Automation Services. The network will support a broad range of office automation services for DOS, Windows, and Macintosh workstations. The following services will be provided:
 - 1. File storage and retrieval;
 - 2. Network printing;
 - 3. Support of commercial off-the-shelf (COTS) desktop applications (in the DOS, Windows and Macintosh environments), including electronic mail and calendaring; and fax services.

1.05 OPERATIONAL REQUIREMENTS

- A. Network Management. The design will contain methods and tools for the efficient management and control of the network. The capability to monitor and manage both network traffic and physical components of the network will be provided.
- B. Fault Recovery. The design will include contingency or back-up plans should any element of the network fail.

1.06 PERFORMANCE REQUIREMENTS

- A. Network Response. The servers and other components of the network must be sized to avoid unacceptable start-up delays when workstations are first activated, long login times, and slow response during normal network utilization (e.g., application startup and exit, file retrieval and save operations). Response times for network desktop applications should not be significantly greater than stand-alone usage.
- B. Network Availability. The users must be able to access the network 24 hours a day, seven days a week unless specifically made unavailable at organization discretion (e.g., for administrative or maintenance activities).

1.07 NETWORK CAPACITY: Individual components of the network will be sized as indicated below:

- A. The cable plant -- The cable plant will provide for approximately 150 cable drops distributed throughout the offices and facility.
- B. User workstations -- Initially, service will be provided for approximately 50 local users. However, when fully operational, the network will be capable of supporting approximately 150+ local users (150+ Windows-based PCs and servers).
- C. Intelligent hub equipment -- All hub equipment will be sized to support all ports plus 25% spare ports for growth.

1.08 REFERENCES AND STANDARDS INCORPORATED

- A. Published specifications, standards, tests or recommended methods of trade, industry or government organizations apply to work of this section where cited by abbreviation noted below:
 - 1. EIA Electrical Industries Association
 - 2. IEEE Institution of Electrical and Electronics Engineers
 - 3. ISO International Standards Organization
 - 4. ITU International Telecommunications Union
 - 5. CCITT Consultative Committee of International Telegraph and Telephone

6. ANSI American National Standards Institute
 7. TIA Telecommunications Industry Association
 8. ASTM American Society for Testing and Materials
 9. NEC National Electric Code
 10. FCC Federal Communications Commission
 11. CEA Insulated Cable Engineers Association, Inc.
 12. IEC International Electrotechnical Commission
 13. NEMA National Electrical Manufacturers Association
 14. UL Underwriters' Laboratories, Inc.
 15. IPC The Institute for Interconnecting and Packaging Electronic Circuits
 16. NFPA National Fire Protection Association
 17. BICSI Building Industry Consulting Service International
- B. Nothing in the drawings, details, or specifications shall be construed to permit work not conforming to applicable laws, ordinances, rules, or regulations and standard industry IEEE 802 Ethernet standards.
- C. It is not the intent of the drawings, details, or specifications to repeat requirements of codes except where necessary for completeness or clarity.

1.09 SUBMITTALS

- A. Submit manufacturer's data literature for each item used describing each product, including specification, installation instructions and general recommendations.
- B. Submit manufacture's data literature on system hubs, switches, 100/1000BASE-T modules, 100/1000BASE-FB modules, 100/1000Base2 modules, power supplies and accessories.
- C. As per section 260000 - General drawings, submittals and shop drawings.
- D. In addition to the requirements of Division 1, submit all materials for approval, arranged in same order as specifications, individually referenced to specification paragraph and drawing number. Submit number required in Division 1 plus three (3) copies of 8 1/2" x 11" material and 2 prints and one reproducible of drawings in 24" X 26" size, minimum. Submit 8 1/2" x 11" items bound in volumes and 24" X 36" drawings in edgebound sets.

E. Progress Schedule: Include duration and milestones for the following:

1. All submittals specified.
2. Completion of equipment buyout.
3. Completion of equipment receipt at fabrication shop.
4. Shop fabrication.
5. Shop testing.
6. Shipment to site.
7. Installation.
8. Field testing.
9. Training.
10. First use date.

F. Manufacturer's Product Data:

1. List of Materials: For each item include:
 - a) Manufacturer.
 - b) Model number.
 - c) Listing: UL, City Lab or none.
 - d) Quantity.
2. Manufacturer's Product Data: In sequence of list of materials, data sheet for each item, including all accessories, marked for proposed product.

