

PROJECT MANUAL

for

CENTRAL FREEZER FACILITY

Located at

Center Joint Unified School District
Facilities, Maintenance & Operations Yard
8408 Watt Ave.
Antelope, CA 95843

for

Center Joint Unified School District
8408 Watt Ave.
Antelope, CA 95843

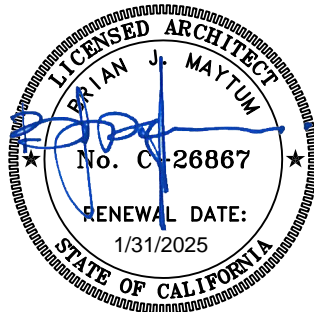
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April 12, 2024



PROJECT MANUAL AND SPECIFICATIONS
FOR
CENTER JOINT UNIFIED SCHOOL DISTRICT
CENTRAL FREEZER FACILITY

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FOR
CENTER JOINT UNIFIED SCHOOL DISTRICT
CENTRAL FREEZER FACILITY**

PROJECT NO. 24-09

FOR

**CENTER JOINT UNIFIED SCHOOL DISTRICT
Facilities, Maintenance & Operations Yard**

8408 Watt Ave., Antelope, CA 95843
Telephone: (916) 338-7580

April 16, 2024



Center Joint Unified School District



Capital Program Management

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NOTICE INVITING BIDS

CENTER JOINT UNIFIED SCHOOL DISTRICT

NOTICE IS HEREBY GIVEN that the Center Joint Unified School District of Sacramento County, California, acting by and through its Governing Board, hereinafter referred to as the "District" or "CJUSD", will receive prior to **2:00:00pm on Thursday, May 2, 2024**, sealed bids for the award of a Contract for the following:

BID NO. 24-09

CENTRAL FREEZER FACILITY AT FACILITIES, MAINTENANCE & OPERATIONS YARD

All bids shall be made and presented only on the forms presented by the District. Bids shall be received in the **District Facilities Office Room 4 at 8408 Watt Ave., Antelope CA 95843** and shall be opened and publicly read aloud at the above stated time and place. Any bids received after the time specified above or after any extensions due to material changes shall be returned unopened.

The Contract Time is one hundred twenty-eight (128) calendar days.

CONTRACTOR should consult the General Conditions, Special Conditions, and General Requirements regarding Milestones and Liquidated Damages.

Miscellaneous Information

Contract Documents will be available on **April 16, 2024** by download directly from the District's website at **<https://www.centerusd.org/About-Us/General-information/Request-For-Proposal>**.

A mandatory pre-bid conference and site visit will be held on **Wednesday, April 24, 2024**, beginning at **10:00 am**, at the **CJUSD District Facilities Maintenance & Operations Yard at 8408 Watt Avenue, Antelope, CA 95843**. All participants will be required to sign in upon arrival. The Site visit is expected to take approximately one hour. Failure to attend any portion of the pre-bid conference and site visit or tardiness will render bid ineligible.

Each bidder shall be a licensed contractor pursuant to the California Business and Professions Code, and be licensed to perform the work called for in the Contract Documents. The successful bidder must possess a valid and active **Class B License** at the time of bid and throughout the duration of this Contract. The Contractor's California State License number shall be clearly stated on the bidder's proposal.

Subcontractors shall be licensed pursuant to California law for the trades necessary to perform the Work called for in the Contract Documents.

Each bid must strictly conform with and be responsive to the Contract Documents as defined in the General Conditions. The District reserves the right to reject any or all bids or to waive any irregularities or informalities in any bids or in the bidding.

The specifications for this project include particular systems, products and/or materials that have been specifically identified by brand or trade name and for which no "or-equals" or substitutions are allowed. Pursuant to California Public Contract Code section 3400(b)(2), the Center Joint Unified School District has determined that those systems, products and/or materials are required to match other systems, products and/or materials in use on existing District construction projects either completed or in the course of completion. Any request for substitution pursuant to Public Contract Code section 3400 must be made at the time of Bid on the Substitution Request Form set forth in the Contract Documents and be included with the bid.

Each bidder shall submit with its bid — on the form furnished with the Contract Documents — a list of the designated subcontractors on this Project as required by the Subletting and Subcontracting Fair Practices Act, California Public Contract Code section 4100 et seq.

In accordance with California Public Contract Code Section 22300, the District will permit the substitution of securities for any moneys withheld by the District to ensure performance under the Contract. At the request and expense of the Contractor, securities equivalent to the amount withheld shall be deposited with the District, or with a state or federally chartered bank as the escrow agent, who shall then

pay such moneys to the Contractor. Upon satisfactory completion of the Contract, the securities shall be returned to the Contractor.

Each bidder's bid must be accompanied by one of the following forms of bidder's security: (1) cash; (2) a cashier's check made payable to the District; (3) a certified check made payable to the District; or (4) a bidder's bond executed by a California admitted surety as defined in Code of Civil Procedure section 995.120, made payable to the District in the form set forth in the Contract Documents. Such bidder's security must be in an amount not less than ten percent (10%) of the maximum amount of bid as a guarantee that the bidder will enter into the proposed Contract, if the same is awarded to such bidder, and will provide the required Performance and Payment Bonds, insurance certificates and any other required documents. In the event of failure to enter into said Contract or provide the necessary documents, said security will be forfeited.

The Contractor and all subcontractors shall comply with the requirements set forth in Division 2, Part 7, Chapter 1 of the Labor Code. The District has obtained from the Director of the Department of Industrial Relations the general prevailing rate of per diem wages and the general prevailing rate for holiday and overtime work in the locality in which this work is to be performed for each craft, classification or type of worker needed to execute the Contract. These per diem rates, including holiday and overtime work, as well as employer payments for health and welfare, pension, vacation, and similar purposes, are on file at the District, and are also available from the Director of the Department of Industrial Relations. Pursuant to California Labor Code section 1720 et seq., it shall be mandatory upon the Contractor to whom the Contract is awarded, and upon any subcontractor under such Contractor, to pay not less than the said specified rates to all workers employed by them in the execution of the Contract.

A contractor or subcontractor shall not be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code, or engage in the performance of any contract for public work, as defined in the Labor Code, unless currently registered and qualified to perform public work pursuant to Labor Code section 1725.5. It is not a violation of this section for an unregistered contractor to submit a bid that is authorized by Section 7029.1 of the Business and Professions Code or by Section 10164 or 20103.5 of the Public Contract Code, provided the contractor is registered to perform public work pursuant to Section 1725.5 at the time the contract is awarded.

The Contractor and all subcontractors shall furnish certified payroll records as required pursuant Labor Code section 1776 directly to the Labor Commissioner in accordance with Labor Code section 1771.4 on at least on a monthly basis (or more frequently if required by the CJUSD or the Labor Commissioner) and in a format prescribed by the Labor Commissioner. Monitoring and enforcement of the prevailing wage laws and related requirements will be performed by the Labor Commissioner/ Department of Labor Standards Enforcement (DLSE).

No bidder may withdraw any bid for a period of ninety (90) calendar days after the date set for the opening of bids.

Separate payment and performance bonds, each in an amount equal to 100% of the total Contract amount are required, and shall be provided to the District prior to execution of the Contract and shall be in the form set forth in the Contract Documents.

All bonds (Bid, Performance, and Payment) must be issued by a California admitted surety as defined in California Code of Civil Procedure section 995.120.

No telephone or facsimile machine will be available to bidders on the District premises at any time.

It is each bidder's sole responsibility to ensure its bid is timely delivered and received at the location designated as specified above. Any bid received at the designated location after the scheduled closing time for receipt of bids shall be returned to the bidder unopened.

Publish Dates:

April 16, 2024

April 23, 2024

INSTRUCTIONS TO BIDDERS

1. **Preparation of Bid Form and Bidding Procedures.** Proposals under these specifications shall be submitted on the blank forms furnished herewith including, but not limited to, the forms in the Special Conditions, at the time and place stated in the Notice Inviting Bids. Each bidder shall review and comply with all bidding instructions and requirements set forth in the Special Conditions. All blanks in the Bid Form must be appropriately filled in, and all proposed prices must be stated clearly and legibly in both words and numerals. All bids must be signed by the bidder in permanent ink and submitted in sealed envelopes, bearing on the outside, the bidder's name, address, telephone number, and California Contractor's License number, and the name of the Project for which the bid is submitted. The District reserves the right to reject any bid if all of the above information is not furnished. It is each bidder's sole responsibility to ensure its bid is timely delivered and received at the location designated as specified above. Any bid received at the designated location after the scheduled closing time for receipt of bids shall be returned to the bidder unopened.

2. **Bid Security.** Each bid must be accompanied by one of the following forms of bidder's security: (1) cash; (2) a cashier's check made payable to the District; (3) a certified check made payable to the District; or (4) a bidder's bond executed by a California admitted surety as defined in Code of Civil Procedure Section 995.120, made payable to the District, in the form set forth in the Contract Documents. Such bidder's security must be in an amount not less than **ten percent (10%)** of the maximum amount of such bidder's bid as a guarantee that the bidder will enter into the Contract, if the same is awarded to such bidder, and will provide the required Performance and Payment Bonds, insurance certificates and any other required documents. In the event that a bidder is awarded the Contract and such bidder fails to enter into said Contract or provide the surety bond or bonds within five (5) calendar days after award of the Contract to bidder, said security will be forfeited.

3. **Signature.** The bid form, all bonds, all designations of subcontractors, the Contractor's Certificate, the Agreement, and all Guarantees must be signed in permanent ink in the name of the bidder and must bear the signature in longhand of the person or persons duly authorized to sign the bid.

If bidder is a corporation, the legal name of the corporation shall first be set forth, together with two signatures: one from the President and one from the Secretary or Assistant Secretary. Alternatively, the signature of other authorized officers or agents may be affixed, if a certified copy of the resolution of the corporate board of directors authorizing them to do so is provided to the District. Such documents shall include the title of such signatories below the signature and shall bear the corporate seal.

If bidder is a partnership, the true name of the firm shall first be set forth, together with the names of all persons comprising the partnership or co-partnership. The bid must be signed by all partners comprising the partnership unless proof in the form of a certified copy of a statement of partnership acknowledging the signer to be a general partner is presented to the District, in which case the general partner may sign.

Bids submitted as joint ventures must so state and be signed by each joint venturer.

Bids submitted by individuals must be signed by the bidder unless an up to date power- of-attorney is on file in the District office, in which case, said person may sign for the individual.

The above rules also apply in the case of the use of a fictitious firm name. In addition, however, where a fictitious name is used, it must be so indicated in the signature.

4. **Modifications.** Changes in or additions to the bid form, recapitulations of the work bid upon, alternative proposals, or any other modification of the bid form which is not specifically called for in the Contract Documents may result in the District's rejection of the bid as not being responsive to the Notice Inviting Bids. **No oral or telephonic modification of any bid submitted will be considered.**

5. **Erasures, Inconsistent or Illegible Bids.** The bid submitted must not contain any erasures, interlineations, or other corrections unless each such correction creates no inconsistency and is suitably authenticated by affixing in the margin immediately opposite the correction the signature or signatures of the person or persons signing the bid. In the event of inconsistency between words and figures in the bid

price, words shall control figures. In the event that the District determines that any bid is unintelligible, inconsistent, or ambiguous, the District may reject such bid as not being responsive to the Notice Inviting Bids.

6. Examination of Site and Contract Documents. Each bidder shall visit the site of the proposed work and become fully acquainted with the conditions relating to the construction and labor so that the facilities, difficulties, and restrictions attending the execution of the work under the Contract are fully understood. Bidders shall thoroughly examine and be familiar with the drawings, specifications and all other documents and requirements that are attached to and/or contained in the Project Manual. The failure or omission of any bidder to receive or examine any Contract Documents, Special Conditions, form, instrument, addendum, or other document or to visit the site and become acquainted with conditions there existing shall not relieve any bidder from obligations with respect to the bid or to the contract. The submission of a bid shall be taken as prima facie evidence of compliance with this section. Bidders shall not, at any time after submission of the bid, dispute, complain, or assert that there were any misunderstandings with regard to the nature or amount of work to be done.

7. Withdrawal of Bids. Any bid may be withdrawn, either personally or by written request, at any time prior to the scheduled closing time for receipt of bids. The bid security for bids withdrawn prior to the scheduled closing time for receipt of bids, in accordance with this paragraph, shall be returned upon demand therefor.

No bidder may withdraw any bid for a period of ninety (90) calendar days after the date set for the opening of bids.

8. Agreements and Bonds. The Agreement form which the successful bidder, as Contractor, will be required to execute, and the forms and amounts of surety bonds and insurance endorsements Contractor which will be required to be furnished at the time of execution of the Agreement, are included in the bid documents and should be carefully examined by the bidder. The number of executed copies of the Agreement, the Performance Bond, and the Payment Bond required is two (2). Payment and Performance bonds must be executed by an admitted surety insurer as defined in Code of Civil Procedure 995.120.

9. Interpretation of Plans and Documents/Pre-Bid Clarification. If any prospective bidder is in doubt as to the true meaning of any part of the Contract Documents, or finds discrepancies in, or omissions, a written request for an interpretation or correction thereof may be submitted to the District. The bidder submitting the request shall be responsible for its prompt delivery. **Any interpretation or correction of the Contract Documents will only be made by Addendum duly issued, and a copy of such Addendum will be made available for each contractor receiving a set of the Contract Documents.** No person is authorized to make any oral interpretation of any provision in the Contract Documents, nor shall any oral interpretation be binding on the District. If discrepancies on drawings, specifications or elsewhere in the Contract Documents are not covered by addenda, bidder shall include in their bid methods of construction and materials for the higher quality and complete assembly. Each request for clarification shall be submitted in writing, via email, to only the following persons:

TO: Richard Putnam, Director of Facilities
rputnam@centerusd.org

Each transmitted request shall contain the name of the person and/or firm filing the request, address, telephone and email address, Specifications and/or Drawing number, and document title. Bidder is responsible for the legibility of hand written requests. Pre-bid clarification request shall be filed a minimum of **six (6)** calendar days prior to bid opening. Requests received less than **six (6)** calendar days before bid opening shall not be considered or responded to. A written response to timely pre-bid clarifications requests which materially affects the bidders price will be made by Addendum issued by District not less than seventy-two (72) hours prior to bid opening.

10. Bidders Interested in More Than One Bid. No person, firm, or corporation shall be allowed to make, or file, or be interested in more than one prime bid for the same work unless alternate bids are specifically called for. A person, firm, or corporation that has submitted a proposal to a bidder, or that has quoted prices

of materials to a bidder, is not thereby disqualified from submitting a proposal or quoting prices to other bidders or making a prime proposal.

11. Award of Contract. The Contract will be awarded to the lowest responsive responsible bidder by action of the governing Board. The District reserves the right to reject any or all bids, or to waive any irregularities or informalities in any bids or in the bidding. In the event an award is made to bidder, and such bidder fails or refuses to execute the Contract and provide the required documents within five (5) calendar days after award of the Contract to bidder, the District may award the Contract to next lowest responsible and responsive bidder or release all bidders. **Each bid must conform and be responsive to the Contract Documents as defined in the General Conditions.**

12. Bid Protest Procedure. Any bidder may file a bid protest. The protest shall be filed in writing with the District's representative, not more than five (5) business days after the date of the bid opening. An e-mail address shall be provided and by filing the protest, protesting bidder consents to receipt of e-mail notices for purposes of the Protest and Protest related questions and Protest Appeal, if applicable. The protest shall specify the reasons and facts upon which the protest is based.

a. Resolution of Bid Controversy: Once the bid protest is received, the apparent lowest responsible bidder will be notified of the protest and the evidence presented. If appropriate, the apparent low bidder will be given an opportunity to rebut the evidence and present evidence that the apparent low bidder should be allowed to perform the Work. If deemed appropriate by the District, an informal hearing will be held. District will issue a written decision within fifteen (15) days of receipt of the protest, unless factors beyond the District's reasonable control prevent such resolution. The Decision on the Bid Protest will be copied to all parties involved in the protest.

b. Appeal: If the protesting bidder or the apparent low bidder is not satisfied with the decision, the matter may be appealed to the District Superintendent, or their designee, within three (3) business days after receipt of the District's written decision on the bid protest. The appeal must be in writing and sent via overnight registered mail with all accompanying information relied upon for the appeal and an e-mail address from which questions and responses may be provided to:

Center Joint Unified School District
Business Department
8408 Watt Ave.
Antelope, CA 95843-9116

c. Appeal Review: The District Superintendent or their designee shall review the decision on the bid protest from the Director of Facilities and issue a written response to the appeal, or if appropriate, appoint a Hearing Office to conduct a hearing and issue a written decision. The written decision of the District Superintendent or the Hearing Officer shall be rendered within fifteen (15) calendar days and shall state the basis for the decision. The decision concerning the appeal will be final and not subject to any further appeals.

d. Reservation of Rights to Proceed with Project Pending Appeal. The District reserves the right to proceed to award the Project and commence construction pending an Appeal. If there is State Funding or a critical completion deadline, the District may choose to shorten the time limits set forth in this Section if written notice is provided to the protesting party. E-mailed notice with a written confirmation sent by First Class Mail shall be sufficient to constitute written notice. If there is no written response to a written notice shortening time, the District may proceed with the award.

e. Finality. Failure to comply with this Bid Protest Procedure shall constitute a waiver of the right to protest and shall constitute a failure to exhaust the protesting bidder's administrative remedies.

13. Alternates. If alternate bids are called for, the Contract may be awarded at the election of the Governing Board to the lowest responsible and responsive bidder using the method and procedures outlined in the Notice Inviting Bids and as specified in the section entitled Alternate/Deductive Bid Alternates. The Contract will be awarded to the lowest responsive responsible Bidder based on any

combination of Base Bid and Alternates, if applicable, as determined by the District. This process may be conducted by the District in a "blind selection" format, i.e., without knowledge of the identity of any of the Bidders before ranking of all Bidders from lowest to highest has been determined. All awards will be made in the District's best interest.

a. Subcontractor Listing for Alternates. If alternate bids are called for and the bidder intends to use different or additional subcontractors, a separate list of subcontractors must be submitted for each such alternate..

14. Evidence of Responsibility. Upon the request of the District, a bidder whose bid is under consideration for the award of the Contract shall submit promptly to the District satisfactory evidence showing the bidder's financial resources, surety and insurance claims experience, construction experience, completion ability, workload, organization available for the performance of the Contract, and other factors pertinent to a Project of the scope and complexity involved.

15. Listing Subcontractors. Each bidder shall submit with his bid, on the form furnished with the Contract Documents, a list of the names, license numbers, scopes of work, locations of the places of business, contact information, and Department of Industrial Relations ("DIR") registration numbers of each subcontractor who will perform work or labor or render service to the bidder in or about the project, or a subcontractor who under subcontract to the bidder, specially fabricates and installs a portion of the work, in an amount in excess of one-half of 1 percent of the bidder's total bid as required by the Subletting and Subcontracting Fair Practices Act (Public Contract Code section 4100, et seq.) Pursuant to Labor Code section 1725.5, all subcontractors (of any tier) performing work on this Project must be properly registered with DIR.

16. Workers' Compensation. In accordance with the provisions of Labor Code Section 3700, the successful bidder as the Contractor shall secure payment of compensation to all employees. The Contractor shall sign and file with the District the following certificate prior to performing the work under this contract: "I am aware of the provisions of Section 3700 of the Labor Code, which requires every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract." The form of such certificate is included as a part of the Bid Documents.

17. Contractor's License. To perform the work required by this notice, the Contractor must possess the Contractor's License as specified in the Notice Inviting Bids, and the Contractor must maintain the license throughout the duration of the contract. If, at the time of bid, bidder is not licensed to perform the Project in accordance with Division 3, Chapter 9, of the Business and Professions Code for the State of California and the Notice to Contractors calling for bids, such bid will not be considered and the Contractor will forfeit its bid security to the District.

18. Anti-Discrimination. It is the policy of the District that in connection with all work performed under contracts, 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. The Contractor agrees to comply with applicable federal and California laws, including, but not limited to, the California Fair Employment and Housing Act, beginning with Government Code section 12900 and Labor Code section 1735. In addition, the Contractor agrees to require like compliance by any subcontractors employed on the work by such Contractor.

19. Preference for Materials and Substitutions.

a. One Product Specified. Unless the Plans and Specifications state that no Substitution is permitted, whenever the Contract Documents indicate any specific article, device, equipment, product, material, fixture, patented process, form, method, construction, or any specific name, make, trade name, or catalog number, with or without the words, "or equal," such specification shall be read as if the language "or equal" is incorporated.

f. Request for Substitution. Bidder may, unless otherwise stated, offer any material, process, article, etc., which is materially equal or better in every respect to that so indicated or specified ("Specified Item") and will completely accomplish the purpose of the Contract Document. If bidder desires to offer a Substitution for a Specified Item, such bidder must make a request in writing on the District's Substitution Request Form ("Request Form") and submit the completed Request Form with the bidder's bid. The Request Form must be accompanied by evidence as to whether the proposed substitution:

- 1) Is equal in quality, service, and ability to the Specified Item as demonstrated by a side by side comparison of key characteristics and performance criteria (CSI comparison chart);
- 2) Will entail no changes in detail, construction and scheduling of related work;
- 3) Will be acceptable in consideration of the required design and artistic effect;
- 4) Will provide no cost disadvantage to the District;
- 5) Will require no excessive or more expensive maintenance, including adequacy and availability of replacement parts; and
- 6) Will require no change in the Contract Time.

In completing the Request Form, bidder must state with respect to each requested substitution whether bidder will agree to provide the Specified Item in the event that the District denies bidder's request for substitution of a Specified Item. In the event that bidder does not agree in the Request Form to provide the Specified Item and the District denies the requested Substitution, the bidder's bid shall be considered non-responsive and the District may award the Contract to the next lowest bidder or in its sole discretion, release all bidders. In the event that bidder has agreed in the Request Form to provide the Specified Item and the District denies bidder's requested substitution for a Specified Item, bidder shall execute the Agreement and provide the Specified Item without any additional cost or charge to the District, and if bidder fails to execute the Agreement with the Specified Item(s), bidder's bid bond will be forfeited.

After the bids are opened, the apparent lowest bidder shall provide, within five (5) calendar days of opening such bids, any and all Drawings, Specifications, samples, performance data, calculations, and other information as may be required to assist the Architect and the District in determining whether the proposed substitution is acceptable. The burden of establishing these facts shall be upon the bidder.

After the District's receipt of such evidence by bidder, the District will make its final decision as to whether the bidder's request for Substitution for any Specified Items will be granted. The District shall have sole discretion in deciding as to whether a proposed request for Substitution is equal to or better than a Specified Item. Any request for Substitution which is granted by the District shall be documented and processed through a Change Order. The District may condition its approval of any Substitution upon delivery to the District of an extended warranty or other assurances of adequate performance of the Substitution. Any and all risks of delay due to DSA, or any other governmental agency having jurisdiction shall be on the bidder.

20. Disqualification of Bidders and Proposals. More than one proposal for the same work from any individual, firm, partnership, corporation, or association under the same or different names will not be accepted; and reasonable grounds for believing that any bidder is interested in more than one proposal for the work will be cause for rejecting all proposals in which such bidder is interested and the bidder will forfeit their bid security to the District.

21. Unbalanced or Altered Bids. Proposals in which the prices are obviously unbalanced, and those which are incomplete or show any alteration of form, or contain any additions or conditional or alternate bids that are not called for or otherwise permitted, may be rejected. A proposal on which the signature of the bidder has been omitted may be rejected. If, in the CJUSD's sole discretion, it determines any pricing, costs or other information submitted by a bidder may result in an unbalanced bid, the CJUSD may deem such bid non-responsive. A bid may be determined by the CJUSD to be unbalanced if the bid is based on prices significantly less than cost for some work and prices which are significantly overstated in relation to cost for other work, and if there is a reasonable doubt that the bid will result in the lowest overall cost to the CJUSD even though it may be the low evaluated bid, or if it is so unbalanced as to be tantamount to allowing an advanced payment.

22. Employment of Apprentices. The Contractor and all Subcontractors shall comply with the provisions of California Labor Code including, but not limited to sections 1777.5, 1777.6, and 1777.7 concerning the employment of apprentices. The Contractor and any Subcontractor under him shall comply with the requirements of said sections, including applicable portions of all subsequent amendments in the employment of apprentices; however, the Contractor shall have full responsibility for compliance with said Labor Code sections, for all apprenticeable occupations, regardless of any other contractual or employment relationships alleged to exist.

23. Non-Collusion Declaration. Public Contract Code Section 7106 requires bidders to submit declaration of non-collusion with their bids. This form is included with the bid documents and must be signed and dated by the bidder under penalty of perjury.

24. Wage Rates, Travel and Subsistence.

a. The Contractor and all subcontractors shall comply with the requirements set forth in Division 2, Part 7, Chapter 1 of the Labor Code. Pursuant to Labor Code Sections 1770 et. seq., the District has obtained from the Director of the Department of Industrial Relations the general prevailing rate of per diem wages and the general prevailing rate for holiday and overtime work in the locality in which this work is to be performed for each craft, classification or type of worker needed to execute the contract. Copies are available from the District to any interested party on request and are also available from the Director of the Department of Industrial Relations. The Contractor shall obtain copies of the above-referenced prevailing wage sheets and post a copy of such wage rates at appropriate, conspicuous, weatherproof points at the Site.

b. Any worker employed to perform work on the Project and such work is not covered by any classification listed in the published general prevailing wage rate determinations or per diem wages determined by the Director of the Department of Industrial Relations, shall be paid not less than the minimum rate of wages specified therein for the classification which most nearly corresponds to the employment of such person in such classification.

c. Holiday and overtime work, when permitted by law, shall be paid for at the rate set forth in the prevailing wage rate determinations issued by the Director of the Department of Industrial Relations or at least one and one-half (1½) times the specified basic rate of per diem wages, plus employer payments, unless otherwise specified in the Contract Documents or authorized by law.

d. These per diem rates, including holiday and overtime work, and employer payments for health and welfare, pension, vacation, and similar purposes, are on file at the administrative office of the District, located as noted above and are also available from the Director of the Department of Industrial Relations. It is the Contractor's responsibility to ensure the appropriate prevailing rates of per diem wages are paid for each classification. It shall be mandatory upon the Contractor to whom the Contract is awarded, and upon any subcontractor under such Contractor, to pay not less than the said specified rates to all workers employed by them in the execution of the Contract.

25. DIR Registration of Contractor and Subcontractors. A contractor or subcontractor shall not be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code, or engage in the performance of any contract for public work, as defined in the Labor Code, unless currently registered and qualified to perform public work pursuant to Section 1725.5. It is not a violation of this section for an unregistered contractor to submit a bid that is authorized by Section 7029.1 of the Business and Professions Code or by Section 10164 or 20103.5 of the Public Contract Code, provided the contractor is registered to perform public work pursuant to Section 1725.5 at the time the contract is awarded.

This Project is a public works project as defined in Labor Code section 1720. Each contractor bidding on this Project and all subcontractors (of any tier) performing any portion of the Work must comply with the Labor Code sections 1725.5 and 1771.1 and must be properly and currently registered with DIR and qualified to perform public works pursuant to Labor Code section 1725.5 throughout the duration of the Project. For more information and up to date requirements, contractors are recommended to periodically review the DI's website at www.dir.ca.gov. Contractor shall be solely responsible for ensuring compliance

with Labor Code section 1725.5 as well as any requirements implemented by DIR applicable to its services or its subcontractors throughout the term of the Agreement and in no event shall contractor be granted increased payment from the CJUSD or any time extensions to complete the Project as a result of contractor's efforts to maintain compliance with the Labor Code or any requirements implemented by the DIR. Failure to comply with these requirements shall be deemed a material breach of this Agreement and grounds for termination for cause. The contractor and all subcontractors shall furnish certified payroll records as required pursuant Labor Code section 1776 directly to the Labor Commissioner in accordance with Labor Code section 1771.4 on at least on a monthly basis (or more frequently if required by the CJUSD or the Labor Commissioner) and in a format prescribed by the Labor Commissioner. The CJUSD reserves the right to withhold contract payments if the CJUSD is notified, or determines as the result of its own investigation, that contractor is in violation of any of the requirements set forth in Labor Code section 1720 et seq. at no penalty or cost to the CJUSD. Monitoring and enforcement of the prevailing wage laws and related requirements will be performed by the Labor Commissioner/ Department of Labor Standards Enforcement (DLSE).

26. No Telephone or Facsimile Availability. No telephone or facsimile machine will be available to bidders on the District premises at any time.

27. Obtaining Bidding Documents. Contract Documents are available on November 30, 2021, upon request from Capital Program Management, Inc., attention Omar Peña at omarp@capitalpm.com, or by download directly from the District's website at www.centerusd.org/rfp.

Bidder shall utilize a complete set of Bidding Documents in preparing a bid. The failure or omission of bidder to receive any Bidding Document, form, instrument, Addendum, or other document shall not relieve bidder from any obligations with respect to the bid and/or Contract.

28. Addenda. Clarification or any other notice of a change in the Bidding Documents will be issued only by the District on behalf of Center Joint Unified and only in the form of a written Addendum. Any other purported Addenda are void and unenforceable.

Bidder is responsible for ascertaining the disposition of all Addenda issued regardless of District notification and to acknowledge all Addenda in the submitted sealed bid prior to the bid opening. Copies of Addenda will be made available for inspection wherever Bidding Documents are on file for inspection. Each Addendum will be numbered and dated. Oral statements or any instructions in any form, other than Addendum as described above, shall be void and unenforceable. Any Addendum issued by the District and not noted as being acknowledged by bidder as required in the Bid Form, may result in the bid being deemed non-responsive.

29. Debarment. Bidder may also be subject to debarment, in addition to seeking remedies for False Claims under Government Code section 12650 et seq. and Penal Code section 72, the District may debar a Contractor pursuant to Article 15 of the General Conditions if the Board, or the Board may designate a hearing officer who, in his or her discretion, finds the Contractor has done any of the following:

- a. Intentionally or with reckless disregard, violated any term of a contract with the District
- b. Committed an act or omission which reflects on the Contractor's quality, fitness or capacity to perform work for the District;
- c. Committed an act or offense which indicates a lack of business integrity or business honesty; or,
- d. Made or submitted a false claim against the District or any other public entity (See Government Code section 12650, et seq., and Penal Code section 72)

Checklist of Mandatory Bid Forms

(For Contractor's use and reference only. Additional documents may be required so bidders should carefully review all Contract Documents and Bid Documents)

- ☐ Bid Form
- ☐ Bid Bond (or Bid Guarantee form if Security is other than Bid Bond)
- ☐ Designation of Subcontractors
- ☐ Contractor's Certificate Regarding Workers Compensation
- ☐ Non-Collusion Declaration
- ☐ Substitution Request Form (if Substitutions are being requested - If Substitution Request Form is not submitted then NO Substitutions will be allowed after the bids are opened)
- ☐ Site Visit Certificate
- ☐ Acknowledgment of Bidding Practices Regarding Indemnity
- ☐ Contractor's Certificate Regarding Drug-Free Work Place
- ☐ Contractor's Certificate Regarding Alcoholic Beverage and Tobacco-Free Campus Policy

DESIGNATION OF SUBCONTRACTORS

In compliance with the Subletting and Subcontracting Fair Practices Act (California Public Contract Code Sections 4100 et. seq.,) and any amendments thereof, each Bidder shall set forth below: (a) the name, license number, and location of the place of business of each subcontractor who will perform work or labor or render service to the Contractor, who will perform work or labor or work or improvement to be performed under this Contract, or a subcontractor licensed by the State of California who, under subcontract to the Contractor, specially fabricates and installs a portion of the work or improvements according to detailed drawings contained in the Plans and Specifications in an amount in excess of one-half of one percent of the Contractor's total bid; and (b) the portion and description of the work which will be done by each subcontractor under this Act. The Contractor shall list only one subcontractor for each such portion as is defined by the Contractor in this bid. All subcontractors shall be properly licensed by the California State Licensing Board.

If a Contractor fails to specify a subcontractor, or if a Contractor specifies more than one subcontractor for the same portion of work to be performed under the Contract in excess of one-half of one percent of the Contractor's total bid, the Contractor shall be deemed to have agreed that the Contractor is fully qualified to perform that portion, and that the Contractor alone shall perform that portion.

No Contractor whose bid is accepted shall (a) substitute any subcontractor, (b) permit any subcontractor to be voluntarily assigned or transferred or allow the relevant portion of the work to be performed by anyone other than the original subcontractor listed in the original bid, or (c) sublet or subcontract any portion of the work in excess of one-half of one percent of the Contractor's total bid where the original bid did not designate a subcontractor, except as authorized in the Subletting and Subcontracting Fair Practices Act.

Subletting or subcontracting of any portion of the work in excess of one-half of one percent of the Contractor's total bid where no subcontractor was designated in the original bid shall only be permitted in cases of public emergency or necessity, and then only after a finding, reduced to writing as a public record, of the authority awarding this Contract setting forth the facts constituting the emergency or necessity.

All subcontractors (of any tier) performing any portion of the Work must comply with the Labor Code sections 1725.5 and 1771.1 and must be properly and currently registered with the California Department of Industrial Relations and qualified to perform public works pursuant to Labor Code section 1725.5 throughout the duration of the Project.

NOTE: If alternate bids are called for and bidder intends to use different or additional subcontractors on the alternates, a separate list of subcontractors must be provided for each such Alternate.

DESIGNATION OF SUBCONTRACTORS FORM

Description & Portion of Work	Name of Subcontractor	Location & Place of Business	License Type and Number	E-Mail & Telephone*	DIR Registration Number*

Description & Portion of Work	Name of Subcontractor	Location & Place of Business	License Type and Number	E-Mail & Telephone*	DIR Registration Number*

* This information must be provided at the time of submission of bid or must be provided within 24 hours after the time set for the opening of bids. Bidders who choose to provide this information within 24 hours after the time set for the opening of bids are solely responsible to ensure the CJUSD receives this information in a timely manner. The CJUSD is not responsible for any problems or delays associated with emails, faxes, delivery, etc. Absent a verified fax or email receipt date and time by the CJUSD, the CJUSD's determination of whether the information was received timely shall govern and be determinative. Bidder shall not revise or amend any other information in this form submitted at the time of bid. The information submitted at the time of bid shall govern over any conflicts, discrepancies, ambiguities or other differences in any subsequent Subcontractor Designation Forms submitted by the bidder.

Proper Name of
Bidder:

Date:

Name:

Signature of Bidder
Representative:

Address:

Phone:

BID FORM

Project No. 24-09

FOR

CENTER JOINT UNIFIED SCHOOL DISTRICT

FOR

CENTRAL FREEZER FACILITY AT
FACILITIES, MAINTENANCE & OPERATIONS YARD

CONTRACTOR
NAME:

ADDRESS:

TELEPHONE:

() _____

FAX:

() _____

EMAIL:

1. Pursuant to and in compliance with your Notice Inviting Bids and other documents relating thereto, the undersigned bidder, having familiarized himself with the terms of the Contract, the local conditions affecting the performance of the Contract, the cost of the work at the place where the work is to be done, with the Drawings and Specifications, and other Contract Documents, hereby proposes and agrees to perform within the time stipulated, the Contract, including all of its component parts, and everything required to be performed, including its acceptance by the District, and to provide and furnish any and all labor, materials, tools, expendable equipment, and utility and transportation services necessary to perform the Contract and complete all of the Work in a workmanlike manner required in connection with the construction of:

for the District described above, all in strict conformance with the drawings and other Contract Documents on file at the District Offices of said District for amounts set forth herein.

[illegible]

Acknowledge the inclusion of all addenda issued prior to bid in the blanks provided above. Your failure to do so may render your bid non-responsive.

Central Freezer Facility at M&O Yard

<div style="border-bottom: 1px solid black; height: 1.2em; width: 100%;"></div>		Dollars	\$ <div style="border-bottom: 1px solid black; height: 1.2em; width: 100%;"></div>
Total Base Bid – in words			In numbers

4. ALLOWANCES: The Bidder's Base Bid shall **NOT** include the following potential Allowance(s). The District will add some or all of the following Allowance(s) amount(s) to the successful bidder's Contract, at the District's discretion. Contractor shall be permitted to invoice for Work under an Allowance in the identical structure as a Change Order.

District Allowance	\$50,000.00
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5. TIME FOR COMPLETION: The District may give a notice to proceed within ninety (90) days of the award of the bid by the District. Once the Contractor has received the notice to proceed, the Contractor shall complete the work in the time specified in the Agreement. By submitting this bid, Contractor has thoroughly studied this Project and agrees that the Contract Time for this Project is adequate for the timely

and proper completion of the Project. Further, Contractor has included in the analysis of the time required for this Project, and the requisite time to complete Punch List.

In the event that the District desires to postpone giving the notice to proceed beyond this ninety (90) day period, it is expressly understood that with reasonable notice to the Contractor, giving the notice to proceed may be postponed by the District. It is further expressly understood by the Contractor, that the Contractor shall not be entitled to any claim of additional compensation as a result of the postponement of giving the notice to proceed.

If the Contractor believes that a postponement will cause a hardship to it, the Contractor may terminate the contract with written notice to the District within ten (10) days after receipt by the Contractor of the District's notice of postponement. Should the Contractor terminate the Contract as a result of a notice of postponement, the District shall have the authority to award the Contract to the next lowest responsible bidder, if applicable.

It is understood that the District reserves the right to reject any or all bids and/or waive any irregularities or informalities in this bid or in the bid process. The Contractor understands that it may not withdraw this bid for a period of ninety (90) days after the date set for the opening of bids.

6. Attached is bid security in the amount of not less than ten percent (10%) of the bid:

Bid bond (10% of the Bid), certified check or cashier's check (circle one)

7. The required List of Designated Subcontractors is attached hereto.

8. The required Non-Collusion Declaration is attached hereto.

9. The Substitution Request Form, if applicable, is attached hereto.

10. The Site Visit Certification, if applicable, is attached hereto.

11. It is understood and agreed that if written notice of the acceptance of this bid is mailed, emailed, or delivered to the undersigned after the opening of the bid, and within the time this bid is required to remain open, or at any time thereafter before this bid is withdrawn, the undersigned will execute and deliver to the District a Contract in the form attached hereto in accordance with the bid as accepted, and that he or she will also furnish and deliver to the District the Performance Bond and Payment Bond, all within five (5) calendar days after award of Contract, and that the work under the Contract shall be commenced by the undersigned bidder, if awarded the Contract, by the start date provided in the District's Notice to Proceed, and shall be completed by the Contractor in the time specified in the Contract Documents.

12. The names of all persons interested in the foregoing proposal as principals are as follows:

(IMPORTANT NOTICE: If bidder or other interested person is a corporation, state the legal name of such corporation, as well as the names of the president, secretary, treasurer, and manager thereof; if a co-partnership, state the true names of the firm, as well as the names of all individual co-partners comprising the firm; if bidder or other interested person is an individual, state the first and last names in full.)

13. PROTEST PROCEDURES. If there is a bid protest, the grounds shall be submitted as set forth in the Instructions to Bidders.

14. The undersigned bidder shall be licensed and shall provide the following California Contractor's license information:

License Number:

License Expiration Date:

Name on License:

Class of License:

DIR Registration Number:

If the bidder is a joint venture, each member of the joint venture must include the above information.

15. Time is of the essence regarding this Contract, therefore, in the event the bidder to whom the Contract is awarded fails or refuses to post the required bonds and return executed copies of the Agreement form within three (3) calendar days from the date of receiving the Notice of Award, the District may declare the bidder's bid deposit or bond forfeited as damages.

16. The bidder declares that he/she has carefully examined the location(s) of the proposed Project, that he/she has examined the Contract Documents, including the Plans, General Conditions, Supplemental Conditions, Special Conditions, Addenda, Specifications, and all other documents and requirements that are attached to and/or contained in the Project Manual, and read the accompanying instructions to bidders, and hereby proposes and agrees, if this proposal is accepted, to furnish all materials and do all work required to complete the said work in accordance with the Contract Documents, in the time and manner therein prescribed for the unit cost and lump sum amounts set forth in this Bid Form.

17. DEBARMENT. In addition to seeking remedies for False Claims under Government Code section 12650 et seq. and Penal Code section 72, the District may debar a Contractor pursuant to Article 15 of the General Conditions if the Board, or the Board may designate a hearing officer who, in his or her discretion, finds the Contractor has done any of the following:

- a. Intentionally or with reckless disregard, violated any term of a contract with the District;
- b. Committed an act or omission which reflects on the Contractor's quality, fitness or capacity to perform work for the District;
- c. Committed an act or offense which indicates a lack of business integrity or business honesty; or
- d. Made or submitted a false claim against the District or any other public entity. (See Government Code section 12650, et seq., and Penal Code section 72).

18. DESIGNATION OF SUBCONTRACTORS. In compliance with the Subletting and Subcontracting Fair Practices Act (California Public Contract Code section 4100 et seq.) and any amendments thereof, each bidder shall list subcontractors on the District's form Subcontractor list. This subcontractor list shall be submitted with the bid and is a required form,

I agree to receive service of notices at the e-mail address listed below.

I, the below-indicated bidder, declare under penalty of perjury that the information provided and representations made in this bid are true and correct.

Proper Name of Company

Name of Bidder Representative

Street Address

City, State, and Zip

()

Phone Number

()

Fax Number

E-Mail

By: _____ Date: _____
Signature of Bidder Representative

NOTE: If bidder is a corporation, the legal name of the corporation shall be set forth above together with the signature of authorized officers or agents and the document shall bear the corporate seal; if bidder is a partnership, the true name of the firm shall be set forth above, together with the signature of the partner or partners authorized to sign contracts on behalf of the partnership; and if bidder is an individual, his signature shall be placed above.

All signatures must be made in permanent blue ink.

**CONTRACTOR'S CERTIFICATE REGARDING
WORKERS' COMPENSATION FORM**

Labor Code Section 3700 in relevant part provides:

Every employer except the State shall secure the payment of compensation in one or more of the following ways:

1. By being insured against liability to pay compensation by one or more insurers duly authorized to write compensation insurance in this State.

2. By securing from the Director of Industrial Relations a certificate of consent to self-insure, which may be given upon furnishing proof satisfactory to the Director of Industrial Relations of ability to self-insure and to pay any compensation that may become due to employees.

3. For any county, city, city and county, municipal corporation, public District, public agency, or any political subdivision of the state, including each member of a pooling arrangement under a joint exercise of powers agreement (but not the state itself), by securing from the Director of Industrial Relations a certificate of consent to self-insure against workers' compensation claims, which certificate may be given upon furnishing proof satisfactory to the director of ability to administer workers' compensation claims properly, and to pay workers' compensation claims that may become due to its employees. On or before March 31, 1979, a political subdivision of the state which, on December 31, 1978, was uninsured for its liability to pay compensation, shall file a properly completed and executed application for a certificate of consent to self-insure against workers' compensation claims. The certificate shall be issued and be subject to the provisions of Section 3702.

I am aware of the provisions of Labor Code Section 3700 which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provision before commencing the performance of the work of this Contract.

(Signature)

(Print)

(Date)

In accordance with Article 5 (commencing at section 1860), Chapter 1, Part 7, Division 2 of the Labor Code, the above certificate must be signed and submitted with the Contractor's bid.

NON-COLLUSION DECLARATION

The undersigned declares:

I am the _____ [Title] of _____
[Name of Company], the party making the foregoing bid.

The bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The bid is genuine and not collusive or sham. The bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid. The bidder has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or to refrain from bidding. The bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder. All statements contained in the bid are true. The bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on _____
[Date], at _____ [City], _____ [State].

Signed: _____

Typed Name: _____

BID GUARANTEE FORM
(Use only when not using a Bid Bond)

Accompanying this proposal is a cashier's check payable to the order of the Center Joint Unified School District or a certified check payable to the order of the Center Joint Unified School District in an amount equal to ten percent (10%) of the base bid and alternates (\$_____).

The proceeds of this check shall become the property of said District, if, this proposal shall be accepted by the District through the District's Governing Board, and the undersigned fails to execute a Contract with and furnish the sureties required by the District within the required time; otherwise, said check is to be returned to the undersigned.

Bidder

Note: Use this form, in lieu of Bid Bond form, when a cashier's check or certified check is accompanying the bid

BID BOND FORM

KNOW ALL MEN BY THESE PRESENT that we, the undersigned, (hereafter called "Principal"), and _____ (hereafter called "Surety"), are hereby held and firmly bound unto the Center Joint Unified School District (hereafter called "District") in the sum of _____ (\$_____) for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, successors, and assigns.

SIGNED this _____ day of _____, 20____.

The condition of the above obligation is such that whereas the Principal has submitted to the District a certain Bid, attached hereto and hereby made a part hereof, to enter into a Contract in writing for the construction of _____.

NOW, THEREFORE,

- a. If said Bid is rejected, or
- b. If said Bid is accepted and the Principal executes and delivers a Contract or the attached Agreement form within three (3) calendar days after acceptance (properly completed in accordance with said Bid), and furnishes bonds for his faithful performance of said Contract and for payment of all persons performing labor or furnishing materials in connection therewith,

Then this obligation shall be void; otherwise, the same shall remain in 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, or the work to be performed thereunder, or the specifications accompanying the same, shall in anyway affect its obligation 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, or the call for bids, or the work, or to the specifications.

In the event suit is brought upon this bond by the District and judgment is recovered, the Surety shall pay all costs incurred by the District in such suit, including without limitation, attorneys' fees to be fixed by the court.

IN WITNESS WHEREOF, Principal and Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, on the day and year first set forth above.

By

(Corporate Seal)

Principal's Signature

Typed or Printed Name

Principal's Title

By

(Corporate Seal)

Surety's Signature

(Attached Attorney in Fact Certificate)

Typed or Printed Name

Title

Surety's Name

Surety's Address

Surety's Phone Number

IMPORTANT:

Surety companies executing bonds must possess a certificate of authority from the California Insurance Commissioner authorizing them to write surety insurance defined in California Insurance Code Section 105, and if the work or project is financed, in whole or in part, with federal, grant, or loan funds, it must also appear on the Treasury Department's most current list (Circular 570 as amended).

THIS IS A REQUIRED FORM.

Any claims under this bond may be addressed to:

(Name and Address of Surety)

(Name and Address of agent or representative for service of process in California if different from above)

(Telephone Number of Surety and agent or representative for service of process in California).

SITE-VISIT CERTIFICATION

PROJECT: **Central Freezer Facility at M&O Yard**
 #24-09

Check whichever option applies:

_____ I certify that I visited the Site of the proposed Work and became fully acquainted with the conditions relating to construction and labor. I fully understand the facilities, difficulties, and restrictions attending the execution of the Work under contract.

_____ I certify that _____ (Bidder's representative) visited the Site of the proposed Work and became fully acquainted with the conditions relating to construction and labor. The Bidder's representative fully understood the facilities, difficulties, and restrictions attending the execution of the Work under contract.

Bidder fully relieves and releases the Center Joint Unified School District, its Architect, its Engineer, its Construction Manager, and all of their respective officers, agents, employees, and consultants from any liability for any monetary or other damage(s), related to conditions that could have been identified during my visit and/or the Bidder's representative's visit to the Site.

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

Date: _____

Legal Name of Bidder: _____

Signature: _____

Print Name: _____

Title: _____

REQUEST FOR SUBSTITUTION AT TIME OF BID

Pursuant to Public Contract Code section 3400, bidder submits the following request to Substitute with the bid that is submitted. I understand that if the request to substitute is not an “or equal” or is not accepted by District and I answer “no” I will not provide the specified item, then I will be held non-responsive and my bid will be rejected. With this understanding, I hereby request Substitution of the following articles, devices, equipment, products, materials, fixtures, patented processes, forms, methods, or types of construction:

	Specification Section	Specified Item	Requested Substituted Item	Contractor Agrees to Provide Specified Item if request to Substitute is Denied ¹ (circle one)	District Decision (circle one)
1.				Yes No	Grant Deny
2.				Yes No	Grant Deny
3.				Yes No	Grant Deny
4.				Yes No	Grant Deny
5.				Yes No	Grant Deny
6.				Yes No	Grant Deny
7.				Yes No	Grant Deny
8.				Yes No	Grant Deny
9.				Yes No	Grant Deny
10.				Yes No	Grant Deny
11.				Yes No	Grant Deny
12.				Yes No	Grant Deny

This Request Form must be accompanied by evidence as to whether the proposed Substitution (1) is equal in quality, service, and ability to the Specified Item; (2) will entail no change in detail, construction, and scheduling of related work; (3) will be acceptable in consideration of the required design and artistic effect; (4) will provide no cost disadvantage to

¹ Bidder must state whether bidder will provide the Specified Item in the event the Substitution request is evaluate and denied. If bidder states that bidder will not provide the Specified Item the denial of a request to Substitute shall result in the rejection of the bidder as non-responsive. However, if bidder states that bidder will provide the Specified Item in the event that bidder’s request for Substitution is denied, bidder shall execute the Agreement and provide the Specified Item(s). If bidder refuses to execute the Agreement due to the District’s decision to require the Specified Item(s) at no additional cost, bidder’s Bid Bond shall be forfeited.

the District; (5) will require no excessive or more expensive maintenance, including adequacy and availability of replacement parts; (6) will require no change of the construction schedule or milestones for the Project; and, (7) Contractor agrees to pay for any DSA Fees or other Governmental Plan check costs associated with this Substitution Request. (See General Conditions Section 3.6)

The undersigned states that the following paragraphs are correct:

- The proposed Substitution does not affect the dimensions shown on the Drawings.
- The undersigned will pay for changes to the building design, including Architect, engineering, or other consultant design, detailing, DSA plan check or other governmental plan check costs, and construction costs caused by the requested substitution.
- The proposed substitution will have no adverse effect on other trades, the Contract Time, or specified warranty requirements.
- Maintenance and service parts will be available locally for the proposed substitution.
- In order for the Architect to properly review the substitution request, within five (5) days following the opening of bids, the Contractor shall provide samples, test criteria, manufacturer information, and any other documents requested by Architect or Architect's engineers or consultants, including the submissions that would ordinarily be required under Article 3.7 for Shop Drawings along with a document which provides a side by side comparison of key characteristics and performance criteria (often known as a CSI side by side comparison chart).
- If Substitution Request is accepted by the District, Contractor is still required to provide a Submittal for the substituted item pursuant to Article 3.7 and shall provide required Schedule information (including schedule fragnets, if applicable) for the substituted item as required under Article 8.3.2.1. The approval of the Architect, Engineer, or District of the substitution request does not mean that the Contractor is relieved of Contractor's responsibilities for Submittals, Shop Drawings, and schedules under Article 3.7 and 8.3.2 if the Contractor is awarded the Project.

Name of Bidder: _____

By: _____

District: _____

By: _____

ACKNOWLEDGMENT OF BIDDING PRACTICES REGARDING INDEMNITY FORM

TO: Center Joint Unified School District

RE: Project Number 24-09 Central Freezer Facility at M&O Yard

Construction Contract for _____

Please be advised that with respect to the above-referenced Project the undersigned Contractor on behalf of itself and all subcontractors hereby waives the benefits and protection of Labor Code section 3864, which provides:

“If an action as provided in this chapter is prosecuted by the employee, the employer, or both jointly against the third person results in judgment against such third person, the employer shall have no liability to reimburse or hold such third person harmless on such judgment or settlement in the absence of a written agreement to do so executed prior to the injury.”

This Agreement has been signed by an authorized representative of the contracting party and shall be binding upon its successors and assignees. The undersigned further agrees to promptly notify the District of any changes of ownership of the contracting party or any subcontractor while this Agreement is in force.

Contracting Party

Name of Agent/Title

CONTRACTOR'S CERTIFICATE REGARDING DRUG-FREE WORKPLACE

This Drug-Free Workplace Certification form is required from all successful bidders pursuant to the requirements mandated by Government Code section 8350 et seq., the Drug-Free Workplace Act of 1990. The Drug-Free Workplace Act of 1990 requires that every person or organization awarded a contract or grant for the procurement of any property or service from any State agency must certify that it will provide a drug-free workplace by performing certain specified acts. In addition, the Act provides that each contract or grant awarded by a State agency may be subject to suspension of payments or termination of the contract or grant, and the Contractor or grantee may be subject to debarment from future contracting, if the contracting agency determines that specified acts have occurred.

Pursuant to Government Code section 8355, every person or organization awarded a contract or grant from a State agency shall certify that it will provide a drug-free workplace by doing all of the following:

- Publishing a statement, notifying employees that the unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance is prohibited in the person's or organization's workplace, and specifying actions which will be taken against employees for violations of the prohibition.
- Establishing a drug-free awareness program to inform employees about all of the following:
 - a. The dangers of drug abuse in the workplace;
 - b. The person's or organization's policy of maintaining a drug-free workplace;
 - c. The availability of drug counseling, rehabilitation and employee-assistance programs; and
 - d. The penalties that may be imposed upon employees for drug abuse violations;
- Requiring that each employee engaged in the performance of the contract or grant be given a copy of the statement required by subdivision (a) and that, as a condition of employment on the contract or grant, the employee agrees to abide by the terms of the statement.

I, the undersigned, agree to fulfill the terms and requirements of Government Code section 8355 listed above and will (a) publish a statement notifying employees concerning the prohibition of controlled substance at the workplace, (b) establish a drug-free awareness program, and (c) require each employee engaged in the performance of the contract be given a copy of the statement required by section 8355(a) and require such employee agree to abide by the terms of that statement.

I also understand that if the Center Joint Unified School District determines that I have either (a) made a false certification herein, or (b) violated this certification by failing to carry out the requirements of Section 8355, that the contract awarded herein is subject to termination, suspension of payments, or both. I further understand that, should I violate the terms of the Drug-Free Workplace Act of 1990, I may be subject to debarment in accordance with the requirements of Section 8350 et seq.

[Signatures on the following page]

I acknowledge that I am aware of the provisions of Government Code section 8350 et seq. and hereby certify that I will adhere to the requirements of the Drug-Free Workplace Act of 1990.

DATE: _____

CONTRACTOR

By: _____
Signature

**CONTRACTOR'S CERTIFICATE REGARDING ALCOHOLIC BEVERAGE AND TOBACCO-
FREE CAMPUS POLICY**

The Contractor agrees that it will abide by and implement the District's Alcoholic Beverage and Tobacco-Free Campus Policy, which prohibits the use of alcoholic beverages and tobacco products, of any kind and at any time, in District-owned or leased buildings, on DISTRICT property and in DISTRICT vehicles. The Contractor shall procure signs stating "ALCOHOLIC BEVERAGE AND TOBACCO USE IS PROHIBITED" and shall ensure that these signs are prominently displayed in all entrances to school property at all times.

DATE: _____

CONTRACTOR

By: _____
Signature

AGREEMENT FORM

THIS AGREEMENT, entered into this ____ day of _____, 20__ in the County of Sacramento of the State of California, by and between the **Center Joint Unified School District**, hereinafter called the "District" or the "CJUSD", and _____, hereinafter called the "Contractor".

WITNESSETH that the District and the Contractor for the consideration stated herein agree as follows:

ARTICLE I - SCOPE OF WORK: The Contractor shall furnish all labor, materials, equipment, tools, and utility and transportation services, and perform and complete all work required in connection with the Project No. 24-09: **Central Freezer Facility at M&O Yard** in strict accordance with the Contract Documents enumerated in Article 7 below. The Contractor shall be liable to the CJUSD for any damages arising as a result of a failure to comply with that obligation, and the Contractor shall not be excused with respect to any failure to so comply by an act or omission of the Architect, Engineer, Inspector, Division of the State Architect (DSA), or representative of any of them, unless such act or omission actually prevents the Contractor from fully complying with the Contract Documents and the Contractor protests, in accordance with the Contract Documents, that the act or omission is preventing the Contractor from fully complying with the Contract Documents. Such protest shall not be effective unless reduced to writing and filed with the CJUSD Facilities office within seven (7) days of the date of occurrence of such act or omission preventing the Contractor from fully complying with the Contract Documents.

ARTICLE 2 - TIME OF COMPLETION: The District may give notice to proceed within ninety (90) days of the award of the bid by the District. Once the Contractor has received a notice to proceed, the Contractor shall reach Substantial Completion (See Article 1.1.46) of the Work within **one hundred twenty-eight (128) calendar days** from receipt of the Notice to Proceed. This shall be called Contract Time. (See Article 8.1.1). It is expressly understood that time is of the essence.

Contractor has thoroughly studied the Project and has satisfied itself that the time period for this Project is adequate for the timely and proper completion of the Project within each milestone and within the Contract time. Further, Contractor has included in the analysis of the time required for this Project, items set forth in General Conditions Article 8.3.2.1, Submittal Schedules, Rain Day Float, and Governmental Delay Float.

In the event that the District desires to postpone giving the notice to proceed beyond this ninety (90) day period, it is expressly understood that with reasonable notice to the Contractor, giving the notice to proceed may be postponed by the District. It is further expressly understood by the Contractor, that the Contractor shall not be entitled to any claim of additional compensation as a result of the District's postponement of giving the notice to proceed.

If the Contractor believes that a postponement will cause hardship to it, the Contractor may terminate the Contract with written notice to the District within ten (10) days after receipt by the Contractor of the District's notice of postponement. It is further understood by the Contractor that in the event that the Contractor terminates the Contract as a result of postponement by the District, the District shall only be obligated to pay the Contractor for the work performed by the Contractor at the time of notification of postponement. Should the Contractor terminate the Contract as a result of a notice of postponement, the CJUSD shall have the authority to award the Contract to the next lowest responsible bidder.

ARTICLE 3 - LIQUIDATED DAMAGES: It being impracticable and infeasible to determine the amount of actual damage, it is agreed that the Contractor will pay the District the sum of **Five Hundred Dollars (\$500) per calendar day** for each and every day of delay beyond the Contract Time set forth in Article 2 of this Agreement as liquidated damages and not as a penalty or forfeiture. In the event Liquidated Damages are not paid, the Contractor further agrees that the District may deduct such amount thereof from any money due or that may become due the Contractor under the Contract (See Article 9.6 and 2.2 of the General Conditions).

ARTICLE 4 - CONTRACT PRICE: The District shall pay to the Contractor as full consideration for the faithful performance of the Contract, subject to any additions or deductions as provided in the Contract

Documents, the sum of _____ DOLLARS (\$_____), said sum being the total amount stipulated in the Bid Contractor submitted. Payment shall be made as set forth in the General Conditions.

Should any Change Order result in an increase in the Contract Price, the cost of such Change Order shall be agreed to in advance by the Contractor and the District, subject to the monetary limitations set forth in Public Contract Code Section 20118.4. In the event that the Contractor proceeds with a Change in work without an agreement between the District and Contractor regarding the cost of a Change Order, the Contractor waives any Claim of additional compensation for such additional work.

ARTICLE 5 - HOLD HARMLESS AGREEMENT: Contractor shall defend, indemnify and hold harmless District, Architect, Inspector, the State of California and their officers, employees, agents and independent contractors from all liabilities, claims, actions, liens, judgments, demands, damages, losses, costs or expenses of any kind arising from death, personal injury, property damage or other cause based or asserted upon any act, omission, or breach connected with or arising from the progress of Work or performance of service under this Agreement or the Contract Documents. As part of this indemnity, Contractor shall protect and defend, at its own expense, District, Architect, Construction Manager, Inspector, the State of California and their officers, employees, agents and independent contractors from any legal action including attorney's fees or other proceeding based upon such act, omission, breach or as otherwise required by this Article.

Furthermore, Contractor agrees to and does hereby defend, indemnify and hold harmless District, Architect, Construction Manager, Inspector, the State of California and their officers, employees, agents and independent contractors from every claim or demand made, and every liability, loss, damage, expense or attorney's fees of any nature whatsoever, which may be incurred by reason of:

(a) Liability for (1) death or bodily injury to persons; (2) damage or injury to, loss (including theft), or loss of use of, any property; (3) any failure or alleged failure to comply with any provision of law or the Contract Documents; or (4) any other loss, damage or expense, sustained by any person, firm or corporation or in connection with the Work called for in this Agreement or the Contract Documents, except for liability resulting from the sole or active negligence, or the willful misconduct of the District.