G. Field and Shop Drawings:

1. Resubmit: for coordination reference complete with corrections from previous submittal:
 - a) List of Materials.
 - b) Manufacturer's Product Data.
2. Field (installation) Drawings: collate in sequence:

- a) Drawing index/symbol sheet.
- b) Floor plans. At scale of contract documents. Show:
 - (1) Devices with circuit number.
 - (2) Rough-in.
 - (3) Mounting height.
 - (4) Conduit size.
 - (5) Wire type.
 - (6) Wire fill.
- c) Sections/Elevations. At scale of contract documents.
 - (1) Mounting Location Reference
- d) Enlarged Plans. At scale of contract documents or larger as required for trade coordination. Show:
 - (1) Refer to floor plans.
 - (2) Architectural features.
 - (3) Rack cabinets.
 - (4) System furniture.
 - (5) Clearances.
- e) System conduit riser drawing, show:
 - (1) Terminal cabinets.
 - (2) Coordination with floor plans.
 - (3) Wire runs not shown on floor plans.
 - (4) Wire type.
 - (5) Wire fill.
- f) Mounting details
 - (1) Stamped and signed by engineer licensed in jurisdiction for work of this type.
 - (2) Show loads, strength of connections, etc.

- (3) Show calculations - on drawings or in bound volume for review by authorities having jurisdiction.
 - (4) Provide details for:
 - (a) Racks.
 - (5) Installation details as required.
 - (6) Terminal cabinets: terminations.
 - g) Wire run sheets (if used) show:
 - (1) Wire number.
 - (2) Source.
 - (3) Designation.
 - (4) Signal type.
 - (5) Wire type.
 - (6) Operating level or voltage (if applies).
 - h) Shop and Field Test Reports
3. Schedule: Submit test reports in timely manner relative to project schedule such that owner may conduct verification of submitted test data at owner's option, without delay of progress.
- a) Shop test report: Submit prior to shipping completed system to project site.
 - b) Field test report: Submit following system completion and prior to and as condition precedent to owner's acceptance of the work of this section.
4. Test Reports: Include:
- a) Time and date of test.
 - b) Personnel conducting test.
 - c) Test object.
 - d) Procedure used.
 - e) Test equipment, including serial and date of calibration.

- f) Results of test - numerical or graphical presentation.
- 5. Verification of submitted test data: Owner may elect to verify some or all test data submitted. Retest in presence of designated observer(s) at reasonable convenience of owner. Provide technician familiar with work of this section. Provide all test equipment.
- H. Reference Data for Operation, Maintenance and Repair
 - 1. In addition to the requirements of Division 1, submit 3 sets. Submit in three post binders (not ring binder) with tabs.
 - a) Index.
 - b) Systems operating instructions.
 - c) Reduced set of system record drawings.
 - d) Key schedule.
 - e) Maintenance and spare parts schedules.
 - f) Shop and Field Test Reports.
 - g) Equipment manuals. Collate alphabetically by manufacturer. Provide manufacturer's original operation, instruction and service manuals for each equipment item. For each set, provide manufacturer's original printed copies only. Photocopies not acceptable.
- I. Record Drawings in AutoCAD R2010 format
 - 1. Quantity:
 - a) Review sets: as for shop and field drawings.
 - b) Record set:
 - (1) Three (3) blueprints.
 - (2) One CD with applicable .DWG files as full scale
 - c) Content: All drawings required under "Field and Shop Drawings". Show as installed condition.