(b) Any bodily injury to or death of persons or damage to property caused by any act, omission or breach of Contractor or any person, firm or corporation employed by Contractor, either directly or by independent contract, including all damages or injury to or death of persons, loss (including theft) or loss of use of any property, sustained by any person, firm or corporation, including the District, arising out of or in any way connected with Work covered by this Agreement or the Contract Documents, whether said injury or damage occurs either on or off District property, but not for any loss, injury, death or damages caused by the sole or active negligence or willful misconduct of the District.

(c) Any dispute between Contractor and Contractor's subcontractors/supplies/ Sureties, including, but not limited to, any failure or alleged failure of the Contractor (or any person hired or employed directly or indirectly by the Contractor) to pay any Subcontractor or Materialman of any tier or any other person employed in connection with the Work and/or filing of any stop notice or mechanic's lien claims.

(d) Any claims, allegations, penalties, assessments, or liabilities to the extent caused by the Contractor's failure or the failure of any Subcontractor of any tier, to fully comply with the DIR registration requirements under Labor Code section 1725.5 at all times during the performance of any Work on the Project and shall reimburse the District for any penalties assessed against the District arising from any failure by the Contractor or any Subcontractor of any tier from complying with Labor Code sections 1725.5 and 1771.1. Nothing in this paragraph, however, shall require the Contractor or any Subcontractor to be liable to the District or indemnify the District for any penalties caused by the District in accordance with Labor Code section 1773.3 (g).

Contractor, at its own expense, cost, and risk, shall defend any and all claims, actions, suits, or other proceedings that may be brought or instituted against the District, its officers, agents or employees, on account of or founded upon any cause, damage, or injury identified herein Article 5 and shall pay or satisfy any judgment that may be rendered against the District, its officers, agents or employees in any action, suit or other proceedings as a result thereof.

The Contractor's and Subcontractors' obligation to defend, indemnify and hold harmless the District, Architect, Inspector, the State of California and their officers, employees, agents and independent contractors hereunder shall include, without limitation, any and all claims, damages, and costs for the following: (1) any damages or injury to or death of any person, and damage or injury to, loss (including theft), or loss of use of, any property; (2) breach of any warranty, express or implied; (3) failure of the Contractor or Subcontractors to comply with any applicable governmental law, rule, regulation, or other requirement; (4) products installed in or used in connection with the Work; and (5) any claims of violation of the Americans with Disabilities Act ("ADA").

ARTICLE 6 - PROVISIONS REQUIRED BY LAW: Each and every provision of law and clause required to be inserted in this Contract shall be deemed to be inserted herein, and this Contract shall be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted or is not inserted correctly, then upon application of either party the Contract shall forthwith be physically amended to make such insertion or correction.

ARTICLE 7 - COMPONENT PARTS OF THE CONTRACT: The Contract entered into by this Agreement consists of the following Contract Documents, all of which are component parts of the Contract as if herein set out in full or attached hereto:

- Notice Inviting Bids
- Instructions to Bidders
- Designation of Subcontractors
- Non-Collusion Declaration
- Bid Guarantee Form
- Bid Bond
- Bid Form
- Contractor's Certificate Regarding Worker's Compensation
- Acknowledgement of Bidding Practices Regarding Indemnity Agreement Form
- Payment Bond
- Performance Bond
- Guarantee
- Escrow Agreement for Security Deposit In Lieu of Retention
- Workers' Compensation/Employers Liability Endorsement
- Contractor's Certification Regarding Background Checks
- General Liability Endorsement
- Automobile Liability Endorsement
- Contractor's Certificate Regarding Drug-Free Workplace
- Contractor's Certificate Regarding Alcoholic Beverage and Tobacco Free Campus
- General Conditions
- Special Conditions
- General Requirements
- Exhibits
- All Addenda as Issued
- Drawings/Plans
- Substitution Request Form
- Requirements, Reports and/or Documents in the Project Manual or Other Documents Issued to Bidders

All of the above named Contract Documents are intended to be complementary. Work required by one of the above named Contract Documents and not by others shall be done as if required by all.

ARTICLE 8 - PREVAILING WAGES: Wage rates for this Project shall be in accordance with the general prevailing rate of holiday and overtime work in the locality in which the work is to be performed for each craft, classification, or type of work needed to execute the Contract as determined by the Director of the Department of Industrial Relations. Copies of schedules of rates so determined by the Director of the Department of Industrial Relations are on file at the administrative office of the District and are also available from the Director of the Department of Industrial Relations. Monitoring and enforcement of the prevailing

wage laws and related requirements will be performed by the Labor Commissioner/ Department of Labor Standards Enforcement (DLSE).

The following are hereby referenced and made a part of this Agreement and Contractor stipulates to the provisions contained therein.

1. Chapter 1 of Part 7 of Division 2 of the Labor Code (Section 1720 et seq.)
2. California Code of Regulations, Title 8, Chapter 8, Subchapters 3 through 6 (Section 16000 et seq.)

ARTICLE 9 - RECORD AUDIT: In accordance with Government Code Section 8546.7 (and Davis Bacon, if applicable) and Article 13.11 of the General Conditions, records of both the District and the Contractor shall be subject to examination and audit for a period of five (5) years after a Final Retention Payment or the Recording of a Notice of Completion, whichever occurs first.

ARTICLE 10 - CONTRACTOR'S LICENSE: The Contractor must possess throughout the Project a Class B Contractor's License, issued by the State of California, which must be current and in good standing.

IN WITNESS WHEREOF, this Agreement has been duly executed by the above named parties, on the day and year first above written.

Center Joint Unified School District

CONTRACTOR:

Typed or Printed Name

Typed or Printed Name

Title

Title

Signature

Signature

Dated: _____

Type or Printed Name

Title (Authorized Officers or Agents)

Signature

(CORPORATE SEAL)

PAYMENT BOND

(CALIFORNIA PUBLIC WORK)

KNOW ALL MEN BY THESE PRESENTS:

THAT WHEREAS, the CENTER JOINT UNIFIED SCHOOL DISTRICT (sometimes referred to hereinafter as "Obligee") has awarded to _____ (hereinafter designated as the "Principal" or "Contractor"), an agreement for the work described as follows: **Central Freezer Facility at M&O Yard** (hereinafter referred to as the "Public Work"); and

WHEREAS, said Contractor is required to furnish a bond in connection with said Contract, and pursuant to California Civil Code Section 9550;

NOW, THEREFORE, We, _____, the undersigned Contractor, as Principal; and _____, a corporation organized and existing under the laws of the State of _____, and duly authorized to transact business under the laws of the State of California, as Surety, are held and firmly bound unto the CENTER JOINT UNIFIED SCHOOL DISTRICT and to any and all persons, companies, or corporations entitled by law to file stop notices under California Civil Code Section 9100, or any person, company, or corporation entitled to make a claim on this bond, in the sum of _____ Dollars (\$ _____), such sum being not less than one hundred percent (100%) of the total amount payable by said Obligee under the terms of said Contract, for which payment will and truly to be made, we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that if said Principal, its heirs, executors, administrators, successors, or assigns, or subcontractor, shall fail to pay any person or persons named in Civil Code Section 9100; or fail to pay for any materials, provisions, or other supplies, used in, upon, for, or about the performance of the work contracted to be done, or for any work or labor thereon of any kind, or for amounts due under the Unemployment Insurance Code, with respect to work or labor thereon of any kind; or shall fail to deduct, withhold, and pay over to the Employment Development Department, any amounts required to be deducted, withheld, and paid over by Unemployment Insurance Code Section 13020 with respect to work and labor thereon of any kind, then said Surety will pay for the same, in an amount not exceeding the amount herein above set forth, and in the event suit is brought upon this bond, also will pay such reasonable attorneys' fees as shall be fixed by the court, awarded and taxed as provided in California Civil Code Section 9550 et seq.

This bond shall inure to the benefit of any person named in Civil Code Section 9100 giving such person or his/her assigns a right of action in any suit brought upon this bond.

It is further stipulated and agreed that the Surety of this bond shall not be exonerated or released from the obligation of the bond by any change, extension of time for performance, addition, alteration or modification in, to, or of any contract, plans, or specifications, or agreement pertaining or relating to any scheme or work of improvement herein above described; or pertaining or relating to the furnishing of labor, materials, or equipment therefor; nor by any change or modification of any terms of payment or extension of time for payment pertaining or relating to

any scheme or work of improvement herein above described; nor by any rescission or attempted rescission of the contract, agreement or bond; nor by any conditions precedent or subsequent in the bond attempting to limit the right of recovery of claimants otherwise entitled to recover under any such contract or agreement or under the bond; nor by any fraud practiced by any person other than the claimant seeking to recover on the bond; and that this bond be construed most strongly against the Surety and in favor of all persons for whose benefit such bond is given; and under no circumstances shall the Surety be released from liability to those for whose benefit such bond has been given, by reason of any breach of contract between the Obligee and the Contractor or on the part of any obligee named in such bond; that the sole condition of recovery shall be that the claimant is a person described in California Civil Code Section 9100, and who has not been paid the full amount of his or her claim; and that the Surety does hereby waive notice of any such change, extension of time, addition, alteration or modification herein mentioned.

IN WITNESS WHEREOF this instrument has been duly executed by the Principal and Surety above named, on the _____ day of _____, 20____.

PRINCIPAL/CONTRACTOR:

By: _____

SURETY:

By: _____

Attorney-in-Fact

IMPORTANT: THIS IS A REQUIRED FORM.

Surety companies executing bonds must possess a certificate of authority from the California Insurance Commissioner authorizing them to write surety insurance defined in California Insurance Code Section 105, and if the work or project is financed, in whole or in part, with federal, grant or loan funds, Surety's name must also appear on the Treasury Department's most current list (Circular 570 as amended).

Any claims under this bond may be addressed to:

(Name and Address of Surety)

(Name and Address of agent or representative
for service for service of process in California)

Telephone: _____

Telephone: _____

A notary public or other office completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA)
) ss.
COUNTY OF)

On _____, before me,
_____, personally appeared
_____, who proved on the basis of satisfactory
evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and
acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies)
as the Attorney-in-Fact of _____ (Surety) and acknowledged to me
that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which
the person(s) executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing
paragraph is true and correct.

WITNESS my hand and official seal.

Notary Public in and for said State

(SEAL)

Commission expires: _____

NOTE: A copy of the power-of-attorney to local representatives of the bonding company must be
attached hereto.

PERFORMANCE BOND
(CALIFORNIA PUBLIC WORK)

KNOW ALL MEN BY THESE PRESENTS:

THAT WHEREAS, the CENTER JOINT UNIFIED SCHOOL DISTRICT (sometimes referred to hereinafter as "Obligee") has awarded to _____ (hereinafter designated as the "Principal" or "Contractor"), an agreement for the work described as follows: **Central Freezer Facility at M&O Yard** (hereinafter referred to as the "Public Work"); and

WHEREAS, the work to be performed by the Contractor is more particularly set forth in that certain contract for said Public Work dated _____, (hereinafter referred to as the "Contract"), which Contract is incorporated herein by this reference; and

WHEREAS, the Contractor is required by said Contract to perform the terms thereof and to provide a bond both for the performance and guaranty thereof.

NOW, THEREFORE, we, _____, the undersigned Contractor, as Principal, and _____, a corporation organized and existing under the laws of the State of _____, and duly authorized to transact business under the laws of the State of California, as Surety, are held and firmly bound unto the CENTER JOINT UNIFIED SCHOOL DISTRICT in the sum of _____ Dollars (\$ _____), said sum being not less than one hundred percent (100%) of the total amount payable by said Obligee under the terms of said Contract, for which amount well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH THAT, if the bounded Contractor, his or her heirs, executors, administrators, successors or assigns, shall in all things stand to and abide by, and well and truly keep and perform the covenants, conditions, and agreements in said Contract and any alteration thereof made as therein provided, on his or her part, to be kept and performed at the time and in the manner therein specified, and in all respects according to their intent and meaning; and shall faithfully fulfill guarantees of all materials and workmanship; and indemnify, defend and save harmless the Obligee, its officers and agents, as stipulated in said Contract, then this obligation shall become null and void; otherwise it shall be and remain in full force and effect.

The Surety, for value received, hereby stipulates and agrees that it shall not be exonerated or released from the obligation of this bond (either by total exoneration or pro tanto) by any change, extension of time, alteration in or addition to the terms of the contract or to the work to be performed there under or the specifications accompanying the same, nor by any change or modification to any terms of payment or extension of time for any payment pertaining or relating to any scheme of work of improvement under the contract. Surety also stipulates and agrees that it shall not be exonerated or released from the obligation of this bond (either by total exoneration or pro tanto) by any overpayment or underpayment by the Obligee that is based upon estimates approved by the Architect. The Surety stipulates and agrees that none of the aforementioned changes, modifications, alterations, additions, extension of time or actions shall in any way affect

its obligation on this bond, and it does hereby waive notice of any such changes, modifications, alterations, additions or extension of time to the terms of the contract, or to the work, or the specifications as well notice of any other actions that result in the foregoing.

Whenever Principal shall be, and is declared by the Obligee to be, in default under the Contract, the Surety shall promptly either remedy the default, or shall promptly take over and complete the Contract through its agents or independent contractors, subject to acceptance and approval of such agents or independent contractors by Obligee as hereinafter set forth, in accordance with its terms and conditions and to pay and perform all obligations of Principal under the Contract, including, without limitation, all obligations with respect to warranties, guarantees and the payment of liquidated damages; or, at Obligee's sole discretion and election, Surety shall obtain a bid or bids for completing the Contract in accordance with its terms and conditions, and upon determination by Obligee of the lowest responsible bidder, arrange for a contract between such bidder and the Obligee and make available as Work progresses (even though there should be a default or succession of defaults under the contract or contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the "balance of the Contract Price" (as hereinafter defined), and to pay and perform all obligations of Principal under the Contract, including, without limitation, all obligations with respect to warranties, guarantees and the payment of liquidated damages. The term "balance of the Contract price," as used in this paragraph, shall mean the total amount payable to Principal by the Obligee under the Contract and any modifications thereto, less the amount previously paid by the Obligee to the Principal, less any withholdings by the Obligee allowed under the Contract. Obligee shall not be required or obligated to accept a tender of a completion contractor from the Surety.

Surety expressly agrees that the Obligee may reject any agent or contractor which may be proposed by Surety in fulfillment of its obligations in the event of default by the Principal. Unless otherwise agreed by Obligee, in its sole discretion, Surety shall not utilize Principal in completing the Contract nor shall Surety accept a bid from Principal for completion of the work in the event of default by the Principal.

No final settlement between the Obligee and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

The Surety shall remain responsible and liable for all patent and latent defects that arise out of or relate to the Contractor's failure and/or inability to properly complete the Public Work as required by the Contract and the Contract Documents. The obligation of the Surety hereunder shall continue so long as any obligation of the Contractor remains.

Contractor and Surety agree that if the Obligee is required to engage the services of an attorney in connection with enforcement of the bond, Contractor and Surety shall pay Obligee's reasonable attorneys' fees incurred, with or without suit, in addition to the above sum.

In the event suit is brought upon this bond by the Obligee and judgment is recovered, the Surety shall pay all costs incurred by the Obligee in such suit, including reasonable attorneys' fees to be fixed by the Court.

IN WITNESS WHEREOF, we have hereunto set our hands and seals this _____ day of _____, 20____.

PRINCIPAL/CONTRACTOR:

By: _____

SURETY:

By: _____
Attorney-in-Fact

The rate of premium on this bond is _____ per thousand.

The total amount of premium charged: \$_____ (This must be filled in by a corporate surety).

IMPORTANT: THIS IS A REQUIRED FORM.

Surety companies executing bonds must possess a certificate of authority from the California Insurance Commissioner authorizing them to write surety insurance defined in California Insurance Code Section 105, and if the work or project is financed, in whole or in part, with federal, grant or loan funds, Surety's name must also appear on the Treasury Department's most current list (Circular 570 as amended).

Any claims under this bond may be addressed to:

(Name and Address of Surety)

(Name and Address of agent or representative
for service for service of process in California)

Telephone: _____

Telephone: _____

A notary public or other office completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA)
) ss.
COUNTY OF)

On _____, before me,
_____, personally appeared
_____, who proved on the basis of satisfactory evidence to be
the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me
that he/she/they executed the same in his/her/their authorized capacity(ies) as the Attorney-in-
Fact of _____ (Surety) and acknowledged to me that by his/her/their
signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s)
executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing
paragraph is true and correct.

WITNESS my hand and official seal.

Notary Public in and for said State

(SEAL)

Commission expires: _____

NOTE: A copy of the power-of-attorney to local representatives of the bonding company
must be attached hereto.

GUARANTEE

Guarantee for _____. We hereby guarantee that the _____, which we have installed in _____ has been done in accordance with the Contract Documents, including without limitation, the drawings and specifications, and that the work as installed will fulfill the requirements included in the bid documents. The undersigned and its surety agrees to repair or replace any or all such work, together with any other adjacent work, which may be displaced in connection with such replacement, that may prove to be defective in workmanship or material within a period of **two (2) years** from the date of the Notice of Completion of the above-mentioned structure by the Center Joint Unified School District, ordinary wear and tear and unusual abuse or neglect excepted. The guarantee period for corrected defective work shall continue for a duration equivalent to the original guarantee period.

In the event the undersigned or its surety fails to comply with the above-mentioned conditions within a reasonable period of time, as determined by the District, but not later than seven (7) days after being notified in writing by the District or within forty-eight (48) hours in the case of an emergency or urgent matter, the undersigned and its surety authorizes the District to proceed to have said defects repaired and made good at the expense of the undersigned and its surety, who will pay the costs and charges therefor upon demand. The undersigned and its surety shall be jointly and severally liable for any costs arising from the District's enforcement of this Guarantee.

Countersigned

(Proper Name)

(Proper Name)

By: _____

By: _____

(Signature of Subcontract or Contractor)

(Signature of General Contractor if for Subcontractor)

Representatives to be contacted for service:

Name: _____

Address: _____

Phone Number: _____

ESCROW AGREEMENT FOR SECURITY DEPOSITS IN LIEU OF RETENTION

This Escrow Agreement is made and entered into by and between the Center Joint Unified School District, 8408 Watt Avenue, Antelope, California 95843, hereinafter called "District", and _____ whose address is _____, hereinafter called "Contractor", and _____ whose address is _____, hereinafter called "Escrow Agent".

For the consideration hereinafter set forth, the District, Contractor and Escrow Agent agree as follows:

1. Pursuant to section 22300 of the Public Contract Code of the State of California, Contractor has the option to deposit securities with Escrow Agent as a substitute for Retention earnings required to be withheld by District pursuant to the Construction Contract entered into between the District and Contractor for _____ in the amount of _____ dated _____ (hereinafter referred to as the "Contract"). Alternatively, on written request of the Contractor, the District shall make payments of the Retention earnings directly to the escrow agent. When Contractor deposits the securities as a substitute for Contract earnings, the Escrow Agent shall notify the District within ten (10) days of deposit. The market value of the securities at the time of the substitution shall be at least equal to the cash amount then required to be withheld as Retention under the terms of the Contract between the District and Contractor. Securities shall be held in the name of the District, and shall designate the Contractor as beneficial District.

2. The District shall make progress payments to the Contractor for such funds which otherwise would be withheld from progress payments pursuant to the Contract provisions, provided that the Escrow Agent holds securities in the form and amount specified above.

3. When the District makes payments of Retentions earned directly to the Escrow Agent, the Escrow Agent shall hold them for the benefit of the Contractor until such time as the escrow created under this Contract is terminated. The Contractor may direct the investment of the payments into securities. All terms and conditions of this Agreement and the rights and responsibilities of the parties shall be equally applicable and binding when the District pays the Escrow Agent directly.

4. Contractor shall be responsible for paying all fees for the expenses incurred by Escrow Agent in administering the Escrow Account and all expenses of the District. These expenses and payment terms shall be determined by the District, Contractor, and Escrow Agent.

5. The interest earned on the securities or the money market accounts held in escrow and all interest earned on that interest shall be for the sole account of Contractor and shall be subject to withdrawal by Contractor at any time and from time to time without notice to the District.

6. Contractor shall have the right to withdraw all or any part of the principal in the Escrow Account only by written notice to Escrow Agent accompanied by written authorization from the District to the Escrow Agent that District consents to the withdrawal of the amount sought to be withdrawn by Contractor.

7. The District shall have a right to draw upon the securities in the event of default by the Contractor. Upon seven (7) days' written notice to the Escrow Agent from the District of the

notice of default under Article 2.2, Article 9.6 or Article 14, the Escrow Agent shall immediately convert the securities to cash and shall distribute the cash as instructed by the District.

8. Upon receipt of written notification from the District certifying that the Contract is final and complete, and that the Contractor has complied with all requirements and procedures applicable to the Contract, Escrow Agent shall release to Contractor all securities and interest on deposit less escrow fees and charges of the Escrow Account. The escrow shall be closed immediately upon disbursement of all moneys and securities on deposit and payment of fees and charges.

9. Escrow Agent shall rely on the written notifications from the District and the Contractor pursuant to Sections (5) to (8), inclusive, of this Agreement and the District and Contractor shall hold Escrow Agent harmless from Escrow Agent's release and disbursement of the securities and interest as set forth above.

10. The names of the persons who are authorized to give written notice or to receive written notice on behalf of the District and on behalf of Contractor in connection with the foregoing, and exemplars of their respective signatures are as follows:

On behalf of District:

Title

Name

Signature

Address

On behalf of Contractor:

Title

Name

Signature

Address

On behalf of Agent:

Title

Name

Signature

Address

At the time the Escrow Account is opened, the District and Contractor shall deliver to the Escrow Agent a fully executed counterpart of this Agreement.

IN WITNESS WHEREOF, the parties have executed this Agreement by their proper officers on the date set forth above.

DISTRICT

CONTRACTOR

Title

Title

Name

Name

Signature

Signature

INSURANCE DOCUMENTS & ENDORSEMENTS

The following insurance endorsements and documents must be provided to the Center Joint Unified School District within five (5) calendar days after receipt of notification of award. If the apparent low bidder fails to provide the documents required below, the District may award the Contract to the next lowest responsible and responsive bidder or release all bidders, and the bidder's bid security will be forfeited. All insurance provided by the bidder shall fully comply with the requirements set forth in Article 11 of the General Conditions.

- General Liability Insurance: Certificate of Insurance with all specific insurance coverages set forth in Article 11 of the General Conditions, proper Project description, designation of the District as the Certificate Holder, a statement that the insurance provided is primary to any insurance obtained by the District and minimum of 30 days' cancellation notice. Bidder shall also provide required additional insured endorsement(s) designating all parties required in Article 11 of the General Conditions. The additional insured endorsement shall be an ISO CG 20 10 (04/13), or an ISO CG 20 38 (04/13), or their equivalent as determined by the District in its sole discretion.

Incidents and claims are to be reported to the insurer at:

Attn: _____

_____ (Title) _____ (Department)

_____ (Company)

_____ (Street Address)

_____ (City) _____ (State) _____ (Zip Code)

_____ (_____) _____

_____ (Telephone Number)

- Workers' Compensation/ Employer's Liability Insurance: Certificate of Workers' Compensation Insurance meeting the coverages and requirements set forth in Article 11 of the General Conditions, minimum of 30 days' cancellation notice, proper Project description, waiver of subrogation and any applicable endorsements.

- Automobile Liability Insurance: Certificate of Automobile Insurance meeting the coverages and requirements set forth in Article 11 of the General Conditions, minimum 30 days' cancellation notice, any applicable endorsements and a statement that the insurance provided is primary to any insurance obtained by the District.

Incidents and claims are to be reported to the insurer at:

Attn: _____
(Title) (Department)

(Company)

(Street Address)

(City) (State) (Zip Code)
(_____) _____
(Telephone Number)

DATE: _____ CONTRACTOR _____

By: _____
Signature

CONTRACTOR CERTIFICATION REGARDING BACKGROUND CHECKS

_____ certifies that it has performed one of the following:

- ☐ Pursuant to Education Code Section 45125.1, Contractor has conducted criminal background checks, through the California Department of Justice, of all employees providing services to the Center Joint Unified School District, pursuant to the contract/purchase order dated _____, and that none have been convicted of serious or violent felonies, as specified in Penal Code Sections 1192.7(c) and 667.5(c), respectively.

Contractor's DOJ Agency ORI # (Originating Agency Identifier) for Authority to Receive Criminal Record Information: _____

As further required by Education Code Section 45125.1, attached hereto as Attachment "A" is a list of the names of the employees of the undersigned who have been cleared to come in contact with pupils.

OR

- ☐ Pursuant to Education Code Section 45125.2, Contractor will ensure the safety of pupils by one or more of the following methods:
- ☐ 1. The installation of a physical barrier at the worksite to limit contact with pupils.
 - ☐ 2. Continual supervision and monitoring of all employees of the entity by an employee of the entity whom the Department of Justice has ascertained has not been convicted of a violent or serious felony. Complete Attachment "A" with name of employee(s) of the undersigned who have been cleared and will supervise employees.

I declare under penalty of perjury under the laws of the United States that the foregoing is true and correct.

Date _____, 20____

[Name of Contractor/Consultant]

By its: _____

ATTACHMENT A:

CONTRACTOR CERTIFICATION REGARDING BACKGROUND CHECKS

(INSERT NAMES OF EMPLOYEES WHO MAY COME IN CONTACT WITH PUPILS)

<u>Name:</u>	<u>Name of School</u>

GENERAL CONDITIONS

ARTICLE 1 DEFINITIONS

1.1 BASIC DEFINITIONS

NOTE: The following shall not be construed as a comprehensive list of all definitions in the Contract Documents and there may be other definitions set forth in the Contract Documents. Additionally, any references to any DSA forms, documents or requirements shall be construed to incorporate any updates, supplements, or additions. The Contractor shall be required to meet the latest DSA requirements applicable to the Project.

1.1.1 Action of the Governing Board is a vote of a majority of the District's Governing Board.

1.1.2 Approval means written authorization through action of the Governing Board. The Governing board has delegated to the Superintendent the authority to approve certain modifications, Change Orders or Immediate Change Directives (Subject to the limits of the Delegation of Authority provided by the Board). In no case shall the Superintendent have authority to approve total change orders or modifications to the Project exceeding 10% of the Contract sum.

1.1.3 Architect means the architect, engineer, or other design professional engaged by the District to design and perform general observation of the work of construction and interpret the Drawings and Specifications for the Project. Also see Article 4.

1.1.4 As-Builts are a set of Plans and Specifications maintained by the Contractor clearly showing all changes, revisions, substitutions, field changes, final locations, and other significant features of the Project. The As-Builts shall be maintained continuously throughout the Work for the Project and is both a prerequisite to the issuance of Pay Application and a requirement for Contract Close-Out. See Article 3.17

1.1.5 Beneficial Occupancy is the point in time when a building or buildings are fit for occupancy is fit for occupancy and its intended use. Basic requirements are the building is safe, at or near Substantial Completion, and all life safety is operational. The fact that a building is occupied does not mean that the building is ready for Beneficial Occupancy if there are elements that are unsafe or if life safety items are not operational. Taking occupancy on a structure that is under a fire watch is not considered beneficial occupancy. Further, taking of Beneficial Occupancy is not a point in time when retention is due unless the entire school has obtained a Certificate of Substantial Completion that meets the definition of 1.1.46.

1.1.6 Claims. A Claim is a request for payment, supported by back-up documentation which includes, invoices time sheets, or other documents substantiating legitimacy or entitlement that is submitted during the Project or immediately following the Project made prior to the Final Retention Payment Application and prior to Final Completion of the Project. A "Claim" means a separate demand by the Contractor for (1) time extension, (2) payment of money or damages arising from Work done by or on behalf of the Contractor pursuant to the Contract and payment

of which is not otherwise expressly provided for or the claimant is not otherwise entitled to, or (3) and amount the payment of which is disputed by the District. See Article 4.6.

1.1.7 Change Order (CO). A CO is a written instrument prepared by the Architect and signed by the District (as authorized by the District's Governing Board), the Contractor, and the Architect, stating their agreement upon (1) A description of a change in the Work, (2) The amount of the adjustment in the Contract Sum, if any; and (3) The extent of the adjustment in the Contract Time, if any. See Article 7.2.

1.1.8 Change Order Request (COR). A COR is a written request supported by backup documentation prepared by the Contractor requesting that the District and the Architect issue a CO based upon a proposed change, or a change that results in an adjustment in cost, time or both, or arising from an RFP, CCD or ICD. (See Article 7.6)

1.1.9 Close-Out means the process for Final Completion of the Project, but also includes the requirements for the DSA Certification that the Project is Complete (See DSA Certification Guide). See Article 9.9.

1.1.10 Construction Change Document (CCD). A Construction Change Document is a DSA term that is utilized to address changes to the DSA approved Plans and Specifications. There are two types of Construction Change Documents. (1) DSA approved CCD Category A (DSA Form 140) for work affecting Structural, Access or Fire-Life Safety of the Project which will require a DSA approval; and, (2) CCD Category B (DSA Form 141) for work NOT affecting Structural Safety, Access Compliance or Fire and Life Safety that will not require a DSA approval (except to confirm that no Approval is required). See Article 7.3.

1.1.11 Complete means that all Work in the Contract Documents is finished, the requirements of the Contract Documents have been met, the Project has been Closed Out, and all Work has ceased on the Project. This may also be referred to as Final Completion. In most cases, the recording of a Notice of Completion shall represent Completion of the Project. Beneficial Occupancy does not mean the Work is Complete.

1.1.12 Completion Date is the date when all Work for the Project shall be Substantially Complete and is the date assigned at the end of the Contract Time for the Project. See Article 1.1.46.

1.1.13 Construction Manager. The Construction Manager is a consultant to the District contracted to assist in Project planning, management and construction of the Project. If there is a Construction Manager, they may assist in various aspects of the Project including, but not limited to Monitoring the progress of the construction, reviewing and monitoring the schedule, progress of work, monitoring pay requests, facilitating communications, advising the District and its Board of Education on various aspects of the construction process, monitoring the RFI, COR, CCD, ICD, RFP, Claims, Disputes and other Project related processes.

1.1.14 Contract or Agreement when the terms are used in these General Conditions shall be references to the Contract Documents as defined herein.

1.1.15 Contract Documents (sometimes referred to as Construction Documents) consist of the Agreement between District and Contractor (hereinafter the Agreement or Contract), Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to bid, instructions to bidders, notice to bidders, and the

requirements contained in the Bid Documents, other documents listed in the Agreement, and Modifications issued after execution of the Contract. A Modification is a written amendment to the Contract signed by parties, a Change Order, a Construction Change Document, or a written order for a minor change in the Work issued by the Architect. The Contract Documents collectively form the Contract. The Contract represents the entire and integrated Agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a written Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind between the Architect and Contractor, between the District and any Subcontractor or Sub-subcontractor, or between any persons or entities other than the District and the Contractor. The Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Architect's duties.

1.1.16 Contract Time is the time period specified in the Contract Documents in which the Project shall be completed. This is sometimes referred to a Contract Duration, or "time in which the Contractor has to complete the Project". See Article 8.1.1

1.1.17 Contractor, District, and Architect are those mentioned as such in the Agreement. They are treated throughout the Contract Documents as if they are of singular number and neuter gender. Any reference to "District" shall mean "CJUSD" or Center Joint Unified School District.

1.1.18 Cure is the act of remedying a material failure to perform under the terms of the Contract Documents during the time provided to correct Contractor's Default. Specific time periods are provided to Cure and Correct a Contractor Default under Article 14 and for a Partial Default under Article 2.2 as well as elsewhere in the Contract Documents.

1.1.19 Days means calendar days unless otherwise specifically stated.

1.1.20 Default is a material breach of Contract. A Termination for Cause under Article 14 is a declaration of Default of the Contract and shall act as a demand upon the Surety to perform under the terms of the Performance Bond. Partial Defaults may also be tendered to the Surety at District's discretion. See Article 2.2.

1.1.21 Dispute. A dispute is a disagreement on terms or conditions of the Project where the Contractor's opinion of the Project, Payment, Change Order or Request for Proposal differs from that of the District or Architect. A dispute only rises to the level of a claim once the dispute is assembled with back-up documentation and presented for evaluation. See Article 4.6

1.1.22 CJUSD/District Representative is the person designated by the District to represent the District during the Construction for the Project. This District representative shall have the delegated authority. This District representative may be an employee of the District, and may also include Construction Managers who shall have the authorities as set forth in Article 1.1.13. In some cases, the District and its Board may be assisted by a Construction Manager. When a Construction Manager is assisting the District, the Contractor, Architect, and Inspector shall have a primary contact with the District's Construction Manager who will advise the District.

1.1.23 Drawings or Plans are graphic and pictorial portions of the Contract Documents prepared for the Project and approved changes thereto, wherever located and whenever issued, showing the design, location, and scope of the Work, generally including plans, elevations,

sections, details, schedules, and diagrams as drawn or approved by the Architect. Sometimes Drawings will also be included in Addenda, Change Orders, and Specifications.

1.1.24 DSA is the Division of State Architect. DSA is the agency that provides design and construction oversight for K-12 Schools, Community Colleges, and State Funded Charter School Projects. DSA is the responsible agency for this Project and Contractor has submitted a bid for the Project since Contractor is familiar with Contractor's responsibilities under the DSA requirements more thoroughly set forth at Title 24 of the California Code of Regulations. Contractor agrees to abide by the jurisdiction of DSA and shall construct the Project to conform with the approved Plans, Specifications, Addenda, and Change Orders (inclusive of approved CCD's and ICD's issued by the District pending CCD approval). The DSA website is at <http://www.dgs.ca.gov/dsa>.

1.1.25 Emergency shall be defined as a sudden, unexpected occurrence, involving a clear and imminent threat to the continuation of school classes, a critical path delay that will result in not being able to occupy the school when students arrive to use the facility, danger from the facility or from outside the facility, Act of God, or other action which requires immediate action to prevent or mitigate loss of, or damage to, life, health, property, or essential public services.

1.1.26 Float the total number of days an activity may be extended or delayed without delaying the Completion Date shown in the schedule. Float will fall into three categories: (1) Rain Days; (2) Governmental Delays; and, (3) Project Float. (See Article 8.1.4).

1.1.27 Immediate Change Directive. (ICD) A written order prepared by the Architect and signed by the District and the Architect, directing a change in the Work where the Work must proceed immediately and stating a proposed basis for adjustment, if any, in the Contract Sum or Contract Time, or both. See Article 7.3

1.1.28 Inspector of Record (IOR) or Project Inspector (PI) is the individual retained by the District in accordance with Title 24 of the California Code of Regulations and who will be assigned to the Project

1.1.29 Notice of Non-Compliance (DSA Form 154) is a document issued by the Inspector if there is a deviation from the DSA approved Plans, Specifications, and Change Orders. See Article 7.1.2.

1.1.30 Payment Application, Pay Application or Certificate of Payment is the Contractor's certified representation of the actual level of Work performed on the Project. Payment Applications are sometimes also called "Certificate of Payment", "Request for Payment", or similar terms, and shall follow the Schedule of Values that are approved by the Architect, Inspector and District. See Article 9.3.

1.1.31 The Project is the complete construction of the Work performed in accordance with the Contract Documents.

1.1.32 The Project Manual is the volume assembled for the Work which may include, without limitation, the bidding requirements, sample forms, Conditions of the Contract, Reports and Specifications.

1.1.33 Provide shall include "provide complete in place," that is "furnish and install complete."

1.1.34 Punch List/ Punch Item/ Incomplete Punch Item is a list of minor repair items, prepared after the issuance of a Certificate of Substantial Completion, by the Inspector and Architect of Work required in order to complete the Contract Documents and ensure compliance with the DSA Approved Plans so the Project may be Closed Out. Issuance of the Retention Payment is dependent of the proper completion of the Punch List. See Article 9.9.

1.1.34.1 *Contractor's List of Punch Items* is a list of minor repair items the Contractor submits when the Contractor considers the Work Substantially Complete. Submission of this List of Incomplete Punch Items is the Contractor's representation that the Project is Substantially Complete. See Article 9.9.1

1.1.35 A Request for Information (RFI) is a written request prepared by the Contractor requesting the Architect to provide additional information necessary to clarify or amplify an item which the Contractor believes is not clearly shown or called for in the Drawings or Specifications, or to address problems which have arisen under field conditions. See Article 7.4.

1.1.36 A Request for Proposal (RFP) is a written request prepared by the Architect (and/or CM) requesting the Contractor to submit to an estimate of the effect of a proposed change on the Contract Price and (if applicable) the Contract Time. See Article 7.5.

1.1.37 Safety Orders are those issued by any city, county, state or federal agency having jurisdiction over the Project.

1.1.38 Schedule is the Contractor's view of the practical way in which the Work will be accomplished. See. Article 8 of the General Conditions.

1.1.39 Schedule of Values is a detailed breakdown of the Contract Price for each Project, building, Phase of Work or Site as determined by the District. This Schedule of Values shall adequately detail the price for the Work so Progress Payments Applications can be meaningfully reviewed by the Inspector, Architect of Record, Engineer of Record, and District. (See Article 9.2)

1.1.40 Separate Contracts are Contracts that the District may have with other Contractors, vendors, suppliers, or entities to perform Work on the Project. This may include, but is not limited to Multi-Prime Trade Contractors, furniture installers, testing agencies, clean-up contractors, or network or low voltage contractors. Contractor shall plan for certain other contractors that may also be working on the Project site and address these other contractors in Contractor's Schedule. See Article 6.

1.1.41 Site refers to the grounds of the Project as defined in the Contract Documents and such adjacent lands as may be directly affected by the performance of the Work.

1.1.42 Specifications are that portion of the Contract Documents consisting of the written requirements for material, equipment, construction systems, instructions, quality assurance standards, workmanship, and performance of related services.

1.1.43 Standards, Rules, and Regulations referred to are recognized printed standards and shall be considered as one and a part of these Specifications within limits specified. Federal, state and local regulations are incorporated into the Contract Documents by reference.

1.1.44 Stop Work Order, or an Order to Comply, is issued when either (1) the Work proceeds without DSA approval; (2) the Work proceeds without a DSA Inspector of Record, or (3) where DSA determines that the Work is not being performed in accordance with applicable rules and regulations, and would compromise the structural integrity of the Project or would endanger lives. If a Stop Work Order is issued, the Work in the affected area shall cease until DSA withdraws the Stop Work Order. Pursuant to Education Code Section 17307.5(b) and Education Code Section 81133.5, the District shall not be held liable in any action filed against the District for any delays caused by compliance with the Stop Work Order.

1.1.45 Subcontractor, as used herein, includes those having direct or indirect contracts with Contractor and ones who furnished labor, material or services for a special design according to Plans, Drawings, and Specifications of this Work.

1.1.46 Substantial Completion is not reached unless and until each of the following three (3) conditions have been met: (1) all contractually required items have been installed with the exception of only minor and Incomplete Punch Items (See Article 9.9.1.1); (2) All Fire/Life Safety Systems have been installed, and are working and signed off on the DSA Form 152 Inspection Card, all building systems including mechanical, electrical and plumbing are all functioning; and (3) the Project is fit for occupancy and its intended use. For the purposes of this Contract, any references to Completion Date means Substantial Completion Date.

1.1.47 Substitution is a change in product, material, equipment, or method of construction from those required by the Construction Documents proposed by the Contractor. For this Project, a Substitution is subject to the filing of a Construction Substitution Request Form prior to the time of bid and meeting the requirements of Article 3.10.

1.1.48 Supplementary Conditions/ Supplementary General Conditions or Special Conditions are terms that are sometimes used interchangeably and refer to any additional requirements or changes to the General Conditions as noted. In this set of General Conditions, the term used shall be Supplementary Conditions. However, Specifications or other documents may reference Special Conditions, which shall mean the same and Supplementary Conditions.

1.1.49 Surety is the person, firm, or corporation that executes as a bid bond, payment bond or performance bond guarantor on the Contractor's Bid, Contractor's Performance on the Contract and Payment of the Contractor's Subcontractors, material suppliers, vendors and labor on the Project. The Surety is bound to the same extent as the Contractor is bound once a Default occurs. A default includes a Termination for Substantial Failure to Perform under Article 14, but also includes any breach of Contract and is subject to the requirements and responsibilities as set forth in the Performance Bond.

1.1.50 Work shall include all labor, materials, services and equipment necessary for the Contractor to fulfill all of its obligations pursuant to the Contract Documents. It shall include the initial obligation of any Contractor or Subcontractor who performs any portion of the Work, to visit the Site of the proposed Work (a continuing obligation after the commencement of the Work), to fully acquaint and familiarize itself with the conditions as they exist and the character of the operations to be carried out under the Contract Documents, and make such investigation as it may see fit so that it shall fully understand the facilities, physical conditions, and restrictions

attending the Work under the Contract Documents. Each such Contractor and its Subcontractor shall also thoroughly examine and become familiar with the Drawings, Specifications, and associated Contract Documents and bid documents before preparing and submitting any bid.

1.1.51 Workers include laborers, workers, and mechanics.

1.2 EXECUTION, CORRELATION AND INTENT

1.2.1 Correlation and Intent

1.2.1.1 *Documents Complementary and Inclusive.* The Contract Documents are complementary and are intended to include all items required for the proper execution and completion of the Work. All Contract Documents form the Contractor's Contract with the District. Any item of Work mentioned in the Specifications and not shown on the Drawings, or shown on the Drawings and not mentioned in the Specifications, shall be provided by Contractor as if shown or mentioned in both. The Contractor is bound to provide the Work complete and is under a legal duty to carefully study plans and schedule operations well ahead of time and identify inconsistencies with the Plans and Specifications and call such inconsistencies to the attention of the Architect or Registered Engineer through the Inspector under Article 4-343(b) of Title 24.

1.2.1.2 *Work to be Complete.* Contractor has thoroughly studied the Contract Documents and understands that the District contracted with Contractor to provide a complete Project which means complete systems and buildings. Work includes, but is not limited to materials, workmanship, and manufacture of fabrication of components for the Project.

1.2.1.3 *Coverage of the Drawings and Specifications.* The Drawings and Specifications generally describe the Work to be performed by Contractor. Generally, the Specifications describe Work which cannot be readily indicated on the Drawings and indicate types, qualities, and methods of installation of the various materials and equipment required for the Work. It is not intended to mention every item of Work in the Specifications, which can be adequately shown on the Drawings, or to show on the Drawings all items of Work described or required by the Specifications even if they are of such nature that they could have been shown. All materials or labor for Work, which is shown on either the Drawings or the Specifications (or is reasonably inferable therefrom as being necessary to complete the Work), shall be provided by the Contractor.

1.2.1.4 *Conflicts.* In the event there is a discrepancy between the various Contract Documents, it is intended that the more stringent, higher quality, and greater quantity of Work shall apply.

1.2.1.5 *Conformance with Laws.* Each and every provision of law required by law to be inserted in this Contract shall be deemed to be inserted herein, and the Contract shall be read and enforced as though it were included herein, even if through mistake or otherwise any such provision is not inserted, or is not correctly inserted.

Before commencing any portion of the Work, Contractor shall check and review the Drawings and Specifications for such portion for conformance and compliance with all laws, ordinances, codes, rules and regulations of all governmental authorities and public and municipal utilities affecting the construction. (See Title 24 Section 4-343)

The Contractor shall bear all expenses of correcting Work done contrary to said laws, ordinances, rules, and regulations if the Contractor performed same (1) without first consulting the Architect for further instructions regarding said Work or (2) disregarded the Architect's instructions regarding said Work.

1.2.1.6 *Ambiguity and Inconsistency.* Before commencing any portion of the Work, Contractor shall carefully examine all Drawings and Specifications and other information given to Contractor as to materials and methods of construction and other Project requirements. Prior to commencing any portion of the Work, Contractor shall notify Architect and District in writing of any perceived or alleged error, inconsistency, conflict, ambiguity, or lack of detail or explanation in the Drawings and Specifications in the manner provided herein. If the Contractor or its Subcontractors, material or equipment suppliers, or any of their officers, agents, and employees performs, permits, or causes the performance of any Work under the Contract Documents, which it knows or should have known to be in error, inconsistent, or ambiguous, or not sufficiently detailed or explained, Contractor shall bear any and all costs arising therefrom including, without limitation, the cost of correction thereof without increase or adjustment to the Contract Price or the time for performance. Contractor shall maintain an adequate inspection system and perform personal observations and review work and pre-plan the project to ensure the Work performed under the Contract conforms to Contract requirements. Contractor shall maintain records of such review and observation to ensure strict compliance with the terms of the Contract.

1.2.1.7 *Typical Parts and Sections.* Whenever typical parts or sections of the Work are completely detailed on the Drawings, and other parts or sections which are of the same construction are shown in outline only, the complete or more detailed shall apply to the Work which is shown in outline.

1.2.1.8 *Dimensions.* Dimensions of Work shall not be determined by scale or rule. Figured dimensions shall be followed at all times. If figured dimensions are lacking on Drawings, Architect shall supply them on request. The Architect's decisions on matters relating to aesthetic effect will be final.

1.2.2 Addenda and Deferred Approvals

1.2.2.1 *Addenda* are the changes in Specifications, Drawings, Contract Documents, and Plans which have been authorized in writing by the District or Architect, and which alter, explain, or clarify the Contract Documents. Addenda shall govern over all other Contract Documents. Subsequent addenda issued shall govern over prior addenda unless otherwise specified in the addenda.

1.2.2.2 *Deferred Approvals.* Deferred Approvals are Submittals that are reviewed by the Architect (or Engineer of Record) and submitted to DSA for approval based on thorough detailing of manufacturer and Project specific design. See Article 3.9.1 and 3.9.3. Contractor is responsible for all Deferred Approval requirements set forth in the Contract Documents. Contractor is responsible to comply with all laws, building codes, Title 24 and regulations necessary to obtain all necessary approvals, including those required from the Division of the State Architect ("DSA") and the State Fire Marshall. Contractor shall not be granted an extension of time for failure to plan, schedule for and obtain necessary approvals. Contractor shall Schedule all deferred approval items in the Baseline Schedule and Schedule Updates under Article 3.9.6

1.2.3 Specification Interpretation

1.2.3.1 *Titles.* The Specifications are separated into titled sections for convenience only and not to dictate or determine the trade or craft involved.

1.2.3.2 *As Shown, Etc.* Where “as shown,” “as indicated,” “as detailed,” or words of similar import are used, reference is made to the Drawings accompanying the Specifications unless otherwise stated. Where “as directed,” “as required,” “as permitted,” “as authorized,” “as accepted,” “as selected,” or words of similar import are used, the direction, requirement, permission, authorization, approval, acceptance, or selection by Architect is intended unless otherwise stated.

1.2.3.3 *General Conditions.* The General Conditions and Supplementary General Conditions are a part of the Contract Documents which further defines and refines the Contract entered between the Contractor and District.

1.2.3.4 *Abbreviations.* In the interest of brevity, the Specifications are written in an abbreviated form and may not include complete sentences. Omission of words or phrases such as “Contractor shall,” “shall be,” etc., are intentional. Nevertheless, the requirements of the Specifications are mandatory. Omitted words or phrases shall be supplied by inference in the same manner as they are when a “note” occurs on the Drawings. In the interest of brevity, the Contract Documents frequently omit modifying words such as “all” and “any” and articles such as “the” and “an,” but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

1.2.3.5 *Plural.* Words in the singular shall include the plural whenever applicable or the context so indicates.

1.2.3.6 *Metric.* The Specifications may indicate metric units of measurement as a supplement to U.S. customary units. When indicated thus: 1” (25 mm), the U. S. customary unit is specific, and the metric unit is nonspecific. When not shown with parentheses, the unit is specific. The metric units correspond to the “International System of Units” (SI) and generally follow ASTM E 380, “Standard for Metric Practice.”

1.2.3.7 *Standard Specifications.* Any reference to standard specifications of any society, institute, association, or governmental authority is a reference to the organization’s standard specifications, which are in effect at the date of the Contractor’s proposal unless directed otherwise. If applicable specifications are revised prior to completion of any part of the Work, the Contractor may, if acceptable to Architect, perform such Work in accordance with the revised specifications. The standard specifications, except as modified in the Specifications for the Project, shall have full force and effect as though printed in the Specifications. Architect will furnish, upon request, information as to how copies of the standard specifications referred to may be obtained.

1.2.4 Rules of Document Interpretation

1.2.4.1 In the event of conflict within the Drawings, the following rules shall apply:

- a. General Notes, when identified as such, shall be incorporated into other portions of Drawings.

- b. Schedules, when identified as such, are complementary with other notes and other portions of Drawings including those identified as General Notes.
- c. Larger scale Drawings shall take precedence over smaller scale Drawings.
- d. At no time shall the Contractor base construction on scaled Drawings.

1.2.4.2 Specifications shall govern as to materials, workmanship, and installation procedures.

1.2.4.3 If Contractor observes that Drawings and Specifications are in conflict, Contractor shall, prior to commencing work, notify the Architect in writing for the purposes of obtaining an interpretation of the Contract Documents.

1.2.4.4 In the case of conflict or inconsistencies, the order of precedence shall be as follows:

- a. General Conditions take precedence over Drawings and Specifications.
- b. Supplemental Conditions take precedence over General Conditions.
- c. The Agreement Form shall take precedence over the Supplemental Conditions.
- d. In the case of disagreement or conflict between or within Specifications, and Drawings, the more stringent, higher quality, and greater quantity of Work shall apply.
- e. Addenda shall take precedence over Drawings and Specifications.
- f. General Conditions shall take precedence over Addenda.
- g. Drawings and Specifications take precedence over the Soils Report.

1.3 OWNERSHIP AND USE OF ARCHITECT'S DRAWINGS, SPECIFICATIONS AND OTHER DOCUMENTS

The Drawings, Specifications, and other Contract Documents for the Project are the property of the District and/or Architect pursuant Contract requirements between the District and Architect. The Contractor may retain one Contract record set. Neither the Contractor nor any Subcontractor, or material or equipment supplier shall own or claim a Copyright in the Drawings, Specifications, and other documents prepared by the Architect. All copies except the Contractor's record set, shall be returned or properly accounted for upon completion of the Work. The Drawings, Specifications, and other documents prepared by the Architect, and copies thereof furnished to the Contractor are not to be used by the Contractor or any Subcontractor, Sub-

subcontractor, or material or equipment supplier on other projects or for additions to this Project outside the scope of the Work. The District and/or Architect hereby grants the Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers a limited license to use applicable portions of the Drawings, Specifications, and other documents prepared for the Project in the execution of their Work under the Contract Documents. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with this Project is not to be construed as publication in derogation of the District's property interest or other reserved right.

ARTICLE 2 DISTRICT

2.1 INFORMATION AND SERVICES REQUIRED OF THE DISTRICT

2.1.1 Site Survey

The District will furnish, at its expense, a legal description of the Site and a land survey showing the boundaries of the Site. Contractor shall be responsible for all surveys regarding location of construction, grading and site work.

2.1.2 Soils

When required by the scope of the Project, the District will furnish, at its expense, the services of geotechnical engineers or consultants when reasonably required and deemed necessary by the Architect or as required by local or state codes. Such services, with written reports and appropriate written professional recommendations, may include test boring, test pits, soil bearing values, percolation tests, air and water pollution tests, and ground corrosion and resistivity tests, including necessary operations for determining subsoil, air, and water conditions.

2.1.3 Soils Report Part of the Contract Documents: Contractor Reliance

A soils investigation report has been obtained from test holes at the Site, and such report is incorporated into this Contract and made available for the Contractor's use in preparing its bid and Work under this Contract. Where the Plans and Specifications are more specific and provide more significant structure, systems, reinforcing, thicknesses, or construction methods, the Drawings shall control over the soils report. The soils report is available at the Architect's office for review and it is Contractor's responsibility to ensure that Contractor has reviewed the soils investigation report. Any information obtained from such report or any other information given on Drawings as to subsurface soil condition or to elevations of existing grades or elevations of underlying rock is approximate only. If, during the course of Work under this Contract, Contractor encounters subsurface conditions which differ materially from those indicated in the soils report, then Contractor shall notify the District within five (5) calendar days of discovery of the condition, and changes to the Contract Price may be made in accordance with Article 7 entitled "Changes in the Work." Contractor agrees that no claim against District will be made by Contractor for damages and hereby waives any rights to damages in the event the Contractor fails to notify District within the five-day period mentioned above.

WARNING: DISTRICT DOES NOT WARRANT THE SOILS AT THE PROJECT SITE. CONTRACTOR HAS REVIEWED AND IS FAMILIAR WITH THE REQUIREMENTS OF THE SOILS INVESTIGATION REPORT. CONTRACTOR UNDERSTANDS THAT PLANS, DRAWINGS AND SPECIFICATIONS SUPERSEDE THE SOILS REPORT IF THERE ARE CONFLICTS. FURTHER, IN ADDITION TO THE INFORMATION IN THE SOILS REPORT, CONTRACTOR HAS CONDUCTED AN INDEPENDENT INVESTIGATION OF THE PROJECT SITE AND THE SOILS CONDITIONS OF THE SITE. DISTRICT DOES NOT WARRANT THE SOILS CONDITIONS OF THE SITE AND CONTRACTOR IS FULLY RESPONSIBLE TO ASCERTAIN SITE CONDITIONS FOR THE

PURPOSES OF DETERMINING CONSTRUCTION MEANS AND METHODS PRIOR TO COMMENCING CONSTRUCTION.

2.1.4 Utilities

2.1.4.1 *Location of Point of Connection.* The locations shown for the point of connection are approximate. It shall be the responsibility of the Contractor to determine the exact location of all service connections.

2.1.4.2 *Regional Notification Center.* Contractor, except in an emergency, shall contact the appropriate regional notification center at least two (2) business days prior to commencing any excavation if the excavation will be conducted in an area or in a private easement which is known, or reasonably should be known, to contain subsurface installations other than the underground facilities owned or operated by the District, and obtain an inquiry identification number from that notification center. See Government Code section 4216.3. No excavation shall be commenced and carried out by the Contractor unless such an inquiry identification number has been assigned to the Contractor or any Subcontractor of the Contractor and the District has been given the identification number by the Contractor. Any damages arising from failure to make appropriate regional notification shall be at the sole risk of Contractor. Contractor shall solely be responsible for any fines, penalties or damages for violation of this Article and Government Code section 4216.6 or 4216.7. Any delays caused by failure to make appropriate regional notification shall be at the sole risk of Contractor and shall not be considered for extension of time pursuant to Article 8.4.

2.1.4.3 *Utilities - Removal and Restoration.* The District has endeavored to determine the existence of utilities at the Site of the Work from the records of the District of known utilities in the vicinity of the Work. The positions of these utilities as derived from such records are shown in the Contract Documents. Thus, the locations of the main or trunklines located on the Drawings are approximate locations and not exact.

No excavations were made to verify the locations shown for underground utilities. Other than the main or trunkline, which the District has endeavored to locate on the Plans, service connections or laterals to these utilities may not be shown on the Plans. It shall be the responsibility of the Contractor to determine the exact location of all service connections. The Contractor shall make its own investigations, including exploratory excavations, to determine the locations and type of service connections, prior to commencing work which could result in damage to such utilities. The Contractor shall immediately notify the District's representative as to any utility main or trunkline discovered by Contractor in a different position than provided by the Regional Notification Center. With respect to main or trunklines, Contractor is to immediately notify District if the location is substantially different than as shown in the Contract Documents.

Contractor shall coordinate its Work with all utilities, including, but not limited to electricity, water, gas and telephone and meet with said utilities prior to the start of any work. Contractor shall show timing of all utility coordination activities under the Scheduling requirements of Article 8.

2.1.4.4 *Other Utilities.* In case it should be necessary to remove, relocate, or temporarily maintain a utility because of interference with the Work, the work on the utility shall be performed and paid for as follows:

When it is necessary to remove, relocate or temporarily maintain a service connection, the cost of which is not required to be borne by the owner of the service connection, the Contractor shall bear all expenses incidental to the work on the service connection. The work on the service connection shall be done in a manner satisfactory to the owner thereof; it being understood that the owner of the service connection has the option of doing such work with his own forces or permitting the work to be done by the Contractor.

When it is necessary to remove, relocate, or temporarily maintain a utility which is in the position shown on the Plans, the cost of which is not required to be borne by the owner thereof, the Contractor shall bear all expenses incidental to the work on the utility. The work on the utility shall be done in a manner satisfactory to the owner thereof; it being understood that the owner of the utility has the option of doing such work with his own forces or permitting the work to be done by the Contractor.

When it is necessary to remove, relocate, or temporarily maintain a utility which is not shown on the Plans or is in a position different from that shown on the Plans and were it in the position shown on the Plans would not need to be removed, relocated, or temporarily maintained, and the cost of which is not required to be borne by the owner thereof, the District will make arrangements with the owner of the utility for such work to be done at no cost to the Contractor, or will require the Contractor to do such work in accordance with Article 7 or will make changes in the alignment and grade of the Work to obviate the necessity to remove, relocate, or temporarily maintain the utility. Changes in alignment and grade will be ordered in accordance with Article 7 herein.

No representations are made that the obligations to move or temporarily maintain any utility and to pay the cost thereof is or is not required to be borne by the owner of such utility, and it shall be the responsibility of the Contractor to investigate to find out whether said cost is required to be borne by the owner of the utility.

The right is reserved to governmental agencies and to owners of utilities to enter at any time upon any street, alley, right-of-way, or easement for the purpose of making changes in their property made necessary by the Work and for the purpose of maintaining and making repairs to their property.

2.1.5 Existing Utility Lines; Removal, Relocation

2.1.5.1 *Main or Trunkline Facilities.* If the Contractor while performing the Contract discovers utility facilities not identified in the Contract Documents, Contractor shall notify the District and utility in writing prior to commencing work.

The owner of 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 reasonable price.

The Contractor shall exercise reasonable care and shall be compensated by the District for the actual verified field costs of locating, and removing, relocating, protecting or temporarily maintaining such main or trunkline utility facilities located in a substantially different location than in the Plans and Specifications, and for equipment in use on the project necessarily

idled during such work. This Work shall be performed in accordance with Article 7 of these General Conditions.

2.1.5.2 *Assessment.* Nothing in these subparagraphs 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, or meter junction boxes on or adjacent to the Site and could be inferred from the Main or Trunkline shown on the Drawings.

2.1.5.3 *Notification.* If the Contractor, while performing Work under this Contract, discovers utility facilities not identified by the District in the Contract Documents, Contractor shall, within five (5) days, notify the District and the utility in writing. If Contractor fails to notify the District within forty eight hours after discovery of any utility facilities not identified by District in the Contract Documents, Contractor waives all rights to be compensated for any extra Work or damages resulting from such discovered utilities.

2.1.6 Easements

District shall secure and pay for easements for permanent structures or permanent changes in existing facilities, if any, unless otherwise specified in the Contract Documents.

2.2 **DISTRICT'S RIGHT TO CARRY OUT THE WORK DUE TO PARTIAL DEFAULT IN A SPECIFIC SEGREGATED AREA OF WORK (TWO (2) BUSINESS DAY NOTICE TO CURE AND CORRECT)**

If the Contractor Defaults or neglects to carry out the Work in accordance with the Contract Documents, the District may provide a two (2) business day written notice to cure (a shorter period of time in the case of Emergency or a critical path delay as defined in Article 2.2.1) Contractor's Partial Default in a specific segregated area of work. The District's right to issue a Partial Default of the Contractor's Work and take over that segregated area of Work includes, but is not limited to:

1. Failure to supply adequate workers on the entire Project or any part thereof;
2. Failure to supply a sufficient quantity of materials;
3. Failure to perform any provision of this Contract;
4. Failure to comply with safety requirements, or due to Contractor is creation of an unsafe condition;
5. Cases of bona fide emergency;
6. Failure to order materials in a timely manner;
7. Failure to prepare deferred-approval items or Shop Drawings in a timely manner;

8. Failure to comply with Contractor's Baseline or Update Schedule, meet critical Milestones which would result in a Delay to the Critical Path, or Delay the Contract Time;
9. Failure to comply with the Subletting and Subcontracting Fair Practices, Public Contract Code section 4100, et seq.
10. Failure to meet the requirements of the American's with Disabilities Act;
11. Failure to complete Punch List work;
12. Failure to proceed on an Immediate Change Directive; and/or
13. Failure to correct a Notice of Deviation.