PART 2 - PRODUCTS

2.01 GENERAL

- A. Quality of Products: Material and equipment specified herein have been selected as the basis of acceptable and desired quality of performance and have been coordinated to function as components of the specified system. Where a particular material, device, piece of equipment of system is specified directly, the current manufacturer's specification for the same shall be considered to be part of these specifications, as if completely contained herein in every detail. Each material, device, or piece of equipment provided hereunder shall comply with all of the manufacturer's published specifications for that item.
- B. Quantity: Provide quantity as shown on contract drawings, the schedule or as otherwise defined herein.
- C. Preference: Owner desires system to be furnished and installed as specified herein.
- D. Substitutions: Comply with SECTION 16010 -GENERAL CONDITIONS.
- E. Provide complete: Provide all auxiliary and incidental materials and equipment necessary for the operation and protection of the work of this section at, if specified in full herein.
- F. Provide new: All materials provided under the work of this section shall be new, shall be the manufacturer's latest design/model, and shall be permanently labeled with the manufacturer's name, model number and serial number.
- G. Similar: Similar devices shall be of the same manufacturer, unless specifically noted otherwise in these specifications.
- H. Continuous Use: All active circuitry shall be solid state and shall be rated for continuous use. All circuit components shall be operated in full compliance with the manufacturer's recommendations and shall contain sufficient permanent identification to facilitate replacement.

2.02 MANUFACTURERS

A. NETWORKING HARDWARE

- 1. System design is based on products as manufactured by Cisco, 3Com or BayNetworks Substitutions must be pre-approved according to Section 16010 and general conditions.

B. SYSTEM SPECIFICATIONS

1. LOCAL AREA NETWORK

- a) The Local Area Network shall be based on and support IEEE802.3 functional standards for EtherNet Local Area Networking. This shall include IEEE 802.3 100/1000BASE-T and 100/1000BASE-T for station microcomputers, and IEEE 802.3 100/1000BASE-F or 100/1000BASE-F (FIORL) synchronous technology for fiber optic repeater interconnection.
- b) The main distribution frame (MDF) and all intermediate distribution frames (IDF's) shall support one EtherNet segment per network.
- c) System shall be sufficient to support use at full capacity without user-perceptible delays in network response time.
- d) System shall be sufficient to support any combination of system features at full capacity. System shall allow reconfiguration of backbone to allow Customer maximum flexibility and implementation of options in case of need when future services are identified and added.

C. LAN CONFIGURATION

- 1. System hubs are required in DESIGNATED zones so that every data drop on site can be serviced by a hub.
- 2. Each system hub shall allow for growth, without the need to add an additional hubs to 125% of the current data drop count for the area of the campus that it serves even though all those drops will not be connected at initial installation.
- 3. Each designated location shall utilize a system hub as per the specification.
- 4. Each hub location shall utilize fiber optic transceiver module for connection to the fiber optic backbone or horizontal distribution (where fiber is utilized as the backbone or horizontal media).
- 5. Each hub location shall utilize 100/1000BASE-T(RJ45), 100/1000BASE-T (RJ45), unshielded twisted pair ports for connection to the UTP CAT 6 LAN cable plant or 100/1000BASE-2 ports for connection to the ThinLAN cable plant. The quantity of initially installed 100/1000BASE-T/100/1000BASE-2 ports shall be per the needs indicated and requirements of this specification and contract drawings.
- 6. The initially active 100/1000BASE-T, 100/1000BASE-T locations shall be connected to the system Hubs via CAT 6 UTP patch cords and patch panels. If Telco style 100/1000BASE-T modules are utilized in the system Hub then CAT 6, Telco-to RJ45 patch panels shall be installed with the appropriate cable to the hub for full connectivity.

2.03 MATERIALS AND EQUIPMENT

A. SYSTEM HUBS

1. The Local Area Network shall be created from a family of intelligent, or "smart," switches, hubs and related products. The product family shall consist of various hubs; numerous plug-in EtherNet, FDDI, and internetworking modules for these hubs, and network management software. These products shall enable the customer to create a large-scale facility network that is flexible, reliable, and manageable.
2. The System shall have port switching technology that shall offer remote network configuration and management capabilities.
3. The System's network management shall support network analysis, identify specific network problems, and correct or self-heal problems dynamically. The system's network management shall not be a passive traffic monitoring tool.
4. System hubs shall have the following parameters and features:
 - a) Modular Multi-Media Chassis.
 - b) Supports SNMP Based Network Management System.
 - c) Supports Inband and Out of Band Network Management.
5. Specific EtherNet features required:
 - a) Supports Shielded/Unshielded Twisted Pair, Coax, AUI & Synchronous Fiber.
 - b) Supports Internal EtherNet Terminal Servers for TCP/IP.
 - c) Supports Fiber Links Up to 2.0 Kilometers.
6. System hub shall be provided in 12, 24, or 48 port versions. The system hub shall be able to be mounted in a rack and installed from the front.
7. Transceiver slots for connection of twisted pair 100/1000Base-T, Thin LAN or fiber optic FIORL.
8. The unit shall include and Intel I960 RISC-based processor, 1 Mbytes of RAM and 256Kbytes of flash EEPROM.
9. Complete workgroup security including: intruder prevention, auto port disabling, network management alarm, leaves drop prevention, authorized managers list and password protection.
10. Provisions for added SNMP management module.

11. Intelligent error monitoring, intelligent segmentation recovery, auto-segmentation, fault isolation and integrity.
12. Support for SNMP/IP and IPX multi-vendor management with SNMP browsers.
13. The unit shall be UL rated and meet FCC Part 15 Class A emissions standards.
14. The unit shall be provided with a lifetime limited, 5 year on site warranty.
15. The system hub must be capable of implementation to include all of the following features:
 - a) A single-port FOIRL module shall be available to provide FOIRL-based EtherNet connections through the system hub. The module shall comply with the IEEE FOIRL and 100/1000BASE-FL and 100/1000BASE-FL standards which ensures interoperability with other vendors' FOIRL-compliant devices. In addition, users in a FOIRL environment shall be able to take advantage of the system hub benefits such as multi-channel architecture, port redundancy, and fault tolerance.
 - b) The FOIRL module shall achieve point-to-point connections longer than the 1 kilometer specified by the IEEE FOIRL specification by use of high power optics.
 - c) A FOIRL transceiver shall be available to link a network station to EtherNet 100/1000BASE-FL LANs using fiber-optic cable. The FOIRL transceiver shall attach directly to the AUI port on the network station eliminating the need for an AUI cable.
 - (1) The FOIRL transceiver shall comply with the IEEE 802.3 100/1000BASE-FL draft standard and offers low-light level detection for error-free transmission.
16. An EtherNet transceiver module shall be available to provide AUI connectivity to the system hubs.
17. An EtherNet BNC module shall be available to provide a single connection to thin-wire EtherNet segments up to 185 meters in length.
 - a) The BNC module shall be fully compliant with the IEEE 100/1000BASE-2 standard. All thin wire segments shall be able to be terminated either internally or externally.

B. Approved Suppliers

1. The following vendors have been pre-approved to supply product under this contract:
 - a) Cisco
 - b) 3Com
 - c) Bay Networks
 - d) Others submit in accordance with substitution requirements.

PART 3 - EXECUTION

3.01 GENERAL

- A. Provide installation logs supporting building infrastructure.
- B. Configure and cross connect all ports as required for complete end to end system.

3.02 DRAWING DETAILS (Shop Drawings)

- A. Show wall elevation and wire details on shop drawings. Show equipment function, make and model and wire routing and terminations within rack or cabinet.
- B. Show as-built location of all devices on shop drawings.
- C. Provide 3 sets of bound operation and maintenance manuals, including submittal materials, and record of field changes. Provide complete as-built wiring diagrams in AutoCAD2000 format. Provide CD files and original tracings (E size) in format of construction drawings. Input all cabling information into ACS system and provide a detailed printed report with as-builts.

3.03 QUALITY CONTROL

- A. Evidence of Experience and Qualifications
 1. Show that the contractor who will perform the work has a minimum of 5 years experience successfully installing system of the same type and design as specified herein. Include the names, locations, and points of contact of at least two similar installations of the same type and design as specified herein where the installer has installed such systems. Indicate the type of each system and certify that each system has performed satisfactorily in the manner intended for a period of not less than 12 months.
 2. Show that the instructor, who will train staff, operating and maintenance personnel, has received a minimum of a CNE/MCE training from a factory

training center, and 2 years experience in the installation of systems of the type specified. Submit training certification in equipment submittals, title section training and certifications.

3.04 TESTING

A. GENERAL

1. Testing shall be performed in the presence of the owner.
 - a) Testing shall include verification of:
 - (1) Server operation and configuration
 - (2) NOS installation, configuration and operation
 - (3) HUB insulation and operation
 - (4) Cable Plant
2. All test equipment shall bear current calibration stickers or dated certificates.
3. Printed test results along with as-built drawings shall be assembled into a 3 ring project binder and delivered to the consultant for verification and final acceptance prior to start of warranty.