If during the forty eight (48) period, the Contractor fails to Cure and correct the deficiency noted in the notice of Partial Default with diligence and promptness, the District may correct such deficiencies without prejudice to other remedies the District may have, including a Termination for Cause as set forth in Article 14. If there are inadequate funds remaining the Project balance or in the Retention Escrow to address at least 150% of the costs set forth in the Article 2.2 notice, the District may copy the Surety on the written notice of Partial Default. If a notice to the Surety is provided, except in the cases of Emergency or Critical Path Delay, the Surety has the option to take over and complete the Work described in the written notice if Surety personally delivers notice to District that it intends to perform such work. In the case where written notice has been provided, the District shall allow Surety seven (7) days to perform the Work.

2.2.1 Service of Notice of Partial Default with Right to Cure

A written notice of Partial Default and right to Cure under Article 2.2 ("Article 2.2 Notice" or "Notice of Partial Default") shall be served by e-mail (with a copy provided by regular mail) to the e-mail address provided on the Bid submitted and copied to the Project Superintendent.

2.2.2 Shortened Time for Partial Default in the Case of Emergencies.

In an Emergency situation, the District may correct any of the deficiencies described in Article 2.2 without prejudice to other remedies by providing service of written notice of Emergency requiring a shortened time for Partial Default specifying the time given to Cure, if any.

2.2.3 Shortened Time for Partial Default in the Case of Critical Path Delay

In the case of critical path delay, the District may correct any of the deficiencies described in Article 2.2 without prejudice to other remedies providing service of written notice of Critical Path Delay to the Contractor with a specific description of the critical path delay items noting the line item or area of Work that is on the Critical Path and prescribe the length of shortened time to Cure, if any.

2.2.4 Written Notice of Partial Default to be Deducted by Deductive Change Order

The District shall have the right to determine the reasonable value of the Article 2.2 Partial Default Work, or if there is an actual value for the Work, shall use that value and issue a Deductive Change Orders under Article 7.7.4.

ARTICLE 3 THE CONTRACTOR

3.1 SUPERVISION AND CONSTRUCTION PROCEDURES

3.1.1 Contractor

The Contractor shall continually supervise and direct 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, procedures; and shall coordinate all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters. The Contractor shall not perform the Work without utilizing the Contract Documents or, where required, approved Submittals, Shop Drawings, or Samples for any such portion of the Work. If any of the Work is performed by contractors retained directly by the District, Contractor shall be responsible for the coordination and sequencing of the work of those other contractors so as to avoid any impact on the Project Schedule pursuant to the requirements of Article 6 and Article 8. Specific duties of the Contractor shall include those set out in Section 43 of Title 21 of the California Code of Regulations and Section 4-343 of Title 24 of the California Code of Regulations. These duties include, but are not limited to the following:

1. *Responsibilities.* It is the duty of the Contractor to complete the Work covered by his or her Contract in accordance with the approved Plans and Specifications. The Contractor in no way is relieved of any responsibility by the activities of the Architect, Engineer, Inspector or DSA in the performance of their duties.
2. *Performance of the Work.* The Contractor shall carefully study the approved Plans and Specifications and shall plan its schedule of operations well ahead of time. If at any time it is discovered that work is being done which is not in accordance with the approved Plans and Specifications, the Contractor shall correct the Work immediately.

3.1.2 Contractor Responsibility to Study the Plans and Specifications

All inconsistencies or timing or sequences which appear to be in error in the Plans and Specifications shall promptly be called to the attention of the Architect or, Engineer, for interpretation or correction. Local conditions which may affect the structure shall be brought to the Architect's attention at once. In no case, shall the instruction of the Architect be construed to cause work to be done which is not in conformity with the approved Plans, Specifications, change orders, construction change documents, and as required by law. (See Title 24 Section 4-343)

3.1.3 All Work Under the Direction of Inspector

Pursuant to Title 24 requirements, the Contractor shall not carry on Work except with the knowledge of the Inspector. (See Title 24 generally)

3.1.4 Contractor to Establish Timing and Protocol with Inspector

Contractor shall establish a protocol for requesting inspection with Inspector so as to not delay the Work and provide adequate time for the Inspector to perform inspection. If such a protocol is not established ahead of time, Inspector may utilize the time criteria set by Title 24

of 48 hours in advance of submitting form DSA 156 for each new area. The DSA requirements under PR 13-01 specifically give the Special Inspector fourteen (14) days to post to the DSA website. Contractor is responsible for delays and for failure to plan.

For some Projects, there may be a need to incrementally install certain assemblies. It is up to Contractor to identify areas and assemblies that may be constructed incrementally. Contractor must identify and establish incremental areas of construction and establish protocols with Inspector for DSA 152 approvals so they may be presented to DSA. See PR-13 item 1.17 for further discussion.

3.1.5 Verified Reports

The Contractor shall make and submit to the office from time to time, verified reports as required in Title 24 Section 4-366. As part of the Close-Out of the Project (see Article 9.9), Contractor shall be required to execute a Form 6-C as required under Title 24 Sections 4-343.

Contractor shall fully comply with any and all reporting requirements of Education Code Sections 17315, et seq., in the manner prescribed by Title 24, as applicable.

3.1.6 Contractor Responsibility

The Contractor shall be responsible to the District for acts and omissions of the Contractor's employees, Subcontractors, material and equipment suppliers, and their agents, employees, invitees, and other persons performing portions of the Work under direct or indirect contract with the Contractor or any of its Subcontractors.

3.1.7 Obligations not Changed by Architect's Actions

The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by activities or duties of 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.

3.1.8 Acceptance/Approval of Work

The Contractor shall be responsible to determine when any completed portions of the Work already performed under this Contract or provided pursuant to Article 6 are suitable to receive subsequent Work thereon.

3.2 SUPERVISION

3.2.1 Supervision

Unless personally present on the Project site where the Work is being performed, the Contractor shall keep on the Work at all times during its progress a competent, English speaking construction Superintendent satisfactory to the District. The Superintendent shall represent the Contractor in its absence and shall be fully authorized to receive and fulfill any instruction from the Architect, the Inspector, the District or any other District representative (including CM in the cases where the District has a CM representative). All Requests for

Information shall be originated by the Superintendent and responses thereto shall be given to the Superintendent. The Superintendent shall have authority to bind Contractor through the Superintendent's acts. The Superintendent shall represent the Contractor, and communications given to the Superintendent shall be binding on the Contractor. Before commencing the Work, Contractor shall give written notice to District (and CM representative) and Architect of the name and a Statement of Qualifications of such superintendent. If superintendent proves to be unsatisfactory to Contractor and ceases to be employed by Contractor, Contractor shall notify District and Architect in writing. A replacement superintendent must be approved by the District prior to performing additional work.

3.2.2 Staff

Notwithstanding other requirements of the Contract Documents, the Contractor and each Subcontractor shall: (1) furnish a competent and adequate staff as necessary for the proper administration, coordination, supervision, and superintendence of its portion of the Work; (2) organize the procurement of all materials and equipment so that the materials and equipment will be available at the time they are needed for the Work; and (3) keep an adequate force of skilled and fit workers on the job to complete the Work in accordance with all requirements of the Contract Documents.

3.2.3 Right to Remove

District shall have the right, but not the obligation, to require the removal from the Project of any superintendent, staff member, agent, or employee of any Contractor, Subcontractor, material or equipment supplier.

3.3 LABOR AND MATERIALS

3.3.1 Contractor to Provide

Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, material, equipment, tools, construction equipment and machinery, water, heat, air conditioning, utilities, transportation, and other facilities, services and permits necessary for proper execution and completion of the Work whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

3.3.2 Quality

Unless otherwise specified, all materials and equipment to be permanently installed in the Project shall be new and shall be of the highest quality or as specifically stated in the Contract Documents. The Contractor shall, if requested, furnish satisfactory evidence as to kind and quality of all materials and equipment within ten (10) days of a written request by the District, including furnishing the District with bona fide copies of invoices for materials or services provided on the Project. All labor shall be performed by workers skilled in their respective trades, and shall be of the same or higher quality as with the standards of other school construction.

3.3.3 Replacement

Any work, materials, or equipment, which do not conform to these requirements or the standards set forth in the Contract Documents, may be disapproved by the District, in which

case, they shall be removed and replaced by the Contractor at no additional cost or extension of time to the District.

3.3.4 Discipline

The Contractor shall enforce strict discipline and good order among the Contractor's and Subcontractor's employees, and other persons carrying out the Contract. The Contractor shall not permit employment of unfit persons or persons not skilled in tasks assigned to them. As used in this subsection, "unfit" includes any person who the District concludes is improperly skilled for the task assigned to that person, who fails to comply with the requirements of this article, or who creates safety hazards which jeopardize other persons and/or property.

3.3.5 Fingerprinting (Applicable at the time Project is Occupied and on all Projects where Workers will come in Contact with Pupils, such as Modernization Projects)

If applicable, Contractor shall comply with the applicable provisions of Education Code Section 45125.1 in a method as determined by the District. Pursuant to Education Code section 45125.1, Contractor shall either conduct criminal background checks of all employees of Contractor assigned to the Project site, and shall certify that no employees who have been convicted of serious or violent felonies, as specified in Education Code Section 45125.1, will have contact with pupils, by utilizing the Certification Regarding Background Checks and the corresponding Attachment "A" as found in the Contract Documents or shall be separated by a physical barrier from students.

If it is determined that Contractor must provide certification of employees, as part of such certification, Contractor must provide the District with a list of all employees providing services pursuant to this Agreement, and designate which sites such employees will be assigned. In performing the services set forth in this Agreement, Contractor shall not utilize any employees who are not included on the above-referenced list.

At District's sole discretion, District may make a finding, as authorized under Education Code section 45125.1, that Contractor's employees will have only "limited contact" with pupils. Contractor's failure to comply with this law shall be considered a material breach of this Agreement upon where this Agreement may be terminated, at District's sole discretion, without any further compensation to Contractor.

In the case of new construction Projects where there are no students, if the Project Schedule provides for Beneficial Occupancy or portions of the Project or if the Project should be delayed, then Contractor, at no additional costs, shall meet the requirements of either fingerprinting or providing a physical barrier as required by the District.

3.3.6 Noise, Drugs, Tobacco, and Alcohol

Contractor shall take all steps necessary to insure that employees of Contractor or any of its subcontractors' employees do not use, consume, or work under the influence of any alcohol, tobacco or illegal drugs while on the project. Contractor shall further prevent any of its employees or its subcontractor employees from playing any recorded music devices or radios or wearing any radio headphone devices for entertainment while working on the project. Likewise, Contractor shall prevent its employees or subcontractor's employees from bringing any animal onto the project. Contractors shall not violate any written school policies.

3.3.7 Delivery of Material

Contractor shall place orders for materials or equipment so that the Work may be completed in accordance with the Construction schedule for the Work as set forth in Article 8 of this Agreement. Contractor shall, upon demand from the Architect, furnish to the Architect documentary evidence including, but not limited to purchase orders, invoices, bills of materials, work orders and bills of lading, showing that orders have been placed. Contractor shall have a system to receive materials and to ensure that the proper materials are being delivered, including in the case of critical materials to the Project, checking the delivery against Shop Drawings and ensuring that the materials meet the requirements of not only the Plans and Specifications, but also the approved Shop Drawings and Submittals and in conformance with Contractor's plan for delivery of materials (including but not limited to Contractor's representations in the Schedules for the Project and Contractor's equipment and materials schedule under Article 3.7.2.2). Contractor shall be responsible for all costs of accepting non-conforming materials delivered to the Project given Contractor's responsibilities and system for acceptance of deliveries. Contractor shall notify Inspector and District Representative (including CM) as early as possible, in writing, of the delivery of materials for the Project. The deliveries shall include documentation identifying the shipment sufficiently so that the Inspector, Architect or District Representative (including CM) may review the materials that are received.

Under no circumstances shall materials be delivered to the Project site that are meant for another Project.

3.3.8 Liens and Other Security Interests of Subcontractors and Material Suppliers

No material, supplies, or equipment for the Work shall be purchased subject to any chattel mortgage or under a conditional sale or other agreement by which an interest therein or in any part thereof is retained by seller or supplier. Contractor warrants good title to all material, supplies, and equipment installed or incorporated in Work and agrees upon completion of all Work to deliver premises, together with all improvements and appurtenances constructed or placed thereon by it, to District free from any claims, security interests, liens, or charges. Contractor further agrees that neither it nor any person, firm, or corporation furnishing any materials or labor for any Work covered by this Contract shall have any right to place a lien upon the premises or any improvement or appurtenance thereof, except that Contractor may install metering devices or other equipment of a utility company or political subdivision, title to which is commonly retained by the utility company or political subdivision. In event of installation of any such metering device or equipment, Contractor shall advise District as to its District within five (5) days of such installation in writing, prior to making the installation.

Contractor agrees to indemnify, defend and hold the District harmless from any liens, stop notices, or assertion of security interests, including judgments and levies. If after written notice Contractor fails to address the lien, stop notice, or other security interest, the District may proceed to address the lien, stop notice or claim and seek reimbursement from Contractor.

3.3.9 Title to Materials

The title to new materials or equipment for the Work of this Contract shall remain with Contractor until incorporated in the Work of this Contract until Final Acceptance of the Project; no part of said materials shall be removed from its place of storage, and Contractor shall keep an accurate inventory of all said materials and equipment in a manner satisfactory to the District or

its authorized representative. Responsibility for materials remains with Contractor and Contractor shall replace materials in case of loss. District similarly may pay for materials stored off site, but Contractor shall remain responsible for the materials that are stored off site.

3.3.10 Assemblies

For all material and equipment specified or indicated in the Drawings, the Contractor shall provide all labor, materials, equipment, and services necessary, (including engineering as specifically required with Shop Drawings or Deferred Approvals) for complete assemblies and complete working systems. Incidental items not indicated on the Drawings, nor mentioned in the Specifications, that can legitimately and reasonably be inferred to belong to the Work described, or be necessary in good practice to provide a complete assembly or system, shall be furnished as though itemized in the Contract Documents in every detail. In all instances, material and equipment shall be installed in strict accordance with each manufacturer's most recent published recommendations and Specifications.

3.3.11 Noise Control

The Contractor shall be responsible for the installation of noise reducing devices on construction equipment. Contractor shall comply with the requirements of the city and county having jurisdiction with regard to noise ordinances governing construction sites and activities. If school is in session at any point during the progress of the Project, and, in the District's reasonable discretion, the noise from such Work disrupts or disturbs the students or faculty or the normal operation of the school, at the District's request, the Contractor shall schedule the performance of all such Work around normal school hours or make other arrangements so that the Work does not cause such disruption or disturbance. There are specific periods of testing at operational schools and it is critical that Contractor control noise during periods of testing. In no event shall Contractor have a right to receive additional compensation or an extension to the Contract time as a result of any such rescheduling or the making of such arrangements. These controls shall be implemented during site preparation and construction. All noise related issues, including school operations, and noise during testing should be detailed in the Schedule provided pursuant to Article 8

3.4 WARRANTY

The Contractor warrants to the District and Architect that material and equipment furnished under the Contract will be of the highest quality and new unless otherwise required or permitted by the Contract Documents, that the Work will be free from defects not inherent in the quality required or permitted, and that the Work will conform with the requirements of the Contract Documents. Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. Contractor's warranty to District includes, but is not limited to, the following representations:

1. In addition to any other warranties provided elsewhere, Contractor shall, and hereby does, warrant all Work after the date of Notice of Completion of Work by District and shall repair or replace any or all such Work, together with any other Work, which may be displaced in so doing that may prove defective in workmanship or materials within a two (2) year period from date of Final Completion which shall be no later than the final date of Punch List as noted at Article 9.11) without expense whatsoever to District, ordinary wear and tear,

unusual abuse or neglect excepted. District will give notice of observed defects with reasonable promptness. Contractor shall notify District upon completion of repairs.

2. The guarantee period for corrected defective work shall continue for a duration equivalent to the original guarantee period.
3. In the event of failure of Contractor to comply with above mentioned conditions within one week after being notified in writing, District is hereby authorized to proceed to have defects repaired and made good at expense of Contractor who hereby agrees to pay costs and charges therefore immediately on demand.
4. This Article does not in any way limit the guarantee on any items for which a longer warranty is specified or on any items for which a manufacturer gives a guarantee for a longer period. Contractor shall furnish District all appropriate guarantee or warranty certificates upon completion of the project.

3.5 TAXES

Contractor will pay all applicable Federal, State, and local taxes on all materials, labor, or services furnished by it, and all taxes arising out of its operations under the Contract Documents. District is exempt from Federal Excise Tax, and a Certificate of Exemption shall be provided upon request.

3.6 PERMITS, FEES AND NOTICES

3.6.1 Payment

The Contractor shall secure and pay for all permits and governmental fees, licenses, and inspections necessary for proper execution and completion of the Work which are necessary after execution of the Contract and are legally required by any authority having jurisdiction over the Project, except those required by the Division of the State Architect (DSA). District shall be responsible for all testing and inspection as required by the DSA on-site or within the distance limitations set forth in Paragraph 13.5.2, unless a different mileage range is specified in the Supplemental Conditions.

3.6.1.1 DSA Fees. DSA policy is to charge CCD review fees for processing and approval of changes in the Plans and Specifications through the Construction Change Document process. Contractor is specifically directed to the current DSA IR A-30 which provides fee structure and charges that will be incurred for proceeding with respect to the CCD process, a process that must be followed for each change in the Plans and Specifications.

3.6.2 Compliance

The Contractor shall comply with and give notices required by any law, ordinance, rule, regulation, and lawful order of public authorities bearing on performance of the Work. Specifically, the Division of State Architect provides State oversight of the Project and enforcement of Title 24 rules and regulations. Contractor is directed to the DSA website at <http://www/dgs/ca/gov/dsa/home>. There will be local governmental oversight from City, County or both. Finally, Regional Water Quality Control Board, State Fire Marshall, local fire marshal,

Department of Industrial Relations, Department of Labor Standards Enforcement, and Air Quality Management District (Local and State) are some of the agencies that provide oversight and may require specific permits, fees, or provide oversight over the Project. Contractor represents understanding and specialized knowledge of the rules governing Districts and Contractor shall maintain compliance over the applicable rules and will file all documents required in order to ensure compliance with State, local, and other rules that apply to the Project.

3.6.3 Responsibility

The Contractor shall perform all Work in conformance with every law, statute, ordinance, building code, rule or regulation. The Contractor shall assume full responsibility for such Work and shall bear the attributable cost of correction or project delay.

Pursuant to Title 24 Section 4-343(b):

“Contractor shall carefully study the approved Plans and Specifications and shall plan a schedule of operations well ahead of time.... All inconsistencies or items which appear to be in error in the Plans and Specifications shall be promptly called to the attention of the architect or registered engineer, through the inspector, for interpretation or correction.”

To help Contractor plan its operations, Contractor is directed to study the current version of the DSA 152 Inspection Card Manual identifying the exact steps the Inspector is to follow in the review and sign off process for the DSA 152. The DSA 152 Inspection Card Manual provides specific detail as to the order of operations, review items and compliance items beyond the Specifications and Plans which are reviewed for DSA compliance. The most current version of this manual is located on DSA’s website.

Contractor is also specifically directed to the time periods for posting of Special Inspection Reports and Inspector Notifications under DSA PR 13-01 since the timing of Inspection is not a Governmental Entity related delay.

3.7 SUBMITTALS REQUIRED AT THE COMMENCEMENT OF THE PROJECT

3.7.1 Requirements Within Ten (10) Calendar Days

Within ten (10) calendar days after Notice to Proceed, Contract shall submit the following:

- 3.7.1.1 Detailed Schedule of Values (See Article 9.2)
- 3.7.1.2 Submittal Listing and Schedule for Submittals
- 3.7.1.3 Preliminary Project Schedule (See Article 8)
- 3.7.1.4 Critical Path Product Submittals

3.7.2 Requirements Within Forty-Five (35) Calendar Days

Unless otherwise shortened by the Special Provisions or Contract Documents, within) thirty five (35) calendar days after Notice to Proceed, Contractor shall submit the following:

3.7.2.1 Baseline Project Schedule (See Article 8)

3.7.2.2 All Submittals for the Project except those specifically agreed upon by District and Architect, in writing, and shall be specifically incorporated into the Submittal section of the Schedule so as to not delay the Work. The agreement to allow a later Submittal does not mean that Article 3.3.7 is waived.

3.7.2.3 Not Used.

3.8 DOCUMENTS, SAMPLES, AND COMPUTER AT THE SITE

The Contractor shall maintain at the Site for the District one current copy of the California Building Code, Titles 19 and 24 of the California Code of Regulations, any other document required by DSA, and one record copy of the Drawings, Specifications, Addenda, Change Orders, and other Modifications, in good order and marked currently to record changes and selections made during construction. In addition, the Contractor shall maintain at the Site approved Shop Drawings, Product Data, Samples, and similar required Submittals. These documents shall be available to the Architect and shall be delivered to the Architect for delivery to the District upon completion of the Work.

Contractor shall have an operational computer with internet access so Contractor can review and post documents as required for the Project, including but not limited to the filing and posting of DSA required documents for the Project.

Contractor shall be prepared to post and review documents posted to the DSA Project website.

3.9 SUBMITTALS INCLUDING SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

3.9.1 Definitions

3.9.1.1 Deferred Approvals. Approval of certain aspects of the construction may be deferred until the construction Contract has been awarded. To facilitate the design process, DSA grants deferred approval to the design and detailing of certain elements of the Project at the request of the Architect or Engineer of Record. Design elements that may be deferred may include, but are not limited to Access floors, Bleachers, Elevator guide rails and related elevator systems, Exterior wall systems - precast concrete, glass fiber reinforced concrete, etc. , Skylights, Window wall systems, storefronts, Stage rigging, and other systems as noted in the Contract Documents. (Also see Article 1.2.2 and 3.9.3)

3.9.1.2 Shop Drawings. The term "Shop Drawings" as used herein means drawings, diagrams, equipment or product schedules, and other data, which are prepared by Contractor, Subcontractors, manufacturers, suppliers, or distributors illustrating some portion of the Work, and includes: illustrations; fabrication, erection, layout and setting drawings; manufacturer's standard drawings; schedules; descriptive literature, instructions, catalogs, and

brochures; performance and test data including charts; wiring and control diagrams; and all other drawings and descriptive data pertaining to materials, equipment, piping, duct and conduit systems, and methods of construction as may be required to show that the materials, equipment, or systems and their position conform to the requirements of the Contract Documents.

3.9.1.3 *Manufactured* applies to standard units usually mass-produced, and “Fabricated” means items specifically assembled or made out of selected materials to meet individual design requirements. Shop Drawings shall: establish the actual detail of all manufactured or fabricated items, indicate proper relation to adjoining work, amplify design details of mechanical and electrical systems and equipment in proper relation to physical spaces in the structure, and incorporate minor changes of design or construction to suit actual conditions.

3.9.1.4 *Submittals* is a term used interchangeably and sometimes refers to Shop Drawings, Product Data, and Samples since all subcontractor submissions are tracked in a Submittal Log and may include any of the noted items. However, generally, a Submittal is a manufacturer's product information and product data including description, characteristics, size, physical characteristics, and requirements to prepare the jobsite for receiving of the particular manufactured item.

3.9.1.5 *Samples*. The term “samples” as used herein are physical examples furnished by Contractor to illustrate materials, equipment, or quality and includes natural materials, fabricated items, equipment, devices, appliances, or parts thereof as called for in the Specifications, and any other samples as may be required by the Architect to determine whether the kind, quality, construction, finish, color, and other characteristics of the materials, etc., proposed by the Contractor conform to the required characteristics of the various parts of the Work. All Work shall be in accordance with the approved samples.

3.9.2 Shop Drawings.

3.9.2.1 *When Shop Drawings Are Required*. Shop Drawings are required for prefabricated components and for installation and coordination of these prefabricated components into the Project. In addition, Shop Drawings, are prepared to address the actual size and installation of components from various subcontractors and provides an opportunity for the Contractor to coordinate and address conflicts between the subcontracting trades.

3.9.2.2 *Purpose for Shop Drawings*. Shop Drawings are the Contractor's manufacturer, Subcontractor, supplier, vendor or the Contractor's detailed drawings showing particularized method for assembly, specifics to a manufacturer, manufacturer component installation requirements, specifics as to a manufactured item, alterations to a manufactured, a custom created item, or drawn version of more detailed information expanding on the Architect's design shown in the Contract Documents. The Shop Drawings address the appearance, performance, size, weight, characteristics and prescriptive descriptions associated with the Contractor or Contractor's Subcontractor's plan for installation or assembly based on the design in the Specifications and Contract Documents. The Shop Drawing often is more detailed than the information shown in the Contract Documents to give the Architect and Engineer the opportunity to review the fabricator's version of the product (along with particulars specific to that particular product), prior to fabrication. References to the Contract Documents, Construction Documents, Drawings, Plans, and Specifications assist the Architect and Engineer in their review of the Shop Drawings. Attachment of manufacturer's material Specifications, “catalog cut sheets,” and other manufacturer's information may be provided to accompany Shop Drawings. Because Shop

Drawings facilitate the Architect's and Engineer's approval of the system, they should be as clear and complete as possible so they may be reviewed by Architect or Engineer for the Project.

3.9.2.3 *Shop Drawing Requirements.* The Contractor shall obtain and submit with Shop Drawings all seismic and other calculations and all product data from equipment manufacturers. "Product data" as used herein are illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by the Contractor to illustrate a material, product, or system for some portion of the Work.

3.9.2.4 *Not a Reproduction of Architectural or Engineering Drawings.* The Shop Drawings are not a reproduction of the architectural or engineering drawings. Instead, they must show more detail than the Construction Documents and details the fabrication and/or installation of the items to the manufacturer's production crew or Contractor's installation crews.

3.9.2.5 *Shop Drawings Engineering Requirements:* Some Shop Drawings require an engineer stamp to be affixed on the Drawings and calculations. In such cases, a current and valid engineering stamp shall be affixed by a California registered engineer. No out of State engineers shall stamp Shop Drawings. (See DSA IR A-18). In most cases, an engineer means California registered mechanical, structural, electrical or plumbing engineer. California Registered Civil Engineers will not be accepted for structural details unless specifically approved by DSA.

3.9.2.6 *DSA Approvals Required Prior to Work.* No work on a Shop Drawing that requires DSA approval may proceed until DSA approval is received. Contractor has provided DSA approval time and allowed adequate time for corrections in Contractor's Schedule as required pursuant to Article 8.

3.9.2.7 *Shop Drawing Identification.* All Shop Drawings must be properly identified with the name of the Project and dated, and accompanied by a letter of transmittal referring to the name of the Project and to the Specification section number for identification of each item clearly stating in narrative form, as well as "clouding" all qualifications, departures, or deviations from the Contract Documents. Shop Drawings, for each section of the Work shall be numbered consecutively and the numbering system shall be retained throughout all revisions. All Subcontractor submissions shall be made through the Contractor. Each drawing shall have a clear space for the stamps of Architect and Contractor.

3.9.3 Deferred Approvals

Deferred approvals shall be submitted and processed to ensure all DSA and other governmental approvals are secured so as to not delay the Project. There may be additional requirements for deferred approvals at Division 1 of the Specifications. All deferred approvals shall be prepared by Contractor or Contractor's agent early enough so as to not delay the Project. Contractor is aware that Title 24 California Code of Regulations Section 4-317 have specific requirements for deferred approval as to governing agencies and as to the Architect and Engineer for the Project. As a result, any delay associated with the time for approval by applicable agencies or by the Architect or Architect's consultants shall be Contractor's. Contractor is required to comply with inclusion of Deferred Approvals in the Schedule as required under Article 3.9.6

3.9.3.1 *DSA Approvals Required Prior to Work.* No work on a deferred approval item may proceed on the components until DSA approval is received. Contractor has provided

DSA approval time and allowed adequate time for any DSA revisions in Contractor's Schedule as required pursuant to Article 8.

3.9.4 Submittals and Samples

3.9.4.1 *Information Required With Submittals:* Manufacturer, trade name, model or type number and quantities: Information provided must be of sufficient detail to allow Architect and Engineer to compare the submitted item with the specified products and acceptable products listed, in the Specifications and addenda.

3.9.4.2 *Description of Use and Performance Characteristics:* Information should be furnished describing the normal use and expected performance of the product. The Architect and Contractor review this information to confirm that the product is appropriate for the intended use.

3.9.4.3 *Size and Physical Characteristics:* The size and physical characteristics, such as adjustment capabilities, which is reviewed by both the Contractor and Architect. The Contractor has the most available information for comparing adjoining materials and equipment. The Contractor also needs to know the size and weight of the equipment for lifting and handling considerations.

3.9.4.4 *Finish Characteristics:* The Architect reviews the available finishes and selects the appropriate finish, if the finish was not previously specified in the documents. The Contractor should confirm that finish requirements in the Specification are being met by the product.

3.9.4.5 *Contractor Responsible for Jobsite Dimensions:* Some material is custom-fabricated to job conditions, requiring dimensions from the jobsite. These jobsite dimensions are provided by the Contractor as part of the Contractor's responsibilities for the Project and shall be provided prior to release of the product for manufacture. Contractor shall not rely on Architect or Engineers to provide jobsite dimensions.

3.9.4.6 *Full Range of Samples Required (When Specific Items Not Specified).* Except in cases where the exact color and type of item is specified since the District is utilizing items Standardized or pre-selected by District, the full range of color, graining, texture, or other characteristics are anticipated for review in finished products, a sufficient number of samples of the specified materials shall be furnished by the Contractor to indicate the full range of characteristics which will be present in the finished products. Products delivered or erected without Submittal and approval without providing a full range of samples shall be subject to rejection. Except for range samples, and unless otherwise called for in the various sections of the Specifications or Specification Section 1, samples shall be submitted in duplicate.

3.9.4.7 *Labeling of Samples.* All samples shall be marked, tagged, or otherwise properly identified with the name of the submitting party, the name of the Project, the purpose for which the samples are submitted and the date.

3.9.4.8 *Transmittal letter.* All samples shall be accompanied by a letter of transmittal containing similar information, together with the Specification section number.

3.9.4.9 *Labels and Instructions.* All samples of materials shall be supplied with the manufacturer's descriptive labels and application instructions. Each tag or sticker shall have clear space for the review stamps of Contractor and Architect.

3.9.4.10 *Architect's Review.* The Architect will review and, if appropriate, approve submissions and will return them to the Contractor with the Architect's stamp and signature applied thereto, indicating the timing for review and appropriate action in compliance with the Architect's (or District's) standard procedures. In the cases where a CM is hired by the District, CM may be the party that receives and performance logging and initial processing of the Samples. CM may, in some cases, reject samples that are not in conformance with Contract requirements.

3.9.5 Submittal Submission Procedure

3.9.5.1 *Transmittal Letter and Other Requirements.* All Submittals must be properly identified with the name of the Project and dated, and each lot submitted must be accompanied by a letter of transmittal referring to the name of the Project and to the Specification section number for identification of each item clearly stating in narrative form, as well as "clouding" on the submissions, all qualifications, departures, or deviations from the Contract Documents. Shop Drawings, for each section of the Work shall be numbered consecutively and the numbering system shall be retained throughout all revisions. All Subcontractor submissions shall be made through the Contractor. Each drawing shall have a clear space for the stamps of Architect and Contractor.

3.9.5.2 *Copies Required.* Each Submittal shall include one (1) legible, reproducible (if electronic is available, electronic copies shall also be provided) and five (5) legible prints of each drawing or schedule, table, cut sheet, etc., including fabrication, erection, layout and setting drawings, and such other drawings as required under the various sections of the Specifications, until final acceptance thereof is obtained. Subcontractor shall submit copies, in an amount as requested by the Contractor, of: (1) manufacturers' descriptive data for materials, equipment, and fixtures, including catalog sheets showing dimensions, performance, characteristics, and capacities; (2) wiring diagrams and controls; (3) schedules; (4) all seismic calculations and other calculations; and (5) other pertinent information as required by the District or Architect. See also Division 1.

3.9.5.3 *Corrections.* The Contractor shall make all corrections required by Architect, District or CM and shall resubmit, as required by Architect or CM, corrected copies of Shop Drawings or new samples until approved. Contractor shall direct specific attention in writing or on resubmitted Shop Drawings to revisions other than the corrections required by the Architect on previous submissions. Professional services required for more than one (1) re-review of required Submittals of Shop Drawings, product data, or samples are subject to charge to the Contractor pursuant to Paragraph 4.5.

3.9.5.4 *Approval Prior to Commencement of Work.* No portion of the Work requiring a Shop Drawing or sample submission or other Submittal shall be commenced until the submission has been reviewed by Contractor and Architect (and CM, if applicable) and approved by Architect (and CM where applicable) unless specifically directed in writing by the Architect. All such portions of the Work shall be in accordance with approved Shop Drawings and samples.

3.9.5.5 *District's Property.* All Submittals, Shop Drawings, computer disks, BIM modeling information, clash checks, schedules, annotated Specifications, samples and other Submittals shall become the District's property upon receipt by the District or Architect.

3.9.6 Schedule Requirements for Submittals

Contractor shall obtain and shall submit all required Submittals (i.e. Shop Drawings, Deferred Approvals, Samples, etc.), in accordance with Contractor's "Schedule for Submission of Shop Drawings and Samples" as required in the scheduling portion of the General Conditions at Articles 8 and the Specifications (as long as the Specifications do not conflict with General Conditions. In the case of conflict, the conflicting provision shall be controlled by the General Conditions and the remaining Specifications sections shall be interpreted as if the general conditions language is inserted) with such promptness as to cause no delay in its own Work or in that of any other contractor or subcontractor but in no event later than thirty five (35) days after the Notice to Proceed is issued except in the specific cases noted as an exception under Article 3.7.2.1. No extensions of time will be granted to Contractor or any Subcontractor because of its failure to have Shop Drawings and samples submitted in accordance with Division 1 and the Schedule. Each Subcontractor shall submit all Shop Drawings, samples, and manufacturer's descriptive data for the review of the District, the Contractor, and the Architect through the Contractor.

3.9.6.1 *Consideration of Schedule.* Contractor has considered lead times, DSA or other agency governmental review times, Architect or Engineer review times, manufacturing seasons, and specific long lead procurement concerns for all submittals for the Project.

3.9.7 General Submittal Requirements

3.9.7.1 *Contractor Submittal Representations.* By submitting Shop Drawings, product data, samples, etc., the Contractor represents that it has determined and verified all materials, field measurements, catalog numbers, related field construction criteria, and other relevant data in connection with each such submission, and that it has checked, verified, and coordinated the information contained within such Submittals with the requirements of the Work and of the Contract Documents, including the construction schedule.

3.9.7.2 *Contractor Coordination.* Contractor shall stamp, sign, and date each Submittal indicating its representation that the Submittal meets all of the requirements of the Contract Documents and evidence Contractor's review through execution of the following stamp to be placed on each Shop Drawings:

"[Contractor] has reviewed and approved the field dimensions and the construction criteria, and has also made written notation regarding any information in the Shop Drawings and Submittals that does not conform to the Contract Documents. This Shop Drawing or Submittal has been coordinated with all other Shop Drawings and Submittals received to date by me as Contractor and this duty of coordination has not been delegated to Subcontractors, material suppliers, the Architect, or the Engineers on this Project.

3.9.7.3 *No Deviation from Contract Documents.* The submission of the Shop Drawings, product data, samples, etc., shall not deviate from the *requirements* of the Contract Documents including detailing and design intent which is specifically outlined in Contract

Documents except as specifically authorized by the Architect or through an accepted substitution pursuant to Paragraph 3.10.4. All deviations from the Contract Documents shall be narratively described in a transmittal accompanying the Shop Drawings. However, Shop Drawings shall not be used as a means of requesting a substitution, the procedure for which is defined in Paragraph 3.10.4, "Substitutions."

3.9.7.4 *Contractor Responsibility for Shop Drawings Conformance to Contract Documents.* Review by District and Architect shall not relieve the Contractor or any Subcontractor from its responsibility in preparing and submitting proper Shop Drawings in accordance with the Contract Documents.

3.9.7.5 *Incomplete Submittals.* Any submission, which in Architect's opinion is incomplete, contains errors, or has been checked superficially will be returned not reviewed by the Architect for resubmission by the Contractor. Refer to Submittal Procedures of the Specifications for additional information. The Contractor shall be responsible for any related delays and shall not be the basis for any Claim.

3.9.7.6 *Shop Drawings and Submittals Shall Not Be Used as a Method to Make a Substitution.* Shop Drawings and Submittals shall not be used as a means of requesting a substitution or to make changes in the Contract Documents. If changes are made to the Contract Documents through the Shop Drawings, the Architect shall have the right to reject the Submittal. If the Architect does not note the deviation from the approved Plans and Specifications, the Contractor is still responsible for the change and the Architect or the District may require the Shop Drawings be revised to properly reflect the approved Contract Documents. The Architect or District may also require that the Contractor bear all costs under Article 4.5 and consequential damages associated with a CCD to revise Plans and Specifications to accommodate the deviation from approved Plans and Specifications.

3.9.7.7 Extent of Review. In reviewing Shop Drawings, the Architect will not verify dimensions and field conditions. The Architect will review and approve Shop Drawings, product data, samples, etc., for aesthetics and for conformance with the design concept of the Work and the information in the Contract Documents. The Architect's review shall neither be construed as a complete check which relieves the Contractor, Subcontractor, manufacturer, fabricator, or supplier from responsibility for any deficiency that may exist or from any departures or deviations from the requirements of the Contract Documents unless the Contractor has, in writing, called the Architect's attention to the deviations at the time of submission. The Architect's review shall not relieve the Contractor or Subcontractors from responsibility for errors of any sort in Shop Drawings or schedules, for proper fitting of the Work, coordination of the differing subcontractor trades and Shop Drawings and Work which is not indicated on the Shop Drawings at the time of submission of Shop Drawings. Contractor and Subcontractors shall be solely responsible for any quantities which may be shown on the Submittals or Contract Documents.

3.10 SUBSTITUTIONS

3.10.1 Definition

A Substitution is a change in product, material, equipment, or method of construction from those required by the Construction Documents proposed by the Contractor. For this Project, a Substitution is subject to the filing of a Construction Substitution Request Form prior to the time of bid and meeting the requirements of this Article.

3.10.2 One Product Specified

Unless the Specifications state that no substitution is permitted, whenever the Contract Documents indicate any specific article, device, equipment, product, material, fixture, patented process, form, method, or type of construction or any specific name, make, trade name, or catalog number, with or without the words "or equal," such specification shall be deemed to be used for the purpose of facilitating description of the material, process, or article desired and shall be deemed to be followed by the words "or equal." Subject to the requirements of properly submitting a Substitution Request for as Addressed in Special Conditions, the Contractor may, unless otherwise stated, offer any material, process, article, etc., which shall be materially equal or better in every respect to that so indicated or specified ("Specified Item") and will completely accomplish the purpose of the Contract Documents.

3.10.3 Products Specified Which Are Commercially Unavailable

If the Contractor fails to make a request for substitutions for products, prior to the submission of its bid, and such products subsequently become commercially unavailable, the Contractor may request a substitution for such commercially unavailable item. The decision to grant this request is solely at the District's discretion. The written approval of the District, consistent with the procedure for Change Orders, shall be required for the use of a proposed substitute material. The District may condition its approval of the substitution upon the delivery to District of an extended warranty or other assurances of adequate performance of the substitution as well as an equitable deduction in the Contract price should the substituted item cost less than the Specified Item. All risks of delay due the approval of a requested substitution by the DSA, or any other governmental agency having jurisdiction, shall be on the requesting party. All additional costs, DSA review costs, all procurement and construction delays, and all costs for review by the Architect or its consultants shall be the responsibility of the Contractor and will be deducted from Contractor's pay request.

3.10.4 Substitution Request Form

Requests for substitutions of products, materials, or processes in place of a Specified Item must be in writing on the District's Substitution Request Form ("Request Form") at the time of submitting bids to the District, except as provided for in Article 3.10.3.

The Request Form must be accompanied by evidence as to whether the proposed substitution:

- a. Is equal in quality/service/ability to the Specified Item;
- b. Will entail no changes in detail, construction, and scheduling of related work;
- c. Will be acceptable in consideration of the required design and artistic effect;
- d. Will provide no cost disadvantage to the District;
- e. Will require no excessive or more expensive maintenance, including adequacy and availability of replacement parts; and

- f. Will required no change of the construction schedule.

In completing the Request Form, the bidder must state, with respect to each requested substitution, whether the bidder will agree to provide the Specified Item in the event that the District denies the bidder's request for such requested substitution. In the event that the bidder has agreed in the Request Form to provide the Specified Item and the District denies the bidder's requested substitution for a Specified Item, the bidder shall provide the Specified Item without any additional cost or charge to the District.

After bids are opened, the apparent lowest bidder shall provide, within five (5) days of opening such bids, any and all Drawing, Specifications, samples, performance data, calculations, and other information, as may be required to assist the Architect, CM and the District in determining whether the proposed substitution is acceptable. The burden of establishing these facts shall be upon the bidder.

After the District's receipt of such evidence by the bidder, the District will make its final decision as to whether the bidder's request for substitution for any Specified Items will be granted. The decision as to whether a proposed request for substitution is equal to a Specified Item shall be at the sole discretion of the District. Any request for substitution that is granted by the District shall be documented and processed through a Change Order. Contractor must submit a complete Submittal of the requested substitution and a Shop Drawing showing configuration, dimensions, and other critical information associated with the substitution that meets the requirements of Article 3.9. The District may condition its approval of any substitution upon delivery to the District of an extended warranty or other assurances of adequate performance of the substitution. Any and all risks of delay due to approval by the DSA or any other governmental agency having jurisdiction shall be on the bidder.

If the Architect and District accept a proposed substitution, the Contractor agrees to pay for all DSA review costs, engineering and design services, including, without limitation, compensation to the Architect and affected engineers for their required time to process such substitution through the Division of the State Architect, if required, and to make all changes and adjustments in materials or the work of all trades directly or indirectly affected by the substituted item or items at no cost to the District.

3.10.5 Substitution Requests After Bid

The District, in its sole discretion, may accept a request for substitution by the Contractor or may request Contractor substitute a specified item. Any substitutions requested after bids are opened shall be subject to the same conditions and requirements set forth in Article 3.10.4 above. If any substitutions, that in the District or Architect's determination, results in a credit to the District, the credit amount shall be agreed upon in writing, otherwise, the request for substitution shall be deemed denied.

3.11 INTEGRATION OF WORK

3.11.1 Scope

The Contractor shall be responsible for cutting, fitting, or patching to complete the Work and to make all parts fit together properly. Contractor shall be responsible for ensuring that all trades are coordinated and scheduled so as to ensure the timely and proper execution of the work. When modifying existing work or installing new Work adjacent to existing work, Contractor shall match, as closely as conditions of Site and materials will allow, the finishes, textures, and colors of the original work, refinishing existing work at no additional cost to District. All cost caused by defective or ill-timed work shall be borne by Contractor. Contractor shall be solely responsible for protecting existing work on adjacent properties and shall obtain all required permits for shoring and excavations near property lines.

3.11.2 Structural Members

New or existing structural members and elements, including reinforcing bars and seismic bracing, shall not be cut, bored, or drilled except by written authority of the Architect. Work done contrary to such authority is at the Contractor's risk and subject to replacement at its own expense without reimbursement under the Contract. Schedule delays resulting from Agency approvals for unauthorized work shall be the Contractor's responsibility.

3.11.3 Subsequent Removal

Permission to patch any areas or items of the Work shall not constitute a waiver of the District's or the Architect's right to require complete removal and replacement of the areas of items of the Work if, in the opinion of the Architect or the District, the patching does not satisfactorily restore quality and appearance of the Work or does not otherwise conform to the Contract Documents.

3.12 CLEANING UP

3.12.1 Contractor's Responsibility to Clean Up

Contractor at all times shall keep premises free from debris such as waste, dust, excess water, storm water runoffs, rubbish, and excess materials and equipment. Contractor shall not leave debris under, in, or about the premises, but shall promptly remove same from the premises and dispose of it in a lawful manner. Disposal receipts or dump tickets shall be furnished to the Architect within five (5) days of request.

Contractor shall remove rubbish and debris resulting from the Work on a daily basis. Contractor shall maintain the structures and Site in a clean and orderly condition at all times until acceptance of the project by the District. Contractor shall keep its access driveways and adjacent streets, sidewalks, gutters and drains free of rubbish, debris and excess water by cleaning and removal each day. All concrete, sidewalks, and paths of travel shall be broom cleaned daily.

3.12.2 General Final Clean-Up

Upon completion of Work, Contractor shall employ experience workers or professional cleaners for final cleaning. Clean each surface to the condition expected in a normal, commercial, building cleaning and maintenance program.

- a. Clean interior and exterior of buildings, including fixtures, equipment, walls, floors, ceilings, roofs, window sills and ledges, horizontal projections, and any areas where debris has collected, so surfaces are free from foreign material or discoloration;
- b. Clean the Project site. The grounds should be cleared of any Contractor equipment, raked clean of debris and trash removed. Sweep paved areas broom clean;
- c. Repair or replace any damaged materials. Replace any chipped or broken glass;
- d. Remove any and all stains;
- e. Remove labels that aren't permanent labels;
- f. Clean and polish all glass, plumbing fixtures, equipment, finish hardware and similar finish surfaces. Remove any glazing compounds;
- g. Remove temporary utilities, fencing, barricades, planking, sanitary facilities and similar temporary facilities from Site;
- h. Remove temporary film that remains on any hardware, doors or other surfaces and
- i. Seal the bottom and tops of all doors.

3.12.3 Special Clean-Up.

In addition to the general cleaning, the following special cleaning shall be done at the completion of the Work in accordance with the Specifications including, but not limited to:

- a. Remove putty stains from glazing, then wash and polish glazing;
- b. Remove marks, stains, fingerprints and other soil or dirt from painted, stained or decorated work;
- c. Remove temporary protection and clean and polish floors and waxed surfaces;
- d. Clean and polish hardware and plumbing trim; remove stains, dust, dirt, plaster and paint;
- e. Wipe surfaces of mechanical and electrical equipment;

- f. Remove spots, soil, plaster and paint from tile work, and wash tile;
- g. Clean all fixtures and equipment, remove excess lubrication, clean light fixtures and lamps, polish metal surfaces;
- h. Vacuum-clean carpeted surfaces; and
- i. Remove debris from roofs, down spout and drainage system.

3.12.4 Failure to Cleanup

If the Contractor fails to clean up as provided in the Contract Documents, the District may do so, and the cost thereof shall be the responsibility of the Contractor pursuant to Article 2.2 and seek a Deductive Change Order.

3.13 ACCESS TO WORK

The Contractor shall provide the District, the Architect, Engineers and the Inspector of Record, access to the Work in preparation and progress wherever located. Contractor shall provide safe and proper facilities for such access so that District's representatives may perform their functions.

CONTRACTOR IS AWARE THAT THIS CONTRACT MAY BE SPLIT INTO SEVERAL PHASES AS ADDRESSED IN ARTICLE 6.

3.13.1 Special Inspection, Inspections or Tests Out of State, Out of Country or Remote from Project

If Contractor has a Subcontractor or supplier that requires in plant or special inspections or inspections or tests that are out of the country, out of the state, or a distance of more than 200 miles from the Project site, the Special Inspector or Inspector shall be provided access so the special inspection or inspection may occur in the remote location. In some cases, the DSA Inspector may also require access in addition to Special Inspectors and individuals performing tests. Inspections/tests shall occur during normal work hours. (See also Article 4.3.6)

3.14 ROYALTIES AND PATENTS

3.14.1 Payment and Indemnity for Infringement

Contractor shall hold and save the District and its officers, agents, and employees, the Construction Manager, the Architect, and the Architect's consultants harmless from liability of any nature or kind, including cost and expense, for or on account of any patented or unpatented invention, process, article, or appliance manufactured or used in the performance of the Contract, including its use by the District, unless otherwise specifically provided in the Contract Documents, and unless such liability arises from the sole negligence, or active negligence, or willful misconduct of the District, the Architect, or the Architect's consultants.

3.14.2 Review

The review by the Architect of any method of construction, invention, appliance, process, article, device, or material of any kind shall be for its adequacy for the Work and shall not be an approval for the use by the Contractor in violation of any patent or other rights of any person or entity.

3.15 INDEMNIFICATION

3.15.1 Contractor

See Agreement Form. Contractor shall ensure that its contract with each of its Subcontractors contains provisions requiring the Subcontractors to defend, indemnify and hold harmless the District, Architect, Inspector, the State of California to a minimum level as set forth in this Article and consistent with the indemnity and hold harmless language in the Agreement Form.

The Contractor's and Subcontractors' obligation to defend, indemnify and hold harmless the District, Architect, Inspector, the State of California and their officers, employees, agents and independent contractors hereunder shall include, without limitation, any and all claims, damages, and costs for the following: (1) any damages or injury to or death of any person, and damage or injury to, loss (including theft), or loss of use of, any property; (2) breach of any warranty, express or implied; (3) failure of the Contractor or Subcontractors to comply with any applicable governmental law, rule, regulation, or other requirement; (4) products installed in or used in connection with the Work; and (5) any claims of violation of the Americans with Disabilities Act ("ADA").

3.16 SUBMISSION OF DAILY REPORTS

3.16.1 General

By 10:00 a.m. on the following business day, the Contractor shall submit a Daily Report to the Inspector and copy the Architect for the previous day's Work. If there is a Construction Manager, the original Daily Report is to be provided to the Construction Manager and copies sent to the Architect and the Inspector. Daily Reports shall be prepared on forms approved by the District, together with applicable delivery tickets, listing all labor, materials, and equipment involved for that day. The District reserves the right to note inconsistencies or inaccuracies in the Daily Reports. In such cases, pertinent notes shall be entered by each party to explain points which cannot be resolved that day. Each party shall retain a signed copy of the report. Daily Reports by Subcontractors or others shall be submitted through the Contractor.

3.16.2 Labor

The Daily Report shall show names of workers, classifications, hours worked and hourly rate. The locations where work occurred shall also be identified in the Daily Report. Project superintendent expenses are not allowed.

3.16.3 Materials

The Daily Report required shall describe and list quantities of materials used and unit costs.

3.16.4 Equipment

The Daily Report required shall show type of equipment, size, identification number, and hours of operation, including loading and transportation, if applicable, and hourly/daily cost. Move-on and move-off fees shall be noted.

3.16.5 Other Services and Expenditures

Other services and expenditures shall be described in the Daily Report in detail as the District requires.

3.16.6 Failure to Submit Daily Report

If Contractor does not submit its Daily Report by 10 am the next business day, the Inspector of Record shall prepare a Daily Report addressing each of the above items. The cost for the Inspector's services to prepare the Daily Report shall be addressed through a Deductive Change Order under Article 7.7.4.

3.17 AS-BUILT DRAWINGS AND ANNOTATED SPECIFICATIONS

Throughout the duration of the Project, Contractor shall maintain on a current basis an accurate and complete set of As-Built Drawings (and Annotated Specifications) clearly showing all changes, revisions to Specifications and substitutions during construction, including, without limitation, field changes and the final location of all electrical and mechanical equipment, utility lines, ducts, outlets, structural members, walls, partitions, and other significant features. In case a Specification allows Contractor to elect one of several brands, makes, or types of material or equipment, the annotations shall show which of the allowable items the Contractor has furnished. The Contractor will update the As-Built Drawings and Annotated Specifications as often as necessary to keep them current, but no less often than weekly.

Contractor shall update As-Built Drawings with complete information on an area of Work at or near the time when the Work is being performed and prior to any DSA 152 sign off and prior to any Work being covered.

The As Built Drawings and Annotated Specifications shall be kept at the Site and available for review and inspection by the District and the Architect. Failure to maintain and update the As Built Drawings is a basis to withhold Progress Payments pursuant to Article 9.6.

3.17.1 Upon Beneficial Occupancy

Contractor shall obtain and pay for reproducible Plans upon Beneficial Occupancy. Contractor shall deliver Plans to District Representative (Construction Manager if one is hired for the Project).

3.17.2 As-Builts at Completion of Work

On completion of the Work and prior to and as a condition precedent to Application for Retention Payment, the Contractor will provide one neatly prepared and complete set of As-Built Drawings and Annotated Specifications to the District. Contractor shall certify the As-Builts as a complete and accurate reflection of the actual construction conditions of the Work by affixing a Stamp indicating the Drawings are As-Builts and Certifying Accuracy on the final set of As-Builts. Failure to deliver a complete Record Set of Drawings may result in significant withholdings to ensure Work is properly documented. See Article 9.9.2.

3.17.3 Log of Control and Survey Documentation

Contractor shall complete and maintain an accurate log or all control and survey documentation for the Project as the Work progresses. All reference and control points shall be recorded on the As-Built Drawings. The basis of elevations shall be one of the established benchmarks that must be maintained on the As-Builts.

3.17.4 Record Coordinates for Key Items

Contractor shall record, by coordinates, all utilities on-site with top of pipe elevations, major grade and alignment changes, rim, grate or top of curb and flow line elevations of all drainage structures and sewer manholes. Contractor shall update record information at or near the time when work is occurring in an area and prior to DSA 152 sign off on any category of Work and prior to covering the Work.

3.17.5 BIM As-Built Drawings

If BIM is utilized for the Project, then an electronic version of such As-Built Drawings and Annotated Specifications will be delivered to District (in an acceptable format to District).

3.18 EQUIPMENT MANUALS

Contractor shall obtain and furnish three (3) complete sets of manuals containing the manufacturers' instructions for maintenance and operation of each item of equipment and apparatus furnished under the Contract Documents and any additional data specifically requested under the various sections of the Specifications for each division of the Work. The manuals shall be arranged in logical, sequential order, labeled, indexed, and placed in three-ring binders. At the completion of its Work, the Contractor shall certify, by endorsement thereon, that each of the manuals is complete, accurate, and covers all of its Work.

Prior to submittal of Contractor's Application for Retention Payment, and as a further condition to its approval by the Architect, each Subcontractor shall deliver the manuals, arranged in logical, sequential order, labeled, indexed, endorsed, and placed in three-ring binders, to the Contractor, who shall assemble these manuals for all divisions of the Work, review them for completeness, and submit them to the District through the Architect.

3.19 DIR REGISTRATION

Strict compliance with all DIR registration requirements in accordance with Labor Code sections 1725.5 and 1771.1 is a material obligation of the Contractor and all of its subcontractors (of any tier) under the Contract Documents. The foregoing includes, without limitation, compliance with DIR registration requirements at all times during performance of the Work by the Contractor and all of its subcontractors of any tier. The failure of the Contractor and all subcontractors of any tier to be properly registered with DIR at all times during performance of the Work is a material breach of the Contract and subject to termination for cause.

An affirmative and ongoing obligation of the Contractor under the Contract Documents is the verification that all subcontractors of any tier are at all times during performance of the Work are in full and strict compliance with the DIR registration requirements. The Contractor shall not permit or allow any subcontractor of any tier to perform any Work without the Contractor's verification that all subcontractors are in full and strict compliance with the DIR registration requirements. Any subcontractors of any tier not properly registered with DIR shall be substituted in accordance with Labor Code section 1771.1. Contractor or its subcontractors of any tier shall not be entitled to any additional costs or time arising from or in any way related to compliance with the DIR registration requirements.

ARTICLE 4 ADMINISTRATION OF THE CONTRACT AND CLAIMS

4.1 ARCHITECT

4.1.1 Replacement of Architect

In the case of the termination of the Architect, the District may appoint an Architect or another construction professional or may perform such functions with its own licensed professional personnel. The status of the replacement Architect under the Contract Documents shall be the same as that of the former Architect.

4.2 ARCHITECT'S ADMINISTRATION OF THE CONTRACT

4.2.1 Status

Pursuant to Titles 2 of the California Code of Regulations and as required pursuant to the Field Act, Education Code 17280 et. seq., the Architect will provide administration of the Contract Documents and the Work, and will be the District's representative during construction, as well as during the one (1) year period following the commencement of any warranties. The Architect will have authority to act on behalf of the District only to the extent provided in the Contract Documents.

4.2.2 Site Visits

The Architect will visit the Site at intervals necessary in the judgment of the Architect to become generally familiar with the progress and quality of the Work and to determine in general if the Work is being performed in accordance with the Contract Documents and as otherwise required by DSA.

4.2.3 Limitations of Construction Responsibility

The Architect, District and CM shall not have control over, charge of, or be responsible for construction means, methods, techniques, schedules, sequences or procedures, fabrication, procurement, shipment, delivery, receipt, installation, or for safety precautions and programs in connection with the Work, since these are solely the Contractor's responsibility under the Contract Documents. The Architect, District and CM shall not have control over or charge of acts or omissions of the Contractor, Subcontractors, their agents or employees, or any other persons or entities performing or supplying portions of the Work. The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect, District or CM in the Architect, District or CM's administration of the Contract Documents, or by tests, inspections, or approvals required or performed by persons other than the Contractor.

4.2.4 Communications Facilitating Contract Administration

Except where a CM is on the Project, or as otherwise provided in the Contract Documents or when direct communications are warranted by special circumstances, the District and the Contractor shall communicate through the Architect. In the cases where a CM is hired for the Project, all communication shall be through the CM (unless otherwise directed) with copies

to the District, Architect and Inspector. Where direct communication is necessary between the District and the Contractor, the District's communication shall be through the District's authorized designated person. Contractor shall not rely upon any communications from the District that is not from the District's authorized designee. Communications by and with the Architect's consultants shall be through the Architect. Copies of all communication shall be sent to the Architect, District Representative and Inspector.

4.2.5 Payment Applications

The Architect will review and make recommendations to the District regarding the amounts due the Contractor on the Certificates for Payment pursuant to Article 9.3.4 and subject to the Inspector's review, (CM review, if applicable) and Architect's observation. This review of Payment Applications is sometimes called a "Pencil Draft." Return of a Pencil Draft shall constitute the District's dispute of the Pay Application that has been submitted. Contractor shall promptly respond to Pencil Drafts or Contractor's Pay Applications may be delayed. Contractor's failure to promptly respond to a Pencil Draft shall qualify as a delay in the Prompt Payment of a Request for Payment or Request for Retention.

4.2.6 Rejection of Work

In addition to the rights, duties, and obligations of the Inspector under this Article, the Architect may recommend to the District that the District reject Work which does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable to achieve the intent of the Contract Documents, the Architect (and/or CM) may recommend to the District that the District require additional inspection or testing of the Work in accordance with Article 13.5, whether or not such Work is Fabricated, installed, or completed. District may have Non-conforming Work removed and replaced pursuant to Article 9.7. However, neither this authority of the Architect (or CM) nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect (or CM) to the Contractor, Subcontractors, material and equipment suppliers, their agents or employees, or other persons performing portions of the Work.

Contractor shall, without charge, replace or correct Work found by the District to not be in conformance to Contract requirements. Contractor shall promptly segregate and remove rejected materials from the Project site.

This section does not address a Notice of Non-Compliance and the remedies associated with a Notice of Non-Compliance which are addressed at Article 7.1.2.