3.05 COMMISSIONING

A. General

1. The contractor shall guarantee all equipment and wiring free from inherent mechanical and electrical defects for one year from the date of final acceptance by owner.
2. Acceptance shall consist of the following:
 - a) Burn-in period.
 - (1) The system shall be accepted for start of warranty upon successful completion and testing of the system.
 - (2) Burn-in period shall be a 30 day time frame to allow the system to operate free of defects, grounds, programming faults, etcetera.
 - (3) The 30-day burn-in shall begin the day of acceptance by owner.
 - (4) The burn-in period shall be 30 days of continuous use without system trouble, false alarm, open, short or ground condition present.

- (5) Should the system fail for any reason during the burn-in period, the contractor shall respond immediately upon notification by owner's personnel and correct said deficiencies.
 - (6) Upon correction and restoration, the burn-in period shall be re-set to "0" and the 30 day count shall begin again.
 - (7) Warranty shall commence upon day 31 of successful burn-in period.
- b) Final Test
- (1) Before the installation shall be considered completed and acceptable by the awarding authority, a test on the system shall be performed as follows:
 - (a) The contractor's job foreman, in the presence of a representative of the manufacturer, and a representative of the owner shall operate every network device to ensure proper operation and correct configuration at the file server location.
 - (b) When the testing has been completed to the satisfaction of both the contractor's job foreman and the representatives of the manufacturer and owner, a notarized letter co-signed by each attesting to the satisfactory completion of said testing shall be forwarded to the owner.
 - (c) The contractor shall leave the data network system in proper working order, and, without additional expense to the owner, shall replace any defective materials or equipment provided by him under this contract within one year (365 days) from the date of final acceptance by the consultant.

B. As Built Drawings, Testing, and Maintenance Instructions

- 1. A complete set of reproducible as-built drawings in AutoCAD R2000 format (CDs and sheets) showing installed wiring, color coding, and wire tag notations for exact locations of all installed equipment, specific interconnections between all equipment, and internal wiring of the equipment shall be delivered to the owner upon completion of system acceptance.
- 2. Operating and Instruction Manuals
 - a) Operating and instruction manuals shall be submitted prior to testing of the system. Four (4) complete sets of operating and instruction manuals shall be delivered to the owner upon completion.

- b) Provide necessary training and/or schooling to designated owner personnel at no additional cost to owner. Training shall be on site.

C. Testing Frequency Instructions

1. Complete, accurate, step-by-step testing instructions giving recommended and required testing frequency of all equipment, methods for testing each individual piece of equipment, and a complete trouble-shooting manual explaining how to test the primary internal parts of each piece of equipment shall be delivered to the owner upon completion of the system.
2. Maintenance instructions shall be complete, easy to read, understandable, and shall provide the following information:
 - a) Instructions on replacing any components of the system, including internal parts.
 - b) Instructions on periodic cleaning and adjustment of equipment with a schedule of these functions
 - c) A complete list of all equipment and components with information as to the address and phone number of both the manufacturer and local supplier of each item.
 - d) User operating instructions shall be provided, prominently displayed on a separate sheet located next to the control.

END OF SECTION

GENERAL CONTROL DEVICES

PART 1 - GENERAL

1.01 SUMMARY

A. Section includes:

1. Pushbutton and selector switches.
2. Control stations.
3. Relays.
4. Time delay relays.
5. Control power transformers.
6. Control panels.

B. Related work:

1. Control Cabinets: Section 260130.

1.02 REFERENCES

- A. NEMA ICS 1 General Standards for Industrial Control Systems.
- B. NEMA ICS 2 Standards for Industrial Control Devices, Controllers and Assemblies.
- C. NEMA ICS 6 Enclosures for Industrial Controls and Systems.
- D. NEMA ST 1 Standard for Specialty Transformers (Except General Purpose Type).
- E. NFPA 70 - National Electrical Code.

1.03 SUBMITTALS

- A. Submit under provisions of Section 010000.
- B. Shop Drawings: Submit to NEMA ICS 1 indicating control panel layouts, wiring connections and diagrams, dimensions, support points.
- C. Product Data: Provide for each component showing electrical characteristics and connection requirements.

- D. Manufacturer's Installation Instructions: Indicate application conditions and limitations of use stipulated by Product testing agency. Include instructions for storage, handling, protection, examination, preparation, installation, and starting of Product.

1.04 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing the products specified in this section with minimum three years documented experience, and with service facilities within 100 miles of project.

1.05 REGULATORY REQUIREMENTS

- A. Conform to requirements of NFPA 70.
- B. Furnish products listed and classified by Underwriters Laboratories, Inc. as suitable for purpose specified and indicated.

PART 2 - PRODUCTS

2.01 MATERIAL AND FABRICATION

- A. Contactors:
 - 1. Mechanically and Electrically Held Contactors: Open type, 120V coil, number of poles and ampere rating as indicated. Factory wired and installed in lighting panelboard compartment.
 - 2. Square D Co. Class 8903.
- B. Time Switch:
 - 1. Intermatic time switch as shown on the drawings.
- C. Photo Control With Time Delay:
 - 1. Rated for 1000W load or 1800 VA, sp st, in weatherproof enclosure.
 - 2. General Electric Co. Cat. No. CR174H651, or equal.
- D. Control Relays:
 - 1. 120 VAC coil, 10A rated contacts with number of poles indicated. Square D Co. Class 8501 Type X.
 - 2. 48 VDC coil, 10A rated contacts. Square D Co. Class 8501 Type KDP 12.

3. 24 VDC coil, 10A rated contacts, plug in Type 3PDT. Square D Co. Class 8501 Type KDP 13 with NR62 socket.
 4. Pneumatic Time Delay Relay: Square D Co. Class 9050 Type B.
- E. Control Units, Such as Push Buttons, Pilot Lights, Selector Switches: Heavy duty, oil tight - Square D Co. Class 9001.
1. Push buttons, standard, full guard. Red for stop, green for start.
 2. Pilot lights, transformer type, with color caps as indicated.
 3. Selector switches, 3 position (Hand Off Automatic) manual return.
 4. Legend Plates: Standard, with legends as indicated.

2.02 LABELING AND IDENTIFICATION

- A. Provide engraved plastic nameplates with 1/4 inch minimum height letters indicating circuit designation of panel or device controlled on controls which are individually enclosed.
- B. Secure nameplates with at least two screws or rivets. Cementing and adhesive installation not acceptable.