4.2.7 Warranties upon Completion

The Architect (and where applicable CM), in conjunction with the Inspector will conduct field reviews of the Work to determine the date of Substantial Completion and of Final Completion, shall receive and forward to the District for the District's review written warranties and related documents required by the Contract and assembled by the Contractor, and will issue a final Certificate for Payment when the Architect believes the Work has been completed in compliance with the requirements of the Contract Documents (See Article 9.11 for Close-Out). The handling by the Architect (or where applicable CM) of such warranties, maintenance manuals, or similar documents shall not diminish or transfer to the Architect any responsibilities or liabilities

required by the Contract Documents of the Contractor or other entities, parties, or persons performing or supplying the Work.

On some Projects, the District will take a phased occupancy of the Project. In those cases, the District may commence the running of warranties on the buildings, or phases that are accepted after Punch List is completed and the District has accepted Completion of the separate phase. A separate Notice of Completion may be filed for the separate building or phase of work and warranties shall commence for the separate phase only to the extent that warranties do not require coordination or connection to other buildings or other parts of the site and only if the warranted item is completed to its entirety in the segregated building or phased area.

If written warranties are not provided at the time the Punch List is nearing completion, Architect (with recommendations from the CM and Inspector) shall determine the dollar value of the warranties and shall make recommendation for withholdings necessary to effectuate the transfer of such warranties to the District for future use as part of the Punch List for the Project pursuant to Article 9.6.

Warranties are not commenced through utilizing of equipment for testing and operation as necessary to acclimate buildings or where necessary to test systems.

4.3 PROJECT INSPECTOR

4.3.1 General

One or more project inspectors employed by the District and approved by the Division of the State Architect will be assigned to the Work in accordance with the requirements of Title 24 of the California Code of Regulations. The Inspector(s) duties are as specifically defined in Title 24 Section 4-333 and 4-342 and in DSA IR A-8.

4.3.2 Inspector's Duties and DSA Noted Timelines for Inspection

All Work shall be under the observation of the Inspector. The Inspector shall have free access to any or all parts of the Work at any time. The Contractor shall furnish the Inspector such information as may be necessary to keep the Inspector fully informed regarding progress and manner of Work and character of materials. Such observations shall not, in any way, relieve the Contractor from responsibility for full compliance with all terms and conditions of the Contract, or be construed to lessen to any degree the Contractor's responsibility for providing efficient and capable superintendence. The Inspector is not authorized to make changes in the Drawings or Specifications nor shall the Inspector's approval of the Work and methods relieve the Contractor of responsibility for the correction of subsequently discovered defects, or from its obligation to comply with the Contract Documents.

Inspector shall electronically post DSA required documents on the DSA electronic posting website. It is the Contractor's responsibility to determine the status of posting and determine if all the criteria for sign off of a category of Work on the Project Inspection Card (Form DSA 152) as defined more thoroughly in the most current version of the DSA 152 manual posted on the DSA website.

Inspector may collaborate with Contractor about approval of areas that may be constructed and approved incrementally under the DSA 152 card pursuant to the guidelines of

PR-13 at Article 1.17. Inspector shall work with Contractor to present incremental approval proposals to DSA.

4.3.3 Inspector's Authority to Reject or Stop Work

The Inspector shall have the authority to reject Work whenever provisions of the Contract Documents are not being complied with, and Contractor shall instruct its Subcontractors and employees accordingly. In addition, the Inspector may stop any Work that poses a probable risk of harm to persons or property. The Contractor shall instruct its employees, Subcontractors, material and equipment suppliers, etc., accordingly. The absence of any Stop Work Order or rejection of any portion of the Work shall not relieve the Contractor from any of its obligations pursuant to the Contract Documents.

4.3.4 Inspector's Facilities

Within seven (7) days after the notice to proceed, the Contractor shall provide the Inspector with the temporary facilities as required. More specific requirements for the Inspector facilities may be further described under Division 1 of the Specifications.

4.3.5 Testing Times

The District will provide inspection and testing at its cost during the normal eight (8) hour day Monday through Friday (except holidays). Work by the Contractor outside of the normal eight (8) hour day shall constitute an authorization from the Contractor to the District to provide inspection and testing as required outside of the normal eight (8) hour day. Contractor shall provide adequate time for inspections so as to not delay the Work. An advanced timing protocol may be established pursuant to Article 4.3.2. If the Contractor is behind Schedule then it is incumbent on the Contractor to provide advance forecast through look ahead of the anticipated date for inspection so the Inspector may plan their activities so as to not delay the Project. Contractor shall reimburse District for any additional costs associated with inspection and testing (including re-inspection and re-testing) outside the normal eight-hour day and for any retests caused by the Contractor.

It is the Contractor's responsibility to request special inspections with sufficient time so all testing may be timely completed and posted so work may proceed and the Inspector's signature is attached to the Project Inspection Card (Form 152). Specifically, timely request for special inspection under the DSA Verified Report Forms 291 (laboratory), DSA Verified Report Form 292 (Special Inspection), and DSA Verified Report 293 (geotechnical) since DSA requirements under PR 13-01 specifically gives the Special Inspections 14 days to post to the DSA website. Failure to plan and pay (if applicable) for quicker delivery of Special Inspections may be counted as Float, but is not considered Governmental Delay Float under Article 8.1.4.

4.3.6 Special Inspection Out of State, Out of Country or Remote from Project

If Contractor has a subcontractor or supplier that requires in plant or special inspections or tests that are out of the Country, out of State or a Distance of more than 200 miles from the Project site, the District shall provide the Special Inspector or individual performing tests time for inspection and testing during normal work hours. Contractor, however, is responsible for the cost of travel, housing, food, out of area premiums that may be in the Inspector/Testing Agreement with District, or other expenses necessary to ensure proper inspection or testing is

provided by a DSA Certified Inspector, Special Inspector, or individual performing tests. In some cases all three (DSA Inspector, Special Inspector, and Testing) may be required. In addition, if the DSA Certified Inspector, Special Inspector, or individual performing test has contractual travel clauses or special rates for out of town inspection, Contractor is responsible for all costs associated with the contractual travel costs in addition to all other costs. Arrangements for inspection and/or testing shall be made far enough in advance so as to not delay the Work.

4.4 STOP WORK ORDER

DSA may issue a Stop Work Order, or an Order to Comply, when either (1) the Work proceeds without DSA approval; (2) the Work proceeds without a DSA Inspector of Record, or (3) where DSA determines that the Work is not being performed in accordance with applicable rules and regulations, and would compromise the structural integrity of the Project or would endanger lives. If a Stop Work Order is issued, the Work in the affected area shall cease until DSA withdraws the Stop Work Order. Pursuant to Education Code section 17307.5(b), the District shall not be held liable in any action filed against the District for any delays caused by compliance with the Stop Work Order, except to the extent that an error or omission by the District is the basis for the issuance of the Stop Work Order.

Examples of Stop Work Orders that may be issued by DSA include DSA Bulletin 07-04 and Policy 10-01, the installation of automatic fire sprinkler systems without approved Plans, covering Work that has not been approved by Inspector on DSA Project Inspection Card (Form 152).

4.5 RESPONSIBILITY FOR ADDITIONAL CHARGES INCURRED BY THE DISTRICT FOR PROFESSIONAL SERVICES

If at any time prior to the completion of the requirements under the Contract Documents, the District is required to provide or secure additional professional services (including CM, Inspection, Architect, Engineering and Special Consultant Services) for any reason by any act of the Contractor, the District may seek a Deductive Change Order for any costs incurred for any such additional services, which costs shall be deducted from the next progress payment. A Deductive Change Order shall be independent from any other District remedies and shall not be considered a waiver of any District rights or remedies. If payments then or thereafter due to the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the District. Additional services shall include, but shall not be limited to, the following:

- a. Services made necessary by the default of the Contractor (Article 14 or Article 2.2).
- b. Services made necessary due to the defects or deficiencies in the Work of the Contractor (Article 2.2 and Article 9.6).
- c. Spurious or frivolous RFI's issued that do not conform to the requirements of Article 7.4. Issuance of the same RFI after receiving an answer from the Architect or Engineer.
- d. Review of Schedules that are provided by Contractor that do not Conform with the Requirements of Article 8.

- e. Preparation of a CCD or ICD to correct a Contractor Deficiency, or Contractor Caused Notice of Non-Compliance (Article 7.3).
- f. Review of Incomplete Shop Drawings or Submittals, including the submission of Piecemeal Shop Drawings or Submittals unless piecemeal Submittals are specifically agreed upon by District (Article 3.9).
- g. Services required by failure of the Contractor to perform according to any provision of the Contract Documents.
- h. Services in connection with evaluating substitutions of products, materials, equipment, Subcontractors' proposed by the Contractor, and making subsequent revisions to Drawings, Specifications, obtaining DSA approvals, DSA costs for review of CCD's, other governmental agency review costs, and providing other documentation required (except for the situation where the specified item is no longer manufactured or available) (Article 3.10).
- i. Services for evaluating and processing Claims or Disputes submitted by the Contractor in connection with the Work outside the established Change Order process.
- j. Services required by the failure of the Contractor to prosecute the Work in a timely manner in compliance within the specified time of completion.
- k. Services in conjunction with the testing, adjusting, balancing and start-up of equipment other than the normal amount customarily associated for the type of Work involved.
- l. Services in conjunction with more than one (1) re-review of Submittals of Shop Drawings, product data, samples, RFI's etc.

4.6 DISPUTES AND CLAIMS

4.6.1 Decision of Architect

Disputes between District and Contractor involving money or time, including those alleging an error or omission by the Architect shall be referred initially to the Architect for action within ten (10) days after Contractor's Article 7 request for Change is denied. A decision by the Architect, as provided in Paragraph 4.6.5, shall be required as a condition precedent to proceeding with remedies set forth in Paragraph 4.6.9 as to all such matters arising prior to the date Retention Payment Application is due, regardless of whether such matters relate to execution and progress of the Work, or the extent to which the Work has reached Final Completion.

The condition precedent of an Architect decision shall be waived if: (1) the position of Architect is vacant; (2) the Architect has failed to take action required under Article 4.6.5 within the time periods required therein; or (3) the Dispute or Claim relates to a Stop Notice Claim not arising from any extra change order or Immediate Change Directive for which approval has not been provided.

4.6.2 Architect's Review

The Architect (and CM) will review the Dispute and take one or more of the following preliminary actions upon receipt of a Dispute: (1) request additional supporting data from the claimant; (2) submit a schedule to the parties indicating when the Architect expects to take action; (3) reject the Dispute in whole or in part, stating reasons for rejection; (4) recommend approval of the Dispute; or (5) suggest a compromise. The Architect may also, but is not obligated to, notify the Surety, if any, of the nature and amount of the Dispute.

4.6.2.1 *Architectural Immunity.* Architect review of Disputes and Claims shall be impartial and meant to resolve Disputes and Claims. Pursuant to the case, Huber, Hunt & Nichols, Inc. v. Moore (1977) 67 Cal.App.3d 278, the Architect is provided a quasi-judicial immunity for interpreting and deciding Disputes and Claims between the District and Contractor.

4.6.3 Documentation if Resolved

If a Dispute has been resolved, the Architect (and/or CM) will prepare a Change Order or obtain appropriate documentation to document the terms for Board approval.

4.6.4 Actions if Not Resolved

If a Dispute has not been resolved and all documentation requested pursuant to Article 4.6.2 has been provided, the Contractor shall, within ten (10) days after the Architect's initial response, assemble all the documents involved in the Dispute including copies of all back-up documentation of costs and the basis for the Dispute and take one or more of the following actions: (1) modify the initial Dispute; (2) notify the Architect that the initial Dispute stands; or (3) supplement with additional supporting data and re-submit to the Architect under Article 4.6.2.

4.6.5 Architect's Written Decision

If a Dispute has not been resolved after consideration of the foregoing and of other evidence presented by the parties or requested by the Architect, the Architect (or Architect through CM) shall provide a written decision twenty (20) days after the Architect's preliminary decision rendered in accordance with Paragraph 4.6.1. Upon expiration of such time period, the Architect (or Architect through CM) will render to the parties its written decision relative to the Dispute, including any change in the Contract Sum or Contract Time or both. The Architect may also request reasonable additional time to complete Architect's written decision.

If the resolution of the Dispute by the Architect is not satisfactory to the Contractor and copies of all back-up documentation of costs and the basis for the Dispute is fully articulated in a package of material that is complete, the Contractor may then submit a Claim to the District under Article 4.6.9.

The Architect may also request reasonable additional time to complete Architect's written decision.

If the resolution of the Dispute by the Architect is not satisfactory to the Contractor and copies of all back-up documentation of costs and the basis for the Dispute is fully articulated in a package of material that is complete, the Contractor may then submit a Claim to the District under Article 4.6.9

4.6.6 Continuing Contract Performance

Pending final resolution of a Dispute or Claim, including, negotiation, mediation, arbitration, or litigation, the Contractor shall proceed diligently with performance of the Contract, and the District shall continue to make any undisputed payments in accordance with the Contract (less any withholdings or offsets). If the Dispute or Claim is not resolved, Contractor agrees it will neither rescind the Contract nor stop the progress of the work, but Contractor's sole remedy shall be to submit such controversy to determination by a court of competent jurisdiction in the county where the project is located, after the project has been completed, and not before.

4.6.6.1 *District's Option to Submit Individual Disputes to Arbitration during Claims and Disputes Process.* At the District's sole option, in order to more efficiently resolve claims during the Project and prior to the completion of the Claims Process, pursuant to Government Code Section 9201, the District may submit individual Disputes or Claims for binding arbitration and Contractor agrees to the resolution of for each individual Dispute or Claim by an Arbitrator, including resolution of time and delays. If binding arbitration is utilized for individual disputes, such resolution is full and final as to that particular Dispute or Claim. THIS INDIVIDUAL DISPUTE ARBITRATION PROCESS IS NOT AN ARBITRATION CLAUSE AND SHALL NOT BE CONSTRUED AS AN AGREEMENT TO ARBITRATE. THIS INDIVIDUAL DISPUTES ARBITRATION PROCESS IS FOR THE SOLE PURPOSE OF STREAMLINING AND RESOLVING CLAIMS DURING CONSTRUCTION AND SHALL BE REQUESTED ON SPECIFIC INDIVIDUAL ITEMS BY THE DISTRICT PRIOR TO RETENTION PAYMENT (EVEN IF THERE ARE DEDUCTIONS MADE FROM RETENTION PAYMENT) WHICH REPRESENTS THE FINAL COMPLETION OF THE PROJECT.

- a. If there is no Retention remaining on the Project, Individual Disputes initiated prior to Project Final Completion shall continue until a final disposition of the Arbitration or resolution of the individual Claim or Dispute.
- b. No Tolling. The Arbitration process shall not toll the Disputes, Claims, or Appeals process under Article 4.6 or the requirement to submit claims to Court under Article 4.6.9.5.

4.6.7 [Reserved]

4.6.8 Dispute Concerning Extension of Time.

If Contractor and District cannot agree upon an extension of time, whether compensable or not, then Contractor must have first completed the procedures set forth in Paragraph 8.4. Upon completion of the procedures set forth under Paragraph 8.4, Contractor must then comply with the requirements in this Article including those set forth under Paragraph 4.6.9.

4.6.9 Claims Procedures

Pursuant to the remedies under Public Contract Code Section 9201 and Government Code Section 930.2, Contractor, through execution of this Agreement, also agrees to comply with the Claims requirements of Article 4.6 to quickly and efficiently resolve disputes. Further, to provide a level of accuracy to the records submitted, the District shall have the right to

audit books and records pursuant to Article 13.11 based on the actual costs incurred and to reduce the uncertainty in resolving disputes with limited information.

4.6.9.1 *Procedure Applicable to All Claims*

- a. Definition of Claim: A "Claim" is where a Dispute between the parties rises to the level where backup documentation is assembled and provided to the District as a separate demand by the Contractor for (1) time extension, including, without limitation, for relief from damages or penalties for delay assessed by the District under the Contract; (2) payment of money or damages arising from Work done by or on behalf of the Contractor pursuant to the Contract and payment of which is not otherwise expressly provided for or the claimant is not otherwise entitled to, or (3) and amount the payment of which is disputed by the District. If the Claim is for damages associated with a DSA Stop Work Order, the Contractor shall not be entitled to a request for Compensation, but shall be entitled to utilize Governmental Delay Float (See Article 8.1.4.1.)
- b. Filing Claim Is Not Basis to Discontinue Work: The Contractor shall promptly comply with Work under the Contract or Work requested by the District even though a written claim has been filed. The Contractor and the District shall make good faith efforts to resolve any and all claims that may arise during the performance of the Work covered by this Contract.
- c. Claim Notification: The Contractor shall within seven (7) calendar days after the Written Decision of the Architect, or if the time period for Architect's Decision has passed under Article 4.6.1, submit a notification, in writing, with the District (and the District's CM) stating clearly the basis for the claim. If the notification is not submitted within seven (7) days after the Written Decision of the Architect or the passage of time under Article 4.6.1, the Contractor shall be deemed to have waived all right to assert the claim, and the claim shall be denied. Claims submitted after the Retention Payment date shall also be considered null and void by the District. All claims shall be reviewed pursuant to Article 4.6.1 through 4.6.5.

The Formal Notification of Claim must be presented as follows:

- (1) The term "Claim" must be at the top of the page in no smaller than 20 point writing.
- (2) All documentation submitted pursuant to Article 4.6 to the Architect shall be submitted with the "claim."

- (3) A stack of documents, copy of all Project documents, or the submission of random documents shall not constitute an adequate reference to supporting documentation.
- (4) Any additional or supporting documentation that Contractor believes is relevant should be submitted at this time.
- d. Reasonable Documents to Support Claim: The Contractor shall furnish reasonable documentation to support the Claim. The Contractor shall provide all written detailed documentation which supports the Claim, including but not limited to: arguments, justifications, cost, estimates, Schedule analysis and detailed documentation. The format of the required reasonable documentation to support the Claim shall include, without limitation:
 - 1. Cover letter.
 - 2. Summary of factual basis of Claim and amount of Claim.
 - 3. Summary of the basis of the Claim, including the specific clause and section under the Contract under which the Claim is made.
 - 4. Documents relating to the Claim, including:
 - a. Specifications sections in question.
 - b. Relevant portions of the Drawings
 - c. Applicable Clarifications (RFI's)
 - d. Other relevant information, including responses that were received.
 - e. Contractor Analysis of Claim merit.
 - (1) Contractor's analysis of any Subcontractor vendor Claims that are being passed through.
 - (2) Any analysis performed by outside consultants
 - (3) Any legal analysis that Contractor deems relevant
 - f. Break down of all costs associated with the Claim.
 - g. For Claims relating to time extensions, an analysis and supporting documentation evidencing any effect upon the critical path in conformance with the requirements of Article 8.4 chronology of events and related correspondence.
 - h. Applicable Daily Reports and logs.

- (1) If the Daily Reports or Logs are not available, lost or destroyed, there shall be a presumption that the lost documentation was unfavorable to the Contractor. See California Civil Jury Instruction 204.
- i. For Claims involving overhead, cost escalation, acceleration, disruption or increased costs, a full version of job costs reports organized by category of work or Schedule of Values with budget information tracked against actual costs. Any and all supporting back-up data, including the original bid (and associated original unaltered metadata).
 - (1) The metadata and bid information shall be provided confidentially and subject to a protective order to prevent dissemination to other contractors or to the public. However, the bid documentation should remain intact and available for review and inspection in case of this type of increased cost Claim.
 - (2) This data on the bid shall be made available to any District attorneys or experts and shall also be utilized as evidence for any legal proceedings.
 - (3) If the bid documentation is not available, lost or destroyed, there shall be a presumption that the lost bid documentation was unfavorable to the Contractor. See California Civil Jury Instruction 204.
- e. Certification: The Contractor (and Subcontractors, if applicable) shall submit with the Claim a certification under penalty of perjury:
 1. That the Contractor has reviewed the Claim and that such Claim is made in good faith;
 2. Supporting data are accurate and complete to the best of the Contractor's knowledge and belief;
 3. The amount requested accurately reflects the amount of compensation for which the Contractor believes the District is liable.

4. That the Contractor is familiar with Government Code sections 12650 et seq. and Penal Code section 72 and that false claims can lead to substantial fines and/or imprisonment.
- f. Signature of Certification: If the Contractor is not an individual, the certification shall be executed by an officer or general partner of the Contractor having overall responsibility for the conduct of the Contractor's affairs.
- g. Upon receipt of a Claim and all supporting documents as required above, the District shall conduct a reasonable review of the Claim and, within a period not to exceed 45 days, shall provide the Contractor a written statement identifying what portion of the Claim is disputed and what portion is undisputed. Upon receipt of a Claim, the District and Contractor may, by mutual agreement, extend the time period provided in this paragraph.
- h. If the District needs approval from its governing Board to provide the Contractor a written statement identifying the disputed portion and the undisputed portion of the Claim, and the governing Board does not meet within the 45 days or within the mutually agreed to extension of time following receipt of a Claim sent by registered mail or certified mail, return receipt requested, the District shall have up to three days following the next duly publicly noticed meeting of the governing Board after the 45-day period, or extension, expires to provide the Contractor a written statement identifying the disputed portion and the undisputed portion.
- i. Any payment due on an undisputed portion of the Claim shall be processed and made within 60 days after the District issues its written statement. If the District fails to issue a written statement, paragraph o below shall apply.
- j. If the Contractor disputes the District's written response, or if the District fails to respond to a Claim issued pursuant to this Article 4.6.9 within the time prescribed, the Contractor may demand in writing an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a demand in writing sent by registered mail or certified mail, return receipt requested, the District shall schedule a meet and confer conference within 30 days for settlement of the Claim.
- k. Within 10 business days following the conclusion of the meet and confer conference, if the Claim or any portion of the Claim remains in dispute, the District shall provide the Contractor a written statement identifying the portion of the Claim that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the Claim shall be processed and made within

60 days after the District issues its written statement. Any disputed portion of the Claim, as identified by the Contractor in writing, shall be submitted to nonbinding mediation, with the District and the Contractor sharing the associated costs equally. The District and Contractor shall mutually agree to a mediator within 10 business days after the disputed portion of the Claim has been identified in writing. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the Claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator. If mediation is unsuccessful, the parts of the Claim remaining in dispute shall be subject to applicable procedures in Article 4.6.9.5.

- l. For purposes of this Article 4.6.9, mediation includes any nonbinding process, including, but not limited to, neutral evaluation or a dispute review board, in which an independent third party or board assists the parties in dispute resolution through negotiation or by issuance of an evaluation. Any mediation utilized shall conform to the timeframes in this section.
- m. Unless otherwise agreed to by the District and the Contractor in writing, the mediation conducted pursuant to this Article 4.6.9 shall excuse any further obligation under Section 20104.4 to mediate after litigation has been commenced.
- n. This Claims process does not preclude the District from requiring arbitration of disputes under private arbitration or the Public Works Contract Arbitration Program, if mediation under this Article 4.6.9 does not resolve the parties' Claim. This Claims process does not preclude the District from submitting individual Disputes or Claims to binding arbitration pursuant to Article 4.6.9.4 below.
- o. Failure by the District to respond to a Claim from the Contractor within the time periods described in this subdivision or to otherwise meet the time requirements of this Article 4.6.9 shall result in the Claim being deemed rejected in its entirety. A Claim that is denied by reason of the District's failure to have responded to a Claim, or its failure to otherwise meet the time requirements of this Article 4.6.9, shall not constitute an adverse finding with regard to the merits of the Claim or the responsibility or qualifications of the Contractor.
- p. If a subcontractor or a lower tier subcontractor lacks legal standing to assert a Claim against a District because privity of contract does not exist, the Contractor may present to the District a Claim on behalf of a subcontractor or lower tier subcontractor. A subcontractor may request in writing, either on his or her own behalf

or on behalf of a lower tier subcontractor, that the Contractor present a Claim for work which was performed by the subcontractor or by a lower tier subcontractor on behalf of the subcontractor. The subcontractor requesting that the Claim be presented to the District shall furnish reasonable documentation to support the Claim. Within 45 days of receipt of this written request, the Contractor shall notify the subcontractor in writing as to whether the Contractor presented the Claim to the District and, if the Contractor did not present the Claim, provide the subcontractor with a statement of the reasons for not having done so.

- q. Upon receipt of a Claim, the parties may mutually agree to waive, in writing, mediation and proceed directly to the commencement of a civil action or binding arbitration, as applicable.
- r. The Contractor's Claim shall be denied if it fails to follow the requirements of this Article.

4.6.9.2 District (through CM or District's Agent or Attorney) May Request Additional Information. Within thirty (30) days of receipt of the Claim and the information under this Article, the District may request in writing any additional documentation supporting the Claim or documentation relating to defenses to the Claim which the District may assert. If additional documents are required, the time in which the Claim is evaluated may be extended by a reasonable time so the Claim and additional documents may be reviewed.

4.6.9.3 Claims Procedures in Addition to Government Code Claim. Nothing in the Claims procedures set forth in this Article 4 of the General Conditions shall act to waive or relieve the Contractor from meeting the requirements set forth in Government Code section 900 et seq.

4.6.9.4 Binding Arbitration of Individual Claim Issues. To expedite resolution of Claims pursuant to Public Contract Code section 9201, at the District's sole option, the District may submit individual Claims to Arbitration prior to Retention Payment consistent with the requirements of Article 4.6.6.1.

4.6.9.5 Resolution of Claims in Court of Competent Jurisdiction. If Claims are not resolved under the procedure set forth and pursuant to Article 4.6.9, such Claim or controversy shall be submitted to a court in the County of the location of the Project after the Project has been completed, and not before.

4.6.9.6 Warranties, Guarantees and Obligations. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto, and, in particular but without limitation, the warranties, guarantees and obligations imposed upon Contractor by the General Conditions and amendments thereto; and all of the rights and remedies available to District and Architect thereunder, are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by laws or regulations by special warranty or guarantee or by other provisions of the Contract Documents, and the provisions of this Article will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right and remedy to which they apply.

ARTICLE 5 SUBCONTRACTORS

5.1 DEFINITIONS

5.1.1 Subcontractual Relations Bound to Same Contract Terms at General Contractor

By appropriate agreement, written where legally required for validity, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the same obligations and responsibilities, assumed by Contractor pursuant to the Contract Documents. Each subcontract agreement shall preserve and protect the rights of the District and the Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound. Upon written request of the Subcontractor, the Contractor shall identify to the Subcontractor the terms and conditions of the proposed subcontract agreement, which may be at variance with the Contract Documents. Subcontractors shall similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

5.1.2 Subcontractor Licenses

All Subcontractors shall be properly licensed by the California State Licensing Board. All Subcontractors (of any tier) performing any portion of the Work must comply with the Labor Code sections 1725.5 and 1771.1 and must be properly and currently registered with the California Department of Industrial Relations and qualified to perform public works pursuant to Labor Code section 1725.5 throughout the duration of the Project. No portion of the Work is permitted to be performed by a subcontractor of any tier unless the Subcontractor is properly registered with DIR. Any Subcontractors of any tier not properly registered with DIR shall be substituted in accordance with Labor Code section 1771.1.

5.1.3 Substitution of Subcontractor

Substitution of Subcontractors shall be permitted only as authorized under Public Contract Code §§ 4107 et. seq. Any substitutions of Subcontractors shall not result in any increase in the Contract Price or result in the granting of any extension of time for the completion of the Project.

5.1.4 Contingent Assignment of Subcontracts and Other Contracts

Each subcontract, purchase order, vendor contract or agreement for any portion of the Work is hereby assigned by the Contractor to the District provided that:

- a. Such assignment is effective only after Termination of this Contract with the Contractor by the District as provided under Article 14 and only for those subcontracts and other contracts and agreements that

the District accepts by notifying the Subcontractor or Materialman (as may be applicable) in writing; and

- b. Such assignment is subject to the prior rights of the Surety(ies) obligated under the Payment Bond and Performance Bond.
- c. The Contractor shall include adequate provisions for this contingent assignment of subcontracts and other contracts and agreements in each such document.

ARTICLE 6 CONSTRUCTION BY DISTRICT OR BY SEPARATE CONTRACTORS

6.1 DISTRICT'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS

6.1.1 Separate Contracts.

6.1.1.1 District reserves the right to let other contracts in connection with this Work. Contractor shall afford other contractors reasonable opportunity for (1) introduction and storage of their materials; (2) access to the Work; and (3) execution of their work. Contractor shall properly connect and coordinate its work with that of other Contractors.

6.1.1.2 If any part of Contractor's Work depends on proper execution or results of any other contractor, the Contractor shall inspect and within seven (7) days or less, report to Architect, in writing, any defects in such work that render it unsuitable for proper execution of Contractor's Work. Contractor will be held accountable for damages to District for that Work which it failed to inspect or should have inspected. Contractor's failure to inspect and report shall constitute its acceptance of other contractors' Work as fit and proper for reception of its Work, except as to defects which may develop in other contractors' work after execution of Contractor's work.

6.1.1.3 To ensure proper execution of its subsequent Work, Contractor shall measure and inspect Work already in place and shall at once report to the Architect in writing any discrepancy between executed Work as built and the Contract Documents.

6.1.1.4 Contractor shall ascertain to its own satisfaction the scope of the Project and nature of any other contracts that have been or may be awarded by District in prosecution of the Project and the potential impact of such Work on the Baseline Schedule or Schedule updates.

6.1.1.5 Nothing herein contained shall be interpreted as granting to Contractor the exclusive occupancy at the site of Project. Contractor shall not cause any unnecessary hindrance or delay to any other contractor working on the Project Site. If execution of any contract by the District is likely to cause interference with Contractor's performance of this Contract, once Contractor provides District timely written notice and identifies the Schedule Conflict, District shall decide which contractor shall cease work temporarily and which contractor shall continue, or whether Work can be coordinated so that contractors may proceed simultaneously.

6.1.1.6 District shall not be responsible for any damages suffered or extra costs incurred by Contractor resulting directly or indirectly from award or performance or attempted performance of any other contract or contracts at the Project necessary for the performance of the Project (examples include Electrical Utility Contractor, separate offsite contractor, a separate grading contractor, furniture installation etc.).

CONTRACTOR IS AWARE THAT THIS CONTRACT MAY BE SPLIT INTO SEVERAL PHASES BASED ON DOCUMENTATION PROVIDED WITH THIS BID OR DISCUSSED AT THE JOB WALK. CONTRACTOR HAS MADE ALLOWANCE FOR ANY DELAYS OR DAMAGES WHICH MAY ARISE FROM COORDINATION WITH CONTRACTORS REQUIRED FOR OTHER PHASES. IF ANY DELAYS SHOULD ARISE FROM ANOTHER CONTRACTOR WORKING

ON A DIFFERENT PHASE, CONTRACTOR'S SOLE REMEDY FOR DAMAGES, INCLUDING DELAY DAMAGES, SHALL BE AGAINST THE CONTRACTOR WHO CAUSED SUCH DAMAGE AND NOT THE DISTRICT. CONTRACTOR SHALL PROVIDE ACCESS TO OTHER CONTRACTORS FOR OTHER PHASES AS NECESSARY TO PREVENT DELAYS AND DAMAGES TO OTHER CONTRACTORS WORKING ON OTHER PHASES OF CONSTRUCTION.

6.1.2 District's Right to Carry Out the Work

(See Article 2.2)

6.1.3 Designation as Contractor

When separate contracts are awarded to contractors on the Project Site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate District/Contractor Agreement.

6.1.4 District Notice to the Contractor of Other Contractors

The Contractor shall have overall responsibility to reasonably coordinate and schedule Contractor's activities with the activities of the District's 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 construction schedules when:

- a. Notice is provided in the Contract Documents of other scope of Work,
- b. In the case where there is known Work to be performed by other Contractors
- c. For outside contractors hired by utilities
- d. Where the Contract Document provides "Work by Others" or "By Others"
- e. Where specifically noted during the Pre-Bid Conference
- f. Where specifically noted in the Mandatory Job Walk
- g. By CO or ICD,
- h. With respect to the installation of :
 - 1. Furniture,
 - 2. Electronics and networking equipment,
 - 3. Cabling,
 - 4. Low voltage,
 - 5. Off-site work,
 - 6. Grading (when by a separate contractor),

7. Environmental remediation when excluded by the Contract Documents (i.e. asbestos, lead or other hazardous waste removal)
8. Deep cleaning crews,
9. Commissioning and testing,
10. Keying and re-keying,
11. Programming

6.1.4.1 Exception where no Coordination is Required on the Part of the Contractor for Turn Key Operations. If the Contractor has specifically outlined a “Turn Key” or “Complete Delivery” of a final completed operational school in writing as part of the Baseline Schedule.

6.1.4.2 The Contractor shall make any revisions to the Baseline Schedule (or Schedule Update) and Contract Sum deemed necessary after a joint review and mutual agreement. The Baseline Schedule (or Schedule Update) shall then constitute the Schedules to be used by the Contractor, separate contractors, and the District until subsequently revised. Additionally, Contractor shall coordinate with Architect, District, and Inspector to ensure timely and proper progress of Work.

6.2 CONSTRUCTIVE OWNERSHIP OF PROJECT SITE AND MATERIAL

Upon commencement of Work, the Contractor becomes the constructive owner of the entire site, improvements, material and equipment on Project site. Contractor must ensure proper safety and storage of all materials and assumes responsibility as if Contractor was the owner of the Project site. All risk of loss or damage shall be borne by Contractor during the Work until the date of Completion. As constructive owner of the Project site, Contractor must carry adequate insurance in case of calamity and is not entitled to rely on the insurance requirements as set forth in this Agreement as being adequate coverage in case of calamity.

6.3 DISTRICT’S RIGHT TO CLEAN UP

If a dispute arises among the Contractor, separate contractors, and the District as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish as described in Paragraph 3.12, the District may clean up and allocate the cost among those it deems responsible.

ARTICLE 7 CHANGES IN THE WORK

7.1 CHANGES

7.1.1 No Changes Without Authorization

There shall be no change whatsoever in the Drawings, Specifications, or in the Work without an executed Change Order, Change Order Request, Immediate Change Directive, or order by the Architect for a minor change in the Work as herein provided. District shall not be liable for the cost of any extra work or any substitutions, changes, additions, omissions, or deviations from the Drawings and Specifications unless the District's Governing Board or designated representative with delegated authority (subject to Board ratification) has authorized the same and the cost thereof approved in writing by Change Order or executed Construction Change Document. No extension of time for performance of the Work shall be allowed hereunder unless claim for such extension is made at the time changes in the Work are ordered, and such time duly adjusted in writing in the Change Order. The provisions of the Contract Documents shall apply to all such changes, additions, and omissions with the same effect as if originally embodied in the Drawings and Specifications. Notwithstanding anything to the contrary in this Article 7, all Change Orders shall be prepared and issued by the Architect and shall become effective when executed by the District's Governing Board, the Architect, and the Contractor.

Should any Change Order result in an increase in the Contract Price, the cost of such Change Order shall be agreed to, in writing, in advance by Contractor and District and be subject to the monetary limitations set forth in Public Contract Code section 20118.4 (Please check with the District since there are different interpretations of the limitations of Public Contract Code section 20118.4 depending on the County the Project is located). In the event that Contractor proceeds with any change in Work without first notifying District and obtaining the Architect's and District's consent to a Change Order, Contractor waives any Claim of additional compensation for such additional work and Contractor takes the risk that a Notice of Non-Compliance may issue, a critical path Project delay may occur, and the Contractor will also be responsible for the cost of preparation and DSA CCD review fees for a corrective DSA approved Construction Change Document.

CONTRACTOR UNDERSTANDS, ACKNOWLEDGES, AND AGREES THAT THE REASON FOR THIS NOTICE REQUIREMENT IS SO THAT DISTRICT MAY HAVE AN OPPORTUNITY TO ANALYZE THE WORK AND DECIDE WHETHER THE DISTRICT SHALL PROCEED WITH THE CHANGE ORDER OR ALTER THE PROJECT SO THAT SUCH CHANGE IN WORK BECOMES UNNECESSARY AND TO AVOID THE POSSIBLE DELAYS ASSOCIATED WITH THE ISSUANCE OF A NOTICE OF NON-COMPLIANCE.

7.1.2 Notices of Non-Compliance

Contractor deviation or changes from approved Plans and Specifications may result in the issuance of a Notice of Non-Compliance (See DSA Form 154). Contractor is specifically notified that deviations from the Plans and Specifications, whether major or minor, may result in the requirement to obtain a DSA Construction Change Document to correct the Notice of Non-Compliance. (See Article 7.3.1 for Definition of CCD). In some cases, the lack of a DSA approved CCD AND verification from the Inspector that a Notice of Non-Compliance has

been corrected may result in a critical path delay to the next stage of Work on the Project. Specifically, a deviation from approved Plans and Specifications may prevent approval of the category of Work listed in the DSA 152 Project Inspection Card. Any delays that are caused by the Contractor's deviation from approved Plans and Specifications shall be the Contractor's responsibility.

7.1.3 Architect Authority

The Architect will have authority to order minor changes in the Work that do not involve DSA Approval not involving any adjustment in the Contract Sum, or an extension of the Contract Time.

7.2 CHANGE ORDERS ("CO")

A CO is a written instrument prepared by the Architect and signed by the District (as authorized by the District's Governing Board), the Contractor, and the Architect stating their agreement upon all of the following:

- a. A description of a change in the Work;
- b. The amount of the adjustment in the Contract Sum, if any; and
- c. The extent of the adjustment in the Contract Time, if any.

A CO may be comprised of ICD's, Response to RFP's and COR's

7.3 CONSTRUCTION CHANGE DOCUMENT (CCD Category A, and CCD Category B) and IMMEDIATE CHANGE DIRECTIVE (ICD)

7.3.1 Definitions

7.3.1.1 *Construction Change Document (CCD)*. A Construction Change Document is a DSA term that is utilized to address changes to the DSA approved Plans and Specifications. There are two types of Construction Change Documents. (1) DSA approved CCD Category A (DSA Form 140) for Work affecting Structural, Access or Fire-Life Safety of the Project which will require a DSA approval; and, (2) CCD Category B (DSA Form 141) for work NOT affecting Structural Safety, Access Compliance or Fire and Life Safety that will not require a DSA approval (except to confirm that no Approval is required);

7.3.1.2 *Immediate Change Directive (ICD)*. An Immediate Change Directive is a written order to the Contractor prepared by the Architect and signed by the District (and CM if there is a CM on the Project) and the Architect, directing a change in the Work and stating a proposed basis for adjustment, if any, in the Contract Sum or Contract Time, or both. The District may by ICD, without invalidating the Contract, direct immediate changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions within. If applicable, the Contract Sum and Contract Time will be adjusted accordingly.

In the case of an Immediate Change Directive being issued, Contractor must commence Work immediately or delays from failure to perform the ICD shall be the

responsibility of Contractor and the failure to move forward with Work immediately shall also be grounds for Termination under Article 14.

An ICD does not automatically trigger an Article 7.6 Dispute or Claim. Contractor must timely follow the procedures outlined at Article 7.6 and 4.6 where applicable.

Refer to Division 1 for a copy of the proposed Immediate Change Directive form.

7.3.2 Use to Direct Change

An ICD shall be used to move work forward immediately and to avoid delay. In some cases, an ICD shall be issued in the absence of agreement on the terms of a CO, COR, or RFP. A copy of an ICD form is provided in Division 1. The anticipated not to exceed price for the Work will be inserted into the ICD. In the case of an ICD issued to correct Contractor Deficiencies or to correct a Contractor caused Notice of Non-Compliance, the ICD may be issued with \$0 and 0 time. Contractor may prepare a COR associated with the ICD pursuant to Article 7. However, Contractor shall proceed with all Work required under an Approved ICD immediately upon issuance. Failure to proceed with the Work under an ICD shall be grounds for Termination for Cause under Article 14 or take over the Work under Article 2.2.

If adequate time exists, an ICD may be subject of an RFP for pricing and determination if any time that may be required. However, if an RFP is not completed, Contractor shall immediately commence Work when an ICD is issued. If the RFP is incomplete, it may still be completed to be submitted for Pricing Purposes as long as the PR is submitted within the timeline provided by the PR, or within 10 days following issuance of the ICD.

7.3.3 ICD Issued Over a Notice of Non-Compliance or to Cover Work Subject to a DSA 152 Sign Off

In some cases, an ICD shall be for the purpose of proceeding with Work to keep the Project on Schedule and as an acknowledgement by the District that Contractor is proceeding with Work contrary to a Notice of Non-Compliance, prior to issuance of a DSA approved CCD Category A, or to direct the covering of Work which has not yet received a DSA 152 Inspection Approval to move forward.

7.3.3.1 Contractor Compliance with all Aspects of an ICD. Contractor is to undertake the ICD and comply with all aspects of the Work outlined in the ICD. Inspector is to inspect the Work pursuant to the ICD. Failure to follow the ICD may result in deduction of the ICD Work under Article 2.2 or Termination of the Contractor pursuant to Article 14.

7.3.3.2 Exception in the Case of DSA Issued Stop Work Order. Contractor must proceed with an ICD even if a CCD has not been approved by DSA except in the case of a DSA issued Stop Work Order. If a DSA Stop Work Order is issued, Contractor must stop work and wait further direction from the District.

7.3.3.3 ICD Due to Contractor Deficiency or Contractor Caused Notice of Non-Compliance. If an ICD is issued to correct a Contractor Deficiency or a Contractor caused notice of Non-Compliance, Contractor specifically acknowledges responsibility for all consequential damages associated with the Contractor Deficiency or Contractor Caused Notice of Non-

Compliance and all consequential damages and costs incurred to correct the deficiency under Article 4.5

7.4 REQUEST FOR INFORMATION ("RFI")

7.4.1 Definition

An RFI is a written request prepared by the Contractor requesting the Architect to provide additional information necessary to clarify or amplify an item which the Contractor believes is not clearly shown or called for in the Drawings or Specifications, or to address problems which have arisen under field conditions.

7.4.1.1 An RFI shall not be used as a vehicle to generate time extensions.

7.4.1.2 Resubmission of the same or similar RFI is not acceptable. RFI's that are similar should be addressed in Project meetings where the requestor (Contractor, subcontractor or vendor) is able to address the particular issue with the Architect or Engineer and a resolution addressed in the minutes.

7.4.1.3 An RFI response applicable to a specific area cannot be extended to other situations unless specifically addressed in writing within the RFI or in a separate RFI.

7.4.1.4 RFI's should provide a proposed solution and should adequately describe the problem that has arisen.

7.4.2 Scope

The RFI shall reference all the applicable Contract Documents including Specification section, detail, page numbers, drawing numbers, and sheet numbers, etc. The Contractor shall make suggestions and interpretations of the issue raised by the RFI. An RFI cannot modify the Contract Cost, Contract Time, or the Contract Documents.

7.4.3 Response Time

The Architect must respond to a RFI within a reasonable time after receiving such request. If the Architect's response results in a change in the Work, then such change shall be effected by a written CO, COR RFP or ICD, if appropriate. If the Architect cannot respond to the RFI within a reasonable time, the Architect shall notify the Contractor, with a copy to the Inspector and the District, of the amount of time that will be required to respond.

7.4.4 Costs Incurred

The Contractor shall be responsible for any costs incurred for professional services as more fully set forth in Article 4.5, which shall be subject to a Deductive Change Order, if an RFI requests an interpretation or decision of a matter where the information sought is equally available to the party making such request. District, at its sole discretion, shall issue a Deductive Change Order to Contractor for all such professional services arising from this Article.

7.5 REQUEST FOR PROPOSAL ("RFP")

7.5.1 Definition

An RFP is a written request prepared by the Architect (and/or CM) requesting the Contractor to submit to the District and the Architect an estimate of the effect of a proposed change on the Contract Price and (if applicable) the Contract Time. If Architect issues a Bulletin, the Changed items in the Bulletin shall be addressed as an RFP and all responses shall be prepared to a Bulletin as addressed in this Article 7.5. A form RFP is included in the Division 1 documents.

7.5.2 Scope

An RFP shall contain adequate information, including any necessary Drawings and Specifications, to enable Contractor to provide the cost breakdowns required by Paragraph 7.7. The Contractor shall not be entitled to any Additional Compensation for preparing a response to an RFP, whether ultimately accepted or not.

7.5.3 Response Time

Contractor shall respond to an RFP within ten (10) days or the time period otherwise set forth in the RFP.

7.6 CHANGE ORDER REQUEST ("COR")

7.6.1 Definition

A COR is a written request prepared by the Contractor supported by backup documentation requesting that the District and the Architect issue a CO based upon a proposed change, cost, time, or cost and time that may be incurred on the Project or arising from an RFP, ICD, or CCD.

7.6.2 Changes in Price

A COR shall include breakdowns per Paragraph 7.7 to validate any change in Contract Price due to proposed change or claim.

7.6.3 Changes in Time

A COR shall also include any additional time required to complete the Project only if the delay is a critical path delay. Any additional time requested shall not be the number of days to make the proposed change, but must be based upon the impact to the Project Schedule as defined in Article 8 of the General Contract. A schedule fragment showing the time delay must be submitted with the COR. Any changes in time will be granted only if there is an impact to the critical path. If Contractor fails to request a time extension in a COR, then the Contractor is thereafter precluded from requesting or claiming a delay.

7.6.4 Notice of Change

Contractor shall submit a written Notice of Change to the District and the Architect if any instruction, request, drawing, specification, action, condition, omission, default, deduction, deletion, or other circumstance occurs that impacts the Contract Sum as defined in Article 9.1, the critical path, or the Contract Time as defined in Article 8.1.1. Such Notice of Change shall be provided prior to the commencement of performance of the Work affected and no later than five (5) Days after the discovery date of such circumstance by Contractor. Once a timely Notice of Change has been submitted to the District and Architect, Contractor shall thereafter submit a fully complete COR as required by Article 7.6 and Article 7.7. FAILURE BY THE CONTRACTOR TO PROVIDE A COMPLETE AND TIMELY NOTICE OF CHANGE AND/OR COR WHERE A NOTICE OF CHANGE AND/OR COR IS REQUIRED BY THIS ARTICLE 7.6 AND ARTICLE 7.7 SHALL CONSTITUTE A WAIVER BY CONTRACTOR OF THE RIGHT TO A CONTRACT ADJUSTMENT ON ACCOUNT OF SUCH CIRCUMSTANCES AND A WAIVER OF ANY RIGHT TO FURTHER RECOURSE OR RECOVERY BY REASON OF OR RELATED TO SUCH CHANGE BY MEANS OF THE DISPUTES AND CLAIMS PROCESS (SEE ARTICLE 4.6) OR BY ANY OTHER LEGAL PROCESS OTHERWISE PROVIDED FOR UNDER APPLICABLE LAWS.

7.7 COST OF CHANGE ORDERS

7.7.1 Scope

At the time a request is made for a change that impacts the Contract Sum as defined in Paragraph 9.1, the critical path, or the Contract Time as defined in Paragraph 8.1.1, the Contractor shall provide the District and the Architect, with a written estimate of the effect of the proposed CO upon the Contract Sum and the actual or estimated cost of construction, which shall include a complete itemized cost breakdown of all labor and material showing actual quantities, hours, unit prices, and wage rates required for the change, and the effect upon the Contract Time of such CO. Changes may be made by District by an appropriate written CO, or, at the District's option, such changes shall be implemented immediately upon the Contractor's receipt of an appropriate written Construction Change Document.

District may, as provided by law and without affecting the validity of this Agreement, order changes, modification, deletions and extra work by issuance of written CO or Construction Change Documents from time to time during the progress of the Project, Contract sum being adjusted accordingly. All such Work shall be executed under conditions of the original Agreement except that any extension of time caused thereby shall be adjusted at time of ordering such change. District has discretion to order changes on a "time and material" basis with adjustments to time made after Contractor has justified through documentation the impact on the critical path of the Project.

7.7.1.1 *Time and Material Charges.* If the District orders Work on a "time and material" basis, timesheets shall be signed daily by the Inspector or District Designee at or near the time the Work is actually undertaken and shall show the hours worked, and the Work actually completed. No time sheets shall be signed the next day. A copy shall be provided to the Person signing the document at the time the document is signed, but not before 10 am the following day.

7.7.2 Determination of Cost

The amount of the increase or decrease in the Contract Price from a CO or COR, if any, shall be determined in one or more of the following ways as applicable to a specific situation:

- a. Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation. If an agreement cannot be reached within fifteen (15) days after submission and negotiation of Contractor's proposal, Contractor may submit pursuant to Paragraph 7.7.3. Submission of sums which have no basis in fact are at the sole risk of Contractor and may be a violation of the False Claims Act set forth under Government Code Section 12650 et. seq.);
 1. If the District objects to 7.7.2(a) as a method for submission due to inaccuracies in the submitted amount, overstatement of manpower or time required to perform the CO, or unreliability of the data provided, the District may either have the Architect or a professional estimator determine the cost for the CO, and the applicable time extension, or the Contractor shall utilize Paragraph 7.7.2(d) or 7.7.3.
 2. Once the District provides a written objection to use of Article 7.7.2(a) due to unreliability of the estimated price, the Contractor shall no longer utilize mutual acceptance of a lump sum as a method for submission of CO's and shall provide a breakdown of estimated or actual costs pursuant to Article 7.7.2(d) or 7.7.3.
- b. By unit prices contained in Contractor's original bid and incorporated in the Project documents or fixed by subsequent agreement between District and Contractor;
- c. Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee. However, in the case of disagreement, Contractor must utilize the procedure under section 7.7.3; or
- d. By cost of material and labor and percentage of overhead and profit. If the value is determined by this method the following requirements shall apply:
 1. *Basis for Establishing Costs*
 - i. Labor will be the cost for wages prevailing locally for each craft or type of workers at the time the extra Work is done, plus employer payments of payroll taxes and workers compensation insurance (exclude insurance costs as part of the Overhead and Profit mark-up), health and welfare, pension, vacation, apprenticeship funds, and other direct costs resulting from Federal, State, or local laws, as well as assessments or benefits required by lawful collective

bargaining agreements. In no case shall the total labor costs exceed the applicable prevailing wage rate for that particular classification. The use of a labor classification which would increase the extra Work cost will not be permitted unless the Contractor establishes the necessity for such additional costs. Labor costs for equipment operators and helpers shall be reported only when such costs are not included in the invoice for equipment rental.

- ii. Materials shall be at invoice or lowest current price at which such materials are locally available and delivered to the Site in the quantities involved, plus sales tax, freight, and delivery. The District reserves the right to approve materials and sources of supply or to supply materials to the Contractor if necessary for the progress of the Work. No markup shall be applied to any material provided by the District.
- iii. Tool and Equipment Rental. No payment will be made for the use of tools which have a replacement value of \$250 or less.

Regardless of ownership, the rates to be used in determining equipment rental costs shall not exceed listed rates prevailing locally at equipment rental agencies or distributors at the time the Work is performed. Rates applied shall be appropriate based on actual equipment need and usage. Monthly, weekly or other extended use rates that results in the lowest cost shall be applied if equipment is used on site for extended periods.

The rental rates paid shall include all associated costs, including the cost of fuel, oil, lubrication, supplies, small tools, necessary attachments, repairs and maintenance of any kind, depreciation, storage, insurance, and all incidentals.

Necessary loading and transportation costs for equipment used on the extra Work shall be included. If equipment is used intermittently and, when not in use, could be returned to its rental source at less expense to the District than holding it at the Work Site, it shall be returned unless the Contractor elects to keep it at the Work Site at no expense to the District.

All equipment shall be acceptable to the Inspector, in good working condition, and suitable for the purpose for which it is to be used. Manufacturer's ratings and modifications shall be used to classify equipment, and equipment shall be powered by a unit of at least the minimum rating recommended by the manufacturer.

If tool and equipment charges are part of a Dispute, Claim, or Appeal, the District reserves the right to utilize actual costs for

tools and equipment or a depreciation rate for equipment based on audit finding under Article 13.11 and deduct any rental charges that exceed actual or depreciated costs.

- e. Other Items. The District may authorize other items which may be required on the extra work. Such items include labor, services, material, and equipment which are different in their nature from those required by the Work, and which are of a type not ordinarily available from the Contractor or any of the Subcontractors. Invoices covering all such items in detail shall be submitted with the request for payment.
- f. Invoices. Vendors' invoices for material, equipment rentals, and other expenditures shall be submitted with the COR. If the request for payment is not substantiated by invoices or other documentation, the District may establish the cost of the item involved at the lowest price which was current at the time of the Daily Report.
- g. Overhead. Overhead, including direct and indirect costs, shall be submitted with the COR and include: field overhead, home office overhead, off-site supervision, CO preparation/negotiation/research, time delays, project interference and disruption, additional guaranty and warranty durations, on-site supervision, additional temporary protection, additional temporary utilities, additional material handling costs, liability and property damage insurance, and additional safety equipment costs.

7.7.3 Format for COR or CO's

The following format shall be used as applicable by the District and the Contractor to communicate proposed additions to the Contract. All costs submitted shall be actual costs and labor shall be unburdened labor. Refer to Division 1 for a copy of the Construction Change Order form.

	<u>EXTRA</u>	<u>CREDIT</u>
(a) Material (attach itemized quantity and unit cost plus sales tax)	_____	_____
(b) Labor Not to Exceed Applicable Prevailing Wage Rates (attach itemized hours and rates)	_____	_____
(c) Equipment (attach invoices)	_____	_____
(d) Subtotal	_____	_____

		<u>EXTRA</u>	<u>CREDIT</u>
(e)	If Subcontractor performed work, add Subcontractor's overhead and profit to portions performed by Subcontractor, not to exceed 10% of item (d).		
(f)	Subtotal		
(g)	Contractor's Overhead and Profit: Not to exceed 10% of Item (d) if Contractor performed the work. No more than 5% of Item (d) if Subcontractor performed the work. If work was performed by Contractor and Subcontractors, portions performed by Contractor shall not exceed 10% of Item (d), and portions performed by Subcontractor shall not exceed 10% of Item (d).		
(h)	Subtotal		
(i)	Bond not to exceed one percent (1%) of Item (h)		
(j)	TOTAL		
(k)	Time/Days		

The undersigned Contractor approves the foregoing Change Order or Immediate Change Directive as to the changes, if any, and the Contract price specified for each item and as to the extension of time allowed, if any, for completion of the entire Work on account of said Change Order or Immediate Change Directive, and agrees to furnish all labor, materials and service and perform all Work necessary to complete any additional Work specified therein, for the consideration stated herein. It is understood that said Change Order or Immediate Change Directive shall be effective when approved by the Governing Board of the District.

It is expressly understood that the value of such extra Work or changes, as determined by any of the aforementioned methods, expressly includes any and all of the Contractor's costs and expenses, both direct and indirect, resulting from additional time required on the Project or resulting from delay to the Project. Any costs, expenses, damages or time extensions not included are deemed waived.

The Contractor expressly acknowledges and agrees that any change in the Work performed shall not be deemed to constitute a delay or other basis for claiming additional compensation based on theories including, but not limited to, acceleration, suspension or disruption to the Project.

7.7.3.1 *Adjustment for Time and Compensable Delay.* A CO shall also include any additional time required to complete the Project. Any additional time requested shall not be the number of days to make the proposed change, but must be based upon the impact to the Project Schedule as defined in Article 8 of the General Contract. A schedule fragnet showing the time delay must be submitted with the CO. Any changes in time will be granted only if there is an impact to the critical path. If Contractor fails to request a time extension in a CO, then the Contractor is thereafter precluded from requesting or claiming a delay.

7.7.4 Deductive Change Orders

All Deductive Change Order(s) must be prepared utilizing the form under Paragraph 7.7.3 (a)-(d) only setting forth the actual costs incurred. Except in the case of an Article 2.2 or 9.6 Deductive Change Order where no mark-up shall be allowed, Contractor will be allowed a maximum of 5% total profit and overhead.

For Unilateral Deductive Change Orders, or where credits are due from Contractor for Allowances, Deductive Items, Inspection, Damage, DSA CCD review costs, Architect or Inspector costs for after hours or corrective services, Work removed from the Agreement under Article 2.2 or Article 9.6, there shall be no mark-up.

District may, any time after a Deductive Change Order is presented to Contractor by District for items under Article 2.2 or Article 9.6 of if there is disagreement as to the Deductive Change Order, issue a unilateral Deductive Change Order on the Project and deduct the Deductive Change Order from a Progress Payment, Final Payment, or Retention.

7.7.5 Discounts, Rebates, and Refunds

For purposes of determining the cost, if any, of any change, addition, or omission to the Work hereunder, all trade discounts, rebates, refunds, and all returns from the sale of surplus materials and equipment shall accrue and be credited to the Contractor, and the Contractor shall make provisions so that such discounts, rebates, refunds, and returns may be secured, and the amount thereof shall be allowed as a reduction of the Contractor's cost in determining the actual cost of construction for purposes of any change, addition, or omissions in the Work as provided herein. All CO's are subject to Audit under Article 13.11 for discounts, rebates and refunds.

7.7.6 Accounting Records

With respect to portions of the Work performed by CO's and CCD's on a time-and-materials, unit-cost, or similar basis, the Contractor shall keep and maintain cost-accounting records in a format consistent with accepted accounting standards and satisfactory to the District, which shall be available to the District on the same terms as any other books and records the Contractor is required to maintain under the Contract Documents.

Any time and material charges shall require Inspector's signature on time and material cards showing the hours worked and the Work actually completed. (See Article 7.7.1.1)

7.7.7 Notice Required

If the Contractor desires to initiate a Dispute for an increase in the Contract Price, or any extension in the Contract Time for completion, Contractor shall notify the applicable party responsible for addressing the Dispute or Claim pursuant to Article 4.6. No Claim or Dispute shall be considered unless made in accordance with this subparagraph. Contractor shall proceed to execute the Work even though the adjustment may not have been agreed upon. Any change in the Contract Price or extension of the Contract Time resulting from such Claim shall be authorized by a CO.

7.7.8 Applicability to Subcontractors

Any requirements under this Article 7 shall be equally applicable to CO's, COR's or ICD's issued to Subcontractors by the Contractor to the same extent required by the Contractor.

7.7.9 Alteration to Change Order Language

Contractor shall not alter or reserve time in COR's, CO's or ICD's. Contractor shall execute finalized CO's and proceed under Paragraph 7.7.7 and Paragraph 4.6 with proper notice. If Contractor intends to reserve time without an approved CPM schedule prepared pursuant to Article 8 or without submitting a schedule fragnet showing delay to critical path, then Contractor may be prosecuted pursuant to the False Claim Act.

ARTICLE 8 TIME AND SCHEDULE

8.1 DEFINITIONS

8.1.1 Contract Time

Contractor shall perform and reach Substantial Completion (See Article 1.1.46) within the time specified in the Agreement Form. Moreover, Contractor shall perform its Work in strict accordance with the Project Milestones in the Contract Documents and shall proceed on a properly developed and approved Baseline Schedule, which represents the Contractor's view of the practical way in which the Work will be accomplished. Note that Contract Time includes and incorporates all Float and other Baseline inclusions as noted in Article 8.3.2.1 and as otherwise specifically noted in Article 8.

8.1.2 Notice to Proceed

District may give a Notice to Proceed within ninety (90) days of the award of the bid by District. Once Contractor has received the notice to proceed, Contractor shall complete the Work in the period of time referenced in the Contract Documents.

In the event that District desires to postpone the giving of the Notice to Proceed beyond this three-month period, it is expressly understood that with reasonable notice to the Contractor, the giving of the date to proceed may be postponed by District. It is further expressly understood by Contractor, that Contractor shall not be entitled to any claim of additional compensation as a result of the postponement of the giving of the notice to proceed

If the Contractor believes that a postponement will cause a hardship to Contractor, Contractor may terminate the Contract with written notice to District within 10 days after receipt by Contractor of District's notice of postponement. It is further understood by Contractor that in the event that Contractor terminates the Contract as a result of postponement by the District, the District shall only be obligated to pay Contractor for the Work that Contractor had performed at the time of notification of postponement and the grounds for notification and hardship shall be subject to Audit pursuant to Article 13.11. Should Contractor terminate the Contract as a result of a notice of postponement, District may award the Contract to the next lowest responsible bidder.

8.1.3 Computation of Time

8.1.4 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

8.1.5 Float

Float is time the total number of days an activity may be extended or delayed without delaying the Completion Date shown in the schedule. Float will fall into three categories: (1) Rain Days; (2) Governmental Delays; and, (3) Project Float. Project Float and Rain Days are owned by the Project and may be utilized as necessary for critical path delays once the days become available for consumption (i.e. the Rain Day arrives and is not utilized since rain did not occur or Work was performed on the interior of a building). However, Governmental Delay float

shall not be utilized for purposes other than to address critical path delays that arise due to approvals, Inspector approvals or verifications on governmental forms.

8.1.5.1 Governmental Delay Float. It is anticipated that there will be governmental generated delays. Specific to DSA approvals, it is anticipated that no less than twelve (12) days per calendar year shall be set aside as Governmental Float to be utilized on critical path delays. A pro-rated number of days shall be calculated based on length of Contract Time. (For example, a two (2) year Contract Time shall require twenty-four (24) days of Governmental Float. If the Contract Time is 182 days, then the Contract Time shall require six (6) days of Governmental Float) This Governmental Delay float must be incorporated into the schedule and should be incorporated in each critical activity as Contractor deems fit. Specifically, major categories of Work under the DSA 152 (Project Inspection Card) should be allocated Governmental Delay Float at the Contractor's discretion. Governmental Delay Float on the Project may exceed 12 days per one (1) year period, but Contractor is required to include not be less than 12 days of Governmental Delay Float during each one (1) year period.

Contractor's failure to establish a protocol for requesting inspections is not grounds to utilize Governmental Delay Float. As noted in Article 3.1.4, 48 hours advance notice of commencing Work on a new area is required after submitting form DSA 156 and under PR 13-01 Special Inspection reports are not required to be posted until at least 14 days after the Work was inspected. Failure to plan, and pay (if applicable) for quicker delivery of Special Inspections is not Governmental Delay Float under Article 8.1.4.1. If Governmental Delay Float is not utilized, this float is carried through to other DSA 152 categories of inspection and consumed over the course of the Project

Governmental Delay Float may be utilized for a DSA Stop Work Order regardless of fault as defined under Education Code section 17307.5(b).

8.1.5.2 Inclement Weather (Rain Days). The Contractor will only be allowed a time extension for unusually severe weather if it results in precipitation or other conditions which in the amount, frequency, or duration is in excess of the norm at the location and time of year in question as established by NOAA weather data. No less than 22 calendar days for each calendar year for Southern California will be allotted for in the Contractor's schedule for each winter weather period or carried at the end of the schedule as Rain Float. Float for weather days in other geographical regions shall be adjusted based on NOAA weather data for the geographical location. Contractor has anticipated all the days it takes to dry out and re-prepare areas that may be affected by weather delays which extend beyond the actual weather days. The weather days shall be shown on the schedule and if not used will become float for the Project's use. The Contractor will not be allowed a day-for-day weather delay for periods noted as float in the Schedule. The Contractor is expected to work seven (7) days per week (if necessary, irrespective of inclement weather), to maintain access, and to protect the Work under construction from the effects of inclement weather. Additional days beyond the NOAA shall be considered under the same criteria that weather days are granted below.

A Rain Day shall be granted by Architect or CM if the weather prevents the Contractor from beginning Work at the usual daily starting time, or prevents the Contractor from proceeding with seventy-five (75%) of the normal labor and equipment force towards completion of the day's current controlling item on the accepted schedule for a period of at least five hours, and the crew is dismissed as a result thereof, the Architect will designate such time as

unavoidable delay and grant one (1) critical path activity calendar-day extension if there is no available float for the calendar year.

8.1.5.3 *Project Float.* The Contractor may determine some activities require a lesser duration than allocated and may set aside float in the Project Schedule. There shall be no early completion. Instead, to the extent float is either addressed at the end of the Project or throughout each category of critical path work, Project float may be used as necessary during the course of the Project and allocated on a first, come first serve basis. However, the use of float does not extend to Governmental Delay Float, which shall only be used for Governmental Delays.

8.2 HOURS OF WORK

8.2.1 Sufficient Forces

Contractors and Subcontractors shall continuously furnish sufficient forces to ensure the prosecution of the Work in accordance with the Construction Schedule.

8.2.2 Performance During Working Hours

Work shall be performed during regular working hours as set forth in the Special Conditions and as permitted by the appropriate governmental agency except that in the event of an emergency, or when required to complete the Work in accordance with job progress, Work may be performed outside of regular working hours with the advance written consent of the District and approval of any required governmental agencies.

8.2.3 Costs for After Hours Inspections

If the Work done after hours is required by the Contract Documents, a Recovery Schedule, or as a result of the Contractor's failure to plan, and inspection must be conducted outside the Inspector's regular working hours, the costs of any after hour inspections, shall be borne by the Contractor.

If the District allows the Contractor to do Work outside regular working hours for the Contractor's convenience, the costs of any inspections required outside regular working hours shall be invoiced to the Contractor by the District and a Deductive Change Order shall be issued from the next Progress Payment.

If the Contractor elects to perform Work outside the Inspector's regular working hours, costs of any inspections required outside regular working hours shall be invoiced to the Contractor by the District and a Deductive Change Order from the next Progress Payment as a Deductive Change Order.

8.3 PROGRESS AND COMPLETION

8.3.1 Time of the Essence

Time limits stated in the Contract Documents are of the essence to the Contract. By executing the Agreement, the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

8.3.2 Project Schedule Requirements

8.3.2.1 *Timing:* Within ten (10) calendar days after Notice to Proceed, Contractor shall submit a Preliminary Project Schedule showing the order in which the Contractor proposes to perform the Work, and the dates on which the Contractor contemplates starting and completing the salient categories of the Work. This first schedule which outlines the Contractor's view of the practical way in which the Work will be accomplished is the Baseline Project Schedule. The Baseline Project Schedule showing all critical path items must be submitted within forty-five (45) calendar days after Notice to Proceed. If the Contractor Fails to submit either schedule within the proscribed time, then District may withhold processing and approval of progress payments pursuant to Article 9.4 and 9.6.

8.3.2.2 *District Review and Approval:* District, Architect and CM will review both a paper and electronic copy of Baseline Schedule and may provide comments as noted in this Article and either approve or disapprove the Project Schedule. All Schedules shall be prepared using an electronic scheduling program acceptable to District. All Schedules shall be delivered in an electronic format usable by the District. All logic ties and electronic information shall be included in the electronic copy of the Baseline Schedule that is delivered to the District.

8.3.2.3 *Schedule Must Be Within the Given Contract Time.* The schedule shall not exceed time limits set forth in the Contract Documents and shall comply with all of the scheduling requirements as set forth in the Specifications and Contract Documents.

8.3.2.4 *Submittals Must Be Incorporated (See Article 3.7.2 and 3.9.6):* Contractor shall include Submittals as line items in the Baseline Schedule as required under Article 3.7.2 and 3.9.6. Submittals shall not delay the Work, Milestones, or the Completion Date. Failure to include Submittals in the Baseline Schedule shall be deemed a material breach by the Contractor.

8.3.2.5 *[Reserved]*

8.3.2.6 *No Early Completion.* Contractor shall not submit a schedule showing early completion without indicating float time through the date set for Project completion by District. Contractor's schedule shall account for all days past early completion as float which belongs to the Project. Usage of float shall not entitle Contractor to any delay claim or damages due to delay.

8.3.2.7 *Use of Schedule Provided in Bid Documents.* In some cases, the Bid will include a preliminary schedule indicating milestones and construction sequences for the Project along with general timing for the Project. The preliminary schedule is not intended to serve as the Baseline Schedule utilized for construction. It is up to the Contractor to study and develop a Baseline Schedule to address the actual durations and sequences of Work that is anticipated while maintaining the Milestones provided by the District. Contractor shall obtain information from Contractor's subcontractors and vendors on the planning, progress, delivery of equipment, coordination, and timing of availability of subcontractors so a practical plan of Work is fully developed and represented in the Baseline Schedule.

8.3.2.8 *Incorrect Logic, Durations, Sequences, or Critical Path.* The District may reject or indicate durations, sequences, critical path or logic are not acceptable and request changes. The electronic copy of the schedule shall have adequate information so logic ties,

duration, sequences and critical path may be reviewed electronically. Contractor is to diligently rebuild and resubmit the schedule to represent the Contractor's plan to complete the Work and maintain milestones at the next Progress meeting, or before the next progress meeting. If Contractor is not able to build a schedule that is acceptable to the District or Architect, the District reserves the right to utilize the unapproved originally submitted Baseline (See Article 8.3.2.12) and the comments submitted to hold Contractor accountable for timely delivery of Work and maintenance of Milestones. Furthermore, Contractor's representations in Baseline, if unacceptable, may also be used as a basis for termination of the Contract under Article 14 if Contractor fails to adequately maintain the schedule and falls significantly behind without undertaking the efforts to either submit and follow a recovery schedule or fail to submit a recovery schedule and make no effort toward recovery on the Project.

8.3.2.9 Contractor Responsibility Even if Schedule Issues Are Not Discovered. Failure on the Part of the District to discover errors or omissions in schedules submitted shall not be construed to be an approval of the error or omission and a flawed schedule is not grounds for a time extension.

8.3.2.9.1 Inclusions in Baseline Schedule. In addition to scheduling requirements set forth at Article 8.3.2, Contractor is specifically directed to include (broken out separately) in Contractor's Baseline Schedule and all Schedule updates, the following items required pursuant to these General Conditions, including but not limited to:

1. Rain Day Float (excluding inclement weather) as required under Article 8.1.4.2. For example, if the NOAA provides 22 days of Rain Days, all 22 days must be incorporated and noted in the Baseline Schedule. Further, any days required to clean-up or dry out shall be included for operations that are likely to require a clean-up or dry out period. Days that are not utilized shall be considered float owned by the Project.
2. Governmental Delay Float under Article 8.1.4.1. This Governmental Delay Float shall only be utilized for Governmental Delays and shall not be considered available float owned by the Project. This float shall only be distributed to the Project upon the completion of the Project and shall be used to offset Liquidated Damages and shall not generate compensable delays.
3. Submittal and Shop Drawing schedule under Article 3.9.
4. Deferred Approvals under Article 3.9.
5. Time for separate contractors, including furniture installation and start up activities, under Article 6.1.
6. Coordination and timing of any Drawings, approvals, notifications, permitting, connection, and testing for all utilities for the Project. (See Article 2.1.4).
7. Testing, special events, or school activities

8.3.2.10 *Failure to include Mandatory Schedule Items.* District may withhold payment pursuant to Articles 9.3, 9.4 and 9.6. In lieu of withholding payment for failure to include Mandatory Schedule Items, after the District or Architect has notified the Contractor of failure to meet the Baseline Schedule or Updated Schedule requirements and provided a written notification of this failure and provided a written notice of Schedule preparation errors, and the Contractor fails to correct the noted deficiencies or the Contractor does not provide an updated Baseline Schedule correcting the deficiencies, then Contractor shall not be granted an extension of time for failure to obtain necessary items and approvals under Article 8.3.2 and for the time required for failure to comply with laws, building codes, and other regulations (including Title 24 of the California Code of Regulations). Contractor shall maintain all required Article 8.3.2 Schedule items in the Baseline Schedule and indicate any days that have been used as allowed in Article 8. If Contractor fails to include all Article 8.3.2 items in its Baseline Schedule or Schedule Updates and the District either utilizes an Unapproved Schedule under Article 8.3.2.12 or does not object to the inclusion of required scheduling items, then all mandatory Schedule inclusions, including float, shall be utilized in the District's discretion. If the Contract Time is exceeded, then Contractor shall be subject to the assessment of Liquidated Damages pursuant to Article 8.4.

8.3.2.11 *Failure to Meet Requirements.* Failure of the Contractor to provide proper schedules as required by this Article and Article 9 is a material breach of the Contract and grounds for Termination pursuant to Article 14. The District, at its sole discretion, may choose, instead, to withhold, in whole or in part, any Progress Payments or Retention amounts otherwise payable to the Contractor.

8.3.2.12 *Use of an Unapproved Baseline Schedule.* If Schedule Submitted is unacceptable to the District (i.e. failing to meet the requirements of Article 8.3.2) and Contractor does not incorporate or address the written comments to the schedule and a Baseline Schedule is not approved, but due to extreme necessity, the District moves forward without an approved Baseline Schedule, Contractor shall diligently revise and meet Schedule update requirements of Article 8 and incorporate all Article 8.3.2 comments in all updates). However, for purposes of Termination pursuant to Article 14, the Schedule initially submitted shall be treated as a Baseline Schedule with durations shortened to accommodate all Float and other mandatory Schedule Requirements under Article 8.3.2.1 as well as incorporate all 8.3.2 revisions from District or Architect.

8.3.3 Update Schedules

8.3.3.1 *Updates Shall Be Based on Approved Baseline Schedule.* Except in the case where there has not been agreement as to a Baseline Schedule as addressed in Article 8.3.2.4, after there has been agreement as to the Baseline Schedule, the Baseline Schedule shall be used to build future schedule updates. Schedule Updates shall be a CPM based schedule consistent with the Baseline Schedule requirements of 8.3.2

In the case that no Baseline has been approved, Schedule updates shall be provided monthly and shall incorporate all comments and revisions noted as not complying with the requirements of Article 8.3.2. Contractor shall be held to the Article 8.3.2.12 Unapproved Baseline Schedule, inclusive of all Milestones, float, comments and revisions by the District and Architect, all required Baseline Schedule Inclusions under Article 8.3.2, and any requirements in the Contract Documents.

8.3.3.2 *Schedule Updates.* Contractor shall update the schedule each month to address actual start dates and durations, the percent complete on activities, actual completion dates, estimated remaining duration for the Work in progress, estimated start dates for Work scheduled to start at future times and changes in duration of Work items.

8.3.3.3 *Listing of Items Causing Delays.* Schedule updates shall provide a listing of activities which are causing delay in the progress of Work and a narrative shall be provided showing a description of problem areas, anticipated delays, and impacts on the Construction Schedule. Simply stating "District Delay" or "Architect Delay" shall be an inadequate listing. Delays shall only be listed if they meet the requirements of Article 8.4.

8.3.3.4 *Recovery Schedule.* In addition to providing a schedule update every thirty (30) days, the Contractor, if requested by the Architect or District, shall take the steps necessary to improve Contractor's progress and demonstrate to the District and Architect that the Contractor has seriously considered how the lost time, the Completion Date, or the milestones that are required to be met within the terms of the Contract. Contractor shall immediately provide a Recovery Schedule showing how the Completion Date will be met. In no case, shall a Recovery Schedule be provided later than ten (10) days following the request for a Recovery Schedule from the Architect or District.

- a. Failure to Provide a Recovery Schedule. Shall subject Contractor to the assessment of Liquidated Damages for failure to meet the Contract Time. Refusal or failure to provide a Recovery Schedule shall be considered a substantial failure of performance and a material breach of Contract and may result in Termination of the Contract pursuant to Article 14.
- b. Recovery Schedule Acceleration without Additional Cost. The District may require Contractor prepare a Recovery Schedule showing how the Project shall be accelerated, without any additional cost to the District. The District may order, without additional cost, the following:
 1. Increase the number of shifts;
 2. Utilize overtime to recover the approved Schedule; and/or
 3. Increase the days when Work occurs, including weekends, at the Project and at any manufacturer's plant.
- c. Recovery Schedule Acceleration without Additional Cost. If Contractor disputes that the Recovery Schedule acceleration shall be issued without additional costs, the Contractor shall submit concurrent with Recovery Schedule acceleration notice pursuant to Articles 8.4.3 and 8.4.4.

8.4 EXTENSIONS OF TIME - LIQUIDATED DAMAGES

8.4.1 Liquidated Damages

CONTRACTOR AND DISTRICT HEREBY AGREE THAT THE EXACT AMOUNT OF DAMAGES FOR FAILURE TO COMPLETE THE WORK WITHIN THE TIME SPECIFIED IS EXTREMELY DIFFICULT OR IMPOSSIBLE TO DETERMINE. IF THE WORK IS NOT SUBSTANTIALLY COMPLETED IN THE TIME SET FORTH IN THE AGREEMENT, IT IS UNDERSTOOD THAT THE DISTRICT WILL SUFFER DAMAGES. IT BEING IMPRACTICAL AND UNFEASIBLE TO DETERMINE THE AMOUNT OF ACTUAL DAMAGE, IT IS AGREED THE CONTRACTOR SHALL PAY TO THE DISTRICT THE AMOUNT LIQUIDATED DAMAGES SET FORTH IN THE AGREEMENT, FOR EACH CALENDAR DAY OF DELAY IN REACHING SUBSTANTIAL COMPLETION (SEE ART 1.1.46). CONTRACTOR AND ITS SURETY SHALL BE LIABLE FOR THE AMOUNT THEREOF PURSUANT TO GOVERNMENT CODE SECTION 53069.85.

8.4.2 Delay

Except and only to the extent provided under Article 7 and Article 8, by signing the Agreement, Contractor agrees to (a) bear the risk of delays to completion of the Work; and (b) that Contractor's bid for the Contract was made with full knowledge of this risk.

In agreeing to bear the risk of delays to complete the Work, Contractor understands that, except and only to the extent provided otherwise in Article 7 and 8, the occurrence of events that delay the Work shall not excuse Contractor from its obligation to achieve Completion of the Project within the Contract Time, and shall not entitle the Contractor to an adjustment to the Contract time.

8.4.3 Excusable Delay

Contractor shall not be charged for Liquidated Damages because of any delays in completion of Work which are not the fault or negligence of Contractor or its Subcontractors, arising from Rain Float or Project Float, including acts of God, as defined in Public Contract Code section 7105, acts of enemy, epidemics and quarantine restrictions. Contractor shall within five (5) calendar days of beginning of any such delay notify District in writing of causes of delay; thereupon District shall ascertain the facts and extent of delay and grant extension of time for completing Work when, in its judgment, the findings of fact justify such an extension. Extensions of time shall apply only to that portion of Work affected by delay, and shall not apply to other portions of Work not so affected. An extension of time may only be granted after proper compliance with Article 8.3 requiring preparation and submission of a properly prepared CPM schedule.

8.4.3.1 *Excusable Delay Is Not Compensable.* No extended overhead, general conditions costs, impact costs, out-of-sequence costs or any other type of compensation, by any name or characterization, shall be paid to the Contractor for any delay to any activity not designated as a critical path item on the latest approved Project schedule.

8.4.3.2 *Notification.* The Contractor shall notify the Architect in writing of any anticipated delay and its cause, in order that the Architect may take immediate steps to prevent, if possible, the occurrence or continuance of delay, and may determine whether the delay is to be

considered avoidable or unavoidable, how long it continues, and to what extent the prosecution and completion of the Work might be delayed thereby.

8.4.3.3 *Extension Request.* In the event the Contractor requests an extension of Contract time for unavoidable delay, such request shall be submitted in accordance with the provisions in the Contract Documents governing changes in Work (See Article 7). When requesting time, i.e., extensions, for proposed Change Orders, they must be submitted with the proposed Change Order with full justification and documentation. If the Contractor fails to submit justification with the proposed Change Order it waives its right to a time extension at a later date. Such justification must be based on the official Contract schedule as updated at the time of occurrence of the delay or execution of Work related to any changes to the scope of Work. Blanket or general claims for extra days without specific detailed information as required herein or a blanket or general reservation of rights do not fulfill the requirements of this Article and shall be denied. The justification must include, but is not limited to, the following information:

- a. The duration of the activity relating to the changes in the Work and the resources (manpower, equipment, material, etc.) required to perform these activities within the stated duration.
- b. Logical ties to the official Baseline Schedule or Approved Updated Schedule for the proposed changes and/or delay showing the activity/activities in the schedule whose start or completion dates are affected by the change and/or delay. (A fragment of any delay of over ten (10) days must be provided.)

The Contractor and District understand and expressly agree that insofar as Public Contract Code section 7102 may apply to changes in the Work or delays under this Contract, the actual delays and damages, if any, and time extensions are intended to, and shall provide, the exclusive and full method of compensation for changes in the Work and construction delays.

8.4.4 Notice by Contractor Required

The Contractor shall within five (5) calendar days of beginning of any such delay notify the District in writing of causes of delay with justification and supporting documentation. In the case of a Recovery Schedule pursuant to Article 8.3.3.4, Contractor shall submit written notice concurrent with the Recovery Schedule. District will then ascertain the facts and extent of the delay and grant an extension of time for completing the Work when, in its judgment, the findings of fact justify such an extension. Extensions of time shall apply only to that portion of the Work affected by the delay and shall not apply to other portions of the Work not so affected.

Claims relating to time extensions shall be made in accordance with applicable provisions of Article 7.

8.4.4.1 *Adjustment for Compensable Delays.* The Schedule may be adjusted for a delay if, and only if, Contractor undertakes the following:

- a. Contractor submits a timely COR or CO pursuant to the requirements of Article 7.

- b. Contractor submits a fragnet showing the critical path delay caused by the COR, CO, Changed Condition, CCD, or ICD
- c. Contractor has addressed all required float days in the Fragnet.
- d. Contractor submits a complete breakdown of all costs incurred utilizing the format of Article 7.3.3

8.4.5 No Additional Compensation for Coordinating Governmental Submittals and the Resulting Work

CONTRACTOR HAS PLANNED ITS WORK AHEAD OF TIME AND IS AWARE THAT GOVERNMENTAL AGENCIES, SUCH AS THE GAS COMPANIES, ELECTRICAL UTILITY COMPANIES, WATER DISTRICTS AND OTHER AGENCIES MAY HAVE TO APPROVE CONTRACTOR PREPARED DRAWINGS OR APPROVE A PROPOSED INSTALLATION. CONTRACTOR HAS INCLUDED DELAYS AND DAMAGES WHICH MAY BE CAUSED BY SUCH AGENCIES IN CONTRACTOR'S BID AND HAS INCLUDED ADEQUATE TIME IN THE CONTRACTOR'S BASELINE SCHEDULE. FAILURE TO ADEQUATELY PLAN AND SCHEDULE IS NOT A BASIS TO USE GOVERNMENTAL DELAY FLOAT.

8.4.6 District Right to Accelerate the Work

The District may direct the Contractor to meet schedule requirements when the Work has been delayed. The District shall compensate the Contractor for the additional costs incurred by acceleration to the extent that such costs are directly attributable to the acceleration and are incurred through no fault or negligence of the Contractor.

8.4.6.1 *Management of Acceleration.* Contractor acceleration shall not include Work that is part of the scope of Work detailed in the Plans and Specifications. Instead, the acceleration costs shall be premium or overtime and quantifiable additional work added to the Project meant to accelerate the Project. Contractor is directed to keep consistent crews on the Project so time can be tracked. If crews are circulated off the Project or crews brought in only for overtime, the District may be charged for Contract Work and not accelerated time. In such case, the District may object to the costs submitted.

8.4.6.2 *Costs for Acceleration.* Cost for Acceleration shall be supported by backup documentation, and time sheets signed by the Inspector for each day work has been performed, at or near the time when the Work was performed. A listing on the time sheet shall document all labor, materials and services utilized that day and provide areas of work, and amount of work performed. Contractor shall comply with submission requirements of Article 7.7.

ARTICLE 9 PAYMENTS AND COMPLETION

9.1 CONTRACT SUM

The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the District to the Contractor for performance of the Work under the Contract Documents.

9.2 COST BREAKDOWN

9.2.1 Required Information

Contractor shall furnish the following:

- a. Within ten (10) days after Notice to Proceed, a detailed breakdown of the Contract Price (hereinafter "Schedule of Values") for each Project, Site, building, Milestone or other meaningful method to measure the level of Project Completion as determined by the District shall be submitted as a Submittal for the Project.;
- b. Within ten (10) days after the date of the Notice to Proceed, a schedule of estimated monthly payment requests due the Contractor showing the values and construction time of the various portions of the Work to be performed by it and by its Subcontractors or material and equipment suppliers containing such supporting evidence as to its correctness as the District may require;
- c. Within ten (10) days after the date of the Notice to Proceed, address, telephone number, e-mail address, California State Contractors License number, classification and monetary value of all subcontracts for parties furnishing labor, material, or equipment for completion of the Project.

9.2.2 Information and Preparation of Schedule of Values

9.2.2.1 *Break Down of Schedule of Values.* Schedule of Values shall be broken down by Project, site, building, milestone, or other meaningful method to measure the level of Project Completion as determined by the District.

9.2.2.2 *Based on Contractor Bid Costs.* The Schedule of Values shall be based on the costs from Contractor's bid to the District. However, the submission of the Schedule of Values shall not be front loaded so the Contractor is paid a greater value than the value of the Work actually performed and shall not shift funds from parts of the Project that are later to Work that is performed earlier.

9.2.2.3 Largest Dollar Value for Each Line Item. Identify subcontractors and materials suppliers proposed to provide portions of Work equal to or greater than ten thousand dollars (\$10,000) or one-half (1/2) of one percent (1%) of their Contract Price, whichever is less.

9.2.2.4 *Allowances.* Any Allowances provided for in the Contract shall be a line item in the Schedule of Values.

9.2.2.5 *Labor and Materials Shall Be Separate.* Labor and Materials shall be broken into two separate line items unless specifically agreed in writing by the District.

9.2.2.6 *Cost of Contract Closeout.* The cost of contract closeout shall be shown as individual line items:

- a. Punch List – 3% of the total contract price
- b. Closeout Documentation – 2% of the total contract price

9.2.3 District Approval Required

The District shall review all submissions received pursuant to Paragraph 9.2 in a timely manner. All submissions must be approved by the District before becoming the basis of any payment.

9.3 PROGRESS PAYMENTS

9.3.1 Payments to Contractor

Unless there is a resolution indicating that the Work for the Project is sufficiently complex, within thirty (30) days after approval of the Request for Payment, Contractor shall be paid a sum equal to ninety-five percent (95%) of the value of the Work performed (as certified by Architect and Inspector and verified by Contractor) up to the last day of the previous month, less the aggregate of previous payments. The value of the Work completed shall be the Contractor's best estimate. Work completed as estimated shall be an approximation or estimate only and no mistake, inaccuracy, error or falsification in said any approved estimate shall operate to release the Contractor, or any surety upon any bond, from damages arising from such Work, or from the District's enforcement of each and every provision of this Contract including but not limited to the Performance Bond and Payment Bond. The District shall have the right to subsequently to correct any mistake, inaccuracy, error or falsification made or otherwise set forth in any approved Request for Payment and such correction may occur in any future Payment Application or in the Retention Payment to the Contractor. No Surety upon any bond shall be relieved, released or exonerated of its obligations under this Contract or any applicable bond when the District is unable to correct an overpayment to the Contractor due to any abandonment by the Contractor or termination by the District.

The Contractor shall not be entitled to have any payment requests processed, or be entitled to have any payment made for Work performed, so long as any lawful or proper direction given by the District concerning the Work, or any portion thereof, remains incomplete.

Notwithstanding anything to the contrary stated above, the Contractor may include in its Request for Payment the value of any structural steel, glue laminated beams, trusses, bleachers and other such custom-made materials prepared specifically for the Project and unique to the Project so long as all of the following requirements are satisfied:

- a. The aggregate cost of materials stored off-site shall not exceed Twenty Five Thousand Dollars (\$25,000) at any time or as otherwise agreed to be District in writing;
- b. Title to such materials shall be vested in the District as evidenced by documentation satisfactory in form and substance to the District, including, without limitation, recorded financing statements, UCC filings and UCC searches;
- c. With each Contractor Request for Payment, the Contractor shall submit to the District a written list identifying each location where materials are stored off-site (which must be a bonded warehouse) and the value of the materials at each location. The Contractor shall procure insurance satisfactory to the District (in its reasonable discretion) for materials stored off-site in an amount not less than the total value thereof;
- d. The consent of any Surety shall be obtained to the extent required prior to payment for any materials stored off-site;
- e. Representatives of the District shall have the right to make inspections of the storage areas at any time; and
- f. Such materials shall be: (1) protected from diversion, destruction, theft and damage to the reasonable satisfaction of the District; (2) specifically marked for use on the Project; and (3) segregated from other materials at the storage facility.

9.3.2 Purchase of Materials and Equipment and Cost Fluctuations

The Contractor is required to order, obtain, and store materials and equipment sufficiently in advance of its Work at no additional cost or advance payment from District to assure that there will be no delays or cost fluctuations due to market fluctuations or procurement difficulties. Contractor further understands and incorporates into Contractor's bid cost any wage rate increases during the Project for the Contractor's labor force as well as all other subcontractor and vendor labor forces. District shall not be responsible for market fluctuations in costs or labor rate increases during the Project. Contractor further has incorporated any and all cost increases in areas of Work where there may be schedule variations so that cost increases are not passed through to the District.

9.3.3 No Waiver

No payment by District hereunder shall be interpreted so as to imply that District has inspected, approved, or accepted any part of the Work. Contractor specifically understands that Title 24 Section 4-343 that:

"It is the duty of the contractor to complete the work covered by his or her contract in accordance with the approved Plans and Specifications therefore. The contractor in no way is relieved of any responsibility by the activities of the Architect, Engineer, Inspector or DSA in the performance of such duties...In no case, however, shall the instruction of the Architect or

registered Engineer be construed to cause work to be done with is not in conformity with the approved Plans, Specifications, and change orders... “

Notwithstanding any payment, the District may enforce each and every provision of this Contract which includes, but is not limited to, the Performance Bond and Payment Bond. The District may correct any error subsequent to any payment. In no event shall the Contractor or the Surety be released or exonerated from performance under this Contract when the District overpays the Contractor based upon any mistake, inaccuracy, error or falsification in any estimate that is included in any Request for Payment.

9.3.4 Issuance of Certificate of Payment

The Architect shall, within seven (7) days after receipt of the Contractor's Application for Payment, either approve such payment or notify the Contractor in writing of the Architect's reasons for withholding approval in whole or in part as provided in Article 9.6. The review of the Contractor's Application for Payment by the Architect is based on the Architect's observations at the Site and the data comprising the Application for Payment that the Work has progressed to the point indicated and that, to the best of the Architect's knowledge, information, and belief, the quality of the Work is in accordance with the Contract Documents. In some cases, the Architect may act upon or rely on the evaluation of the Work by the Inspector. This review of Payment Applications is sometimes called a "Pencil Draft." District's return of a Pencil Draft shall constitute the District's dispute of the Pay Application that has been submitted. Contractor shall promptly respond to Pencil Drafts or Contractor's Pay Applications may be delayed. Contractor's failure to promptly respond to a Pencil Draft shall qualify as a delay in the Prompt Payment of a Request for Payment or Request for Retention. The foregoing representations are subject to: (1) an evaluation of the Work for conformance with the Contract Documents, (2) results of subsequent tests and inspections, (3) minor deviations from the Contract Documents correctable prior to completion, and (4) specific qualifications expressed by the Architect. The issuance of a Certificate for Payment will further constitute the Contractor's verified representation that the Contractor is entitled to payment in the amount certified.

9.3.5 Payment of Undisputed Contract Payments

In accordance with Public Contract Code section 7100, payments by the District to the Contractor for any and all undisputed amounts (including all Progress Payments, Final Payments or Retention Payment) is contingent upon submission of a proper and accurate Payment Application and the Contractor furnishing the District with a release of all Claims against the District related to such undisputed amounts. Disputed Contract Claims in stated amounts may be specifically excluded by the Contractor from the operation of the release. If, however, the Contractor specifically excludes any Claims, the Contractor shall provide details such as a specific number of disputed days or costs of any such exclusion in accordance with Articles 4.6 and 7.7.

9.4 APPLICATIONS FOR PROGRESS PAYMENTS

9.4.1 Procedure

9.4.1.1 *Application for Progress.* On or before the fifth (5th) day of each calendar month during the progress of the Work, Contractor shall submit to the Architect an

itemized Application for Progress Payment for operations completed. Such application shall be notarized, if required, and supported by the following or such portion thereof as Architect requires:

1. The amount paid to the date of the Application to the Contractor, to all its Subcontractors, and all others furnishing labor, material, or equipment for its Contract;
2. The amount being requested under the Application for Payment by the Contractor on its own behalf and separately stating the amount requested on behalf of each of the Subcontractors and all others furnishing labor, material, and equipment under the Contract;
3. The balance that will be due to each of such entities after said payment is made;
4. A certification that the As-Built Drawings and Annotated Specifications are current;
5. Itemized breakdown of Work done for the purpose of requesting partial payment;
6. An updated construction schedule in conformance with Article 8;
7. Failure to submit an updated Schedule for the month or any previous month;
8. The additions to and subtractions from the Contract Price and Contract Time;
9. A summary of the Retention held;
10. Material invoices, evidence of equipment purchases, rentals, and other support and details of cost as the District may require from time to time;
11. The percentage of completion of the Contractor's Work by line item;
12. An updated Schedule of Values from the preceding Application for Payment;
13. Prerequisites for Progress Payments; and
14. Any other information or documents reasonably requested by the District, Architect, Inspector or CM (if applicable).

9.4.1.2 *First Payment Request.* The following items, if applicable, must be completed before the first payment request will be accepted for processing:

1. Installation of the Project sign;

2. Receipt by Architect of Submittals;
3. Installation of field office;
4. Installation of temporary facilities and fencing;
5. Submission of documents listed in the Article 9.2 relating to Contract Price breakdown;
6. Preliminary schedule analysis, due within 10 days after Notice to Proceed;
7. Contractor's Baseline Schedule (to be CPM based in conformance with Article 8);
8. Schedule of unit prices, if applicable;
9. Submittal Schedule;
10. Copies of necessary permits;
11. Copies of authorizations and licenses from governing authorities;
12. Initial progress report;
13. Surveyor qualifications;
14. Written acceptance of District's survey of rough grading, if applicable;
15. List of all Subcontractors, with names, license numbers, telephone numbers, and scope of work;
16. All bonds and insurance endorsements; and
17. Resumes of General Contractor's Project Manager, and if applicable, job site secretary, record documents recorder, and job site Superintendent.

9.4.1.3 *Second Payment Request.* The second payment request will not be processed until all Submittals and Shop Drawings have been accepted for review by the Architect.

9.4.1.4 *All Payment Requests.* No payment requests will be processed unless Contractor has submitted copies of the Certified Payroll records for the Work which correlates to the payment request and a proper CPM schedule pursuant to Article 8 is submitted.

9.4.1.5 *Final Pay Application (95%).* See Article 9.11.1

9.4.1.6 *Final Pay Application (100%).* See Article 9.11.3

9.5 STOP NOTICE CLAIMS AND WARRANTY OF TITLE

The Contractor warrants title to all Work. The Contractor further warrants that all Work is free and clear of liens, claims, security interests, stop notices, or encumbrances in favor of the Contractor, Subcontractors, material and equipment suppliers, or other persons or entities making a claim by reason of having provided labor, materials, and equipment relating to the Work. Failure to keep work free of liens, stop notices, claims, security interests or encumbrances is grounds to make a claim against Contractor's payment and performance bond to immediately remedy and defend.

If a lien or stop notice of any nature should at any time be filed against the Work or any District property, by any entity which has supplied material or services at the request of the Contractor, Contractor and Contractor's surety shall promptly, on demand by District and at Contractor's and surety's own expense, take any and all action necessary to cause any such lien or stop notice to be released or discharged immediately therefrom.

If the Contractor fails to furnish to the District within ten (10) calendar days after written demand by the District, satisfactory evidence that a lien or stop notice has been so released, discharged, or secured, then District may discharge such indebtedness and deduct the amount required therefor, together with any and all losses, costs, damages, and attorney's fees and expense incurred or suffered by District from any sum payable to Contractor under the Contract. In addition, any liens, stop notices, claims, security interests or encumbrances shall trigger the indemnification requirements under Article 3.15 and shall act as a trigger under Civil Code Section 2778 and 2779 requiring reimbursement for any and all costs following the District's written demand has been made.

9.6 DECISIONS TO WITHHOLD PAYMENT

9.6.1 Reasons to Withhold Payment

The District may withhold payment in whole, or in part, to the extent reasonably necessary to protect the District if, in the District's opinion, the representations to the District required by Paragraph 9.4 cannot be made. The District may withhold payment, in whole, or in part, to such extent as may be necessary to protect the District from loss because of, but not limited to:

- a. Defective Work not remedied;
- b. Stop Notices served upon the District;
- c. Liquidated damages assessed against the Contractor;
- d. The cost of completion of the Contract if there exists reasonable doubt that the Work can be completed for the unpaid balance of any Contract Price or by the completion date;
- e. Damage to the District or other contractor;
- f. Unsatisfactory prosecution of the Work by the Contractor;

- g. Failure to store and properly secure materials;
- h. Failure of the Contractor to submit on a timely basis, proper and sufficient documentation required by the Contract Documents, including, without limitation, acceptable monthly progress schedules, Shop Drawings, Submittal schedules, schedule of values, product data and samples, proposed product lists, executed Change Order, Construction Change Documents, and verified reports;
- i. Failure of the Contractor to maintain As Built Drawings;
- j. Erroneous estimates by the Contractor of the value of the Work performed, or other false statements in an Application for Payment;
- k. Unauthorized deviations from the Contract Documents (including but not limited to Unresolved Notices of Deviations (DSA Form 154));
- l. Failure of the Contractor to prosecute the Work in a timely manner in compliance with established progress schedules and completion dates.
- m. Failure to properly pay prevailing wages as defined in Labor Code section 1720, et seq.;
- n. Failure to properly maintain or clean up the Site;
- o. Payments to indemnify, defend, or hold harmless the District;
- p. Any payments due to the District including but not limited to payments for failed tests, or utilities changes or permits;
- q. Failure to submit an acceptable schedule in accordance with Paragraph 3.8;
- r. Failure to pay Subcontractor or suppliers as required by Paragraph 9.8.1;
- s. Failure to secure warranties, including the cost to pay for warranties;
- t. Failure to provide release from material suppliers or subcontractors when requested to do so;
- u. Items deducted pursuant to Article 2.2;
- v. Incomplete Punch List items under Article 9.9.1.2 which have gone through the Article 2.2 process; or
- w. Allowances that have not been used.

9.6.2 Reallocation of Withheld Amounts

District may, in its discretion, apply any withheld amount to payment of outstanding claims or obligations as defined in Paragraphs 9.6.1 and 9.5. In so doing, District shall make such payments on behalf of Contractor. If any payment is so made by District, then such amount shall be considered as a payment made under Contract by District to Contractor and District shall not be liable to Contractor for such payments made in good faith. Such payments may be made without prior judicial determination of claim or obligation. District will render Contractor an accounting of such funds disbursed on behalf of Contractor.

If Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents or fails to perform any provision thereof, District may, after ten (10) calendar days written notice to the Contractor and without prejudice to any other remedy make good such deficiencies. The District shall adjust the total Contract price by reducing the amount thereof by the cost of making good such deficiencies. If District deems it inexpedient to correct Work which is damaged, defective, or not done in accordance with Contract provisions, an equitable reduction in the Contract price (of at least 150% of the estimated reasonable value of the nonconforming Work) shall be made therefor.

9.6.3 Payment After Cure

When the grounds for declining approval are removed, payment shall be made for amounts withheld because of them. No interest shall be paid on any retainage or amounts withheld due to the failure of the Contractor to perform in accordance with the terms and conditions of the Contract Documents.

9.7 NONCONFORMING WORK

Contractor shall promptly remove from premises all Work identified by District as failing to conform to the Contract whether incorporated or not. Contractor shall promptly replace and re-execute its own Work to comply with the Contract without additional expense to District and shall bear the expense of making good all Work of other contractors destroyed or damaged by such removal or replacement.

If Contractor does not remove such Work which has been identified by District as failing to conform to the Contract Documents within a reasonable time, fixed by written notice, District may remove it and may store the material at Contractor's expense. If Contractor does not pay expenses of such removal within ten (10) calendar days' time thereafter, District may sell such materials at auction or at private sale and shall account for net proceeds thereof, after deducting all costs and expenses that should have been borne by Contractor.

9.8 SUBCONTRACTOR PAYMENTS

9.8.1 Payments to Subcontractors

No later than ten (10) days after receipt, or pursuant to Business and Professions Code section 7108.5, the Contractor shall pay to each Subcontractor, out of the amount paid to the Contractor on account of such Subcontractor's portion of the Work, the amount to which said Subcontractor is entitled. The Contractor shall, by appropriate agreement with each

Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

9.8.2 No Obligation of District for Subcontractor Payment

The District shall have no obligation to pay, or to see to the payment of, money to a Subcontractor except as may otherwise be required by law.

9.8.3 Payment Not Constituting Approval or Acceptance

An approved Request for Payment, a progress payment, a Certificate of Substantial Completion, or partial or entire use or occupancy of the Project by the District shall not constitute acceptance of Work that is not in accordance with the Contract Documents.

9.8.4 Joint Checks

District shall have the right, if necessary for the protection of the District, to issue joint checks made payable to the Contractor and Subcontractors and material or equipment suppliers. The joint check payees shall be responsible for the allocation and disbursement of funds included as part of any such joint payment. In no event shall any joint check payment be construed to create any contract between the District and a Subcontractor of any tier, any obligation from the District to such Subcontractor, or rights in such Subcontractor against the District. The District may choose to issue joint checks at District's sole discretion and only after all the requirements of that particular school district and county are specifically met. Some school districts cannot issue joint checks, so the ability to issue joint checks depends on the school district and the specific circumstances.

9.9 COMPLETION OF THE WORK

9.9.1 Close-Out Procedures

9.9.1.1 *Incomplete Punch Items.* When the Contractor considers the Work Substantially Complete (See Article 1.1.46 for definition of Substantially Complete), the Contractor shall prepare and submit to the District a comprehensive list of minor items to be completed or corrected (hereinafter "Incomplete Punch Items" or "Punch List"). The Contractor and/or its Subcontractors shall proceed promptly to complete and correct the Incomplete Punch Items listed. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents. Contractor is aware that Title 24 Section 4-343(a) provides:

"RESPONSIBILITIES. IT IS THE DUTY OF THE CONTRACTOR TO COMPLETE THE WORK COVERED BY HIS OR HER CONTRACT IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS THEREFOR. THE CONTRACTOR IN NO WAY IS RELIEVED OF ANY RESPONSIBILITY BY THE ACTIVITIES OF THE ARCHITECT, ENGINEER, INSPECTOR OR DSA IN THE PERFORMANCE OF SUCH DUTIES.

9.9.1.2 *Punch List Is Prepared Only After the Project Is Substantially Complete.*

If any of the conditions noted in Article 1.1.46 as defining Substantial Completion are not met, the Inspector, Architect or District may reject Contractor's Incomplete Punch Items as premature. If the Architect and Inspector commence review of Incomplete Punch Items, all rights are reserved until the Project actually meets the definition of Substantially Complete. Liquidated Damages, warranties, and other contractual rights are not affected by Incomplete Punch Items unless otherwise addressed in these General Conditions.

Once the Inspector and the Architect determine the Project is Substantially Complete, a Certificate of Substantial Completion shall be issued. The Inspector and Architect shall prepare a Punch List of items which is an inspection report of the Work, if any, required in order to complete the Contract Documents and ensure compliance with the DSA Approved Plans so the Project may be Completed by the Contractor and a final DSA Close-Out is approved. When all Work for the Project is Complete, including Punch Lists and all Work complies with the approved Contract Documents and Change Orders, the Project has reached Final Completion.

9.9.1.3 *Time for Completion of Punch List.* Contractor shall only be given a period of no more than thirty (30) days to complete the Punch List on Project. During the Punch List period Contractor Superintendent and Project Manager shall remain engaged in the Project and shall not be removed or replaced. If the Punch List is not completed at the end of the Punch List time then Contractor shall issue a valued Punch List within 5 days after the date the Punch List time ends. If Contractor does not issue such a list, the District or Architect may issue a valued Punch List to the Contractor and withhold up to 150% of the value of the Punch List Work pursuant to Article 2.2 of this Agreement.

Failure to issue a timely written request for additional time to complete Punch List shall result in the deletion of the remaining Punch List Work pursuant to Article 2.2 and the issuance of a Deductive Change Order.

- a. Extension of Time to Complete Punch List. If Contractor cannot finish the Punch List Work during the time period allotted under Article 9.9.1.3, the Contractor may make a written request for a Non-Compensable Punch List time extension accompanied by an estimate of the number of additional days it will take to complete the Punch List Work for a written consent from the District to allow continued Punch List Work. Punch List time extensions are a maximum of thirty (30) days for each request and must be accompanied by an itemized valued Punch List.
- b. If there is no valued Punch List accompanying any request or if Contractor intends to undertake Punch List without the continued support and supervision of its Superintendent and Project Manager (as required under Article 3.2), the District, Construction Manager or Architect may issue a valued Punch List, reject the Punch List Time Extension and deduct 150% of the valued Punch List pursuant to Article 2.2 and proceed to Close-Out the Project. Contractor shall cease work on the Project and proceed to complete Contractor's Retention Payment Application and complete the Work for the Project required pursuant to Article 9.11.3.

9.9.1.4 *District Rejection of Written Request for Punch List Time Extensions.* Following sixty (60) Days of Punch List under Article 9.9.1.3, the District has the option of rejecting Punch List Time Extension requests. The District may proceed under Article 2.2 and deduct the value of remaining Punch List Work pursuant to Article 2.2. If the District rejects the Punch List Time Extension request then Contractor shall cease Work on the Project and proceed to Final Inspection pursuant to Article 9.11.2.

9.9.1.5 *Punch List Liquidated Damages to Compensate for Added District Project Costs.* If the total time utilized for Punch List exceeds sixty (60) days [the thirty (30) day period under Article 9.9.1.3 plus an additional thirty (30) day period that has been requested in writing], and the District grants an additional written Punch List Time Extension that exceeds sixty (60) days of Punch List, then Contractor shall be charged Liquidated Damages of at least \$750 per day for continued Punch List Work to partially compensate the Inspector, Architect, and Construction Manager's extended time on the Project. This Punch List Liquidated Damage number is based on anticipated cost for an Inspector on site and additional costs for the Architect and Construction Manager to reinspect Punch List items and perform the administration of the Close-out.

Contractor received thirty (30) days without any charges for Punch List Liquidated Damages and is placed on notice pursuant to this Article 9.9.1.5 that \$750 is due for each day of Punch List that exceeds sixty (60) days at \$750, a cost much lower than typical (and actual) costs for Inspection, Architect and Construction Manager time required during Punch List. Starting at ninety (90) days of Punch List (an excessive number of days to complete Punch List), the District shall be entitled to adjust Punch List Liquidated Damages to an estimate of the actual costs incurred to oversee, monitor and inspect the Punch List. If costs exceed \$750 per day, the anticipated extended contract charges for Inspection, Architect, Construction Manager, and any other costs that will be incurred due to the extended Punch List shall be itemized and a daily rate of Punch List Liquidated Damages shall be presented in writing to the Contractor within five (5) days following the receipt of a written request for Punch List Time Extension by the Contractor that extends the Punch List time beyond ninety (90) days. This written notice of actual Punch List Liquidated Damages may be provided to the Contractor at any time following the first written request for Punch List Time extension requested under Article 9.9.1.3. The adjusted actual Punch List Liquidated Damage amount shall be applicable as Punch List Liquidated Damages commencing on the ninetieth (90th) day of Punch List.

9.9.2 Close-Out Requirements for Final Completion of the Project

- a. Utility Connections. Buildings shall be connected to water, gas, sewer, and electric services, complete and ready for use. Service connections shall be made and existing services reconnected.
- b. As-Builts Up to Date and Complete. The intent of this procedure is to obtain an exact "As-Built" record of the Work upon completion of the project. The following information shall be carefully and correctly drawn on the prints and all items shall be accurately located and dimensioned from finished surfaces of building walls on all As Built Drawings.

1. The exact location and elevations of all covered utilities, including valves, cleanouts, etc. must be shown on As-Builts
 2. Contractor is liable and responsible for inaccuracies in As-Built Drawings, even though they become evident at some future date.
 3. Upon completion of the Work and as a condition precedent to approval of Retention Payment, Contractor shall obtain the Inspector's approval of the "As-Built" information. When completed, Contractor shall deliver corrected sepias and/or a Diskette with an electronic file in a format acceptable to the District.
 4. District may withhold the cost to hire a draftsman and potholing and testing service to complete Record As-Built Drawings at substantial cost if the Contractor does not deliver a complete set of Record As-Built Drawings. This shall result in withholding of between \$10,000 to \$20,000 per building that does not have a corresponding Record As Built Drawing.
- c. Any Work not installed as originally indicated on Drawings.
- d. All DSA Close-Out requirements (See DSA Certification Guide) Contractor is also specifically directed to Item 3.2 in the DSA Certification Guide and the applicable certificates for the DSA-311 form.
- e. Submission of Form 6-C. Contractor shall be required to execute a Form 6-C as required under Title 24 Sections 4-343. The Contractor understands that the filing with DSA of a Form 6-C is a requirement to obtain final DSA Approval of the Construction by Contractor and utilized to verify under penalty of perjury that the Work performed by Contractor complies with the DSA approved Contract Documents. The failure to file a DSA Form 6C has two consequences. First, the Construction of the Project will not comply with the Design Immunity Provisions of Government Code Section 830.6 and exposes the District and the individual Board members to Personal Liability for injuries that occur on the Project.

Secondly , under DSA IR A-20, since the Project cannot be Certified by DSA, no future or further Projects will be authorized so Contractor will have essentially condemned the campus from any future modernization or addition of new classrooms through their failure to file the DSA Form 6C.

1. *Execution of the DSA Form 6-C is mandatory.* Refusal to Execute the Form 6-C, which is a Final DSA Verified Report that all Work performed complies with the DSA approved Contract Documents is a violation of Education Code Section 17312 and shall be referred to the Attorney General for Prosecution.
2. *Referral to the District Attorney for Extortion.* If the Contractor's refusal to execute the DSA Form 6C is to leverage a Dispute, Claim

or Litigation, then the matter shall also be referred to the District Attorney for prosecution for Extortion.

3. *Contractor shall be Responsible for All Costs to Certify the Project.* The District may Certify the Project complies with Approved Plans and Specifications by utilizing the procedures under the Project Certification Guide (Located at the DSA website at http://www.documents.dgs.ca.gov/dsa/plan_review_process/project_certification_guide_updated_03-15-13.pdf). All costs for professionals, inspection, and testing required for an alternate Project Certification shall be the Contractor's responsibility and the District reserves its right to institute legal action against the Contractor and Contractor's Surety for all costs to Certify the Project and all costs to correct Non-Compliant Work that is discovered during the Alternate Certification Process.

- f. ADA Work that must be corrected to receive DSA certification. See Article 12.2.
- g. Maintenance Manuals. At least thirty (30) days prior to final inspection, three (3) copies of complete operations and maintenance manuals, repair parts lists, service instructions for all electrical and mechanical equipment, and equipment warranties shall be submitted. All installation, operating, and maintenance information and drawings shall be bound in 8½" x 11" binders. Provide a table of contents in front and all items shall be indexed with tabs. Each manual shall also contain a list of subcontractors, with their addresses and the names of persons to contact in cases of emergency. Identifying labels shall provide names of manufactures, their addresses, ratings, and capacities of equipment and machinery.
 1. Maintenance manuals shall also be delivered in electronic media for the Project. Any demonstration videos shall also be provided on electronic media.
- h. Inspection Requirements. Before calling for final inspection, Contractor shall determine that the following Work has been performed:
 1. The Work has been completed.
 2. All life safety items are completed and in working order.
 3. Mechanical and electrical Work complete, fixtures in place, connected and tested.
 4. Electrical circuits scheduled in panels and disconnect switches labeled.
 5. Painting and special finishes complete.

6. Doors complete with hardware, cleaned of protective film relieved of sticking or binding and in working order.
7. Tops and bottoms of doors sealed.
8. Floors waxed and polished as specified.
9. Broken glass replaced and glass cleaned.
10. Grounds cleared of Contractor's equipment, raked clean of debris, and trash removed from Site.
11. Work cleaned, free of stains, scratches, and other foreign matter, replacement of damaged and broken material.
12. Finished and decorative work shall have marks, dirt and superfluous labels removed.
13. Final cleanup, as in Paragraph 3.12.
14. All Work pursuant to Article 9.11.
15. Furnish a letter to District stating that the District's Representative or other designated person or persons have been instructed in working characteristics of mechanical and electrical equipment.

9.9.3 Costs of Multiple Inspections

More than two (2) requests of the District to make inspections required under Paragraph 9.9.1 shall be considered an additional service of Architect, Inspector, Engineer or other consultants shall be the Contractor's responsibility pursuant to Article 4.5 and all subsequent costs will be prepared as a Deductive Change Order.

9.10 PARTIAL OCCUPANCY OR USE

9.10.1 District's Rights

The District may occupy or use any completed or partially completed portion of the Work at any stage. The District and the Contractor shall agree in writing to the responsibilities assigned to each of them for payments, security, maintenance, heat, utilities, damage to the Work, insurance, the period for correction of the Work, and the commencement of warranties required by the Contract Documents. If District and Contractor cannot agree as to responsibilities such disagreement shall be resolved pursuant to Paragraph 4.6. When the Contractor considers a portion complete, the Contractor shall prepare and submit a Punch List to the District as provided under Paragraph 9.9.1.

9.10.2 Inspection Prior to Occupancy or Use

Immediately prior to such partial occupancy or use, the District, the Contractor, and the Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

9.10.3 No Waiver

Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

9.11 **COMPLETION AND FINAL PAYMENT**

9.11.1 Final Payment (90% Billing if Substantially Complete Finding and 95% Billing If No Finding Is Made)

The following items must be completed before the Final Pay Application will be accepted for processing at Substantial Completion of the Project:

- a. Inspector Sign off of each item in the DSA 152 Project Inspection Card;
- b. The Project has reached the Punch List items under Article 9.9.1.2 and the Project has been determined to be Substantially Complete under Article 1.1.28;
- c. Removal of temporary facilities and services;
- d. Testing, adjusting and balance records are complete;
- e. Removal of surplus materials, rubbish, and similar elements;
- f. Change Over of Door locks;
- g. Deductive items pursuant to Article 9.6 and Article 2.2; and
- h. Completion and submission of all final Change Orders for the Project.

9.11.2 Final Inspection (Punch List Completion)

Contractor shall comply with Punch List procedures under Article 9.9.1.1, and maintain the presence of Project Superintendent and Project Manager (not replacement project superintendent or project manager) until the Punch List is complete to ensure proper and timely completion of the Punch List. Under no circumstances shall Contractor demobilize its forces prior to completion of the Punch List.

Upon completion of the Work under Article 9.9.1, the Contractor shall notify the CJUSD and Architect, who shall again inspect such Work. If the Architect and the CJUSD find the Work contained in the Punch List acceptable under the Contract Documents, the Work shall

have reached Final Completion. Architect shall notify Contractor, who shall then submit to the Architect its Application for Retention Payment. This Application for Retention Payment shall contain any deductions under Article 9.6, including but not limited to incomplete Punch List items under Article 9.9.1.

Upon receipt and approval of Application for Retention Payment, the Architect shall issue a Form 6 stating that to the best of its knowledge, information, and belief, and on the basis of its observations, inspections, and all other data accumulated or received by the Architect in connection with the Work, such Work has been completed in accordance with the Contract Documents. The District shall thereupon inspect such Work and either accept the Work as complete or notify the Architect and the Contractor in writing of reasons why the Work is not complete. Upon acceptance of the Work of the Contractor as fully complete (which, absent unusual circumstances, will occur when the Punch List items have been satisfactorily completed), the District shall record a Notice of Completion with the County Recorder, and the Contractor shall, upon receipt of payment from the District, pay the amounts due Subcontractors.

If the Architect and the District find that the Work Contained in the Punch List is unacceptable, then Contractor shall issue a valued Punch List within 5 days after the date the Punch List time ends. If Contractor does not issue such a list, the District or Architect may issue a valued Punch List to the Contractor and withhold up to 150% of the value of the Punch List Work pursuant to Article 2.2 of this Agreement.

9.11.3 Retainage (100% Billing for the Entire Project)

The retainage, less any amounts disputed by the District or which the District has the right to withhold Pursuant to Paragraph 9.6 (including but not limited to incomplete Punch List items under Article 9.9.1), shall be paid after approval by the District of the Application for Retention Payment, after the satisfaction of the conditions set forth in Article 9, the Final Inspection under Article 9.11.2 is completed, and after thirty-five (35) days after the acceptance of the Work and recording of the Notice of Completion by District. No interest shall be paid on any retainage, or on any amounts withheld due to a failure of the Contractor to perform, in accordance with the terms and conditions of the Contract Documents, except as provided to the contrary in any Escrow Agreement between the District and the Contractor.

- a. Procedures for Application for Retention Payment. The following conditions must be fulfilled prior to release of Retention Payment:
 - i. A full and final waiver or release of all Stop Notices in connection with the Work shall be submitted by Contractor, including a release of Stop Notice in recordable form, together with (to the extent permitted by law) a copy of the full and final release of all Stop Notice rights.
 - ii. The Contractor shall have made all corrections, including all Punch List Items, to the Work which are required to remedy any defects therein, to obtain compliance with the Contract Documents or any requirements of applicable codes and ordinances, or to fulfill any of the orders or directions of District required under the Contract Documents.

- iii. Each Subcontractor shall have delivered to the Contractor all written guarantees, warranties, applications, releases from the Surety and warranty bonds (if applicable) required by the Contract Documents for its portion of the Work.
- iv. Contractor must have completed all requirements set forth in Article 9.9.
- v. Contractor must have issued a Form 6C for the Project.
- vi. The Contractor shall have delivered to the District all manuals and materials required by the Contract Documents.
- vii. The Contractor shall have completed final clean up as required by Paragraph 3.12.
- viii. Contractor shall have all deductive items under Article 9.6 and Article 2.2 submitted as part of the Retention Payment.

9.11.4 Recording of a Notice of Completion After Punch List Period and Final Inspection.

When the Work, or designated portion thereof, is complete or the District has completed the Article 9.6 and/or the Article 2.2 process, whichever occurs first, the District will file either a Notice of Completion or a Notice of Completion noting Valued Punch List items. Valued Punch List items will be deducted from the Retention Payment.

During the time when Work is being performed on the Punch List, the Project does not meet the definition of "Complete" under Public Contract Code Section 7107(c)(1) even if there is "beneficial occupancy" of the Project since that has been no "cessation of labor" on the Project. Completion of Punch List under this Article is not "testing, startup, or commissioning by the public entity or its agent." In other words, the continuing Punch List Work is Contractor labor on the Project until each and every item of Punch List Work is complete or the time periods under Article 9.9.1 have expired.

9.11.5 Warranties

Warranties required by the Contract Documents shall commence on the date of Completion of the entire Work. Warranty periods DO NOT commence at Substantial Completion or when a particular subcontractor work is complete. No additional charges, extras, Change Orders, or Claims may be sought for warranties commencing from the Notice of Completion.

District shall have the right to utilize equipment, test, and operate as necessary for acclimation, or testing without voiding or starting warranties. Taking beneficial occupancy shall not start warranties except in the case where the District agrees, in writing, that warranties shall commence running or where the District is taking phased occupancy of specific buildings or areas and completes separate Punch Lists as further addressed in Article 4.2.7.

9.11.6 Time for Submission of Application for Final Payment and Retention Payment (Unilateral Processing of Final and Retention Pay Application).

If Contractor submits a Final Pay Application which fails to include deductive items under Article 9.6, the District or Architect shall note this defective request for Final Pay Application. The Contractor shall be notified that specific deductive items shall be included in the Final Pay Application. If Contractor either continues to submit the Final Pay Application without deductive items under Article 9.6, or a period of 14 calendar days passes after Contractor is provided written notice of deductive items for inclusion in Final Pay Application, then District may either alter the Final Pay Application and recalculate the math on the Final Pay Application to address the Article 9.6 deductive items or process a Unilateral Final Pay Application.