END OF SECTION

CE1	S\M2	02Q.P:MS:EC	-%Q2	.ETCS	Baj:sa:j t-H	20T:MB2CS Q.920TA2 B802A Z%QS2	.EBB2CSQ	Z%S2P A:CCX	OP%:C	Z%SSQ	YEASQ	%BMQ	MAT8
	Z%PB:CB EY2C SZR Q:020	7A%YBEPQ%YEP S%AA 0P\ 9EA0:CB .%-:C2S0	.%QS2PQ	" 9%\$.E	M7QSB"[C2Z 20T:MB2CS D EZC2P 7TPC:Q920 A .ECSP%.SEP :CQ\$%AA20						C2B% 'D
	" TC02P.ETCS2P :.2 B%#2P	B%C:SEZE. ,%- TC02P.ETCS2P :.2 B%.9:C2	" B%C:SEZE.	C2E ,%-		C2Z 20T:MB2CS D EZC2P 7TPC:Q920 A .ECSP%.SEP :CQ\$%AA20% Q22 BM'a"		"%-S .EAO Z%S2P 7AEEP					C2B% 'D
	, ZAP2Z%9:CB Q:0%#	2A%# \ , 8%T82 Q\$%:CA2Q0 Q\$22A S9P22 .EBM%PSB2CS Q:0W%\$ A2%Q	" 2A%# \	" ,D' ,["D'D'-(7AEEP Q:0%#		C2Z 20T:MB2CS D .ECSP%.SEP 7TPC:Q920 A :CQ\$%AA20% Q22 BM'a"		.9:,%8E 7%T.2S					"1'"M
	" 9%CO Q:0%#	90D'A Z%AA 9TCB 9%CO Z%Q9 Q:0%# Z%\$ P%0:TQ .EPC2PQ Z%AA BETCS20	" @PE2C2	90D"	0:P2.S	C2Z 20T:MB2CS D .ECSP%.SEP 7TPC:Q920 A :CQ\$%AA20% Q22 BM'a"		.C.A% .S .2C\$% Z%AA BETCS					"1%"S
	" ,7EEO P27P:82P%SEP	%Y%CSB.E % Q2P:2Q QBA:0 OKEP P2%.9 :C P27P:82P%SEPO ,S A2%Q	" %Y%CSB.E	"--% ,8P.9		C2Z 20T:MB2CS D EZC2P 7TPC:Q920 A .ECSP%.SEP :CQ\$%AA20		7%T.2S					C2B% 'D
	" ,.E7722 TPC	Z%P:CB " ,.TM .E7722 TPC -P222P Z% OT%A 92%S2P	.ETCS2PSEM	" Z%P:CB	Z.T'"	C2Z 20T:MB2CS D EZC2P 7TPC:Q920 A .ECSP%.SEP :CQ\$%AA20							C2B% 'D
	" ,.XCBM\ QC22_2 8T%P0	" ,.XCBM\ QC22_2 8T%P0	.ETCS2PSEM	" C2B.E	-- ,D.80	C2Z 20T:MB2CS D EZC2P 7TPC:Q920 A .ECSP%.SEP :CQ\$%AA20							"M
	"-BE:QS 92%\$ 9ES 0E8 -TC Z%PB2P	C2B.E -- ,Z	.ETCS2PSEM	" C2B.E	-- ,D-Z	C2Z 20T:MB2CS D EZC2P 7TPC:Q920 A .ECSP%.SEP :CQ\$%AA20							C2B% 'D
	" % 9ES 0E8 PZAA2P 8P:AA ,"	C2B.E -- ,C	.ETCS2PSEM	" C2B.E	-- ,	C2Z 20T:MB2CS D EZC2P 7TPC:Q920 A .ECSP%.SEP :CQ\$%AA20							C2B% 'D
	" " 7A\ 7%C	.TPSPBC %MB'D",D'Q0	Z%AA BETCS20	" ,TPSPBC	AMC" ,D'T%DE-	C2Z 20T:MB2CS D .ECSP%.SEP 7TPC:Q920 A :CQ\$%AA20							C2B% 'D
	" " 7EEO MP2M%P%\$EC Q:0%#	2A%# \ Q:0BA2 .EBM%PSB2CS Q.TAA2P\ Q:0W%\$ P:8	" "S A2%Q	" 2A%# \	" ,-('-DPD'-(7AEEP Q:0%# Z:59	C2Z 20T:MB2CS D .ECSP%.SEP 7TPC:Q920 A :CQ\$%AA20% Q22 BM'a"		"D'%-S 9ES %C					"D'%"
	" ,.PE.@ M\$S	%Y%CSB.E Q,"" , 0\$.ETCS2PSEM	" %Y%CSB.E	Q,""	C2Z 20T:MB2CS D EZC2P 7TPC:Q920 A .ECSP%.SEP :CQ\$%AA20		.EAO					C2B% 'D
	" " QMA%Q9 8T%P0 @:S	7P%CB%A:C B%.9:C2 MPEOT.S " 'D' , , " ,S [" "S	Q:0%# BETCS20	" MPEOT.S	" " 'D' ,	C2Z 20T:MB2CS D .ECSP%.SEP 7TPC:Q920 A :CQ\$%AA20							"M