9.11.7 Unilateral Release of Retention

After the recordation of the Notice of Completion, or within sixty (60) days following the completion of the Punch List or the expiration of the time for completion of Punch List under Article 9.9.1, if Contractor does not make an Application for Release of Retention, the CJUSD may unilaterally release retention less any deducts under Article 9.6 and/or Article 2.2, withholds due to stop notices, or withholdings due to other defective Work on the Project. CJUSD may also choose to unilaterally release Retention after deduction of 150% of any disputed items, which may also include items under Article 9.6 and 2.2. If a deduction pursuant to Article 9.6 is made from Retention, a letter deducting specific valued items shall be considered a notice of Default under the terms of the Escrow Agreement.

9.12 SUBSTITUTION OF SECURITIES

The District will permit the substitution of securities in accordance with the provisions of Public Contract Code section 22300.

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

10.1 SAFETY PRECAUTIONS AND PROGRAMS

10.1.1 Contractor Responsibility

The Contractor shall be responsible for all damages to persons or property that occur as a result of its fault or negligence in connection with the prosecution of this Contract and shall take all necessary measures and be responsible for the proper care and protection of all materials delivered and Work performed until completion and final acceptance by the District. All Work shall be solely at the Contractor's risk, with the exception of damage to the Work caused by "acts of God" as defined in Public Contract Code Section 7105(b)(2).

Contractor shall take, and require subcontractor to take, all necessary precautions for safety of workers on the Work and shall comply with all applicable federal, state, local and other safety laws, standards, orders, rules, regulations, and building codes to prevent accidents or injury to persons on, about, or adjacent to premises where Work is being performed and to provide a safe and healthful place of employment. In addition to meeting all requirements of OSHA, Cal-OSHA, state, and local codes, Contractor shall furnish, erect and properly maintain at all times, as directed by District or Architect or required by conditions and progress of Work, all necessary safety devices, safeguards, construction canopies, signs, audible devices for protection of the blind, safety rails, belts and nets, barriers, lights, and watchmen for protection of workers and the public, and shall post danger signs warning against hazards created by such features in the course of construction. Contractor shall designate a responsible member of its organization on the Work, whose duty shall be to post information regarding protection and obligations of workers and other notices required under occupational safety and health laws, to comply with reporting and other occupational safety requirements, and to protect the life, safety and health of workers. The name and position of person so designated shall be reported to District by Contractor. Contractor shall correct any violations of safety laws, rules, orders, standards, or regulations. Upon the issuance of a citation or notice of violation by the Division of Occupational Safety and Health, such violation shall be corrected promptly.

10.1.2 Subcontractor Responsibility

Contractor shall require that Subcontractors participate in, and enforce, the safety and loss prevention programs established by the Contractor for the Project, which will cover all Work performed by the Contractor and its Subcontractors. Each Subcontractor shall designate a responsible member of its organization whose duties shall include loss and accident prevention, and who shall have the responsibility and full authority to enforce the program. This person shall attend meetings with the representatives of the various Subcontractors employed to ensure that all employees understand and comply with the programs.

10.1.3 Cooperation

All Subcontractors and material or equipment suppliers shall cooperate fully with Contractor, the District, and all insurance carriers and loss prevention engineers.

10.1.4 Accident Reports

Subcontractors shall immediately, within two (2) days, report in writing to the Contractor all accidents whatsoever arising out of, or in connection with, the performance of the Work, whether on or off the Site, which caused death, personal injury, or property damage, giving full details and statements of witnesses. In addition, if death or serious injuries or serious damages are caused, the accident shall be reported within four (4) days by telephone or messenger. Contractor shall thereafter immediately, within two (2) days, report the facts in writing to the District and the Architect giving full details of the accident.

10.1.5 First-Aid Supplies at Site

The Contractor will provide and maintain at the Site first-aid supplies which complies with the current Occupational Safety and Health Regulations.

10.1.6 Material Safety Data Sheets and Compliance with Proposition 65

Contractor is required to have material safety data sheets available in a readily accessible place at the job site for any material requiring a material safety data sheet per the Federal "hazard communication" standard, or employees' "right-to-know law." The Contractor is also required to properly label any substance brought into the job site, and require that any person working with the material, or within the general area of the material, is informed of the hazards of the substance and follows proper handling and protection procedures.

Contractor is required to comply with the provisions of California Health and Safety Code section 25249, 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 the provisions of this section, and to comply fully with its requirements.

10.1.7 Non-Utilization of Asbestos Material

NO ASBESTOS OR ASBESTOS-CONTAINING PRODUCTS SHALL BE USED IN THIS CONSTRUCTION OR IN ANY TOOLS, DEVICES, CLOTHING, OR EQUIPMENT USED TO EFFECT THIS CONSTRUCTION.

Asbestos and/or asbestos-containing products shall be defined as all items containing, but not limited to, chrysotile, amosite, anthophyllite, tremolite, and antinolite.

Any or all material containing greater than one-tenth of one percent (>.1%) asbestos shall be defined as asbestos-containing material.

All Work or materials found to contain asbestos or Work or material installed with asbestos-containing equipment will be immediately rejected and this Work will be removed at no additional cost to the District.

Decontamination and removal of Work found to contain asbestos or Work installed with asbestos-containing equipment shall be done only under supervision of a qualified consultant, knowledgeable in the field of asbestos abatement and accredited by the Environmental Protection Agency.

The asbestos removal contractor shall be an EPA accredited contractor qualified in the removal of asbestos and shall be chosen and approved by the asbestos consultant, who shall have sole discretion and final determination in this matter.

The asbestos consultant shall be chosen and approved by the District, who shall have sole discretion and final determination in this matter.

The Work will not be accepted until asbestos contamination is reduced to levels deemed acceptable by the asbestos consultant.

Interface of Work under this Contract with Work containing asbestos shall be executed by the Contractor at his risk and at his discretion, with full knowledge of the currently accepted standards, hazards, risks, and liabilities associated with asbestos work and asbestos-containing products. By execution of this Contract, the Contractor acknowledges the above and agrees to hold harmless District and its assigns for all asbestos liability which may be associated with this work and agrees to instruct his employees with respect to the above-mentioned standards, hazards, risks, and liabilities.

10.2 SAFETY OF PERSONS AND PROPERTY

10.2.1 The Contractor

The Contractor shall take reasonable precautions for the safety of, and shall provide reasonable protection to prevent damage, injury, or loss to:

- a. Employees on the Work and other persons who may be affected thereby;
- b. The Work, material, and equipment to be incorporated therein, whether in storage on or off the Site, under the care, custody, or control of the Contractor or the Contractor's Subcontractors or Sub-subcontractors; and
- c. Other property at the Site or adjacent thereto such as trees, shrubs, lawns, walks, pavement, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction.

Contractor is constructive owner of Project site as more fully discussed in Article 6.2.

10.2.2 Contractor Notices

The Contractor shall give notices and comply with applicable laws, ordinances, rules, regulations, and lawful orders of public authorities bearing on the safety of persons or property or their protection from damage, injury, or loss.

10.2.3 Safety Barriers and Safeguards

The Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations, and notifying Districts and users of adjacent sites and utilities.

10.2.4 Use or Storage of Hazardous Material

When use or storage of explosives, other hazardous materials or equipment, or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel. The Contractor shall notify the District any time that explosives or hazardous materials are expected to be stored on Site. Location of storage shall be coordinated with the District and local fire authorities.

10.2.5 Protection of Work

The Contractor and Subcontractors shall continuously protect the Work, the District's property, and the property of others, from damage, injury, or loss arising in connection with operations under the Contract Documents. The Contractor and Subcontractors, at their own expense, shall make good any such damage, injury, or loss, except such as may be solely due to, or caused by, agents or employees of the District.

The Contractor, at Contractor's expense, will remove all mud, water, or other elements as may be required for the proper protection and prosecution of its Work.

Contractor shall take adequate precautions to protect existing roads, sidewalks, curbs, pavements, utilities, adjoining property and structures (including, without limitation, protection from settlement or loss of lateral support), and to avoid damage thereto, and repair any damage thereto caused by construction operations. All permits, licenses, or inspection fees required for such repair Work shall be obtained and paid for by Contractor.

10.2.6 Requirements for Existing Sites

Contractor shall (unless waived by the District in writing):

- a. When performing construction on existing sites, become informed and take into specific account the maturity of the students on the Site; and perform Work which may interfere with school routine before or after school hours, enclose working area with a substantial barricade, and arrange Work to cause a minimum amount of inconvenience and danger to students and faculty in their regular school activities. The Contractor shall comply with Specifications and directives of the District regarding the timing of certain construction activities in order to avoid unnecessary interference with school functioning.
- b. Avoid performing any Work that will disturb students during testing.
- c. Provide substantial barricades around any shrubs or trees indicated to be preserved.
- d. Deliver materials to building area over route designated by Architect.
- e. Take preventive measures to eliminate objectionable dust, noise, or other disturbances.

- f. Confine apparatus, the storage of materials, and the operations of workers to limits indicated by law, ordinances, permits or directions of Architect; and not interfere with the Work or unreasonably encumber premises or overload any structure with materials; and enforce all instructions of District and Architect regarding signs, advertising, fires, and smoking and require that all workers comply with all regulations while on the Project site.
- g. Take care to prevent disturbing or covering any survey markers, monuments, or other devices marking property boundaries or corners. If such markers are disturbed by accident, they shall be replaced by an approved land surveyor or civil engineer and all maps and records required therefrom shall be filed with county and local authorities, at no cost to the District. All filing and plan check fees shall be paid by Contractor.
- h. Provide District on request with Contractor's written safety program and safety plan for each site.

10.2.7 Shoring and Structural Loading

The Contractor shall not impose structural loading upon any part of the Work under construction or upon existing construction on or adjacent to the Site in excess of safe limits, or loading such as to result in damage to the structural, architectural, mechanical, electrical, or other components of the Work. The design of all temporary construction equipment and appliances used in construction of the Work and not a permanent part thereof, including, without limitation, hoisting equipment, cribbing, shoring, and temporary bracing of structural steel, is the sole responsibility of the Contractor. All such items shall conform with the requirements of governing codes and all laws, ordinances, rules, regulations, and orders of all authorities having jurisdiction. The Contractor shall take special precautions, such as shoring of masonry walls and temporary tie bracing of structural steel Work, to prevent possible wind damage during construction of the Work. The installation of such bracing or shoring shall not damage the Work in place or the Work installed by others. Any damage which does occur shall be promptly repaired by the Contractor at no cost to the District.

10.2.8 Conformance within Established Limits

The Contractor and Subcontractors shall confine their construction equipment, the storage of materials, and the operations of workers to the limits indicated by laws, ordinances, permits, and the limits established by the District or the Contractor, and shall not unreasonably encumber the premises with construction equipment or materials.

10.2.9 Subcontractor Enforcement of Rules

Subcontractors shall enforce the District's and the Contractor's instructions, laws, and regulations regarding signs, advertisements, fires, smoking, the presence of liquor, and the presence of firearms by any person at the Site.

10.2.10 Site Access

The Contractor and the Subcontractors shall use only those ingress and egress routes designated by the District, observe the boundaries of the Site designated by the District,

park only in those areas designated by the District, which areas may be on or off the Site, and comply with any parking control program established by the District, such as furnishing license plate information and placing identifying stickers on vehicles.

10.2.11 Security Services.

The Contractor shall be responsible for providing security services for the Site as needed for the protection of the Site and as determined in the District's sole discretion.

10.3 EMERGENCIES

10.3.1 Emergency Action

In an emergency affecting the safety of persons or property, the Contractor shall take any action necessary, at the Contractor's discretion, to prevent threatened damage, injury, or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 7.

10.3.2 Accident Reports

The Contractor shall promptly report in writing to the District all accidents arising out of or in connection with the Work, which caused death, personal injury, or property damage, giving full details and statements of any witnesses in conformance with Article 10.1.4. In addition, if death, serious personal injuries, or serious property damages are caused, the accident shall be reported in accordance with Paragraph 10.1.4, immediately by telephone or messenger to the District.

10.4 HAZARDOUS MATERIALS

10.4.1 Discovery of Hazardous Materials

In the event the Contractor encounters or suspects the presence on the job site of material reasonably believed to be asbestos, polychlorinated biphenyl (PCB), or any other material defined as being hazardous by § 25249.5 of the California Health and Safety Code, which has not been rendered harmless, the Contractor shall immediately stop Work in the area affected and report the condition to the District and the Architect in writing, whether or not such material was generated by the Contractor or the District. The Work in the affected area shall not thereafter be resumed, except by written agreement of the District and the Contractor, if in fact the material is asbestos, polychlorinated biphenyl (PCB), or other hazardous material, and has not been rendered harmless. The Work in the affected area shall be resumed only in the absence of asbestos, polychlorinated biphenyl (PCB), or other hazardous material, or when it has been rendered harmless by written agreement of the District and the Contractor.

10.4.2 Hazardous Material Work Limitations

In the event that the presence of hazardous materials is suspected or discovered on the Site (except in cases where asbestos and other hazardous material Work in the Contractor's responsibility), the District shall retain an independent testing laboratory to determine the nature of the material encountered and whether corrective measures or remedial action is required. The Contractor shall not be required pursuant to Article 7 to perform without consent

any Work in the affected area of the Site relating to asbestos, polychlorinated biphenyl (PCB), or other hazardous material, until any known or suspected hazardous material has been removed, or rendered harmless, or determined to be harmless by District, as certified by an independent testing laboratory and approved by the appropriate government agency.

10.4.3 Indemnification by Contractor for Hazardous Material Caused by Contractor

In the event the hazardous materials on the Project Site is caused by the Contractor, the Contractor shall pay for all costs of testing and remediation, if any, and shall compensate the District for any additional costs incurred as a result of Contractor's generation of hazardous material on the Project Site. In addition, the Contractor shall defend, indemnify and hold harmless District and its agents, officers, and employees from and against any and all claims, damages, losses, costs and expenses incurred in connection with, arising out of, or relating to, the presence of hazardous material on the Project Site.

10.4.4 Terms of Hazardous Material Provision

The terms of this Hazardous Material provision shall survive the completion of the Work and/or any termination of this Contract.

ARTICLE 11 INSURANCE AND BONDS

11.1 CONTRACTOR'S LIABILITY INSURANCE

11.1.1 Insurance Requirements

Before the commencement of the Work, the Contractor shall purchase from and maintain in a company or companies lawfully authorized to do business in California with a financial rating of at least an A-VIII status as rated in the most recent edition of Best's Insurance Reports or as amended by the Supplementary General Conditions, such insurance as will protect the District from claims set forth below, which may arise out of or result from the Contractor's Work under the Contract and for which the Contractor may be legally liable, whether such Work are by the Contractor, by a Subcontractor, by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable. Any required insurance shall not contain any exclusion that applies to the type of work performed by the Contractor under the Contract Documents.

- a. Claims for damages because of bodily injury, sickness, disease, or death of any person District would require indemnification and coverage for employee claim;
- b. Claims for damages insured by usual personal injury liability coverage, which are sustained by a person as a result of an offense directly or indirectly related to employment of such person by the Contractor or by another person;
- c. Claims for damages because of injury or destruction of tangible property, including loss of use resulting therefrom, arising from operations under the Contract Documents;
- d. Claims for damages because of bodily injury, death of a person, or property damage arising out of the ownership, maintenance, or use of a motor vehicle, all mobile equipment, and vehicles moving under their own power and engaged in the Work;
- e. Claims involving contractual liability applicable to the Contractor's obligations under the Contract Documents, including liability assumed by and the indemnity and defense obligations of the Contractor and the Subcontractors; and
- f. Claims involving Completed Operations, Independent Contractors' coverage, and Broad Form property damage, without any exclusions for collapse, explosion, demolition, underground coverage, and excavating. (XCU)
- g. Claims involving sudden or accidental discharge of contaminants or pollutants.

11.1.2 Specific Insurance Requirements

Contractor shall take out and maintain and shall require all Subcontractors, if any, whether primary or secondary, to take out and maintain:

Comprehensive General Liability Insurance with a combined single limit per occurrence of not less than \$2,000,000.00 or Commercial General Liability Insurance which provides limits of not less than:

- | | | |
|-----|--|----------------|
| (a) | Per occurrence (combined single limit) | \$2,000,000.00 |
| (b) | Project Specific Aggregate (for this Project only) | \$2,000,000.00 |
| (c) | Products and Completed Operations (aggregate) | \$2,000,000.00 |
| (d) | Personal and Advertising Injury Limit | \$1,000,000.00 |

Insurance Covering Special Hazards

The following Special hazards shall be covered by riders or riders to above mentioned public liability insurance or property damage insurance policy or policies of insurance, in amounts as follows:

- | | | |
|-----|--|----------------|
| (a) | Automotive and truck where operated in amounts | \$1,000,000.00 |
| (b) | Material Hoist where used in amount | \$1,000,000.00 |
| (c) | Explosion, Collapse and Underground (XCU coverage) | \$1,000,000.00 |
| (d) | Hazardous Materials | \$1,000,000.00 |

In addition, provide Excess Liability Insurance coverage in the amount of Four Million Dollars (\$4,000,000.00).

11.1.3 Subcontractor Insurance Requirements

The Contractor shall require its Subcontractors to take out and maintain public liability insurance and property damage insurance required under Article 11.1 in like amounts. A "claims made" or modified "occurrence" policy shall not satisfy the requirements of Article 11.1 without prior written approval of the District.

11.1.4 Additional Insured Endorsement Requirements

The Contractor shall name, on any policy of insurance required under Article 11.1, the District, CM, Architect, Inspector, the State of California, their officers, employees, agents, volunteers and independent contractors as additional insureds. Subcontractors shall name the Contractor, the District, Architect, Inspector, the State of California, their officers, employees, agents, volunteers and independent contractors as additional insureds. The Additional Insured Endorsement included on all such insurance policies shall be an ISO CG 20 10 (04/13), or an ISO CG 20 38 (04/13), or their equivalent as determined by the District in its sole discretion, and must state that coverage is afforded the additional insured with respect to claims arising out of operations performed by or on behalf of the insured. If the additional insureds have other insurance which is applicable to the loss, such other insurance shall be on an excess or contingent basis. The insurance provided by the Contractor pursuant to 11.1 must be designated in the policy as primary to any insurance obtained by the District. The amount of the insurer's liability shall not be reduced by the existence of such other insurance.

11.2 WORKERS' COMPENSATION INSURANCE

During the term of this Contract, the Contractor shall provide workers' compensation and employer's liability insurance for all of the Contractor's employees engaged in Work under this Contract on or at the Site of the Project and, in case any of the Contractor's Work is subcontracted, the Contractor shall require the Subcontractor to provide workers' compensation insurance for all the Subcontractor's employees engaged in Work under the subcontract. Any class of employee or employees not covered by a Subcontractor's insurance shall be covered by the Contractor's insurance. In case any class of employees engaged in Work under this Contract on or at the Site of the Project is not protected under the Workers' Compensation laws, the Contractor shall provide or cause a Subcontractor to provide insurance coverage for the protection of those employees not otherwise protected. The Contractor shall file with the District certificates of insurance as required under Article 11.6 and in compliance with Labor Code § 3700.

Workers' compensation limits as required by the Labor Code, but not less than \$1,000,000 and employers' liability limits of \$1,000,000 per accident for bodily injury or disease.

11.3 BUILDER'S RISK/ "ALL RISK" INSURANCE

11.3.1 Course-of-Construction Insurance Requirements

The Contractor, during the progress of the Work and until final acceptance of the Work by District upon completion of the entire Contract, shall maintain Builder's Risk, Course of Construction or similar first party property coverage issued on a replacement cost value basis consistent with the total replacement cost of all insurable Work and the Project included within the Contract Documents. Coverage is to insure against all risks of accidental direct physical loss, and must include, by the basic grant of coverage or by endorsement, the perils of vandalism, malicious mischief (both without any limitation regarding vacancy or occupancy), fire, sprinkler leakage, civil authority, sonic boom, earthquake, flood, collapse, wind, lightning, smoke and riot. The coverage must include debris removal, demolition, increased costs due to enforcement of building ordinance and law in the repair and replacement of damage and undamaged portions of the property, and reasonable costs for the Architect's and engineering services and expenses required as a result of any insured loss upon the Work and Project which is the subject of the Contract Documents, including completed Work and Work in progress, to the full insurable value

thereof. Such insurance shall include the District and the Architect as additional named insureds, and any other person with an insurable interest as designated by the District.

The Contractor shall submit to the District for its approval all items deemed to be uninsurable. The risk of the 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.

11.4 FIRE INSURANCE

Before the commencement of the Work, the Contractor shall procure, maintain, and cause to be maintained at the Contractor's expense, fire insurance on all Work subject to loss or damage by fire. The amount of fire insurance shall be sufficient to protect the Project against loss or damage in full until the Work is accepted by the District. This requirement may be waived upon confirmation by the District that such coverage is provided under the Builder's Risk Insurance being provided.

11.5 AUTOMOBILE LIABILITY

11.5.1 The District, Architect and Construction Manager, Inspectors, their directors, officers, employees, agents and volunteers shall be covered as additional insureds with respect to the Districtship, operation, maintenance, use, loading or unloading of any auto owned, leased, hired or borrowed by the Contractor or for which the Contractor is responsible. Such insurance coverage shall be primary and non-contributory insurance as respects the District, Architect, Construction Manager, Project Inspector, their directors, officers, employees, agents and volunteers, or if excess, shall stand in an unbroken chain of coverage excess of the Contractor's scheduled underlying coverage. Any insurance or self-insurance maintained by the District, Architect, Construction Manager, Project Inspector, their directors, officers, employees, agents and volunteers shall be excess of the Contractor's insurance and shall not be called upon to contribute with it. The insurer shall agree to waive all rights of subrogation against the District, Architect, Construction Manager, Project Inspector, their directors, officers, employees, agents and volunteers for losses paid under the terms of the insurance policy that arise from Work performed by the Contractor.

11.5.2 Insurance Services Office Business Auto Coverage Form Number CA 0001, Code 1 (any auto) is required. Comprehensive Automobile Liability insurance to include all autos, owned, non-owned, and hired, with limits of \$1,000,000 per accident for bodily injury and property damage

11.6 OTHER INSURANCE

The Contractor shall provide all other insurance required to be maintained under applicable laws, ordinances, rules, and regulations.

11.7 PROOF OF INSURANCE

The Contractor shall not commence Work nor shall it allow any Subcontractor to commence Work under this Contract until all required insurance and certificates have been

obtained and delivered in duplicate to the District for approval subject to the following requirements:

- a. Certificates and insurance policies shall include the following clause:

“This policy and any coverage shall not be suspended, voided, non-renewed, canceled, or reduced in required limits of liability or amounts of insurance or coverage until notice has been mailed via certified mail to the District. Date of cancellation or reduction may not be less than thirty (30) days after the date of mailing notice.”

- b. Certificates of insurance shall state in particular those insured, the extent of insurance, location and operation to which the insurance applies, the expiration date, and cancellation and reduction notices.
- c. Certificates of insurance shall clearly state that the District and the Architect are named as additional insureds under the policy described and that such insurance policy shall be primary to any insurance or self-insurance maintained by District.
- d. The Contractor and its Subcontractors shall produce a certified copy of any insurance policy required under this Section upon written request of the District.

11.8 COMPLIANCE

In the event of the failure of Contractor to furnish and maintain any insurance required by this Article 11, the Contractor shall be in default under the Contract. Compliance by Contractor with the requirement to carry insurance and furnish certificates or policies evidencing the same shall not relieve the Contractor from liability assumed under any provision of the Contract Documents, including, without limitation, the obligation to defend and indemnify the District and the Architect.

11.9 WAIVER OF SUBROGATION

Contractor waives (to the extent permitted by law) any right to recover against the District for damages to the Work, any part thereof, or any and all claims arising by reason of any of the foregoing, but only to the extent that such damages and/or claims are covered by property insurance and only to the extent of such coverage (which shall exclude deductible amounts) by insurance actually carried by the District.

The provisions of this section are intended to restrict each party to recovery against insurance carriers only to the extent of such coverage and waive fully and for the benefit of each, any rights and/or claims which might give rise to a right of subrogation in any insurance carrier. The District and the Contractor shall each obtain in all policies of insurance carried by either of them, a waiver by the insurance companies thereunder of all rights of recovery by way of subrogation for any damages or claims covered by the insurance.

11.10 PERFORMANCE AND PAYMENT BONDS

11.10.1 Bond Requirements

Unless otherwise specified in the Supplemental Conditions, prior to commencing any portion of the Work, the Contractor shall furnish separate payment and performance bonds for its portion of the Work which shall cover 100% faithful performance of and payment of all obligations arising under the Contract Documents and/or guaranteeing the payment in full of all claims for labor performed and materials supplied for the Work. All bonds shall be provided by a corporate surety authorized and admitted to transact business in California as sureties.

To the extent, if any, that the Contract Price is increased in accordance with the Contract Documents, the Contractor shall, upon request of the District, cause the amount of the bonds to be increased accordingly and shall promptly deliver satisfactory evidence of such increase to the District. To the extent available, the bonds shall further provide that no change or alteration of the Contract Documents (including, without limitation, an increase in the Contract Price, as referred to above), extensions of time, or modifications of the time, terms, or conditions of payment to the Contractor will release the surety. If the Contractor fails to furnish the required bonds, the District may terminate the Contract for cause.

11.10.2 Surety Qualification

Only bonds executed by admitted Surety insurers as defined in Code of Civil Procedure § 995.120 shall be accepted. Surety must be a California-admitted surety and listed by the U.S. Treasury with a bonding capacity in excess of the Project cost.

11.10.3 Alternate Surety Qualifications

If a California-admitted surety insurer issuing bonds does not meet these requirements, the insurer will be considered qualified if it is in conformance with § 995.660 of the California Code of Civil Procedure and proof of such is provided to the District.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

12.1 COMPLIANCE WITH TITLE 24 INSTALLATION REQUIREMENTS

Contractor is aware of the requirements governing Contractor's Work under title 24 Section 4-343 which provides, in pertinent part:

4-343. Duties of the Contractor.

(a) **Responsibilities.** It is the duty of the contractor to complete the Work covered by his or her contract in accordance with the approved Plans and Specifications therefore. The contractor in no way is relieved of any responsibility by the activities of the architect, engineer, Inspector or DSA in the performance of such duties.

(b) **Performance of the Work.** The contractor shall carefully study the approved Plans and Specifications and shall plan a schedule of operations well ahead of time. If at any time it is discovered that Work is being done which is not in accordance with the approved Plans and Specifications, the contractor shall correct the Work immediately. All inconsistencies or items which appear to be in error in the Plans and Specifications shall be promptly called to the attention of the architect or registered engineer, through the Inspector, for interpretation or correction. In no case, however, shall the instruction of the architect or registered engineer be construed to cause Work to be done which is not in conformity with the approved Plans, Specifications, and Change Orders. The contractor must notify the Project Inspector, in advance, of the commencement of construction of each and every aspect of the Work.

12.1.1 Issuance of Notices of Non-Compliance

The Inspector may issue a Notice of Non-Compliance on the Project indicating deviation from Plans and Specifications. It is Contractor's responsibility to correct all deviations from the approved Plans and Specifications unless the District has issued an Immediate Change Directive. In such case, the Contractor shall proceed with the Work with the understandings of the District as set forth in the ICD and as specifically noted in Article 7.3.

12.2 SPECIAL NOTICE OF AMERICAN'S WITH DISABILITIES ACT

Some of the requirements in the Plans and Specifications are meant to comply with the Americans with Disabilities Act ("ADA"). The requirements of the ADA are technical in nature and may appear to be minor in nature (i.e. whether a walkway or ramp has a 2% cross-slope). Contractor is warned that even the slightest deviation from the specific requirements from the ADA is considered a Civil Rights Violation and subjects the District to fines of three times actual damages sustained by a handicap individual or up to \$4,000 per violation and attorney's fees required to enforce the ADA violation. As a result of the significant liability and exposure associated with ADA aspects of the Contract, Contractor shall take special care to meet all ADA requirements detailed in the Plans and Specifications. Failure to comply with ADA rules that results in a Notice of Non-Compliance shall be repaired to meet ADA requirements promptly. In addition, any ADA violations that are not identified by Inspector or Architect that are later identified shall be repaired and charged back to the Contractor through a Deductive Change Order.

12.2.1 Indemnification of ADA Claims

Contractor shall indemnify, hold harmless and defend the CJUSD from ADA claims arising from the failure to comply with the Plans and Specifications. Further, any withholdings for ADA violations under Article 9.6 shall include potential redesign costs and an accelerated repair costs due to the potential for ADA claims arising from DSA posting of ADA violations on the Project.

12.3 UNCOVERING OF WORK

12.3.1 Uncovering Work for Required Inspections

Work shall not be covered without the Inspector's review and the Architect's knowledge that the Work conforms with the requirements of the approved Plans and Specifications (except in the case of an ICD under Article 7.3). Inspector must be timely notified of inspections and of new areas so Work can be inspected at least 48 hours before opening a new area (For example, see DSA Form 156 for Commencement/Completion of Work Notification which requires "at least 48 hour" advance notification of a new area). An Inspector must comply with DSA protocols for signing each category or phase of Work under DSA Form 152 (in compliance with the Form 152 Manual) or a Notice of Deviation (DSA Form 154) will be issued requiring the Work that was not inspected be uncovered for inspection. Thus, if a portion of the Work is covered without Inspection or Architect approval, is subject to a Notice of Non-Compliance for being undertaken without Inspection, or otherwise not in compliance with the Contract Documents, after issuance of a Written Notice of Non-Compliance (Form 154) or a written notice to uncover Work, Contractor shall promptly uncover all Work (which includes furnishing all necessary facilities, labor, and material) for the Inspector's or the Architect's observation and such Work be replaced at the Contractor's expense without change in the Contract Sum or Time.

12.3.2 Costs for Inspections Not Required

If a portion of the Work has been covered is believed to be Non-Conforming to the Plans and Specifications, even if the Form 152 for the category of Work has been signed by the Inspector, the Inspector or the Architect may request to see such Work, and it shall be promptly uncovered by the Contractor. If such Work is in accordance with the Contract Documents, costs of uncover and replacement shall, by appropriate Change Order and shall, be charged to the District. If such Work is not in accordance with Contract Documents, the Contractor shall be responsible for all costs to uncover the Work, delays incurred to uncover the Work, and Contractor shall pay all costs to correct the Non-Confirming construction condition unless the condition was caused by the District or a separate contractor, in which event the District shall be responsible for payment of such costs to the Contractor.

12.4 CORRECTION OF WORK

12.4.1 Correction of Rejected Work

The Contractor shall promptly correct the Work rejected by the Inspector or the District upon recommendation of the Architect as failing to conform to the requirements of the Contract Documents, whether observed before or after Completion and whether or not fabricated, installed, or completed. The Contractor shall bear costs of correcting the rejected Work, including

cost for delays that may be incurred by Contractor or subcontractors, the cost for additional testing, inspections, and compensation for the Inspector's or the Architect's services and expenses made necessary thereby (including costs for preparing a CCD, DSA CCD review fees, and additional inspection and special inspection costs).

12.4.2 Two-Year Warranty Corrections

If, within two (2) year after the date of Completion of the Work or a designated portion thereof, or after the date for commencement of warranties established under Paragraph 9.9.1, or by the terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of written notice from the District to do so unless the District has previously given the Contractor a written acceptance of such condition. This period of two (2) years shall be extended with respect to portions of the Work first performed after Completion by the period of time between Completion and the actual performance of the Work. This obligation under this Paragraph 12.4.2 shall survive acceptance of the Work under the Contract and termination of the Contract. The District shall give such notice promptly after discovery of the condition.

12.4.3 District's Rights if Contractor Fails to Correct

If the Contractor fails to correct nonconforming Work within a reasonable time, the District may correct the Work and seek a Deductive Change Order, pursuant to Article 9.6 or Article 2.2.

ARTICLE 13 MISCELLANEOUS PROVISIONS

13.1 GOVERNING LAW

The Contract shall be governed by the law of the place where the Project is located.

13.2 SUCCESSORS AND ASSIGNS

The District and the Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to the other party hereto and to partners, successors, assigns, and legal representatives of such other party in respect to covenants, agreements, and obligations contained in the Contract Documents. Neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make such an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

13.3 WRITTEN NOTICE

In the absence of specific notice requirements in the Contract Documents, written notice shall be deemed to have been duly served if delivered in person to the individual, member of the firm or entity, or to an officer of the corporation for which it was intended, or if delivered at or sent by registered or certified mail to the last business address known to the party giving notice.

13.4 RIGHTS AND REMEDIES

13.4.1 Duties and Obligations Cumulative

Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights, and remedies otherwise imposed or available by law.

13.4.2 No Waiver

No action or failure to act by the Inspector, the District, or the Architect shall constitute a waiver of a right or duty afforded them under the Contract Documents, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed in writing.

13.5 TESTS AND INSPECTIONS

13.5.1 Compliance

Tests, inspections, and approvals of portions of the Work required by the Contract Documents will comply with Division 1, Title 24, and with all other laws, ordinances, rules, regulations, or orders of public authorities having jurisdiction.

13.5.2 Independent Testing Laboratory

The District will select and pay an independent testing laboratory to conduct all tests and inspections. Selection of the materials required to be tested shall be made by the laboratory or the District's representative and not by the Contractor. Any costs or expenses of inspection or testing incurred outside of a fifty (50) mile radius from the Project Site or not located in a contiguous county to the Site, whichever distance is greater, shall be paid for by the District, invoiced by the District to the Contractor, and deducted from the next Progress Payment.

13.5.3 Advance Notice to Inspector

The Contractor shall notify the Inspector a sufficient time in advance of its readiness for required observation or inspection so that the Inspector may arrange for same. The Contractor shall notify the Inspector a sufficient time in advance of the manufacture of material to be supplied under the Contract Documents which must, by terms of the Contract Documents, be tested in order that the Inspector may arrange for the testing of the material at the source of supply.

13.5.4 Testing Off-Site

Any material shipped by the Contractor from the source of supply, prior to having satisfactorily passed such testing and inspection or prior to the receipt of notice from said Inspector that such testing and inspection will not be required, shall not be incorporated in the Work.

13.5.5 Additional Testing or Inspection

If the Inspector, the Architect, the District, or public authority having jurisdiction determines that portions of the Work require additional testing, inspection, or approval not included under Paragraph 13.5.1, the Inspector will, upon written authorization from the District, make arrangements for such additional testing, inspection, or approval. The District shall bear such costs except as provided in Paragraph 13.5.7.

13.5.6 Costs for Retesting

If such procedures for testing, inspection, or approval under Paragraphs 13.5.1 and 13.5.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, the Contractor shall bear all costs arising from such failure, including those of re-testing, re-inspection, or re-approval, including, but not limited to, compensation for the Architect's services and expenses. Any such costs shall be paid by the District, invoiced to the Contractor, and deducted from the next Progress Payment.

13.5.7 Costs for Premature Test

In the event the Contractor requests any test or inspection for the Project and is not completely ready for the inspection, the Contractor shall be invoiced by the District for all costs and expenses resulting from that testing or inspection, including, but not limited to, the Inspector's and Architect's fees and expenses, and the amount of the invoice shall be deducted from the next Progress Payment.

13.6 TRENCH EXCAVATION

13.6.1 Trenches Greater Than Five Feet

Pursuant to Labor Code Section 6705, if the Contract Price exceeds \$25,000 and involves the excavation of any trench or trenches five (5) feet or more in depth, the Contractor shall, in advance of excavation, submit to the District or a Registered Civil or Structural Engineer employed by the District or Architect, a detailed plan showing the design of shoring for protection from the hazard of caving ground during the excavation of such trench or trenches.

13.6.2 Excavation Safety

If such plan varies from the Shoring System Standards established by the Construction Safety Orders, the plan shall be prepared by a Registered Civil or Structural Engineer, but in no case shall such plan be less effective than that required by the Construction Safety Orders. No excavation of such trench or trenches shall be commenced until said plan has been accepted by the District or by the person to whom authority to accept has been delegated by the District.

13.6.3 No Tort Liability of District

Pursuant to Labor Code § 6705, nothing in this Article shall impose tort liability upon the District or any of its employees.

13.6.4 No Excavation without Permits

The 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 Site prior to the commencement of any excavation.

13.7 WAGE RATES, TRAVEL, AND SUBSISTENCE

13.7.1 Wage Rates

Pursuant to the provisions of Article 2 (commencing at § 1720), Chapter 1, Part 7, Division 2, of the Labor Code, the District has obtained the general prevailing rate of per diem wages and the general prevailing rate for holiday and overtime work in the locality in which this public works project is to be performed for each craft, classification, or type of worker needed for this Project from the Director of the Department of Industrial Relations ("Director"). These rates are on file at the administrative office of the District and are also available from the Director of the Department of Industrial Relations. Copies will be made available to any interested party on request. The Contractor shall post a copy of such wage rates at appropriate, conspicuous, weatherproof points at the Site.

Any worker employed to perform Work on the Project, but such Work is not covered by any classification listed in the published general prevailing wage rate determinations or per diem wages determined by the Director of the Department of Industrial Relations, shall be paid not less than the minimum rate of wages specified therein for the classification which most nearly corresponds to the employment of such person in such classification.

13.7.2 Holiday and Overtime Pay

Holiday and overtime work, when permitted by law, shall be paid for at the rate set forth in the prevailing wage rate determinations issued by the Director of the Department of Industrial Relations or at least one and one-half (1½) times the specified basic rate of per diem wages, plus employer payments, unless otherwise specified in the Contract Documents or authorized by law.

13.7.3 Wage Rates Not Affected by Subcontracts

The Contractor shall pay and shall cause to be paid each worker engaged in the execution of the Work on the Project not less than the general prevailing rate of per diem wages determined by the Director, regardless of any contractual relationship which may be alleged to exist between the Contractor or any Subcontractor and such workers.

13.7.4 Per Diem Wages

The Contractor shall pay and shall cause to be paid to each worker needed to execute the Work on the Project per diem wages including, but not limited to, employer payments for health and welfare, pensions, vacation, travel time and subsistence pay as provided for in Labor Code §1773.1.

13.7.5 Forfeiture and Payments

Pursuant to Labor Code §1775, the Contractor shall forfeit to the District, not more than Two Hundred Dollars (\$200.00) for each calendar day, or portion thereof, for each worker paid less than the prevailing wages rates as determined by the Director of the Department of Industrial Relations, for the work or craft in which the worker is employed for any Work done under the Agreement by the Contractor or by any Subcontractor under it. The amount of the penalty shall be determined by the Labor Commissioner and shall be based on consideration of: (1) whether the Contractor or Subcontractor's failure to pay the correct rate of per diem wages was a good faith mistake and, if so, the error was promptly and voluntarily correct upon being brought to the attention of the Contractor or Subcontractor; and (2) whether the Contractor or Subcontractor has a prior record of failing to meet its prevailing wage obligations.

13.7.6 Monitoring and Enforcement by Labor Commissioner

Monitoring and enforcement of the prevailing wage laws and related requirements will be performed by the Labor Commissioner/ Department of Labor Standards Enforcement (DLSE). The Contractor and all Subcontractors shall be required to furnish, at least monthly, certified payroll records directly to the Labor Commissioner in accordance with Labor Code section 1771.4. All payroll records shall be furnished in a format required by the Labor Commissioner. The Contractor and all Subcontractors must sign up for, and utilize, the Labor Commissioner's electronic certified payroll records submission system. The CJUSD will have direct and immediate access to all CPRs for the Project that are submitted through the Labor Commissioner's system. The CJUSD can use this information for any appropriate purpose, including monitoring compliance, identifying suspected violations, and responding to Public Records Act requests.

The Labor Commissioner/ DLSE may conduct various compliance monitoring and enforcement activities including, but not limited to, confirming the accuracy of payroll records, conducting worker interviews, conducting audits, requiring submission of itemized statements prepared in accordance with Labor Code section 226, and conducting random in-person inspections of the Project site ("On-Site Visits"). On-Site Visits may include inspections of records, inspections of the Work site and observation of work activities, interviews of workers and others involved with the Project, and any other activities deemed necessary by the Labor Commissioner/DLSE to ensure compliance with prevailing wage requirements. The Labor Commissioner/DLSE shall have free access to any construction site or other place of labor and may obtain any information or statistics pertaining to the lawful duties of the Labor Commissioner/DLSE.

Any lawful activities conducted or any requests made by the Labor Commissioner/DLSE shall not be the basis for any delays, claims, costs, damages or liability of any kind against the CJUSD by the Contractor. Contractor and all Subcontractors shall cooperate and comply with any lawful requests by the Labor Commissioner/ DLSE. The failure of the Labor Commissioner, DLSE, or any other entity related to the Department of Industrial Relations to comply with any requirement imposed by the California Code of Regulations, Title 8, Chapter 8 shall not of itself constitute a defense to the failure to pay prevailing wages or to comply with any other obligation imposed by Division 2, Part 7, Chapter 1 of the Labor Code.

Prior to commencing any Work on the Project, the Contractor shall post the required notice/poster required under the California Code of Regulations and Labor Code section 1771.4 in both English and Spanish at a conspicuous, weatherproof area at the Project site. The required notice/poster is available on the Labor Commissioner's website.

13.8 RECORDS OF WAGES PAID

13.8.1 Payroll Records

- a. Pursuant to §1776 of the Labor Code, the Contractor and each Subcontractor shall keep an accurate payroll record showing the name, address, social security number, work classification and straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker or other employee employed by him or her in connection with the Project.
- b. All payroll records as specified in Labor Code §1776 of the Contractor and all Subcontractors shall be certified and furnished directly to the Labor Commissioner in accordance with Labor Code §1771.4(a)(3) on a monthly basis (or more frequently if required by the CJUSD or the Labor Commissioner) and in a format prescribed by the Labor Commissioner. Payroll records as specified in Labor Code §1776 shall be certified and submitted to the CJUSD with each application for payment. All payroll records shall be available for inspection at all reasonable hours at the principal office of the Contractor on the following basis:
 1. A certified copy of an employee's payroll record shall be made available for inspection or furnished to the employee or his or her authorized representative on request.

2. A certified copy of all payroll records shall be made available for inspection or furnished upon request to a representative of District, the Division of Labor Standards Enforcement or the Division of Apprenticeship Standards of the Department of Industrial Relations.
 3. A certified copy of all payroll records shall be made available upon request by the public for inspection or for copies thereof. However, a request by the public shall be made through the District, the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement. If the requested payroll records have not been provided pursuant to Paragraph (2) above, the requesting party shall, prior to being provided the records, reimburse the costs, according to law for the preparation by the Contractor, Subcontractor(s), 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.
- c. The certified payroll records shall be on forms provided by the Division of Labor Standards Enforcement or shall contain the same information as the forms provided by the Division of Labor Standards Enforcement.
 - d. The Contractor or Subcontractor(s) shall file a certified copy of all payroll records with the entity that requested such records within 10 calendar days after receipt of a written request.
 - e. 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 to prevent disclosure of an individual's name, address and social security number. The name and address of the Contractor awarded the Contract or the Subcontractor(s) performing the Contract shall not be marked or obliterated. Any copy of records made available for inspection by, or furnished to, a joint labor-management committee established pursuant to the federal Labor Management Cooperation Act of 1978 (Section 175a of Title 29 of the United States Code) shall be marked or obliterated only to prevent disclosure of an individual's name and social security number. Notwithstanding any other provision of law, agencies that are included in the Joint Enforcement Strike Force on the Underground Economy established pursuant to Section 329 of the Unemployment Insurance Code and other law enforcement agencies investigating violations of law shall, upon request, be provided non-redacted copies of certified payroll records.
 - f. The Contractor shall inform the District of the location of all payroll records, including the street address, city and county, and shall, within five working days, provide a notice of a change of location and address.
 - g. The Contractor or Subcontractor(s) shall have 10 calendar days in which to comply subsequent to receipt of a written notice requesting payroll records. In the event that the Contractor or Subcontractor(s) fails to comply

within the 10-day period, the Contractor or Subcontractor(s) shall, as a penalty to the District, forfeit One Hundred Dollars (\$100.00) 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, these penalties shall be withheld from progress payments then due.

Responsibility for compliance with this Article shall rest upon the Contractor.

13.8.2 Withholding of Contract Payments & Penalties

The District may withhold or delay contract payments to the Contractor and/or any Subcontractor if:

- a. The required prevailing rate of per diem wages determined by the Director of the Department of Industrial Relations is not paid to all workers employed on the Project; or
- b. The Contractor or Subcontractor(s) fail to submit all required certified payroll records with each application for payment, but not less than once per month; or
- c. The Contractor or Subcontractor(s) submit incomplete or inadequate payroll records; or
- d. The Contractor or Subcontractor(s) fail to comply with the Labor Code requirements concerning apprentices; or
- e. The Contractor or Subcontractor(s) fail to comply with any applicable state laws governing workers on public works projects.

13.9 APPRENTICES

13.9.1 Apprentice Wages and Definitions

All apprentices employed by the Contractor to perform services under the Contract shall be paid the standard wage paid to apprentices under the regulations of the craft or trade for which he or she is employed, and as determined by the Director of the Department of Industrial Relations, and shall be employed only at the craft or trade to which he or she is registered. Only apprentices, as defined in §3077 of the Labor Code, who are in training under apprenticeship standards that have been approved by the Chief of the Division of Apprenticeship Standards and who are parties to written apprenticeship agreements under Chapter 4 (commencing with §3070) of Division 3, are eligible to be employed under this Contract. The employment and training of each apprentice shall be in accordance with the apprenticeship standards and apprentice agreements under which he or she is training, or in accordance with the rules and regulations of the California Apprenticeship Council.

13.9.2 Employment of Apprentices

Contractor agrees to comply with the requirements of Labor Code §1777.5. The Contractor awarded the Project, or any Subcontractor under him or her, when performing any of the Work under the Contract or subcontract, employs workers in any apprenticeable craft or trade, the Contractor and Subcontractor shall employ apprentices in the ratio set forth in Labor Code §1777.5. The Contractor or any Subcontractor must apply to any apprenticeship program in the craft or trade that can provide apprentices to the Project site for a certificate approving the contractor or subcontractor under the apprenticeship standards for the employment and training of apprentices in the area or industry affected. However, the decision of the apprenticeship program to approve or deny a certificate shall be subject to review by the Administrator of Apprenticeship. The apprenticeship program or programs, upon approving the Contractor or Subcontractor, shall arrange for the dispatch of apprentices to the Contractor or Subcontractor upon the Contractor's or Subcontractor's request. "Apprenticeable craft or trade" as used in this Article means a craft or trade determined as an apprenticeable occupation in accordance with the rules and regulations prescribed by the California Apprenticeship Council. The ratio of work performed by apprentices to journeyman employed in a particular craft or trade on the Project shall be in accordance with Labor Code §1777.5.

13.9.3 Submission of Contract Information

Prior to commencing Work on the Project, the Contractor and Subcontractors shall submit contract award information to the applicable apprenticeship program(s) that can supply apprentices to the Project and make the request for the dispatch of apprentices in accordance with the Labor Code. The information submitted shall include an estimate of journeyman hours to be performed under the Contract, the number of apprentices proposed to be employed, and the approximate dates the apprentices would be employed. A copy of this information shall also be submitted to the District if requested. Within 60 days after concluding Work on the Project, the Contractor and Subcontractors shall submit to the District, if requested, and to the apprenticeship program a verified statement of the journeyman and apprentice hours performed on the Project.

13.9.4 Apprentice Fund

The Contractor or any Subcontractor under him or her, who, in performing any of the Work under the Contract, employs journeymen or apprentices in any apprenticeable craft or trade shall contribute to the California Apprenticeship Council the same amount that the Director determines is the prevailing amount of apprenticeship training contributions in the area of the Project. The Contractor and Subcontractors may take as a credit for payments to the California Apprenticeship Council any amounts paid by the Contractor or Subcontractor to an approved apprenticeship program that can supply apprentices to the Project. The Contractor and Subcontractors may add the amount of the contributions in computing his or her bid for the Contract.

13.9.5 Prime Contractor Compliance

The responsibility of compliance with Article 13 and §1777.5 of the Labor Code for all apprenticeable occupations is with the Prime Contractor. Any Contractor or Subcontractor that knowingly violates the provisions of this Article or Labor Code §1777.5 shall be subject to the penalties set forth in Labor Code §1777.7.

13.10 ASSIGNMENT OF ANTITRUST CLAIMS

13.10.1 Application

Pursuant to Government Code § 4551, in entering into a public works contract or a subcontract to supply goods, services, or materials pursuant to a public works contract, the Contractor or Subcontractor offers and agrees to assign to the District all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act, (15 U.S.C. § 15) or under the Cartwright Act (Chapter 2 [commencing with § 16700] of Part 2 of Division 7 of the Business and Professions Code), arising from the purchase of goods, services, or materials pursuant to the public works contract or the subcontract. This assignment shall be made and become effective at the time the awarding body tenders Retention Payment to the Contractor, without further acknowledgment by the parties. If the District receives, either through judgment or settlement, a monetary recovery for a cause of action assigned under Chapter 11 (commencing with § 4550) of Division 5 of Title 1 of the Government Code, the assignor 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 bid price, less the expenses incurred in obtaining that portion of the recovery.

13.10.2 Assignment of Claim

Upon demand in writing by the assignor, the District shall, within one (1) 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 the District has not been injured thereby or the District declines to file a court action for the cause of action.

13.11 STATE AND DISTRICT CONDUCTED AUDITS

Pursuant to and in accordance with the provisions of Government Code § 10532, or any amendments thereto, all books, records, and files of the District, the Contractor, or any Subcontractor connected with the performance of this Contract involving the expenditure of state funds in excess of Ten Thousand Dollars (\$10,000.00), including, but not limited to, the administration thereof, shall be subject to the examination and audit of the Office of the Auditor General of the State of California for a period of five (5) years after Retention Payment is made or a Notice of Completion is Recorded, whichever occurs first. Contractor shall preserve and cause to be preserved such books, records, hard drives, electronic media, and files for the audit period.

Pursuant to the remedies under Public Contract Code Section 9201 and Government Code Section 930.2, Contractor, through execution of this Agreement, also agrees the District shall have the right to review and audit, upon reasonable notice, the books and records of the Contractor concerning any monies associated with the Project. The purpose of this Audit is to quickly and efficiently resolve disputes based on the actual costs incurred and to reduce the uncertainty in resolving disputes with limited information. The District shall perform any audits at its own cost and any such audit shall be performed by an independent auditor, having no direct or indirect relationship with the functions or activities being audited or with the business conducted by the Contractor or District. In the even the independent auditor determines that Change Orders, Response to Request for Proposals, Claims, Appeal of Claims, or other requests for payment the

Auditor shall report the results of the Audit findings to the District and provide a copy to the Contractor after giving the District Board the opportunity for at least 10 days review. If the Contractor disputes the findings of the independent auditor, such dispute shall be handled in the manner set forth under Article 4.6.2 entitled Disputes.

If Contractor having agreed to the terms of this Contract fails to produce books or records requested by Auditor, such failure to produce books or records that were required to be preserved for audit, it shall be presumed that the information contained in the withheld books or records were unfavorable to the Contractor and the Auditor shall note this refusal in the results of the Audit findings for further evaluation by the District and the District's Board. The refusal to release records that are concerning monies associated with the Project may be used as a grounds to debar the Contractor for failure to preserve records under Article 13.11 and the failure to produce required audit records may also be used as a grounds for a negative finding against the Contractor depending on the significance of the records that are withheld by Contractor. Failure to produce Job Cost Data tied to Job cost categories and budgets shall be presumed an intentional failure to produce key audit records. Similarly, failure to produce daily time records (prepared at or near the time of the Work actually took place (See Article 3.16) shall be presumed an intentional failure to produce key audited records.

If Contractor is seeking costs for inefficiency, home office overhead, or unanticipated increased costs due to delays or acceleration, Contractor shall also produce copies of the original bid tabulation utilized in submitting Contractors bid for the Project. This document shall be considered confidential and shall not be subject to disclosure through a Public Records Act and shall not be distributed to anyone other than the District and the District's counsel. This bid tabulation shall only be used in litigation, arbitration, evaluation of Claims or Disputes, Audit, and trial. If the records for the bid tabulation are kept on a computer, the Contractor shall also produce all metadata (in native format) that accompanies the bid tabulation for inspection to prove the authenticity of the underlying bid tabulation. Failure to produce the bid tabulation for review of inefficiency, home office overhead, or unanticipated increased costs due to delays or accelerations shall be considered material evidence that the bid tabulation was not favorable to the Contractor. This evidence shall be entered as a jury instruction for trial that the bid tabulation was not produced and the bid tabulation information was unfavorable to the Contractor. The evidence may also be used in Debarment Proceedings, and noted as an exception to an Audit Findings.

Upon notification of Contractor concerning the results of the audit and a reasonable time has passed for Contractor to respond to Audit Findings and if either there is no Dispute of the Audit findings under Article 4.6.2 or if the result after utilizing the Disputes Clause confirms the Audit findings, the District may seek reimbursement for overstated Claims, Change Orders, or Appeal of Claims and may also undertake debarment proceedings.

13.12 STORM WATER POLLUTION PREVENTION: NOT USED.

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

14.1 TERMINATION BY THE CONTRACTOR FOR CAUSE

14.1.1 Grounds for Termination

The Contractor may terminate the Contract if the Work is stopped for a period of thirty (30) consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons performing portions of the Work for whom the Contractor is contractually responsible, for only the following reasons:

- a. Issuance of an order of a court or other public authority having jurisdiction;
or
- b. An act of the United State or California government, such as a declaration of national emergency.

14.1.2 Notice of Termination

If one of the above reasons exists, the Contractor may, upon written notice of seven (7) additional days to the District, terminate the Contract and recover from the District payment for Work executed and for reasonable costs verified by the Architect with respect to materials, equipment, tools, construction equipment, and machinery, including reasonable overhead, profit, and damages.

14.2 TERMINATION BY THE DISTRICT FOR CAUSE

14.2.1 Grounds for Termination

The District may terminate the Contractor and/or this Contract for the following reasons:

- a. Persistently or repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- b. Persistently or repeatedly is absent, without excuse, from the job site;
- c. Fails to make payment to Subcontractors, suppliers, materialmen, etc.;
- d. Persistently disregards laws, ordinances, rules, regulations, or orders of a public authority having jurisdiction;
- e. Fails to provide a schedule or fails or refuses to update schedules required under the Contract;
- f. Falls behind on the Project and refuses or fails to undertake a recovery schedule;
- g. If the Contractor has been debarred from performing Work;

- h. Becomes bankrupt or insolvent, including the filing of a general assignment for the benefit of creditors; or
- i. Otherwise is in substantial breach of a provision of the Contract Documents.

14.2.2 Notification of Termination

When any of the above reasons exist, the District may, without prejudice to any other rights or remedies of the District and after giving the Contractor and the Contractor's surety written notice of seven (7) days, terminate the Contractor and/or this Contract and may, subject to any prior rights of the surety:

- a. Take possession of the Project and of all material, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
- b. Accept assignment of Subcontracts. Contractor acknowledges and agrees that if the District (in its sole and absolute discretion) decides to takeover completion of the Project, the Contractor agrees to immediately assign all subcontracts to the District which the District has chosen to accept;
- c. Complete the Work by any reasonable method the District may deem expedient, including contracting with a replacement contractor or contractors; and,
- d. Agree to accept a takeover and completion arrangement with Surety that is acceptable to the District Board.

14.2.3 Takeover and Completion of Work after Termination for Cause

A Termination for Cause is an urgent matter which requires immediate radiation since Project Work is open and incomplete, the site is subject to vandalism and theft, the Project site is considered a public nuisance, and there is a possibility of injury and deterioration of the Project Work and materials. Thus, the District shall be entitled to enter a takeover contract to either remediate the unfinished condition or complete the Work for this Project.

14.2.4 Payments Withheld

If the District terminates the Contract for one of the reasons stated in Paragraph 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is complete. All costs associated with the termination and completion of the Project shall be the responsibility of the Contractor and/or its surety.

14.2.5 Payments upon Completion

If the unpaid balance of the Contract Sum exceeds costs of completing the Work, including compensation for professional services and expenses made necessary thereby, such excess shall be paid to the Contractor. If such costs exceed the unpaid balance, the Contractor and its Surety shall pay the difference to the District. The amount to be paid to the Contractor, or

District, as the case may be, shall be certified by the Architect upon application. This payment obligation shall survive completion of the Contract.

14.3 TERMINATION OF CONTRACT BY DISTRICT (CONTRACTOR NOT AT FAULT)

14.3.1 Termination for Convenience

District may terminate the Contract upon fifteen (15) calendar days of written notice to the Contractor and use any reasonable method the District deems expedient to complete the project, including contracting with replacement contractor or contractors, if it is found that reasons beyond the control of either the District or Contractor make it impossible or against the District's interest to complete the Work. In such a case, the Contractor shall have no claims against the District except: (1) the actual cost for labor, materials, and services performed which may be documented through timesheets, invoices, receipts, or otherwise, and (2) ten percent (10%) profit and overhead, and (3) five percent (5%) termination cost of the total of items (1) and (2). Contractor acknowledges and agrees that if the District (in its sole and absolute discretion) decides to takeover completion of the Project, the Contractor agrees to immediately assign all subcontracts to the District which the District has chosen to accept.

14.3.2 Non-Appropriation of Funds/ Insufficient Funds

In the event that sufficient funds are not appropriated to complete the Project or the District determines that sufficient funds are not available to complete the Project, District may terminate or suspend the completion of the Project at any time by giving written notice to the Contractor. In the event that the District exercises this option, the District shall pay for any and all work and materials completed or delivered onto the site for which value is received, and the value of any and all work then in progress and orders actually placed which cannot be canceled up to the date of notice of termination. The value of work and materials not otherwise already paid for by the District up to the time of termination under this Paragraph shall include a factor of fifteen percent (15%) for the Contractor's overhead and profit and there shall be no other costs or expenses paid to Contractor. All work, materials and orders paid for pursuant to this provision shall become the property of the District. District may, without cause, order Contractor in writing to suspend, delay or interrupt the Project in whole or in part for such period of time as District may determine. Adjustment shall be made for increases in the cost of performance of the Agreement caused by suspense, delay or interruption.

14.4 REMEDIES OTHER THAN TERMINATION

If a default occurs, the District may, without prejudice to any other right or remedy, including, without limitation, its right to terminate the Contract pursuant to Article 14.2, do any of the following:

- a. Permit the Contractor to continue under this Contract, but make good such deficiencies or complete the Contract by whatever method the District may deem expedient, and the cost and expense thereof shall be deducted from the Contract Price or paid by the Contractor to the District on demand;
- b. If the workmanship performed by the Contractor is faulty or defective materials are provided, erected or installed, then the District may order the Contractor to remove the faulty workmanship or defective materials and to replace the same with work

or materials that conform to the Contract Documents, in which event the Contractor, at its sole costs and expense, shall proceed in accordance with the District's order and complete the same within the time period given by the District in its notice to the Contractor; or

- c. Initiate procedures to declare the Contractor a non-responsible bidder for a period of two (2) to five (5) years thereafter.

All amounts expended by the District in connection with the exercise of its rights hereunder shall accrue interest from the date expended until paid to the District at the maximum legal rate. The District may retain or withhold any such amounts from the Contract Price. If the Contractor is ordered to replace any faulty workmanship or defective materials pursuant to Paragraph (b) above, the Contractor shall replace the same with new work or materials approved by the Architect and the District, and, at its own cost, shall repair or replace, in a manner and to the extent the Architect and the District shall direct, all Work or material that is damaged, injured or destroyed by the removal of said faulty workmanship or defective material, or by the replacement of the same with acceptable work or materials. In no event shall anything in this Paragraph be deemed to constitute a waiver by the District of any other rights or remedies that it may have at law or in equity, it being acknowledged and agreed by the Contractor that the remedies set forth in this Paragraph are in addition to, and not in lieu of, any other rights or remedies that the District may have at law or in equity.

ARTICLE 15 DEBARMENT

15.1 DEBARMENT MEANS THERE HAS BEEN A FINDING THAT THE CONTRACTOR IS NOT RESPONSIBLE.

During the course of the Project, or if it is determined through Change Orders, Claims, or Audit that a Contractor is not responsible, the District may, in addition to other remedies provided in the Contract, debar the Contractor from bidding or proposing on, or being awarded, and/or performing work on District contracts for a specified period of time, which generally will not exceed five (5) years, but may exceed five (5) years or be permanent if the circumstances warrant such debarment. In addition to the debarment proceeding, a finding that a Contractor is to be debarred shall result in the termination of any or all existing Contracts the Contractor may have with the District.

15.2 BOARD FINDING

The District may debar a Contractor if the Board, or the Board's delegatee, in its discretion, finds the Contractor has done any of the following:

15.2.1 Intentionally or with reckless disregard, violated any term of the Contract with the District

15.2.2 Committed an acts or omission which reflects on the Contractor's quality, fitness or capacity to perform Work for the District;

15.2.3 Committed an act or offense which indicates a lack of business integrity or business honesty; or,

15.2.4 Made or submitted a false claim against the District or any other public entity.

15.3 HEARING AND PRESENTATION OF EVIDENCE

If there is evidence that the Contractor may be subject to debarment, the District shall notify the Contractor in writing of the evidence which is the basis for the proposed debarment and shall advise the Contractor of the scheduled date for a debarment hearing before the District Board or its delegated designee.

The District Board, or designee, shall conduct a hearing where evidence on the proposed debarment is presented. The Contractor or the Contractor's representative shall be given an opportunity to submit evidence at the hearing. The Contractor shall be provided an adequate amount of time to prepare and object to evidence presented. A tentative proposed decision shall be issued as a tentative decision and the District shall be entitled to modify, deny or adopt the proposed decision. The proposed decision shall contain a recommendation regarding whether the Contractor should be debarred, and, if so, the appropriate length of time of the debarment. The Contractor and the District shall be provided an opportunity to object to the tentative proposed decision for a period of 15 days. If additional evidence is presented, the District shall evaluate this evidence and either issue an amended ruling, issue the same ruling, or call a further hearing.

If a Contractor has been debarred for a period of longer than five (5) years, that Contractor may after the debarment has been in effect for at least five (5) years, submit a written request for

review of the debarment determination to reduce the period of debarment or terminate the debarment. The District may, in its discretion, reduce the period of debarment or terminate the debarment if it finds that the Contractor has adequately demonstrated one or more of the following: (1) elimination of the grounds for which the debarment was imposed; (2) a bona fide change in ownership or management; (3) material evidence discovered after debarment was imposed; or (4) any other reason that is in the best interests of the District.

The District will consider a request for review of a debarment determination only where: (1) the Contractor has been debarred for a period longer than five (5) years; (2) the debarment has been in effect for at least five (5) years; and (3) the request is in writing, states one or more of the grounds for reduction of the debarment period or termination of the debarment, and includes supporting documentation. Upon receiving an appropriate request, the District will provide notice of the hearing on the request. At the hearing, the District shall review evidence on the proposed reduction of debarment period. This hearing shall be conducted and the request for review decided by the District pursuant to the same procedures as for a debarment hearing.

The District's proposed decision shall contain a recommendation on the request to reduce the period of debarment or terminate the debarment.

The terms shall also apply to Subcontractors of Contractor.

SPECIAL CONDITIONS

1. Refer to **INSTRUCTIONS TO BIDDERS, ARTICLE 15 (b)**: The following Request form shall be used (see following page):

REQUEST FOR SUBSTITUTION PRIOR TO TIME OF BID

Pursuant to Public Contract Code Section 3400, bidder submits the following request to Substitute prior to bid submittal. I understand that if the request to substitute is not “an/or equal” or is not accepted by CJUSD and I answer “no” I will not provide the specified item, then I will be held non-responsive and my bid will be rejected. With this understanding, I hereby request Substitution of the following articles, devices, equipment, products, materials, fixtures, patented processes, forms, methods, or types of construction:

	Specification Section	Specified Item	Requested Substituted Item	Contractor Agrees to Provide Specified Item if request to Substitute is Denied ² (circle one)	CJUSD Decision (circle one)
1.				Yes No	Grant Deny
2.				Yes No	Grant Deny
3.				Yes No	Grant Deny
4.				Yes No	Grant Deny
5.				Yes No	Grant Deny
6.				Yes No	Grant Deny
7.				Yes No	Grant Deny
8.				Yes No	Grant Deny
9.				Yes No	Grant Deny
10.				Yes No	Grant Deny
11.				Yes No	Grant Deny
12.				Yes No	Grant Deny

This Request Form must be accompanied by evidence as to whether the proposed Substitution (1) is equal in quality, service, and ability to the Specified Item; (2) will entail no change

² Bidder must state whether bidder will provide the Specified Item in the event the Substitution request is evaluated and denied. If bidder states that bidder will not provide the Specified Item, the denial of a request to Substitute shall result in the rejection of the bidder as non-responsive. However, if bidder states that bidder will provide the Specified Item in the event that bidder's request for Substitution is denied, bidder shall execute the Agreement and provide the Specified Item(s). If bidder refuses to execute the Agreement due to the CJUSD's decision to require the Specified Item(s) at no additional cost, bidder's Bid Bond shall be forfeited.

in detail, construction, and scheduling of related work; (3) will be acceptable in consideration of the required design and artistic effect; (4) will provide no cost disadvantage to the CJUSD; (5) will require no excessive or more expensive maintenance, including adequacy and availability of replacement parts; (6) will require no change of the construction schedule or milestones for the Project; and, (7) Contractor agrees to pay for any DSA Fees or other Governmental Plan check costs associated with this Substitution Request. (See General Conditions Section 3.6)

The undersigned states that the following paragraphs are correct:

- The proposed Substitution does not affect the dimensions shown on the Drawings.
- The undersigned will pay for changes to the building design, including Architect, engineering, or other consultant design, detailing, DSA plan check or other governmental plan check costs, and construction costs caused by the requested substitution.
- The proposed substitution will have no adverse effect on other trades, the Contract Time, or specified warranty requirements.
- Maintenance and service parts will be available locally for the proposed substitution.
- In order for the Architect to properly review the substitution request, within five (5) days following the opening of bids, the Contractor shall provide samples, test criteria, manufacturer information, and any other documents requested by Architect or Architect's engineers or consultants, including the submissions that would ordinarily be required under Article 3.7 for Shop Drawings along with a document which provides a side by side comparison of key characteristics and performance criteria (often known as a CSI side by side comparison chart).
- If Substitution Request is accepted by the CJUSD, Contractor is still required to provide a Submittal for the substituted item pursuant to Article 3.7 and shall provide required Schedule information (including schedule fragnets, if applicable) for the substituted item as required under Article 8.3.2.1. The approval of the Architect, Engineer, or CJUSD of the substitution request does not mean that the Contractor is relieved of Contractor's responsibilities for Submittals, Shop Drawings, and schedules under Article 3.7 and 8.3.2 if the Contractor is awarded the Project.

Name of Bidder: _____

By: _____

CJUSD: _____

By: _____

2. SCOPE OF WORK

Included:

- Refer to Divisions 02 through 33 – Technical Requirements and drawings for Scope of Work.
- The Freezer equipment will be Owner Furnished Owner Installed (OFOI).

The following supplements modify the General Conditions. Where a portion of the General Conditions is modified and or deleted by these Special Conditions, the unaltered portions of the General Conditions shall remain in effect.

3. Refer to **GENERAL CONDITIONS**

ARTICLE 8 – TIME

Article 8 Schedule Inclusion Requirements –The Contractor's Baseline Schedule shall include the following Milestone Schedule:

- Post Bid Document Phase – Milestone #1 (Start Date: Not Later than 5/1/2024)
 - Notice of Intent to Award
 - District Award
 - Post-Bid Contract Submittals
- Post Bid Document Phase – Milestone #1 (Completion Date: Not Later than 5/21/2024)
- Procurement/Mobilization Phase – Milestone #2 (Start Date: Not Later than 5/22/2024)
 - Notice to Proceed
 - Project Submittals / Procurement
 - Mobilization/initial layout – can be adjusted per fencing procurement
- Procurement/Mobilization Phase – Milestone #2 (Completion Date: Not Later than 6/4/2024)
- Construction Work Phase – Milestone #3 (Start Date: 6/5/2024)
 - All related scope of work.
- Construction Work Phase – Milestone #3 (Completion Date: Not Later than 10/11/2024)
- Final Contract Close-Out Phase – Milestone #5 (Start Date: Not Later than 10/12/2024)
 - Final Contract Close-Out
- Final Contract Close-Out Phase – Milestone #5 (Completion Date: Not Later than 11/15/2024)

Article 11.10 Performance and Payment Bonds – The number of executed copies of the Performance Bond and the Payment Bond required is two (2).

DIVISION 01 – GENERAL REQUIREMENTS

01 04 50	Cutting and Patching
01 12 00	Alteration Project Procedures
01 20 00	Project Meetings and Procedures
01 21 00	Cash Allowances
01 40 00	Quality Control
01 50 00	Temporary Facilities and Controls
01 74 20	Final Cleaning

**SECTION 01 04 50
CUTTING AND PATCHING**

PART 1- GENERAL

1.01 SECTION INCLUDES

- A. Execute cutting, fitting or patching of Work, required to:
 - 1. Make parts fit properly.
 - 2. Uncover Work to provide for installation of ill-timed Work.
 - 3. Remove and replace Work not conforming to requirements of Contract Documents.
 - 4. Remove and replace defective Work.
 - 5. Remove samples of installed Work as specified for testing.
 - 6. Remove existing materials (demolition) required prior to installation of specified Work.
 - 7. Uncover Work to provide for Architect's observation of covered Work.
- B. Do not endanger structural integrity of any Work by cutting or altering any part of it.
- C. The Contractors with structural responsibility within their scope of Work shall solely execute structural cutting and patching required for this Project, according to DSA Approved Drawings.
- D. Minor cutting and patching of finishes and/or trim will be performed by the Contractor where required for the execution of his Work. Locations of all cutting and patching (core boring, etc.) shall be reviewed and approved by the Architect, Structural Engineer and DSA Representative prior to the start of Work.
- E. Cutting, boring, saw cutting, notching or drilling through the new or existing structural elements to be done only when specifically detailed on drawings or approved by Architect.
- F. The Contractor shall make the field measurements necessary for his Work and be responsible for its accuracy. Also, should any structural difficulties prevent a Contractor from installing his material properly, the District's Representative and Architect shall be notified in writing within 24 hours. Cutting into the walls, ceilings and floors, if necessary, shall be carefully and neatly performed and then be repaired as specified in the Contract Documents. The Architect shall be consulted prior to the start of Work in all cases where cutting into a structural portion of the building is either desirable or necessary so that satisfactory reinforcement may be provided.
- G. Patching of all exposed architectural finishes shall be performed under the supervision of the Inspector. Cutting and patching of existing architectural finishes shall be minimized to the extent possible through careful routing and placement of new Work. The Architect or Inspector shall have the authority to reject substandard or unacceptable patching.
- H. Patching of openings that are cut in any fire rated walls or membranes shall be sealed tightly using approved materials only. Verify that fire rating envelopes are maintained and inspections provided prior to concealing Work. Cutting and patching, if required by Agencies to verify adequacy of protection after concealment, shall be performed at no cost to the District.

1.02 RELATED SECTIONS

- A. General Conditions.

B. Section 01 50 00 - Temporary Facilities and Controls.

1.03 SUBMITTALS

- A. Prior to cutting which affects structural safety of Project, submit written notice to Architect requesting consent to proceed with cutting. See items "C" and "F", Section 1.01.
- B. Should conditions of Work or schedule require change of materials or methods, submit written recommendation to Architect, within 48 hours, including:
 - 1. Conditions requiring change.
 - 2. Recommendations for alternative materials or methods.
 - 3. Submittals as required for substitutions.
 - 4. Quotations of charges or credits.
- C. Submit 48-hour advance written notice to Architect (with a copy to the District's Representative) designating the time Work will be uncovered.
- D. Submit all materials to be used in cutting and patching in accordance with Special Conditions..

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Primary Products: Materials for replacement of Work removed are to comply with Technical Specifications and are required to match original installation.
- B. Product Substitution: For any proposed change in materials, submit request for substitution in accordance with Special Conditions.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine existing conditions prior to commencing Work, including elements subject to movement or damage during cutting and patching.
- B. After uncovering existing Work, examine conditions affecting installation of new products and performance of Work.
- C. Beginning of cutting or patching operations means acceptance of existing conditions.

3.02 PREPARATION

- A. Provide means of shoring, bracing and temporary supports as required to maintain structural integrity of the Work.
- B. Provide devices, enclosures and methods to protect adjacent surfaces and areas of the property from damage, dust or disruption.
- C. Provide protection from the elements for areas, which may be exposed during cutting or patching.
- D. Maintain excavations free of water.

3.03 CUTTING

- A. Execute cutting, fitting and adjustment of products to permit finished installation to comply with specified tolerances and finishes.
- B. Perform cutting and demolition by methods, which will prevent damage to other Work, and will provide proper surfaces to receive installation of repairs and new Work.
- C. Uncover Work to install improperly sequenced Work.
- D. Remove and replace defective, rejected or non-conforming Work.
- E. Remove samples of installed Work for testing when requested.
- F. Provide openings in the Work for penetration of Mechanical and Electrical Work.
- G. Employ only experienced installers to perform cutting for weather exposed, moisture resistant and sight-exposed surfaces.
- H. Cut concrete, tile plaster and other rigid materials using masonry/concrete saws and core drills. Pneumatic tools are not allowed without prior approval.

3.04 PATCHING

- A. Execute patching to match adjacent Work.
- B. Fit products together to integrate seamlessly with adjacent Work.
- C. Execute patching by methods to avoid damage to adjacent Work, and which will provide appropriate surfaces to receive finishing Work.
- D. Employ only experienced installers to perform patching for weather exposed, moisture resistant and sight-exposed surfaces.
- E. Restore Work with new products in accordance with requirements of the Contract Documents.
- F. At penetrations of fire rated walls, partitions, ceiling or floor construction, completely seal voids with approved fire rated material in accordance with the manufacturer's installation instructions and applicable Codes.
- G. Fit Work to pipes, sleeves, ducts, conduits and other penetrations through affected surfaces neatly and leave in finished condition.
- H. All patched surfaces are to match adjacent finishes in all respects: Type, texture, thickness and color. For continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit or area.

END OF SECTION 01 04 50

SECTION 01 12 00
ALTERATION PROJECT PROCEDURES

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Products and installation for patching and extending work.
- B. Transition and adjustments.
- C. Repair of damaged surfaces, finishes, and cleaning.
- D. Salvage materials.

1.02 RELATED SECTIONS

- A. Section 010450 - Cutting and Patching.

1.03 ALTERATIONS, CUTTING AND PROTECTION

- A. Assign the work of moving, removal, cutting and patching, to trades qualified to perform the work in manner to cause least damage to each type of work, and provide means of returning surfaces to appearance of new work.
- B. Perform cutting and removal work to remove minimum necessary, and in a manner to avoid damage to adjacent work.
 - 1. Cut finish surfaces such as concrete, masonry, drywall, plaster or metals, by methods to terminate surfaces in a straight line at a natural point of division, or where indicated.
- C. Cutting, boring, saw cutting, notching or drilling through the new or existing structural elements to be done only when specifically detailed on drawings or approved by Architect, Structural Engineer and DSA Representative.
- D. Protect existing finishes, equipment, and adjacent work, which is scheduled to remain, from damage.
 - 1. Protect existing and new' work from extremes of temperature.
 - a. Maintain existing Interior work above 60 degrees F.
 - b. Provide heat and humidity control as needed to prevent damage to remaining existing work and to new work.
- E. Provide temporary enclosures to separate work areas from existing building and from areas occupied by District.

PART 2 - PRODUCTS

2.01 PRODUCTS FOR PATCHING AND EXTENDING WORK

- A. New Materials. As specified in product Sections; match new materials to Work.
 - 1. Provide same products or types of construction as that in existing structure, as needed to patch, extend or match existing work.

2. Presence of a product, finish, or type of construction, requires that patching, extending or matching shall be performed consistent to, or better than, existing standards of quality.
- B. Type and Quality of Existing Products: Determine by Inspection and testing existing products where necessary, referring to existing Work as a standard.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify that demolition is complete, and areas are ready for installation of new Work.
- B. Beginning of restoration Work means acceptance of existing conditions.

3.02 PREPARATION

- A. Cut, move, or remove items as necessary for access to alterations and/or renovation Work. Replace and restore at completion. The full extent of cutting and patching is not shown nor specified. The Contractor shall perform all cutting and patching as required.
- B. Remove unsuitable material not marked for salvage, such as rotted wood, corroded metals, and deteriorated masonry and concrete. Replace materials as specified for finished Work.
- C. Remove debris and abandoned items from area and from concealed spaces.
- D. Prepare surface and remove surface finishes to provide for proper installation of new work and finishes.

3.03 INSTALLATION

- A. Coordinate work of alterations and renovations to expedite completion and to accommodate District occupancy. Patch and extend existing work using skilled mechanics that are capable of matching existing quality of workmanship. Quality of patched or extended work shall be not less than that Specified for new work.
- B. Room Finishes. Complete in all respects consistent with the Contract Documents.
- C. Remove, cut, and patch Work in a manner to minimize damage and to provide a means of restoring Products and finishes to specified condition.
- D. Install Products as specified In Individual Sections.

3.04 TRANSITIONS

- A. Where new Work abuts or aligns with existing, perform a smooth and even transition.
- B. Patch Work to match existing adjacent Work in texture and appearance, without breaks, steps or bulkheads.
- C. When finished surfaces are cut so that a smooth transition with new work is not possible, terminate existing surface along a straight line at a natural line of division and make recommendation to Architect.

3.05 ADJUSTMENTS

- A. Where change of plane of 1/4 inch or more occurs, submit recommendation for providing a

smooth transition.

- B. Where extreme change of plane of two inches or more occurs, request Instructions from Architect as to method of making transition.
- C. Trim existing doors as necessary to clear new threshold Installation. Refinish trim as required.
- D. Fit work at penetrations of surfaces as shown on drawings.

3.06 SALVAGED MATERIALS

- A. Salvaged Materials from existing facilities, which are specified in the Special Provisions or tagged in the field prior to the pre-bid walk-through to be salvaged, shall remain the property of the District. The Contractor shall include the removal, disassembly, preparation, marking, bundling, packaging, tagging, hauling, and stockpiling of salvaged materials or facilities to the location specified in the Special Provisions, or as directed by the District's Representative. Materials include parts, articles, and equipment of assembled facilities. Salvaging does not include the preparation of existing material that is to be reused in the work.
- B. When only specific materials from the facility are designated to be salvaged, the remaining materials from that facility shall be removed and disposed of as provided for elsewhere in the Contract Documents. Materials to be salvaged shall not be removed until their use in the existing facility is no longer required, as determined by the District's Representative.
- C. When practicable, salvaged materials shall be hauled directly to the location specified in the Special Provisions and stockpiled; however, salvaged materials may be temporarily stored at a location selected by the Contractor and approved by the District's Representative and later hauled to and stockpiled at their final location. Materials which are lost before stockpiling at their final location shall either be replaced by the Contractor, at the Contractor's expense, or, at the discretion of the District's Representative, the estimated cost of replacement may be deducted from any moneys due or to become due to the Contractor.
- D. Materials designated to be salvaged that are damaged, as determined by the District's Representative, shall be segregated from undamaged material. After review of the damaged materials by the District's Representative, all damaged materials that are rejected by the District's Representative shall become the property of the Contractor and shall be disposed of as provided elsewhere in the Contract Documents.
- E. Materials to be salvaged that are damaged as a result of the Contractor's operations shall be repaired by the Contractor, at the Contractor's expense, to the satisfaction of the District's Representative. Materials that are damaged beyond repair as a result of the Contractor's operations shall be disposed of as provided elsewhere in the Contract Documents and replaced at the Contractor's expense; or, at the discretion of the District's Representative, the estimated cost of replacement may be deducted from any moneys due or to become due to the Contractor.
- F. Replacements for lost or damaged materials shall be of the same kind and of the same or better quality and condition as the lost or damaged materials were prior to their removal. Replacement materials should also be of the same size, color, weight, etc. of the original materials. Matching or exceeding quality and condition alone may not permit the reuse of material.

3.07 REPAIR OF DAMAGED SURFACES

- A. Patch or replace portions of existing surfaces, which are damaged, lifted, discolored, or showing other imperfections.
- B. Repair substrate prior to patching finish.

3.08 FINISHES

- A. Finish surfaces as specified in Individual Product Sections.
- B. Finish patches to produce uniform finish and texture over entire area. When finish cannot be matched, refinish entire surface to nearest Intersections.

3.09 CLEANING

- A. Clean adjacent District occupied areas of work soiled by work of this Contract (See General Conditions).

END OF SECTION 01 12 00

SECTION 01 20 00
PROJECT MEETINGS AND PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Owner's Representative will schedule and administer a preconstruction meeting, regular progress meetings, and specially called meetings throughout progress of the Work, and will:
 - 1. Prepare agenda for meetings.
 - 2. Make physical arrangements for meetings.
 - 3. Preside at meetings.
 - 4. Record the minutes; include significant proceedings and decisions.
 - 5. Reproduce and distribute copies of minutes after each meeting to participants in the meeting and to parties affected by decisions made at meeting.
- B. Representatives of Contractor, subcontractors and suppliers attending meetings shall be experienced supervisory staff with written authorization to act on behalf of the entity each represents.

1.02 PRECONSTRUCTION MEETING

- A. Timing: Prior to start of construction.
- B. Attendance: Architect and consultants as appropriate, District's representative, Owner's Representative, Contractors as requested.
- C. Purpose: Discuss and familiarize Contractors with construction administrative procedures to be used on Project.

1.03 PROGRESS MEETINGS

- A. Timing: Frequency, day and time to be determined by Owner's Representative, Architect and District.
- B. Attendance: Owner's Representative and each contractor on site. Owner's Representative, Architect, consultants and subcontractors when required.
- C. Purpose: The purpose of these meetings is to provide a formal and regular forum for the District, Owner's Representative, Architect and the Contractors to present questions, problems or issues that need to be addressed. It will also provide an opportunity to review the progress on previous issues and action items along with submittal and schedule review.
- D. Each Contractor scheduled to commence Work within the following week will attend the current week's meeting to coordinate Work with other contractors already on site.

1.04 SPECIALLY CALLED MEETINGS

- A. The Owner's Representative may call a special meeting at any time during the course of the Project. Special Project meetings shall include representatives of the Project as requested in order to discuss problems and/or solutions that are common to the Project.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION 01 20 00

**SECTION 01 21 00
CASH ALLOWANCES**

PART 1 – GENERAL

1.01 SUMMARY

- A. To provide a budget to cover scope of work not precisely determined by the Contract Documents prior to bidding, allow within the proposed Contract Sum the amounts described in this Section.
- B. Related work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to, Bidding and Contract Requirements, General Requirements and related Technical Requirements.
 - 2. Other provisions concerning Cash Allowances are stated in General Conditions.
 - 3. Other provisions concerning Cash Allowances also may be stated in other Sections of the Project Manual.

1.02 SPECIFIC CASH ALLOWANCES

BID PACKAGE #24-09 Project

- A. Center High School Central Freezer Facility: District to provide within the final Contract Price the amount of \$50,000 for unforeseen conditions to be used at the Owner's discretion. This allowance will be expended under a "time and material" basis using current prevailing wage rates, as directed by the Architect and Owner's Representative. All unused portions of the allowance will be deducted from the contract through a change order.

PART 2 – PRODUCTS

Not Used.

PART 3 – EXECUTION

Not Used.

END OF DOCUMENT

**SECTION 01 40 00
QUALITY CONTROL**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Quality assurance and control of installation.
- B. References.
- C. Field samples.
- D. Inspection and testing laboratory services.
- E. Manufacturers' field services and reports.

1.02 RELATED SECTIONS

- A. General Conditions
- B. Technical Specifications

1.03 QUALITY ASSURANCE/CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, Products, services, site conditions, and workmanship, to produce Work of specified quality.
- B. Comply fully with manufacturers' instructions, including each step in sequence.
- C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Architect before proceeding.
- D. Comply with specified standards as a minimum quality for the Work except when more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Perform work by persons qualified to produce workmanship of specified quality.
- F. Secure Products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion or disfigurement.
- G. Contractors Line of Authority: Contractor shall provide one person who shall be both knowledgeable and responsible for all work to be performed on this project at all times during normal work hours. In Contractor's absence, Contractor's appointed representative shall be responsible for all directions given him and said directions shall be binding as if given to the Contractor. Contractor's representative shall be responsible to coordinate all work to be performed.
- H. Shop and fieldwork shall be performed by mechanics skilled and experienced in the fabrication and installation of the work involved. All work on this project shall be done in accordance with the best practices of the various trades involved and in accordance with the drawings, approved shop drawings and these specifications.

- I. All work shall be erected and installed plumb, level, square and true and in proper alignment and relationship to the work of other trades. All finished work shall be free from defects. The Architect reserves the right to reject any materials and workmanship which are not considered to be up to the highest standards of the various trades involved. Such inferior material or workmanship shall be replaced at no additional cost to the Owner.
- J. All work shall be installed by a knowledgeable contractor and defined "certified to install" by the specified materials manufacturers. The specifications and recommendations of the manufacturer whose materials are used shall be strictly adhered to during the application or installation of materials.
- K. Any additional work beyond that specified or illustrated, or any modification thereto, that is necessary for the furnishing of guarantee shall be provided by the Contractor without additional cost to the District.

1.04 REFERENCES

- A. Conform to reference standards by date of issue current on date of the Contract Documents.
- B. Should specified reference standards conflict with Contract Documents, request clarification from Architect before proceeding.
- C. The contractual relationship of the parties to the Contract shall not be altered from the Contract Documents by mention or inference otherwise in any reference document.
- D. The Contractor shall be responsible for being current and knowledgeable of all building codes involved for all trades under his direction.
- E. Provide all work and materials in full accordance with the California Building Standards Code (CBC), the State Fire Marshal, Safety Orders of the Division of Industrial Safety, the National Electric Code, the Uniform Building Code, Uniform Mechanical Code, Uniform Plumbing Code, and any other applicable laws or regulations. Nothing in these plans or specifications is to be construed to permit work not conforming to these Codes.
- F. Furnish without extra charge any additional material and labor required to comply with these Rules and Regulations.

1.05 FIELD SAMPLES

- A. Install field samples at the site as required by individual specifications Sections for review.
- B. Acceptable samples represent a quality level for the Work.
- C. Where field sample is specified in Individual Sections to be removed, clear area after field sample has been accepted by Architect.

1.06 INSPECTION AND TESTING LABORATORY SERVICES

- A. Inspection and Testing labs shall be directly employed by the District.

1.07 MANUFACTURERS FIELD SERVICES AND REPORTS

- A. Submit qualifications of observer to Architect 30 days in advance of required observations.
- B. When specified in individual specification Sections, require material or Product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust, and

balance of equipment as applicable, and to initiate instructions when necessary.

- C. Individuals to report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.
- D. Submit report in duplicate within 30 days of observation to Architect for review.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION 01 40 00

SECTION 01 50 00
TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.01 WORK INCLUDED

- A. Temporary Facilities and controls required for this Work include, but are not necessarily limited to:
1. Parking and storage areas.
 2. Site fencing and security.
 3. Sanitary facilities.
 4. Final and course of construction cleanup and removal of debris.

1.02 TEMPORARY UTILITIES

- A. Temporary power and water facilities will be made available to the general contractor by the for use on this project at no expense to the general contractor. Power and water use shall be limited solely to that required for the direct work of this project.

1.03 FIELD OFFICE/STORAGE CONTAINERS

- A. Temporary office space may be provided by the Owner for use by the general contractor on a limited basis. No temporary office space needs to be provided by the contractor.
- B. General Contractor shall be responsible for all temporary storage.

1.04 PARKING OF VEHICLES

- A. Each Contractor shall assume all responsibility for job site vehicle parking of his and his subcontractor's vehicles. Locations of parking shall be as directed by the Owner's Representative.

1.05 STORAGE AND LAYDOWN AREAS

- A. The Owner's Representative will coordinate use of available laydown areas among various contractors. Only areas designated by Owner's Representative can be used by Contractors. Each contractor is responsible for providing his own fenced storage facilities (trailers or cargo containers.)

1.06 TEMPORARY SITE FENCING AND SECURITY

- A. Each Contractor shall provide and maintain temporary fencing surrounding the buildings and/or rooms under construction, and staging areas. Set-up/relocation of temporary fencing shall be included for each phase of work as shown on the Preliminary Construction Schedule. Contractor is responsible for the security of all equipment, material, and completed construction items. Contractor is also responsible for securing any breeches to existing security system/building caused by his Work. Temporary measures may include watchman, temporary doors, temporary alarm, etc.

1.07 SANITARY FACILITIES

- A. Each Contractor shall provide sanitary toilet facilities for use of all Workers employed on Project, in accordance with State and Local health departments. Use of District toilet facilities will not be allowed.

1.08 CLEANUP AND REMOVAL OF DEBRIS

- A. Each Contractor shall assume all responsibility for cleanup and removal of debris created by his Scope of Work on a daily basis. No community dumpsters will be provided. In the event unidentifiable job site clutter or debris becomes a problem, at Owner's Representatives request, each contractor shall provide sufficient labor to be directed by Owner's Representatives personnel in a group cleanup effort. If a Contractor's clean-up is found to be deficient, the District may backcharge the Contractor for clean-up and/or withhold progress payments as determined appropriate by the District in accordance with General Conditions - Article 2: Owner, Section 2.2 Owner's Right to Carry Out the Work Due to Partial Default in a Specific Segregated Area of Work (Two (2) Business Day Notice to Cure and Correct).

1.09 TEMPORARY CONSTRUCTION, EQUIPMENT AND PROTECTION

- A. Contractor shall provide, maintain and remove upon completion of Work, all temporary rigging, scaffolding, hoisting equipment, rubbish chutes, ladders, barricades, lights and all other protective structures or devices necessary for safety of Workers and public property as required to complete the Bid Package Scope of Work.
1. Safety:
The contractor is responsible for the complete safety of district personnel, students, and the general public at all times.
 2. Walkways and barricades:
If Contractor's portion of Work interferes with pedestrian traffic, provide pedestrian walkway protection conforming to City standards and CAL OSHA requirements.
 3. Access:
The contractor is responsible to maintain access to the buildings at all times. Temporary covered walkways and/or barricades may be required.
 4. Protection:
Each Contractor must protect all Workers and equipment from power lines by maintaining safe distances and by providing protective devices where and as required by Industrial Safety Commission and CAL-OSHA.
 5. Temporary construction and equipment:
All temporary construction and equipment shall conform to all regulations, ordinances, laws and other requirements of State and any other authorities having jurisdiction (including insurance companies), with regards to safety precautions, operations and fire hazards.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION 01 50 00

**SECTION 01 74 20
FINAL CLEANING**

PART 1 - GENERAL

1.01 SUMMARY

- A Contractor is responsible for daily cleanup and a final cleaning prior to occupancy. This section only addresses the final cleaning required prior to punch listing and occupancy.
- B. Cleaning Program:
 - 1. The cleaning program shall include all construction areas and surrounding areas affected by the construction including site, exteriors of buildings / structures, roofs and interior of buildings.
 - 2. The areas to be cleaned shall be turned over to the owner in a "move-in" condition.
 - 3. All areas shall be free of all construction materials, dust, debris, markings and dirt.
 - 4. All surfaces shall be washed, cleaned and cleared of markings.
 - 5. All existing and new fixtures shall be cleaned, sanitized and ready for use.
 - 6. All new and existing hard surface floors will be stripped and waxed.

1.02 PROJECT CONDITIONS

- A Comply fully with Federal and local environmental and antipollution regulations.
- B. Do not dispose of volatile wastes, such as mineral spirits, oil, or paint thinner, in storm or sanitary drains.
- C. Burning or burying of debris, rubbish, or other waste material on the premises is not permitted.

1.03 PRODUCTS

MATERIALS AND METHODS

- A Use cleaning materials and methods which will not create hazards to health or property or cause damage to products and which are recommended by manufacturers of products to be cleaned.

1.04 EXECUTION

FINAL CLEANING

- A General: Provide final cleaning operations. Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit of Work to the condition expected from a commercial building cleaning and maintenance program. Comply with manufacturer's instructions.
- B. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for the entire Project or a portion of the Project.

1. Clean the Project Site, yard and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and foreign substances.
2. Sweep paved areas broom clean. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
3. Remove petrochemical spills, stains, and other foreign deposits.
4. Remove tools, construction equipment, machinery, and surplus material from the site.
5. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
6. All walls not newly painted shall be washed to clean readily removable dirt, markings, dust, and grime.
7. Remove debris and surface dust from limited access spaces, including roofs, attics and similar spaces.
8. All existing floors shall be thoroughly stripped of old wax and have at least four (4) coats of a combination wax/sealer, or two (2) coats of sealer and four (4) coats of wax. General Works Package Contractor #2 shall submit for prior approval manufactures information on floor finish to be applied. All new floors shall have their factory seal stripped off and shall have a floor finish applied according to the recommendations of the manufacturer.
9. New carpeted areas shall be thoroughly vacuumed, including edges. Any spotting during construction shall be removed. Existing carpeted areas shall be thoroughly shampooed.
10. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other substances that are noticeable vision obscuring materials. Replace chipped or broken glass and other damaged transparent materials. Polish mirrors and glass, taking care not to scratch surfaces. Clean interior and exterior of all windows.
11. Clean all Toilet Rooms thoroughly and sanitized. All wall surfaces shall be free of grime, dirt, dust, markings and graffiti. All mirrors, fixtures, and partitions will be cleaned free of dirt and markings.
12. Scrub and seal all ceramic and terrazzo floors and walls.
13. Remove labels that are not permanent labels.
14. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
15. Wipe surfaces of mechanical and electrical equipment, elevator equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
16. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
17. Replace disposable air filters and clean permanent air filters. Clean all exposed surfaces of diffusers, registers, and grilles.

18. Clean ducts, blowers, and coils if units were operated without filters during construction.
19. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency. Replace burned out bulbs; defective and noisy starters in fluorescent fixtures, and defective dimming switches.
20. Leave the Project clean and ready for occupancy.
21. Removal of Protection: Remove temporary protection and facilities installed during construction to protect previously completed installations during the remainder of the construction period. Repair any damage from removal.
22. Compliances: Comply with governing regulations and safety standards for cleaning operations.
23. Remove waste materials from the site and dispose of lawfully.
24. Where extra materials of value remain after completion of associated Work, they become the Owner's property. Dispose of these materials as directed by the Owner.

END OF SECTION 01 74 20

PROJECT MANUAL AND SPECIFICATIONS
FOR
CENTER JOINT UNIFIED SCHOOL DISTRICT
CENTRAL FREEZER FACILITY

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**SECTION 02 41 00
SITE DEMOLITION**

PART 1 – GENERAL

1.01 INCLUSION OF OTHER CONTRACT DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 31 00 00: Earthwork.
- B. Section 31 23 33: Trenching and Backfilling.

1.03 REGULATORY REQUIREMENTS

- A. Conform to applicable jurisdictional authority regulations and codes for disposal of debris.
- B. Coordinate clearing Work with utility companies.
- C. Maintain emergency access ways at all times.
- D. Contractor shall comply with all applicable laws and ordinances regarding hazardous materials, including contaminated soils, hazardous material transformers, and similar materials or components.

1.04 SUBMITTALS:

- A. Submit per the requirements of the General Conditions.
- B. Schedule: Submit a detailed sequence of demolition and removal work, including dates for shutoff, capping, and continuance of utility services.
- C. Procedures: Submit written procedures documenting the proposed methods to be used to control dust and noise.

1.05 EXISTING CONDITIONS

- A. Contractor shall acquaint himself with all site conditions. If unknown active utilities are encountered during work, notify Architect promptly for instructions. Failure to notify will make Contractor liable for damage to these utilities arising from Contractor's operations subsequent to discovery of such unknown active utilities.
- B. Conduct demolition to minimize interference with adjacent structures or items to remain. Maintain protected egress and access at all times.

1.06 PROTECTION

- A. Adequate protection measures shall be provided to protect workmen and passers-by on and off the site. Adjacent property shall be fully protected throughout the operations. Blasting will not be permitted. Prevent damage to adjoining improvements and properties both above and below grade. Restore such improvements to original condition should

damage occur. Replace trees and shrubs outside building area disturbed by operations.

- B. In accordance with generally accepted construction practices, the Contractor shall be solely and completely responsible for working conditions at the job site, including safety of all persons and property during performance of the work. This requirement shall apply continuously and shall not be limited to normal working hours.
- C. Maintain safety precautions to prevent damage to existing elements identified to remain or to be salvaged, and prevent injury to the public and workmen engaged on site. Demolish roofs, walls and other building elements in such manner that demolished materials fall within foundation lines of building. Do not allow demolition debris to accumulate on site. Pull down hazardous work at end of each day; do not leave standing or hanging overnight, or over weekends.
- D. Protect existing items which are not indicated to be altered.
 - a. Protect utilities designated to remain from damage.
 - b. Protect trees, plant growth, and features designated to remain as final landscaping as shown on drawings.
 - c. Protect bench marks from damage or displacement.
- E. Trees: Carefully protect existing trees that are to remain. Provide temporary irrigation as necessary to maintain health of trees.
- F. Fire Safety: The contractor shall conform to Chapter 33 of the California Fire Code (CFC), "Fire Safety During Construction and Demolition", at all times during the construction process. A copy of this chapter can be provided.
- G. Surface Drainage: Provide for surface drainage during period of construction in manner to avoid creating nuisance to adjacent areas. The contractor shall make a reasonable effort on a daily basis to keep all excavations and the site free from water during entire progress of work, regardless of cause, source, or nature of water.
- H. Adjacent streets and sidewalks shall be kept free of mud, dirt or similar nuisances resulting from earthwork operations.
- I. The site and adjacent influenced areas shall be watered as required to suppress dust nuisance. Dust control measures shall be in accordance with the local jurisdiction.

PART 2 - PRODUCTS

NOT USED

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Examine conditions of work in place before beginning work; report defects.
- B. Report existence of hazardous materials or unsafe structural conditions.

3.02 PREPARATION

- A. Scheduling:
 - 1. General: Coordinate and schedule demolition work as required by the Owner and as necessary to facilitate construction progress.
- B. Hazardous Materials:
 - 1. General: Identify chemicals, gases, explosives, acids, flammables, or other dangerous materials before proceeding with demolition operations, and notify such jurisdictional agencies as may be required. Collect and legally dispose of such materials at official disposal locations away from the site.
 - 2. Asbestos: If asbestos or materials containing asbestos are encountered, stop work immediately and contact the Owner. Do not proceed with demolition until directed by Owner.
- C. Utility and Service Termination
 - 1. Locate and identify existing utility, service and irrigation system components affected by work of this contract. Review existing record drawings, conduct site investigations, contact Underground Service Alert and other qualified cable/pipe/line locator services, and implement all other means necessary to define the location of underground systems.
 - 2. Prior to beginning any demolition, properly disconnect all water, gas and electrical power supply at appropriate disconnect locations. Obtain all necessary releases and approvals from serving utility companies.
 - 3. Prior to demolition or disconnect, obtain Owner's approval that such system does not impact facilities or systems beyond the extent of this contract.
 - 4. Mark location of disconnected systems. Identify and indicate stub-out locations on Project Record Documents.
- D. Verify that existing plant life and features designated to remain are tagged or identified.
 - 1. The Architect will mark the features, trees, and shrubs to remain within the construction area. Contractor shall not commence clearing and grubbing operations until authorized by the Owner and all protective measures are in place.
- E. Coordinate the time and duration of all system disconnects with Owner.

3.03 DEMOLITION

- A. General Requirements
 - 1. Clear areas required for access to site and execution of Work, including pavements, structures, foundations, vegetation, trash and debris.
 - 2. Coordinate with Owner the time of day and route to remove demolished materials from premises.

3. Remove demolished materials from site as work progresses. Upon completion of work, leave areas of work in clean condition.
4. Remove all buried debris, rubble, trash, or other material not deemed suitable by the Geotechnical Engineer.
5. Fill all voids or excavations resulting from clearing, demolition, or removal of vegetation with specified fill material.
6. **Review ALL Drawings carefully for items within areas of demolition that are required to remain, including underground conduit pathways. Protect all items identified to remain during demolition work.**

B. Fixture and Equipment Removal:

1. Remove existing fixtures and equipment as identified and shown on drawings and required by Architect.
2. Verify all service connections to fixtures and equipment designated for removal have been properly disconnected.
3. Remove all conductors from conduit at all abandoned circuits.

3.04 UTILITY AND BUILDING SERVICES REMOVAL AND RE-INSTALLATION

- A. Where crossing paths and potential points of interference with existing utility services are shown or can be reasonably inferred from surface conditions or evidence of subsurface systems, such as meter boxes, vaults, relief vents, cleanouts and similar components.
1. Review all contract documents showing crossing paths and potential points of interference.
 2. Pot-hole or determine by other means the accurate depth and location of such utilities.
 3. Incorporate all costs required to complete work under this contract, including additional trenching, re-routing of existing and new utilities, and all means necessary to construct work under this contract.
 4. No additional cost to the Owner will be allowed for work necessary to accommodate utility conflicts where such crossing paths are shown on contract drawings or can be reasonably inferred from surface conditions or components.
- B. Remove all conductors from conduit at all abandoned electrical circuits.
- C. Seal off ends of all piping, drains and other components as directed by Architect and serving utility.
- D. Where necessary to maintain service to existing utility and building systems, relocate or redirect all conduit and conductors, piping, drains, and associated system components.
1. Re-circuit all electrical as required.

2. Re-circuit all landscape irrigation valving and control systems as required.
 3. Temporarily terminate landscape system components in approved boxes or with approved caps, suitable for re-connection or extension.
 4. Extend or otherwise modify all site drainage systems, including catch basins, drain inlets and piping. Fine grade to maintain proper drainage flow pattern to drains.
- E. Demolish structure in an orderly and careful manner.
1. Use of explosives prohibited.

3.05 SITE PAVEMENT REMOVAL

- A. Remove sidewalk and curb where required for new construction as specified and as indicated on the Drawings.
1. Remove all paving by saw-cutting.
 2. Remove concrete paving and curbing at locations shown on drawings. Locate closest adjacent expansion or weakened plane joint to define start of removal or saw-cutting.
- B. Remove asphalt concrete paving areas where required for new construction as specified and as indicated on the Drawings.
1. Remove all paving by saw-cutting.
 2. Remove paving assembly as required to expose subgrade.

3.06 DISPOSAL

Demolished materials become property of the Contractor and shall be removed from premises, except those items specifically listed to be retained by Owner.

- A. Dispose of all demolished material, trash, debris, and other materials not used in the work in accordance with the regulations of jurisdictional authority.
- B. It is recommended that all materials that are of a recyclable nature, be transported to a suitable legal recycling facility instead of a dump or refuse facility (unless they are one-in-the same).
- C. Burning and Burying of Materials: NOT ALLOWED.
- D. Haul Routes:
1. Obtain permits as required by jurisdictional agencies. Establish haul routes in advance; post flagmen for the safety of the public and workmen.
 2. Keep streets free of mud, rubbish, etc.; assume responsibility for damage resulting from hauling operations; hold Owner free of liability in connection therewith.

- E. Remove demolished materials and debris from site on a daily basis.

3.08 CLEANING

- A. Upon completion of work of this Section promptly remove from the working area all scraps, debris.
- B. Clean excess material from surface of all remaining paved surfaces and utility structures.
- C. Power wash all concrete surfaces to remove stains, dried mud, tire marks, and rust spots.

END OF SECTION 02 41 00

**SECTION 03 30 00
CAST-IN-PLACE CONCRETE**

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. Concrete Formwork.
- B. Reinforcement of Concrete for the use in Interior and exterior structural concrete for foundations, building slabs, structural building curbs and housekeeping pads.
- C. Concrete Placing and Finishing.

1.02 RELATED SECTIONS

- A. The Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
- B. Section 03 35 00: Concrete Floor Hardener-Sealers.
- C. Section 32 16 00: Site Concrete.

1.03 REFERENCES

- A. Chapter 19A, California Building Code (CBC), 2022 edition.
- B. ACI 211.1 - Standard Practice for Selecting Proportions for Normal Weight, Heavy Weight and Mass Concrete.
- C. ACI 301 - Specifications for Structural Concrete for Buildings.
- D. ACI 304R - Guide for Measuring, Mixing, Transporting and Placing Concrete.
- E. ACI 305R - Hot Weather Concreting.
- F. ACI 306R - Cold Weather Concreting.
- G. ACI 308 - Standard Practice for Curing Concrete.
- H. ACI 309R - Guide for Consolidation of Concrete.
- I. ACI 318 - Building Code Requirements for Structural Concrete.
- J. ASTM A615 / A615M – 09b - Deformed and Plain Billet Steel Bars for Concrete Reinforcement.
- K. ASTM C33 / C33M-08 - Concrete Aggregates.
- L. ASTM C94 / C94M –09a - Ready-Mixed Concrete.
- M. ASTM C114- 09b - Methods of Chemical Analysis of Hydraulic Cement.
- N. ASTM C150 / C150M-09 - Portland Cement.
- O. ASTM C260-06 - Air Entraining Admixtures.

- P. ASTM C494 / C49M-08a - Water Reducing Admixtures.

1.04 QUALITY ASSURANCE

- A. All Concrete for the project shall be controlled concrete of specified strengths, of uniform color, and free from defects liable to adversely affect strength, durability or appearance of the structure or its components.
- B. Requirements of Regulatory Agencies: The quality and design of structural concrete shall comply with the requirements of the California Building Code, except where more stringent requirements are specified.
- C. Workmanship: Materials and methods used for the production and placement of concrete shall be such as to assure the specified quality and shall conform to applicable requirements of the Building Code for Reinforced Concrete (ACI 318) of the American Concrete Institute, except as otherwise specified in this Section.
1. All materials, components, assemblies, workmanship, and installation are to be observed by the Owner's Project Inspector. Work not so inspected is subject to uncovering and replacement.
 2. Proper installation of partitions and equipment requires the floor finish to be level and smooth throughout. Extreme care shall be exercised during all floating and troweling operations to check levels often.
 3. Any concrete work which does not comply with tolerances and elevations shown on drawings will be cause for rejection of all work affected, and, if so rejected, such work shall be removed and replaced at no increase in cost to the Owner.
- D. Repair of Defective Concrete Surfaces shall be done in the following manner when, in the opinion of the Architect, such defects may be repaired and at no additional cost to the Owner.
1. Rock pockets, voids, spalls, cracks, and exposed reinforcing shall be repaired with 1:2 cement mortar or cut out and patched. Prepare surfaces and bond cement mortar with concrete adhesive as hereinafter specified.
 2. Surfaces which are not plumb and square or which do not conform to the lines and levels indicated shall be chipped, ground, filled or trued as required to obtain the desired results.
- E. Uniformity of Concrete: All aggregates shall be measured by weight and the proportion of water to cement shall be accurately controlled by either automatic measuring devices or calibrated containers. All concrete placed shall be uniform strength and color appearance as well as surface texture.
- F. Screeds shall be provided all construction joints as required to ensure installation of concrete to lines and elevations noted.
- G. Concrete Preplacement Inspection: Concrete shall not be poured until the forms, reinforcement, and preparations are complete and have been reviewed by the Project Inspector.
- H. Ready-Mixed Concrete: ASTM C94 / C94M-09a except as otherwise specified herein. Mix

and deliver in accordance with the requirements set forth in ASTM C94 and ACI 301. Continuous Batch Plant inspection is required per CBC Section 1705A.3.3. Contractor may request waiver of batch plant inspection in accordance with CBC Section 1705A.3.3.1 provided the following is met:

1. Approved Testing Laboratory shall check the first batching for each class of concrete and furnish mix proportions to the Licensed Weighmaster.
 2. Licensed Weighmaster to positively identify materials as to quantity and to certify to each load by ticket.
 3. Ticket shall be transmitted to Project Inspector by truck driver with load identified thereon. Project Inspector will not accept load without load ticket identifying mix and will keep daily record of pours, identifying each truck, its load and time of receipt and will transmit two copies of record to DSA.
 4. Do not add water at the site to concrete mixes with a maximum specified WCR unless the water content at batch time provides for a WCR less than specified and this provision, including the quantity of water which may be added at the site, is specifically noted on the Mix Design and Certification by the mix preparer.
 5. At end of project, Weighmaster shall furnish affidavit to DSA on form satisfactory to DSA, certifying that all concrete furnished conforms in every particular and to proportions established by mix designs.
- I. Tests: For structural concrete, the Testing Lab shall take four (4) test cylinders of concrete not less than once each day, not less than once for every 50 cubic yards of concrete, or not less than 2,000 square feet of slab or wall surface area. Cylinders shall be made and stored as per instructions given by the testing laboratory and shall be in accordance with ASTM Specifications C-31 / C31M-09 and C-39 / C39M-09a. Cylinders shall be tested for ultimate compressive strength of concrete with one cylinder tested at the age of 7 days and two (from the same batch) to be tested at the age of 28 days, with one cylinder held as a spare for future testing if needed. Tests shall be made by a recognized test laboratory selected by the Owner and approved by the Architect.
1. Cylinders not meeting the required design stresses shall indicate defective concrete and such concrete shall be removed and replaced at no increase in cost to the Owner. Core tests requested by the Contractor to establish design stresses, when cylinder tests indicate defective concrete, shall be paid for by the Contractor.

1.05 SUBMITTALS

- A. Submit under provisions of the General Conditions.
- B. Manufacturer's Data: Submit manufacturer's product data with application and installation instructions for proprietary materials and items, including reinforcement and forming accessories, admixtures, patching compounds, joint systems, chemical floor hardeners, and others as may be requested by the Architect.
- C. Shop Drawings:
1. Shop drawings sheet size shall be 24" x 30" minimum and shall not be a reproduction of the construction documents.
 2. Reinforcing Steel: The correctness of the bending diagrams is the responsibility of the Contractor. Identify such shop drawings with a reference thereon to sheet and detail numbers from the contract drawings. No reinforcing steel shall be fabricated without approved shop drawings.

3. Proposed location of constructions and cold joints when different or in addition to those shown on the drawings.
 4. Construction mount layout per the requirements of this Section.
- D. Concrete Mix Design: Submit proposed mix design prepared by concrete supplier. Mix design must submitted to Owner for review and acceptance by a recognized independent testing lab, for all structural concrete.

1.06 JOB CONDITIONS

- A. Traffic Control: Maintain access for vehicular and pedestrian traffic as required by construction activities.

PART 2 – PRODUCTS

2.01 FORM MATERIALS

- A. Plywood Forms shall be exterior plyform, in large sheets of adequate thickness to support the imposed loads, but in no case less than 5/8" thick.
- B. Lumber Forms may be used for concrete surfaces that are unexposed and require no further surface applied materials. Lumber, if used, shall be clean and sound 2 x 12 No. 2 grade or better Douglas fir.
- C. Form Coating: Form shall be coated with nongrain-raising and nonstaining types of form coating that will not leave a residual matter on the face of the concrete or adversely affect proper bonding of any subsequent paint or other surface applications.
1. Form coating containing mineral oils or other nondrying materials will not be permitted for any concrete work.
- D. Form Ties: Snap off metal of fixed length: leaving no metal within 1-1/2 inches of surface and no fractures, spalls or other surface defects larger than one-inch diameter; manufactured by Burke, Dayton Superior, or accepted equal.
- E. Spreaders: Metal (no wood permitted).
- F. Form Release Agent: Colorless, nonstaining, free from Lass; chemically active agent that shall not impair bonding of paint or other coatings intended for use.

2.02 REINFORCING MATERIALS

- A. Reinforcing Bars: ASTM A615 / A615M -09b with Supplement S1, marked "S", Grade 60 for #4 bar and larger, Grade 40 for bars smaller than #4.
- B. Furnish 6x6 W1.4xW1.4 welded wire fabric in flat sheets; rolls will not be allowed.
- C. Wire Ties for tying reinforcing steel shall be #16 annealed wire.
- D. Bar Supports: Comply with CRSI "Recommended Practice for Placing Bar Supports, Specifications and Nomenclature, Latest Edition", except as otherwise specified. Wood is not permitted as supports for reinforcing.
- E. Spacers and Chairs: As manufactured by Kalman Steel Company, Concrete Engineering

Company, or approved equal.

2.03 CONCRETE MATERIALS

- A. Portland Cement: ASTM C150 / C150M-09, Type II, low alkali. All cement used shall be of one manufacturer.
 - 1. Use Type IIA cement if pumping of concrete is selected and permitted for placing of concrete.
 - 2. All cement shall contain not more than 0.6 percent total alkali when calculated as sodium oxide as determined by "Methods of Chemical Analysis of Hydraulic Cement", ASTM C114-09b.
- B. Fly Ash: Western Fly Ash, conforming to ASTM C618 for Class N or Class F materials (Class C is not permitted). Not more than 15% (by weight) may be substituted for portland cement.
- C. Water: Clean and free from deleterious amounts of acids, alkalis, salts and organic matter.
- D. Concrete Aggregates: ASTM C33 / C33M-08 except as otherwise specified hereinafter. All aggregates shall be nonreactive and nondegenerative, and shall consist of sound crushed rock, washed gravel, or a combination of both.
 - 1. Modify fine aggregates when air entrained concrete is used in accordance to Paragraph 4.2.4 of ASTM C33 / C33M-08.
 - 2. Aggregate sources shall be approved by the Architect. Aggregate shall result in shrinkage of concrete not exceeding 0.048 percent at 28 days. Testing lab shall verify aggregate and concrete shrinkage.
 - 3. Do not use fine or course aggregates that contain substances that are known to cause spalling or adverse reactions in the concrete.
- E. Admixtures: Except for admixtures noted below, no other admixtures shall be used without written approval from the Structural engineer. Where such agents are permitted, they shall be a type approved and used only as directed by the Architect and at no increase in cost to the Owner. Agents including calcium chloride will not be permitted for use in concrete under any circumstances.
 - 1. Air Entraining Agents: ASTM C260. Use where specified. The maximum entrained air content shall be no more than 4 percent + 1 percent by volume unless noted otherwise. Approved air entraining agents are Sika AER, Master Builders Micro Air, Darex AEA, and Protex AEA.
 - 2. Water Reducing Admixtures: ASTM C494 and ACI 318, Section 3.6. Use where specified. Approved agent is Master Builders Pozzolith 322-N, used at the rate of 5+2 fluid ounces per 100 pounds of cement.
 - 3. Structural Slab Admixture: Moxie 1800 Super-Admix by Moxie International shall be used in interior structural slabs-on-grade mixes, omitting air entrainment (ASTM C260) and water-reducing (ASTM C494) admixtures. Use rates as recommended by manufacturer.

4. Concrete Hardener/Sealer: See Specification Section, 03 35 00 Concrete Hardener-Sealers.

2.04 CRUSHED ROCK BASE:

- A. Under all new concrete ramps and paving, or as otherwise indicated on the Drawings, provide a minimum of 4 inches of crushed rock fill. Crushed rock fill shall be clean gravel of 1" max. size and have no material passing through a No. 4 sieve.

2.05 JOINT MATERIAL:

- A. Provide 3/8" wide fiber expansion joint material, Model No. 320-F, as manufactured by W.R. Meadows or equal.
- B. Provide Snap-Cap as manufactured by W.R. Meadows or equal. Snap-Cap shall have a top plastic edge that can be used for leveling concrete. Once concrete has set up, top edge of Snap-Cap can be pulled free and discarded. Joint shall then be sealed.
- C. Joint sealing material shall be a two-component, self-leveling, polyurethane elastomeric sealant. Product shall be Sikaflex 2cSL as manufactured Sika Corporation, or equal. Color shall be chosen from the full range of manufacturer's standard colors.

2.06 RELATED MATERIALS

- A. Concrete Adhesive and Bonding Agent: "Concresive #1001-LPL" (1-1/2 hour maximum pot life), an epoxy polysulfide type concrete adhesive as manufactured by Master Builders or equal.
- B. Liquid Curing Compound: W.R. Meadows, Product: "Vocomp-20" or equal.
- C. Bonding Adhesive: Burke, Bondcrete-S; use as a modifier for patching and overlays up to 1/2" thick or equal.
- D. Vapor Barrier: Stego Wrap, 15 mil. vapor barrier system, with a Class A rating, and perm rating not to exceed 0.01 perms; by Stego Industries of San Juan Capistrano, CA (877) 464-7834, VaporGuard by Reef Industries (713) 507-4250., Sundance 15 mil Vapor Barrier by Sundance Inc. (855) 300-7156, or 15 mil Husky, Yellow Guard, Vapor Barrier by Poly-America (800) 527-3322.. No substitutions will be accepted. System to include Stego Mastic, Stego "Crete Claw Tape" and pipe boots, or accepted equal by the specified manufacturers. Conform to ASTM 1745.
- E. Doweling Epoxy: Hilti "HIT-HY 200" (ICC-ES ESR-3187), Simpson Strong-Tie "SET-XP" Epoxy (ICC-ES ESR-2508), or accepted equal.
1. Anchor rods shall be furnished with a 45-degree chisel point on one end to allow for easy insertion into adhesive filled hole and manufactured to meet the requirements of ASTM A36. Nuts and washers shall be furnished to meet the requirements of the anchor rod specifications noted above.
2. Install per manufacturer's recommendation; use stainless steel for all exterior work.
- F. Drilled-in Concrete Anchors: Hilti "Kwik Bolt TZ2" (ICC-ES ESR-4266), Simpson Strong-Tie "Strong-Bolt 2" (ICC-ES ESR-3037), or accepted equal.

1. Install per manufacturer's recommendation; use stainless steel for all exterior work.
- G. Patching Mortar: Meadow-Crete GPS, one-component, trowel applied, polymer enhanced, shrinkage-compensated, fiber reinforced, cementitious repair mortar for horizontal, vertical and overhead applications as manufactured by W.R. Meadows or accepted equal
- H. Non-shrink Grout: Masterflow 713 Plus by Master Builders or accepted equal. Premixed, non-metallic, no chlorides, non-staining and non-shrinking per CRD-C621, Corps of Engineers Specification and ASTM C 1107, Grades B and C.

2.07 CONCRETE DESIGN

A. Designed Strength and Classes of Concrete:

1. **Class "A"** concrete of 1-1/2" max. size aggregate shall have 3,500 psi 28 day strength with a maximum water to cementitious materials ratio of 0.55. Provide air entrainment of 3% to 5%.

Use for at sub-grade footings and other concrete of like nature.

2. **Class "C"** concrete of 1" max. size aggregate shall have 4,000 psi 28 day strength with a maximum water to cementitious materials ratio of 0.45.

Use for at interior and exterior structural concrete slabs, structural curbs and equipment housekeeping pads.

3. For exterior, non-building related concrete, including flatwork, curbs, gutters, ramps, driveways, etc., see Section 32 16 00, Site Concrete.

B. Slump of Concrete: The slump of concrete as determined by the Standard Test Method for Slump of Hydraulic Cement Concrete ASTM Designation C-143 / C143M-09 shall be as follows:

1. **Class "A"** concrete: 3.5" plus or minus 1" (4.5" maximum).
2. **Class "C"** concrete: 4" plus or minus 1" (5" maximum).

C. Laboratory Mix Design: Concrete designs shall be reviewed by the Testing Laboratory. The concrete mix designs reviewed by the Testing Laboratory and approved by the Project Architect or Structural Engineer shall be used by the Contractor. Contractor shall provide samples of aggregates as required by the laboratory to review the mix designs.