	" , Q\$%.8%-A2 7P22_2P	SPT2 SB"OSB9.	.S A2%Q	" SPT2	SB"OSB9.	C2Z 20T:MB2CS D EZC2P 7TPC:Q920 A .ECSP%.SEP :CQ\$%AA20							C2B% 'D
	" , Q\$%.920 EY2C	Z:Q\$BEC .9Y'D"TOPQ\$.Y%M .EB%#9EA0 .%-:C2	.S A2B)	" Zv%I%E	.9Y'D"TYDQ\$	C2Z 20T:MB2CS D EZC2P 7TPC:Q920 A .ECSP%.SEP :CQ\$%AA20							" ,B'"]
	" , 9EA0P:S2 Z%AA BETCS20	O-V% Q%a%l%N Z%a}} BE: t%l 2>-v%-n% % a%t%EF% " ,S		" 9EA0P:S2Z	" "DQ\$9MBZB	C2Z 20T:MB2CS D .ECSP%.SEP 7TPC:Q920 A :CQ\$%AA20							
"1."	" "S _ "	Zn%l%l Q%t%n} Of%a%v	.%QS2PQ	" P282C.\	" "S""""8	C2Z 20T:MB2CS D EZC2P 7TPC:Q920 A .ECSP%.SEP :CQ\$%AA20							
"1."	" "S _ "	P282C.\ " - 8%T82 Q\$%:CA2Q0 Q\$22A ZEP%\$%-A	.%QS2PQ	" P282C.\	" "S""""8	C2Z 20T:MB2CS D EZC2P 7TPC:Q920 A .ECSP%.SEP :CQ\$%AA20							
"1."	" "S _ "	P282C.\ " - 8%T82 Q\$%:CA2Q0 Q\$22A ZEP%\$%-A	.%QS2PQ	" P282C.\	" "S""""8	C2Z 20T:MB2CS D EZC2P 7TPC:Q920 A .ECSP%.SEP :CQ\$%AA20							
"1c"	" "S [,	P282C.\ " - 8%T82 Q\$%:CA2Q0 Q\$22A ZEP%\$%-A	.%QS2PQ	" P282C.\	" "S""""8	C2Z 20T:MB2CS D EZC2P 7TPC:Q920 A .ECSP%.SEP :CQ\$%AA20							
"1k"	" "S _ % ,S	P282C.\ Q\$%:CA2Q0 Q\$22A QBA:0 Z%AA ZEP% Q92AY2Q	Z%AA BETCS20	" -f%a%l%nb .ef%ef%a%t%v%\$]"ZQ""% ,		C2Z 20T:MB2CS D EZC2P 7TPC:Q920 A .ECSP%.SEP :CQ\$%AA20							
"1."	" "S _ ""S	P282C.\ Q\$%:CA2Q0 Q\$22A QBA:0 Z%AA ZEP% Q92AY2Q	Z%AA BETCS20	" -f%a%l%nb .ef%ef%a%t%v%\$]"ZQ""""		C2Z 20T:MB2CS D EZC2P 7TPC:Q920 A .ECSP%.SEP :CQ\$%AA20							
"1."	" "S _ ,S	P282C.\ Q\$%:CA2Q0 Q\$22A QBA:0 Z%AA ZEP% Q92AY2Q	Z%AA BETCS20	" -f%a%l%nb .ef%ef%a%t%v%\$]"ZQ"" ,		C2Z 20T:MB2CS D EZC2P 7TPC:Q920 A .ECSP%.SEP :CQ\$%AA20							
"10"	" "S _ ,S	P282C.\ Q\$%:CA2Q0 Q\$22A QBA:0 Z%AA ZEP% Q92AY2Q	Z%AA BETCS20	" -f%a%l%nb .ef%ef%a%t%v%\$]"ZQ""""		C2Z 20T:MB2CS D EZC2P 7TPC:Q920 A .ECSP%.SEP :CQ\$%AA20							
"1k"	" "S [" -S Q92A7 TC:S D " S:2P	Z:P2 Q92AY:CB D B2SPR QTM2P 2P2.S% " Q2P:2Q B2SPBQ2%A		" B2SPR	" "S2 _ " -S0	C2Z 20T:MB2CS D EZC2P 7TPC:Q920 A .ECSP%.SEP :CQ\$%AA20							
"1."	" ,S [" -S Q92A7 TC:S D " S:2P	Z:P2 Q92AY:CB D B2SPR QTM2P 2P2.S% " Q2P:2Q B2SPBQ2%A		-B2SPR	" ,S Z [" -S 0	C2Z 20T:MB2CS D EZC2P 7TPC:Q920 A .ECSP%.SEP :CQ\$%AA20							
"1."	" ,S [" -S Q92A7 TC:S D " S:2P	Z:P2 Q92AY:CB D B2SPR QTM2P 2P2.S% " Q2P:2Q B2SPBQ2%A		" B2SPR	" ,S2 _ " -S0	C2Z 20T:MB2CS D EZC2P 7TPC:Q920 A .ECSP%.SEP :CQ\$%AA20							
" ,2[:Q\$:CB QMA:S Q\Q\$2B 9%				"		2[:Q\$:CB 20T:MB2CS							