D. Water Reducing Admixture: Unless noted otherwise, all concrete shall contain a water reducing admixture.

2.07 CONCRETE MIXING

A. Ready-Mixed Concrete: ASTM C94 / C94M-09a except as otherwise specified herein.

1. Transit-mixed concrete shall be mixed for a period of not less than 10 minutes at a peripheral drum speed of approximately 200 feet per minute, and mixing shall be continued until discharge is complete. At least 3 minutes of the mixing period shall be at the job. Transit mixers shall be equipped with water measuring devices

consisting of either accurately calibrated water tanks or water meters.

2. When outside air temperature is between 85 degrees and 90 degrees, reduce mixing and delivery time from 90 minutes to 75 minutes. When outside air temperature is above 90 degrees, reduce mixing and delivery time to 60 minutes
- B. Job Mixing: Non-structural concrete only. The capacity of the mixer shall be such that it will handle one or more full sack batches. No split sack batches will be permitted except when all materials are weighed. The rated capacity of the mixer shall not be exceeded. The mixing drum shall be equipped with an automatic timing and locking device and with an accurate water gauge for measuring the amount of water used. Mixing time of each batch shall be at least 1-1/2 minutes after all ingredients are in the mixer.

PART 3 – EXECUTION

3.01 FORMS

- A. Build and Erect Forms to conform to the required shapes, patterns, lines, grades, and dimensions indicated. Forms shall be substantial and tight to prevent any leakage of mortar, properly braced and tied together to maintain their position and shape. Forms shall not deflect under the dead load weight of the plastic concrete or construction loads. Joints in forming material shall be butted tightly and shall bear on solid construction. Provide tool edges where indicated. Completed form work to be checked for grade and alignment to tolerances not exceeding 1/8" in 10'-0" for top of forms and not more than 1/4" in 10'-0" for vertical face.
- B. Cast-in Items: Set in formwork all new sleeves, inserts, anchors, and similar items furnished and required under the work of other sections. Brace, anchor, and support cast-in-items to prevent displacements and distortions.
- C. Clean forms after each use and coat with release agent as required.
- D. Space clamps, ties, hangers, and other form accessories so that working capacities are not exceeded by loads imposed from concrete or concreting operations.
- E. Build openings into vertical forms at regular intervals if necessary to facilitate concrete placement, and at bottoms of forms to permit cleaning and inspection.
- F. Build in securely braced temporary bulkheads, keyed as required, at approved locations of construction joints.
- G. Slope tie-wires downward to outside of wall.
- H. During and immediately after concrete placing, tighten forms, posts, and shores. Readjust to maintain grades, levels, and camber.
- I. No metal or wood stakes are allowed in areas to be concreted.

3.02 REINFORCEMENT FABRICATION

- A. Steel reinforcement shall not be bent or straightened in a manner that will injure the material. Bars with kinks or bends not shown on the Drawings shall not be used. Heating of the bars for bending will not be permitted.
 1. Spacers and chairs shall be as specified or detailed and spaced such that steel

reinforcement will be carried without deflection.

2. Concrete blocks may be used to support bottom layer of steel in floor slabs on grade.
 3. Bars shall be in long lengths with laps and splices as shown. Offset laps 5'-0" minimum in adjacent bars. Place steel with clearances and cover as shown. Bar laps shall be as indicated on the drawings. Tie all laps and all intersections with specified wire. Maintain clear space between parallel bars not less than 1-1/2 times nominal diameter for round bars, or twice side dimension for square bars, but in no case shall clear space be less than 1-1/2", nor less than 1-1/2 times maximum size concrete aggregate.
 4. Reinforcing dowels for slabs shall be placed as detailed. Grease one penetration so that pour will not bond to dowel. Sleeves may be used if approved by the Architect before installation. Install dowels through all construction and expansion joints for all slabs on grade.
 5. Install welded wire fabric in lengths as long as possible. Lap adjoining pieces at least one full mesh and lace splices with wire ties. Offset laps of adjoining widths to prevent continuous laps in either direction.
 6. Cut bars true to length with ends square and free of burrs.
- B. Drawing Notes: Refer to notes on Drawings for additional reinforcement requirements.
- C. Welding of reinforcing bar shall be performed only where indicated on plans and in compliance with AWS D1.4. All welding of reinforcement is to be inspected in accordance with CBC Table 1705A.2.1, Item 5(b).

3.03 CONCRETE PLACEMENT

- A. Surrounding Conditions: Before any concrete is placed, the following items of work shall have been completed in the area of placing.
1. Forms shall have been erected, adequately braced, cleaned, sealed, lubricated if required, and bulkheaded where placing is to stop.
 - a. Any wood forms other than plywood shall be thoroughly water soaked before placing any concrete. The wetting of forms shall be started at least 12 hours before concreting.
 2. Reinforcing steel shall have been placed, tied, supported, and, at the time the concrete is placed around it, shall be cleaned of rust, scale, mill scale or other coatings that will destroy or reduce bond.
 3. Embedded work of all trades shall be in place in the forms and adequately tied and braced.
 4. The entire place of deposit shall have been cleaned of dirt, chips, sawdust, rubbish, debris, hardened concrete, and other foreign matter before concrete is deposited therein. No wooden ties nor blocking shall be left in concrete except where indicated for attachment of other work.
 5. Concrete surfaces to which fresh concrete is to be bonded shall be saw cut and

broken away as indicated. Surfaces shall be brush cleaned to remove all dust and foreign matter and to expose the aggregate, and then coated with the bonding adhesive herein specified.

- B. Conveying Concrete from mixer to forms shall be as rapid as possible.
1. Ready-mixed concrete shall be mixed and delivered in accordance with ASTM C94 / C94M-09a. A delivery ticket shall be furnished for each load of ready-mix or transit-mix concrete. A copy of each delivery ticket shall be handed to the job superintendent at the time of delivery and unloading. A record copy of the delivery tickets shall be forwarded to the Architect for his files.
 2. Conveying equipment shall be of a sufficient capacity to ensure a practically continuous flow of concrete to the placing point without separation or loss of materials. Carts and buggies shall be equipped with pneumatic tires. Runway supports shall not bear on reinforcing or fresh concrete. All conveying equipment shall be thoroughly cleaned before beginning and at frequent intervals during the placing of the concrete.
 - a. Chutes, if employed, shall slope not less than 4" or more than 6" per foot of horizontal run.
 3. Exercise care not to spill concrete on forms and reinforcing steel during the conveying operations. Where such spillage or splattering occurs, the surfaces shall be thoroughly cleaned before concrete hardens.
- C. Placing Concrete: Notify the Architect at least 48 hours in advance of beginning of pouring operations. Under no circumstances shall concrete that has partially hardened be deposited on the work. No concrete shall be placed during rainy weather without the Architect's approval.
1. The Project Inspector shall keep a record on the site of the time and date of placing the concrete in each portion of the structure in accordance with CBC Section 1705A.3.6. The record shall be kept until the completion of the structure and a copy provided to the Architect and DSA.
 2. Before starting new pour on or against concrete that has hardened, forms shall be retightened, and the hardened concrete roughened and thoroughly cleaned of foreign matter and any laitance by sandblasting. Just ahead of the new pour, slush joints with a 2" layer of grout of the designated concrete mix minus 50 percent of the large aggregate.
 3. Reinforcing steel exposed to the sun shall be cooled by a water spray prior to the placing of concrete.
 4. No adjustment of steel reinforcement will be permitted during the placement of concrete.
 5. Concrete shall be scheduled so that the placing is a continuous operation for the completion of each section between predetermined construction joints. If a planned concreting operation cannot be carried on continuously, the concreting shall stop at temporary bulkheads. Locate where resulting construction joints shall be as shown on the Drawings or as approved by the Architect. Prior to placing of concrete for any concrete slabs, the moisture content of the subgrade below the slabs shall be adjusted to at least optimum moisture.

6. Deposit the concrete in forms as nearly as practicable in its final position to avoid flowing and maintain until completion of the unit an approximate horizontal plastic surface. Thoroughly compact all concrete during placing operations, thoroughly around reinforcement, embedded fixtures or accessories, and into the corners of forms to eliminate air pockets and honeycombing. Compacting shall be done with mechanical vibrators. Vibrators shall not be used to cause concrete to flow horizontally. Thoroughly compact concrete to the forms to release the air and secure full contact of the concrete with the forms.
7. Hot Weather Concreting: Concrete placing and finishing operations during hot weather shall be done as quickly as possible. Ample personnel shall be available to handle and place the concrete immediately after its mixing or delivery to the site of the work. Concrete shall be placed in layers thin enough and over areas small enough to ensure complete bond and union of adjacent layers, and thus prevent "cold joints".
 - a. At air temperatures of 80 degrees Fahrenheit or above the following precautions should be taken:
 - 1) In no case shall the temperature of the concrete exceed 90 degrees Fahrenheit when placed in the work.
 - 2) If necessary to produce and maintain concrete at an acceptable temperature, chopped or crushed ice shall be added directly into the mixer up to 50 percent by weight of the mixing water used, the weight of the ice being included in batch weight of the mixing water. The ice shall be added at such a rate and in such a manner that it will be completely melted by the time concrete is mixed.
 - 3) Stockpiled aggregates shall be saturated and kept surface moist by continuous fog spray or by intermittent sprinkling.
 - 4) Forms, reinforcements, and subgrade surfaces shall be wet down immediately before concrete is placed in contact therewith. Remove all excess water before placing concrete. Wetting down of areas around the work to cool the surrounding air and increase the humidity is recommended.
8. Cold Weather Requirements: Do not place concrete when ambient temperature is below 40 degrees Fahrenheit and falling.

3.04 CONCRETE FINISHING

- A. All Concrete Work, except as otherwise specified, shall be of a quality that will present a finished appearance upon the stripping of the forms. Only a minimum of patching and finishing should be necessary as required to fill holes left by form ties and to remove any fins or minor irregularities left by the joints in the forms. Except as otherwise specified, all concrete surfaces shall be finished as follows:
 1. Final Finish: Provide a medium textured broom finish for all exterior surfaces by drawing a soft bristle broom across concrete surface perpendicular to the line of traffic to provide a uniform fine line texture finish. Interior finishes shall be smooth troweld.
 2. No magnesium bull floats allowed on non-air-entrained concrete.

- B. Final Tooling: Tool edges of paving, gutters, curbs and joints formed in fresh concrete with a jointing tool to a radius of 1/4". Repeat tooling of edges and joints after applying surface finishes. Eliminate tools marks on all concrete surfaces.

3.05 CONSTRUCTION JOINTS

- A. Control joints shall be saw cut into concrete as soon as concrete slab can be walked on. Do not wait until the following day to saw cut concrete slab control joints.
- B. Construct contraction, construction, and isolation joints true to line with faces perpendicular to surface plane of concrete. Construct transverse joints at right angles to the centerline unless otherwise indicated.
- C. Joints at Existing Concrete: All joints between existing concrete and new concrete are to include dowels a t a minimum of #4 bars @ 4'-0" on center, 18" maximum from the ends, epoxy set into existing concrete a minimum of 6" in length at the centerline of existing concrete slab.
- D. Contraction Joints (Control Joints): Provide weakened-plane contraction joints, sectioning concrete into areas indicated. Construct contraction joints for a depth equal to at least 1/4 of the concrete thickness. Form in fresh concrete by grooving and finishing each edge of joint with a radiused jointer tool. Joints to be spaced at 10' on center maximum or as shown on the drawings.
- E. Construction Joints: Set construction joints at side and end terminations of concrete placement and at locations where placement operations are stopped for more than 1/2 hour, unless placement ends at isolation joints.
 - 1. Provide preformed galvanized steel or plastic keyway-section forms or bulkhead forms with keys. Use Burke "Keyed Kold Joint Header Form", or approved equal. Embed keys at least 1 1/2" into concrete.
 - 2. Continue reinforcement across construction joints.
 - 3. Use bonding agent on existing concrete surfaces that will be joined with fresh concrete.
- F. Isolation Joints (Expansion Joints): Form isolation joints of performed joint filler strips abutting concrete curbs, catch basin, manholes, inlets, structures, walks, other fixed objects, and where indicated.
 - 1. Extend joint fillers full width and depth of joint, not less than 1/2" or more than 1" below finished surface where a joint sealant is indicated. Place top of removable joint filler flush with finished concrete surface.
 - 2. Protect top edge of joint filler during concrete placement with metal, plastic, or other temporary, removable performed cap.
 - 3. After concrete has set up, remove cap exposing top edge of fiber joint filler, and apply joint sealant.

3.06 PUMPING OF CONCRETE may be permitted for concrete, providing:

- A. The Contractor engages a testing laboratory to design concrete mixes for pumping. Trial

batches shall be made and tested as required hereinbefore for typical concrete.

- B. The quality and proportioning of aggregates for pumping conditions shall be determined in accordance with ACI, Recommended Practice 613. Aggregate proportioning must be tailored to the particular pump intended for use.
- C. When starting a pump operation, actual pumping of concrete shall be preceded by a mortar mix (concrete without coarse aggregate) for the purpose of lubrication.
- D. All mortar and concrete leakage resulting from pumping operations shall be removed from formwork, reinforcing steel and any finished surface.

3.07 CURING

- A. Protect freshly placed concrete from premature drying and excessive cold or hot temperature. Comply with the recommendations of ACI 306R for cold weather protection and ACI 305R for hot weather protection during curing.
- B. Evaporation control is to be implemented in hot, dry and windy weather by protecting concrete from rapid moisture loss before and during finishing operations with an evaporation control material. Apply in accordance with manufacturer's instructions after screeding and bull floating, but not before floating.
- C. Begin curing after finishing concrete but not before free water has disappeared from concrete surface.
- D. Cure concrete by moisture curing, moisture-retaining-cover curing, curing compound, or a combination.
 - 1. For moisture-curing, keep surfaces continuously moist for not less than 7 days with water, a continuous water-fog spray, or absorptive cover kept wet continuously wet.
 - 2. For moisture-retaining-cover, cover concrete with moisture retaining cover with side and end laps sealed.
 - 3. For curing compound, apply in accordance with manufacturer's instructions. Recoat areas subjected to rainfall within 3-hours after initial application.
- C. Forms shall remain in place for not less than the following periods of time. These periods represent minimum cumulative number of days during which temperature of air in contact with concrete is 60 degrees F and above.
 - 1. Vertical forms of foundations and walls: 5 days.
 - 2. Slab edge screens or forms: 7 days.
 - 3. Concrete columns and beam soffits: 28 days.

3.08 SURFACE HARDENER AND SEALER

- A. Refer to Specification Section 03 35 00, Concrete Floor Hardener-Sealers, for locations and use of surface hardener-sealers.

3.09 CLEANING AND PROTECTION

- A. Clean all surfaces and leave in satisfactory condition to receive final finish surface treatment.
- B. Protect concrete surfaces from damage by tools, equipment, material and workmen. No traffic, shoring or other loading will be permitted until concrete has hardened sufficiently to prevent injury to finish and strength, but at least 14 days.
 - 1. Remove surface stains and spillage of materials as they occur.
 - 2. Sweep concrete and wash free of stains, discolorations, dirt, and other foreign material prior to final inspection.

END OF SECTION 03 30 00

**SECTION 03 35 00
CONCRETE FLOOR HARDENER-SEALERS**

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Surface preparation.
- B. Application of clear, colorless, liquid concrete curing aid and hardener.
- C. Application of clear, colorless, liquid concrete hardener and densifier.
- D. Application of water-based concrete enhancer.

1.02 RELATED SECTIONS

- A. Section 03 00 00: Cast-in-Place Concrete.

1.03 REFERENCES

- A. ASTM C779 - Standard Test Method for Abrasion Resistance of Horizontal Concrete Surfaces.
- B. ASTM F609 - Standard Test Method for Using a Horizontal Pull Slip Meter (HPS).

1.04 SUBMITTALS

- A. Submit per the requirements the General Conditions:
 - 1. Submit manufacturer's product data and application instructions.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- B. Store materials in a clean, dry area in accordance with manufacturer's instructions.
- C. Keep products from freezing.
- D. Avoid direct contact with this product, as it may cause mild-to-moderate irritation of the eyes and/or skin.
- E. Protect materials during handling and application to prevent damage or contamination.

1.06 QUALITY ASSURANCE

- A. Installer Qualifications: Minimum of 2 years of experience with installation of similar products.

1.07 ENVIRONMENTAL REQUIREMENTS

- A. Do not apply concrete densifier and chemical hardener when concrete temperature is below 40° F or above 135° F.

- B. Do not apply to frozen concrete.

PART 2 - PRODUCTS

2.01 MANUFACTURER

- A. W. R. MEADOWS®, INC., PO Box 338, Hampshire, Illinois 60140-0338. (800) 342-5976. (847) 683-4500. Website, www.wrmeadows.com.
 - 1. Local area representative: Patrick Ramey, 916.806.8924.
- B. Approved equal.

2.02 MATERIALS

- A. Concrete Curing Aid and Hardener:
 - 1. **W. R. MEADOWS, MED-CURE.** Curing aid shall be a ready to use, water-base colorless liquid formulated with chemically reactive raw materials that meets the maximum VOC content limits of 100 g/L and designed to be installed at the time of concrete placement and finishing.
- B. Densifier and Chemical Hardener:
 - 1. **W. R. MEADOWS, LIQUI-HARD ULTRA.** Concrete densifier and chemical hardener compound shall be a ready-to-use, water-based, colorless liquid formulated with chemically reactive raw materials that meets the maximum VOC content limits of 100 g/L for sealers as required by the South Coast Air Quality Management District requirements, as well as the 400 g/L VOC maximum required by the U.S. EPA Architectural Coatings Rule and designed to be installed after concrete has been placed, finished and partially cured.
- C. Concrete Enhancer:
 - 1. **W. R. MEADOWS, BELLATRIX.** Concrete enhancer shall be a ready-to-use, water-based, synthetic polymer concrete floor enhancer containing a proprietary stain-blocking additive that meets the maximum VOC content limits of 100 g/L for sealers as required by the South Coast Air Quality Management District requirements, as well as the 400 g/L VOC maximum required by the U.S. EPA Architectural Coatings Rule and designed to be installed in conjunction with densifier and chemical hardener.

2.03 RELATED MATERIALS

- A. Water: Potable water.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. To be used at Freezer / Refrigerator Building interior topping-traffic slab only.

- B. Examine surfaces to receive concrete densifier and chemical hardener. Notify architect if surfaces are not acceptable. Do not begin application until unacceptable conditions have been corrected.
- C. Ensure material can penetrate the concrete surface.

3.02 SURFACE PREPARATION

- A. Protect adjacent surfaces not designated to receive treatment.
- B. Clean and prepare surfaces to receive treatment in accordance with manufacturer's instructions, ensuring that all stains, oil, grease, form release agents, curing compounds, dust, and dirt are removed prior to application.
- C. Fill and repair all holes, cracks, and deteriorated areas that have been removed to sound concrete.

3.03 APPLICATION – CURING AID AND HARDENER

- A. Apply concrete curing aid and hardener in accordance with manufacturer's instructions.
- B. Do not dilute concrete curing aid and hardener.
- C. New Concrete:
 - 1. Apply concrete curing aid and hardener as soon as surface water has disappeared and the surface is dry to the touch or hard enough to walk on.
 - 2. Apply one even coat with a pressure hand sprayer or paint roller.
 - 3. Do not allow material to puddle on the surface.
 - 4. Restrict foot traffic for 48 hours.

3.04 APPLICATION – DENSIFIER AND CHEMICAL HARDENER

- A. Apply concrete densifier and chemical hardener in accordance with manufacturer's instructions.
- B. Ensure application equipment is clean and free of previously used materials.
- C. Do not dilute concrete densifier and chemical hardener.
- E. Allow new concrete to cure for a minimum of 72 hours and up to 28 days prior to application. Longer cure time up to 28 days is preferred.
 - 1. Apply undiluted concrete densifier and chemical hardener using a low-pressure sprayer.
 - 2. Keep the surface wet with concrete densifier and chemical hardener for a minimum 20-minute period.
 - 3. Do not allow material to puddle on the surface.
 - 4. Let the surface dry for 2-4 hours.
 - 5. Restrict foot traffic for at least 4 hours; 12 hours is preferable.

3.05 APPLICATION - CONCRETE ENHANCER

- A. Allow 24 hours before proceeding with concrete enhancer application following installation of densifier.

- B. Spray concrete enhancer full strength from container using an industrial sprayer delivering 1/10th of a gallon per minute.
- C. Pre-wet micro-fiber applicator with concrete enhancer prior to use.
- D. Uniformly spread concrete enhancer with a micro-fiber applicator, ensuring that the product is not allowed to dry before spreading is complete. Special caution should be taken to not over apply. A monolithic, thin, even film is desired.
- E. For optimum performance, apply a second coat at a 90° (right) angle to the first coat, after the first coat is thoroughly dry.
- F. Allow 24 hours for concrete enhancer to dry.

3.06 PROTECTION

- A. Keep surfaces dry and limit foot traffic for a minimum of 48 hours after application (preferably 72 hours).

END SECTION 03 35 00

**SECTION 07 90 00
JOINT SEALERS**

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. Building and site paving joint sealants.

1.02 RELATED SECTIONS

- A. The Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
- E. Section 32 16 00: Site Concrete.

1.03 REFERENCES

- A. ASTM C834-10 - Latex Sealants.
- B. ASTM C920-05 - Elastomeric Joint Sealants.
- C. FS TT-S-00227 - Sealing Compound: Elastomeric Type, Multi-Component.
- D. FS TT-S-00230 - Sealing Compound: Elastomeric Type, Single Component.
- E. FS TT-S-001543 - Sealing Compound, Silicone Rubber Base.

1.04 SUBMITTALS

- A. Submit per the requirements of the General Conditions.
- B. Submit product data indicating sealant chemical characteristics, performance criteria, limitations, and color availability.
- C. Submit physical samples.
- D. Submit standard color ranges of exposed materials for Architect selection.
- E. Submit manufacturer's installation instructions.
- F. Submit VOC information for each product included in submittal.

1.05 QUALITY ASSURANCE

- A. Manufacturer: Company specializing in manufacturing the products specified in this Section with minimum three years experience.
- B. Applicator: Company specializing in applying the work of this section with minimum three years experience, with projects of a similar size and type.
- C. Conform to Sealant Water-proofing and Restoration Institute requirements for materials and installation.

- D. Prior to installation of joint sealants, field test adhesion to joint substrates.
 - 1. Install joint sealants in 5-foot joint lengths. Allow to cure before testing. Test adhesion by pulling sealant out of joint.
 - 2. Perform field tests for each type of elastomeric sealant and joint substrate.
 - 3. Arrange for tests to take place with joint sealant manufacturer's technical representative present.
 - 4. Report whether or not sealant in joint connected to pulled out portion failed to adhere to joint substrates or tore cohesively. Include data on pull distance used to test each type of product and joint substrate.
 - 5. Sealants not evidencing adhesive failure from testing, in absence of other indications of non-compliance with requirements, will be considered satisfactory. Do not use sealants that fail to adhere to joint substrate during testing.

1.06 ENVIRONMENTAL REQUIREMENTS

- A. Do not install solvent curing sealants in enclosed building spaces.
- B. Maintain temperature and humidity recommended by the sealant manufacturer during and after installation.
- C. Do not install sealants under adverse weather conditions or when temperatures are above or below manufacturer's recommended limitations for installation.
- D. Deliver materials in the unopened, original containers or unopened packages with manufacturer's name, labels, product identification, color, expiration period, curing time and mixing instructions for multi-component materials.
- E. All adhesives, sealants, and caulks shall have a maximum VOC limit of 250 grams per liter.

1.07 SEQUENCING AND SCHEDULING

- A. Coordinate the work of this Section with all Sections referencing this Section.

1.08 WARRANTY

- A. Provide two-year warranty for materials and workmanship under provisions of the General Conditions.
- B. Warranty: Include coverage of installed sealants and accessories which fail to achieve air tight and watertight seal, exhibit loss of adhesion or cohesion, or do not cure.

PART 2 – PRODUCTS

2.01 SEALANTS

- A. Silicone Sealant: Silicone Sealant (use at glazing applications): FS TT-S-01543, Class A,

low modulus type; Spectrum I as manufactured by Tremco, Inc.

- B. Interior Building Sealant: Acrylic-emulsion; one-part, non-sag, mildew-resistant. Complying with ASTM C834-10, formulated to be paintable; Pecora Corp. "AC-20", Sonneborn "Sonolac", Tremco Inc. "Tremco Acrylic Latex 834" or approved equal.
- C. Sanitary Sealant: One-part mildew-resistant silicone; ASTM C920 Type S; Grade NS Class 25; Uses NT, G, A and O; formulated with fungicide for sealing interior joints with nonporous substrates around ceramic tile, showers, sinks and plumbing fixtures; Dow Corning Corp. "786 Mildew Resistant", or approved equal.
- D. Concrete Expansion Joints: Joint sealing material shall be a two-component, self-leveling, polyurethane elastomeric sealant. Product shall be Sikaflex 2cSL as manufactured Sika Corporation, or equal. Color shall be chosen from the full range of manufacturer's standard colors.
- E. Vertical Building Expansion Joints: Joint sealing material shall be a one-component, polyurethane-based non-sag elastomeric sealant. Product shall be Sikaflex Construction Sealant as manufactured Sika Corporation, Pecora Corp. "DynaTrol II", Dow Corning 758 Weather Barrier Sealant or approved equal. Color shall be chosen from the full range of manufacturer's standard colors.
- F. Sheet Metal Flashings, Trims, Gutters, & Joints: Joint sealing material shall be a premium-grade, high-performance, moisture-cured, 1-component, polyurethane-based, non-sag elastomeric sealant. Product shall be 'Sikaflex 1a' as manufactured Sika Corporation, or equal. Color shall be chosen from the full range of manufacturer's standard colors. Provide Sikaflex 260 Primer at all stainless steel and/or galvanized substrate location for proper adhesion of Sikaflex 1a.
- J. Colors of sealants shall be as selected by Architect from manufacturer's full range of standard colors at time of submittal.

2.02 ACCESSORIES

- A. Primer: Non-staining type, recommended by sealant manufacturer to suit application.
- B. Joint Cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming materials.
- C. Joint Backing: Non-staining; compatible with sealant and primer; such as round, closed cell polyethylene foam rod; oversized 30 to 50 percent larger than joint width. Materials impregnated with oil, bitumen or similar materials shall not be used. Sealant shall not adhere to back-up material.
- D. Bond Breaker: Pressure sensitive tape recommended by sealant manufacturer to suit application.
- E. Solvents; cleaning agents or other accessory materials shall be as recommended by the sealant manufacturer.

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Verify that surfaces and joint openings are ready to receive work and field measurements are as shown on Drawings and recommended by the manufacturer.
- B. Beginning of installation means installer accepts existing surfaces.

3.02 PREPARATION

- A. Clean and prime joints in accordance with manufacturer's instructions.
- B. Remove loose materials and foreign matter which might impair adhesion of sealant.
- C. Verify that joint backing and release tapes are compatible with sealant.
- D. Perform preparation in accordance with sealant manufacturer's recommendations.
- E. Protect elements surrounding the work of this Section from damage or disfiguration.
- F. Clean concrete, masonry, unglazed surfaces of ceramic tile and similar porous surfaces, by brushing, grinding, blast cleaning, mechanical abrading, or acid washing to produce a clean, sound substrate. Remove loose particles remaining from cleaning operations by vacuuming or blowing out joints.
- G. Clean metal, glass, glazed surfaces of ceramic tile and other non-porous surfaces by chemical cleaners or other means which are not harmful to substrates or leave residues capable of interfering with adhesion of joint sealants.

3.03 INSTALLATION

- A. Install sealant in accordance with manufacturer's instructions.
- B. Caulk all exterior joints and openings in the building envelope that are observable sources of air infiltration.
- C. Measure joint dimensions and size materials to achieve required width/depth ratios.
- D. Install joint backing to achieve a neck dimension no greater than 1/3 the joint width. Roll the material into the joint to avoid lengthwise stretching. Do not twist or braid rod stock.
- E. Install bond breaker where joint backing is not used.
- F. Prime surfaces to receive joint sealant with primer recommended by sealant manufacturer.
- G. Apply sealant within recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges. Apply masking tape where required to protect adjacent surfaces from sealant application.
- H. Install sealant free of air pockets, foreign embedded matter, ridges, and sags.
- I. Tool joints concave.
- J. At all surface mounted light fixtures mounted on gypsum board ceilings, contractor shall

caulk light fixture body to ceiling finish to eliminate gap between metal body and fixture.
Coordinate locations with drawings.

3.04 CLEANING AND REPAIRING

- A. Clean work under provisions of the General Conditions.
- B. Clean adjacent soiled surfaces. Use a solvent or cleaning agent as recommended by the sealant manufacturer.
- C. Repair or replace defaced or disfigured finishes caused by work of this Section.

3.05 PROTECTION OF FINISHED WORK

- A. Protect sealants until cured
- B. Do not paint sealants until sealant is fully cured.
- C. Do not paint silicone sealant.

END OF SECTION 07 90 00

**SECTION 11 40 00
FOODSERVICE EQUIPMENT**

(Provided for Reference only as Basis of Design for RMI / Airdyne provided equipment)

- I. Refer to Freezer / Refrigerator Reference Drawing Sheets X1 and R-1 for additional information.**
- II. System is based on Item No: RR1 – Model No: MP-12 Remote Refrigeration Package by Airdyne Refrigeration**
- III. Basis of Design Description:**
 - A. Airdyne shall Furnish and Install mechanical refrigeration work as indicated and specified, complete and ready for use. All systems shall comply with the latest edition of Title 24, 2016 Building Efficiency Standards. Airdyne to include complete refrigeration installation for the project so as to not void manufacturer warranty. Food Service Equipment Contractor shall contract directly with Airdyne for the procurement and installation of refrigeration system and install.

Principle Items of work include:

- 1. Mechanical refrigeration systems, including compressor units, condensers, receivers, refrigerant piping, evaporator coils, control valves, compressor racks, weather covers and required miscellaneous items. Refrigeration equipment shall consist of two major assemblies. One is the condensing unit assembly with all necessary components, factory installed and wired including single point electrical panel, circuit breakers and contactors, OSHA approved fan guards, aluminum flexible conduit for internal wiring, suction/liquid filter driers, sight glasses, oil separator, hand valves, adjustable dual pressure controls, flexible pressure hoses, Rotolock compressor adaptors and necessary tubing. The other is the refrigeration evaporator coil assembly/heat exchanger with liquid line solenoid valve, electronic thermostat expansion valve with Beacon II controller and on/off power switch, completely factory pressure tested with dry nitrogen.

Refrigeration package shall be a pre-engineered and factory assembled unit trade name "MULTI- PAK" as manufactured by:

RMI-Airdyne Refrigeration
17018 Edwards Road, Cerritos, CA 90703
Contact: Tony Bedi
Phone: (562) 645-4668
Fax: (562) 926-2007
Email: tony@rmi-airdyne.com

Compressor shall conform to the Refrigeration Schedule as shown on Sheet R-1 or as specified herein:

- a. Utilize refrigerant with an ozone depleting potential of 0.
- b. R-448a for all low and medium temperatures.
- c. Other refrigerant approved by the Department of Energy for use in remote refrigeration system after December 31, 2017.

2. Refrigeration system shall be housed in a weather protected enclosure. The frame shall be fabricated of galvanized steel. Entire frame shall be pre-assembled, welded, cleaned, primed and powder coated epoxy enamel and baked. The condenser shall be sectional, removable with rifled tubing slotted finned and shall be designed for 20 F T.D.
 3. Furnishing of motor starters and walk-in refrigerator/freezer thermostats for installation under Electrical Sections.
 4. Sleeves, inserts, hangers, supports and other incidental items necessary to complete the work.
 5. Cutting and patching of non-structural and other incidental items necessary to complete the work on this section.
 6. Testing ,charging, adjusting, operational testing and cleaning of equipment. Conduct all tests as required by local inspecting agencies concerned with the project. Each refrigeration items specification is written to provide minimum specifications and scope of work.
 7. Refrigeration equipment shall be designed and installed to maintain the following general temperature unless otherwise specified.

a. Walk-in Refrigerators	1.7 degrees C/ 35 degrees F
b. Walk-in Freezers	-23.2 degrees C/ -10 degrees F
c. Reach-In Refrigerators	1.7 degrees C/ 35 degrees F
d. Reach-In Freezers	-23.2 degrees C/ -10 degrees F
e. Undercounter Refrigerators	1.7 degrees C/ 35 degrees F
f. Undercounter Freezers	-23.2 degrees C/ -10 degrees F
g. Cold Pans	4 degrees C/ 39 degrees F
- B. Compressors and Condensing units shall be new and factory assembled Discus Semi-Hermetic type as manufactured by Copeland Corporation and as indicated on Refrigeration Schedule. Compressors and Condensing units shall operate at such speed within recommended range of section and discharge pressure for economical operation and with required BTUH rating per hour, sizes and capacities in accordance with specifications. Provide units of same manufacturer and type throughout, new standard cataloged, to operate with refrigerant R-448a, 100 ambient air, capacities selected on 16 hour running time basis for medium temperature fixtures and 18 hour running time basis for low temperature fixtures. For locations where the ambient exceeds 100 degrees Fahrenheit, the system is to be engineered for the maximum recorded ambient temperature. Additionally, a 100% redundant refrigeration shall be designed and provided. Each compressor shall be neatly piped to a common suction and liquid manifold and extended to a central location to facilitate a single point field connections.
- C. Compressor shall be completely factory installed and wired to a common load center panel for a single point connection.
- D. Main power disconnect is to be weatherproof type as required by U.L. The entire electrical assembly shall meet all requirements of the National Electrical Code. All

compressor motor contactor, capacitors, relays, fuses, defrost clocks and all required electrical components shall be neatly installed within the factory supplied pre-wired control panel.

- E. Medium temperature evaporator coils shall be equipped with Electronically Commutated Motors (ECM) as indicate on Refrigeration Schedule. All evaporator coils shall be UL Listed, NSF approved units with inline fans and cross fins staggered. Provide copper tubing, aluminum cased, permanently lubricated motors with thermal overload protection. Unit shall be provided with Beacon II (or approved equal) Evaporator Efficiency controller capable of providing evaporator fan control, remote monitoring and diagnostics. Control system shall be interconnected to the local area network and be capable of sending alarm alerts via mobile telephone or e-mail. Water proof electrical system pre-wired to a single point connection. Coils are designed to operate above 34 F Fahrenheit
- F. Low temperature evaporator coils shall be equipped with Electronically Commutated Motors (ECM) as indicate on Refrigeration Schedule. All evaporator coils shall be UL Listed, NSF approved units with inline fans and cross fins staggered. Provide copper tubing, aluminum cased, permanently lubricated motors with thermal overload protection. Unit shall be provided with Beacon II (or approved equal) Demand Defrost controller capable of providing evaporator fan control, on demand defrost, remote monitoring and diagnostics. Control system shall be interconnected to the local area network and be capable of sending alarm alerts via mobile telephone or e-mail. Water proof electrical system pre-wired to a single point connection. Coils are designed to operate in a range from 30 degrees above Fahrenheit to -20 degrees Fahrenheit.
- G. All evaporator coils shall be mounted tightly to the ceiling with 1/2" diameter nylon all thread rod. If any evaporator coil should weight more than 300 Lbs. then Unistrut channels shall be span across a minimum of two (2) walk-in ceiling panels.
- H. Airdyne shall be responsible for final connection of all refrigeration installation for walk-in cooler/freezer and refrigerated piping.
- I. Refrigerant tubing shall be type L ACR hard drawn or soft copper which is cleaned, capped and conforms to ASTM standard specifications. Hard drawn tubing shall be used in all applications except for piping runs within conduits or building chases. All copper fittings shall be of wrought type copper.
- J. All solenoid and expansion valves shall be manufactured by Sporlan Valve Company with sweet type connections. Flare nut connections will not be allowed. Thermostat and water pressure regulator shall be manufactured by Johnson Controls Company.
- K. All refrigerant piping shall be properly supported by adjustable hangers to insure a minimum horizontal line run slope of 1" per 20 feet toward the condensing unit. Where vertical suction line runs exceed 10 feet in height, a suction trap shall be installed at the bottom of the riser. All refrigerant piping shall be installed in accordance with ASHRAE standards.
- L. All refrigerant suction lines shall be insulated with a minimum of 3/4" thick Armstrong Armaflex AP Pipe insulation sealed with adhesive foam insulation for high, medium and low temperature systems. For glycol systems the minimum insulation shall be 3/4 ". Tape fitting to be sufficient thickness to prevent condensation. Lines ran externally shall include a hard white PVC cover.

Metal pipe sleeves shall be provided and installed by the General Contractor where piping passes through a wall, ceiling or floor. All spaces around tubing shall be filled with a mastic insulating compound. All refrigerant piping exposed to outside of building must be wrapped with aluminum pipe jacket.

- M. All copper drain lines from evaporator coils to a point 1" above the floor. Drain lines shall be 1" IPS copper furnished and installed by the Plumbing Contractor. Route and pitch 1/2" per foot to drain. Plumber shall provide a brass union and cleanout connection at coil outlet to facilitate repair, cleaning and replacement. All drain lines shall be trapped immediately above the floor sink or drain. All exposed drain lines shall be painted with two (2) coats of Chromo-tone paint.
- N. All freezer drain lines shall be wrapped and insulated with a continuous electrified 10 watts per feet heater tape provided and installed by the Site Electrician.
- O. The Site Electrical Contractor shall provide and install the main power to each disconnect and shall also inter-wire power to all evaporator coil controllers as shown on refrigeration drawings.
- P. It should be noted that the Food Service Equipment Provider will be required to supervise and instruct the Plumber and Electrician in their work of connection. Rack shall comply in all respects to design drawings and any discrepancies noted during the bidding process shall be immediately noted to the Consultant for interpretation and action. No extras will be considered after the bidding process for not following the above procedures.
- Q. Total refrigeration system shall be furnished with a one (1) year service contract, covering all parts and labor, with service available seven (7) days per week, twenty-four (24) hours per day. Continuation of the service contract after the first year shall be at the option of the Owner. The refrigeration system shall be warranted for one (1) year and the compressors shall carry the manufacturer's extended four (4) year warranty. Food service equipment provider shall contract all aspects of installation for refrigeration systems directly with specified factory so as to not void warranty.

END OF SECTION 11 40 00

SECTION 26 00 00
ELECTRICAL WORK GENERAL REQUIREMENTS

PART 1 – GENERAL

1.01 SUMMARY

- A. The Requirements of General Conditions and Special Conditions apply to Work of this Section as if fully repeated herein.

1.02 WORK INCLUDED

- A. Provide a complete working installation with all material and equipment as shown and specified.
- B. Provide all labor, materials, tools, and equipment necessary for the complete in-place installation of all electrical items complete as shown on drawings and as specified in this Division.
- C. Provide submittals.
- D. Make electrical connections for equipment furnished as part of Work of other Sections.
- E. Include sealing and fireproofing of conduits and cables.
- F. Electrical products shall be anchored and fastened to building elements and finishes as follows:
 - 1. Concrete Structural Elements: Provide expansion anchors and powder actuated anchors.
 - 2. Steel Structural Elements: Provide beam clamps and spring steel clips.
 - 3. Concrete Surfaces: Provide expansion anchors.
 - 4. Solid Masonry Walls: Provide expansion anchors.
 - 5. Sheet Metal: Provide sheet metal screws.
 - 6. Wood Elements: Provide wood screws.
- G. Provide as-built drawings.

1.03 DEFINITIONS

- A. "Listed": Equipment is "listed" if of a kind mentioned in a list which:
 - 1. Is published by a nationally recognized laboratory which makes periodic inspection of production of such equipment.
 - 2. States that such equipment meets nationally recognized standards or has been tested and found safe for use in a specified manner.
- B. "Labeled": Equipment is labeled if:
 - 1. It embodies a valid label, symbol, or other identifying mark of a nationally recognized testing laboratory such as Underwriters Laboratories, Inc.

2. The laboratory makes periodic inspection of the production of such equipment.
 3. The labeling indicates compliance with nationally recognized standards or tests to determine safe use in a specified manner.
- C. "Certified": Equipment is "certified" if:
1. Equipment has been tested and found by a nationally recognized testing laboratory to meet nationally recognized standards or to be safe for use in a specified manner.
 2. Production is periodically inspected by a nationally recognized testing laboratory.
 3. It bears a label, tag or other record of certification.
- D. "Nationally Recognized Testing Laboratory": A testing laboratory, which is approved, in accordance with OSHA regulation, by the Secretary of Labor.
- E. "The Contractor": Refers to the prime contractors.
- F. "The Architect": Refers to the Professional Architect.
- G. "The Owner": Refers to the legally registered owner of the project or their authorized representative.
- H. "The Engineer": Refers to the Professional Electrical Engineer.
- I. "Provide": Construed to mean furnish (supply), install and connect complete and ready for safe and regular operation of particular work referred to unless otherwise noted.
- J. "Furnish": Construed to mean purchase, procure, acquire and deliver complete with related accessories to project site.
- K. "Install": Construed to mean to physically erect and mount the item(s) complete with related accessories in-place.
- L. "Connect": Construed to mean make final electrical connections for a complete operating piece of equipment with related accessories.
- M. "As directed": In written directive by the Owner or their authorized representative.
- N. "Work": Labor, materials, equipment, apparatus, controls, accessories and other items required for proper and complete installation.
- O. "Wiring": Raceway, fittings, wire, boxes and related items.
- P. "Concealed": Embedded in or below masonry or other construction, installed in furred spaces, within partitions, above suspended ceilings, in trenches, or in enclosures.
- Q. "Exposed": Not installed underground or "concealed" as defined above.
- R. "Indicated", "shown" or "noted": As indicated, shown or noted on drawings or specifications.
- S. "Utility Companies": Construed to mean either the electric utility company (Sacramento Municipal Utility District) or the telephone utility company (Pacific Bell or the cable television utility company).

- T. Firestopping (Through-Penetration Protection System): Sealing or stuffing material or assembly placed in spaces between and penetrations through building materials to arrest movement of fire, smoke, heat, and hot gases through fire rated construction.

1.04 CODES AND STANDARDS

- A. Work and materials shall be in full accordance with California Occupational Safety Health Act (CAL-OSHA), California Electrical Code (CEC), State Fire Marshal, Title 8, Safety Orders of Division of Industrial Safety (ESO), the National Fire Protection Association, California Building Code (CBC); California Code of Regulations - Title 24 and other applicable laws or regulations. Nothing in the Drawings or Specifications shall be construed to permit work not conforming to these codes.
- B. When Contract Documents differ from governing codes, furnish, and install larger size or higher standards called for without extra charge.

1.05 QUALITY ASSURANCES

- A. Requirements of Regulatory Agencies:
 - 1. Nothing in the Contract Documents shall be construed to permit Work not conforming to applicable codes, laws, ordinances, rules, or regulations.
 - 2. All installed or connected equipment shall be labeled or certified for its use by a nationally recognized testing laboratory.
 - 3. All materials and equipment shall be installed in accordance with manufacturer's recommendations and in accordance with the National Electrical Contractors Association (NECA) Standard of Installation
 - 4. Equipment to be installed or permanently connected (hardwired) shall be listed, labeled or certified by a Nationally Recognized Testing Laboratory (NRTL).

1.06 PERMITS, FEES, AND INSPECTIONS

- A. Contractor shall obtain all permits and arrange for Owner to pay required fees to any governmental agency or utility company having jurisdiction over the work of this Section. Inspections required by any local ordinances or utility companies during construction shall be arranged by the Contractor.
- B. All work and materials covered by these specifications and accompanying drawings shall at all times be subject to inspection by the Architect or his representative. Any material not in accordance with the plans and specifications, or not installed in a neat and workmanlike manner, shall, upon order from the Architect, be removed from the premises or corrective action taken within three (3) days; and if material in question has been installed, the entire expense for removing and reinstalling shall be borne by the Contractor.
- C. On completion of the work, satisfactory evidence shall be furnished to the Architect to show that all work has been installed in accordance with the Codes.

1.07 SPECIFICATIONS AND CONTRACT DRAWINGS

- A. Accuracy of data given herein and on the drawings is as exact as could be secured, but their extreme accuracy is not guaranteed. The drawings and specifications are for the assistance and guidance of the Contractor and exact locations, distances, levels, etc., will be governed by the construction and the Contractor shall accept same with this understanding.
- B. Layouts of equipment, accessories and wiring systems are diagrammatic (not pictorial and not exact) but shall be followed as closely as possible. Architectural, structural, mechanical, and other drawings shall be examined noting all conditions that may affect this work. Where connections to equipment provided by other divisions are shown on electrical drawings, refer to drawings of respective division for exact locations and electrical requirements of equipment.
- C. Report conflicting conditions to the Architect for adjustment before proceeding with work. Should Contractor proceed with work without reporting conflict(s), he does so on his own responsibility, and shall alter work if directed by the Architect, at his own expense.
- D. Right is reserved to make minor changes in locations of equipment and wiring systems shown, providing change is ordered before conduit runs and/or work directly connected to same is installed and no extra materials are required.
- E. Drawings and specifications may be superseded by later detail specification and detail drawings prepared by the Architect, and the Contractor shall conform to them and to such reasonable changes in the contract drawings as may be called for by these revised drawings without extra cost to the Owner.
- F. Contractor may request additional detail(s) and such shall be conformed to, without additional cost. Contractor may offer alternate detail(s), but such detail(s) shall be approved by Architect and authority having jurisdiction

1.08 SUBMITTALS

- A. Submission Requirements
 - 1. Contractor is responsible for the scheduling of submittals in order to avoid detrimental impact to the construction schedule and to support the timely sequence of the Work. Allow a minimum of 15-working days for submittal review by the Engineer. Complex submittals or submittals which are not provided as complete packages may take longer than 15-working days for review. Contractor should allow time for potential rejection and re-submittal of submittals which are being offered as substitution to the specified products.
 - 2. Contractor shall review submittals for completeness, coordination and conflicts between subcontractors and other work in the Contract Documents. Submittals made by Contractor which are not thoroughly reviewed by the Contractor will be returned. Submittals which vary significantly from the Contract Documents and are not so identified prior to submission, will be returned to the Contractor without review.
 - 3. Make submissions within following number of days from issuance of Notice to Proceed or Start Letter
 - a. Items needed in initial stages of Work or requiring long lead-time for ordering: 15 calendar days.
 - b. All other items: 21 calendar days.

4. Engineer will check submittals for conformance with design concepts of project. Approval covers only such conformance. Effort will be made by Engineer to discover any errors, but responsibility for accuracy and correctness of all submittals shall be with the Contractor.
5. Approval of submittals will be on a general basis only and shall not relieve the Contractor from their responsibility for proper fitting and construction of the Work, nor from furnishing materials and labor required by the Contract which may not be indicated on the submittals when approved.
6. No portion of the work requiring submittals shall be commenced until the submittal for that portion of the work has been approved by Engineer. All such portions of work shall be in accordance with the approved submittal. Any work performed without approved submittals will be done so at the Contractor's own risk. Work found not to be in compliance with the approved submittals shall be removed and corrected at the Contractor's own expense.
7. Number of Copies Required - Contractor shall submit following number of copies:
 - a. Product Data/Material Lists: 1-electronic copy in PDF format.
 - b. Samples: As specifically indicated in pertinent specification section.
 - c. Substitution Request: 1-copy in PDF format
8. Submittals shall include (where applicable):
 - a. Date and revision dates.
 - b. Project title and number.
 - c. The names of Architect, Engineer, Contractor, Subcontractor and supplier or manufacturer.
 - d. Identification of product or material.
 - e. Relation to adjacent structure or material.
 - f. Field dimensions clearly identified as such.
 - g. Specification section number.
 - h. A blank space for Engineer's stamp.
 - i. Contractor's stamp on each, initialed or signed, certifying that submittal was reviewed, field measurements have been verified and submittal is in compliance with the applicable specification section and the overall Contract Documents.
9. Incomplete, inaccurate, or non-complying submittals requiring revisions, re-submittal and additional review time, shall not be considered as a basis for Contract time extension.
10. Two reviews will be made for each submittal. Additional reviews will be charged to the Contractor. A rejection of a submittal or review of a partially presented submittal constitutes one submittal review. Incomplete submittals, such as product data submitted without required shop drawings, will be returned without review.

B. Required Submittals

1. Various specification sections may state additional information to be submitted.
2. Submittals are required for all materials even though the submitted material may be exactly as specified in the Project Manual.
3. Electrical Materials Submittal:

- a. Electrical materials include raceway, boxes, supports, finish material, etc.
- 4. Electrical Equipment Submittal:
 - a. Submit product data for all equipment.
 - b. Electrical equipment includes panelboards, switchboards, transformers, underground pull boxes, floor boxes, light fixtures, etc.
- 5. Substitutions:
 - a. Contractor shall be responsible for notifying Owner of costs that will be incurred for resubmitting to Authority Having Jurisdiction (AHJ) for substituting an approved product.
 - b. Contractor is responsible for time and material related for Electrical Engineer recalculating and revising documentation.
 - c. For submittals that have already been revised and approved, submit product data separately from previous submittal and identify reason for substitution that are being replaced. Contractor shall clearly identify which product/options are modified.
- 6. For submittals that have been sent for review more than once:
 - a. The submittal review shall only be for items not approved prior or items identified that had previously been approved, but are now being resubmitted.
 - b. Should contractor substitute a previously approved product without notifying Electrical Engineer in a separate document what has been substituted, contractor shall bear all cost for replacing with previously approved submittal, or re-engineering fees at a Time-And-Material basis to revise approved construction documents with this revised product, no exceptions.

C. Product Data

- 1. Manufacturer's Standard Schematic Drawings:
 - a. Modify drawings to delete information which is not applicable to the Project.
 - b. Supplement standard information to provide additional information which is applicable to the Project.
- 2. Manufacturer's catalog sheets, brochures, diagrams, schedules, performance charts, illustrations, and other standard descriptive data.
 - a. Clearly mark each copy to identify pertinent materials, products, or models. Mark out or remove all extraneous information.
 - b. Show dimensions and clearances required.
 - c. Show performance characteristics and capacities.
 - d. Show wiring diagrams and controls.

D. Substitutions

- 1. Engineer's Approval Required:
 - a. Contract is based on materials, equipment and methods described in Contract Documents. Substitutions will not be reviewed and approved prior to the award of the contract.

- b. Engineer will consider proposals during the submittal process for substitution of materials, equipment, and methods only when such proposals are accompanied by full and complete technical data and all other information required by Engineer to evaluate proposed substitution. Substitution shall be submitted with completed Substitution Request Form.
 - c. Do not substitute materials, equipment, or methods unless such substitution has been specifically approved for this work by Engineer.
- 2. "Or Equal": Whenever, in Contract Documents, any material, process or specified patent or proprietary name and/or by name of manufacturer is indicated, such name shall be deemed to be used for purpose of facilitating description of material and/or process desired, and shall be deemed to be followed by the words "or equal", or "accepted equal", and Contractor may offer any material or process which shall be equal in every respect to that so indicated or specified; provided, however, that if material, process or article offered by Contractor is not, in opinion of Architect, equal in every respect to that specified, then Contractor must furnish material, process or article specified or one that in opinion of Engineer is equal thereof in every respect.
- 3. "No Substitutions": Items indicated as "No Substitutions" must be provided as specified and no alternates will be allowed. These items are required either due to District standards by the Board or to match materials recently installed by others.
- 4. Coordination: Approval of substitution shall not relieve Contractor from responsibility for compliance with all requirements of Drawings and Project Manual, and Contractor shall be responsible at his own expense for any changes in other parts of his own work or work of others which may be caused by approved substitution.

1.09 OPERATION AND MAINTENANCE MANUALS

- A. General: Contractor shall incorporate in Maintenance/Operation Manual(s) all brochures, manufacturer's catalogs and written instructions for equipment and materials needing regular care or maintenance and other items as required elsewhere in project documents. Prepare all such manuals in durable plastic loose leaf binder size to accommodate 8-1/2 x 11 sheets with following minimum data:
 - 1. Identification on or readable through, front cover stating general nature of manual.
 - 2. Neatly typewritten index of all contents.
 - 3. Site plan and building plans indicating location of equipment referenced (reduced scale).
 - 4. Complete instructions regarding operation, maintenance, replacement instructions and programming instructions of all equipment involved.
 - 5. Complete nomenclature of all replaceable parts, their part numbers, current cost and name and address of nearest vendor of parts.
 - 6. Copy of all guarantees and warranties issued, in a separate binder as specified in this section.

7. Copy of approved shop drawings (reduced scale) with all data concerning changes made during construction.
- B. Extraneous Data:
 1. Where contents of manuals include manufacturer's catalog pages, clearly indicate precise items included in the Project installation and delete, or otherwise clearly indicate, all manufacturer's data with which the Project installation is not concerned.
- C. Materials shall be organized in a logical and consistent manner, by specification section number, with separating tabs clearly marked.
- D. Data shall be provided for:
 1. Panelboards

1.10 RECORD DRAWINGS

- A. At time of installation, installed locations of all underground work shall be recorded on prints by Contractor, and reviewed with Inspector. Record drawings are to be maintained and adjusted on a daily basis by the Contractor.
- B. All information entered on drawings copy shall be neat, legible, and emphasized by drawing "clouds" around changed items. Changes shall be made in an accurate manner by a qualified draftsman acceptable to Architect. Completed Record Drawings shall be signed by the Contractor.
- C. Locate and dimension all major equipment and underground work, including stubs and pull boxes. Provide dimensions from curbs, foundations, or other permanent landmarks.
- D. All symbols and designations used in preparing record drawings shall match those used in the Contract Drawings.
- E. Record drawing shall be up-dated monthly.
- F. Record drawing signoff:
 1. At such time that the underground work has been completed, all the contractors and sub-contractors notes, sketch and miscellaneous drawings documenting installed locations not currently part of the ongoing record drawing set shall be transferred. These updates shall be reviewed for accuracy by the inspector of record and architect. Once all corrections have been completed the inspector shall sign and date the record set coversheet noting it as acceptance of the underground phase of record drawings.
 2. At project completion, the record drawings shall be submitted by the contractor for project inspector and architect review and comment. These will be returned to the contractor for revisions. Once all corrections have been completed the inspector shall sign and date the record set coversheet noting it as acceptance of the completed record drawings. The original record drawings are to be resubmitted to the architect along with a scanned electronic file set in PDF format with file names matching the drawing titles.

1.11 GUARANTEES

- A. Standard Guarantee: Provide individual as well as overall guarantees for all work executed under this Contract or any extra work to be absolutely free of all defects of workmanship and materials for a period of one years from the date of filing of notice of completion and acceptance by Owner. Repair and make good all such defects and repair any damage to other work caused thereby which may occur during same period at no cost to the owner.
- B. Indicate on Guarantee Form specific provisions required by individual specification sections. List all special requirements, extended periods, bonding, etc.
- C. Additional Guarantees: Provide additional guarantees (in excess of year(s) required by Standard Guarantee) where specifically required by pertinent Specification Sections.
- D. Binder: Provide a binder with all guarantees placed in the order in which they occur in the project manual. Include an Index of Guarantees listing each specification section, specific items covered and length of guarantee for each item.

1.12 SITE EXAMINATION AND CONDITIONS

- A. Examine site; verify dimensions and locations against drawings and become informed of all conditions under which work is to be done before submitting proposal. No allowance will be made for extra expenses because of omission on Contractor's part to include cost of work under prevailing conditions.
- B. Information shown relative to services is based upon available records and data shall be regarded as approximate only. Minor deviations found necessary to conform with actual locations and conditions shall be made without extra cost.
- C. Extreme care shall be exercised in excavating near existing utilities to avoid any damage thereto; contractor is responsible for any damage caused by such operations.
- D. Where signal systems exist, and services of other firms are required, Contractor shall instruct those firms to investigate existing systems and determine labor and materials needed to add devices or modify systems.
- E. Where new conduits are to be run underground at existing sites, contractor shall visit site prior to bidding and walk routes of new underground conduits, note areas of concrete and asphalt being crossed, and include in bid all costs for cutting and patching.
- F. Where existing conduits are shown, their location is diagrammatic, and their exact location may not be known.

1.13 UNDERGROUND UTILITIES:

- A. Existing underground utilities, services, circuits, piping, irrigation piping, etc., are present, but their exact locations are not known. Contractor shall locate and protect before trenching or excavating in any area. Consult utility companies, "as-built drawings" and Owner's maintenance personnel for location of existing underground work. If existing piping or utilities are damaged during construction. Contractor shall repair immediately at own expense. New underground work shall be modified as necessary to conform to existing conditions.
- B. Immediately after award of contract, Contractor shall contact utility company representatives for power, telephone, and TV services. Contractor shall obtain specific requirements and details from respective representative. Contractor shall discuss the aspects of the project related to services and coordinate scheduling of the work and inspections required by utility companies.

1.14 CARE AND CLEANING

- A. After all work has been accomplished such as sanding, painting, etc., lighting fixtures, panelboards, and switchboards shall be cleaned to remove all dust, dirt, grease, paint, or other marks. All electrical equipment shall be left in a clean condition inside and out, satisfactory to the Architect. Keep buildings and premises free from accumulated waste materials, rubbish, and debris resulting from work herein, and, upon completion of said work, remove tools, appliances, surplus materials, waste materials, rubbish, debris, and accessory items used in or resulting from said work and legally dispose of off the site.
- B. All broken, damaged, or otherwise defective parts shall be repaired or replaced without additional cost to Owner. Work shall be left in a condition satisfactory to Engineer. At completion, carefully clean and adjust all equipment, fixtures and trim installed as part of this work. Systems and equipment shall be left in a satisfactory operating condition.
- C. All surplus materials and debris resulting from this work shall be cleaned out and removed from site; this includes surplus excavated material.

1.15 PROTECTION

- A. The Contractor shall protect from damage during construction the work and materials of other trades as well as the electrical work and material. Electrical equipment stored and installed on the job site shall be protected from dust, water, or any other damage.

1.16 WORKING SPACE

- A. Adequate working space shall be provided around electrical equipment in strict compliance with the Codes. In general, provide 6'6" of headroom and 36" minimum clear work space in front of switchboards, panelboards, transformers, disconnect switches and controls for 120/208 volts and 42" for 277/480 volts. Carefully coordinate locations and orientation of electrical equipment with other divisions to ensure that working space will be clear of piping, conduits, and equipment provided by others.

1.17 FIRE STOPPING SYSTEM DESCRIPTION AND PERFORMANCE REQUIREMENTS

- A. Firestopping Materials: ASTM E119, ASTM E814, UL 263, UL 1479, to achieve fire ratings of adjacent construction in accordance with FM and UL Design Numbers noted on Drawings.
- B. Firestop interruptions to fire rated assemblies, materials, and components.
- C. Firestopping: Conform to applicable code, FM, and UL for fire resistance ratings and surface burning characteristics.
- D. Firestopping: Provide certificate of compliance from authority having jurisdiction indicating approval of materials used.

1.18 COOPERATION AND COORDINATION

- A. Cooperate and coordinate with other crafts in putting the installation in place at a time when the space required by this installation is accessible. Work done without regard to other crafts shall be moved at the Contractor's expense.

1.19 INSPECTION

- A. The Contractor shall cooperate with the Architect and shall provide assistance at all times for the inspection of the electrical work performed under this contract. He shall remove covers, operate machinery, or perform any reasonable work which, in the opinion of the Engineer, will be necessary to determine the quality and adequacy of the work.

1.20 MANUFACTURER'S DIRECTIONS

- A. Follow manufacturer's directions where these directions cover points not included on the drawings or in the specifications. When equipment is provided by other divisions, obtain directions from respective supplier.

1.21 WORKMANSHIP

- A. Good workmanship shall be evidenced in the installation of all electrical materials and equipment. Equipment shall be level, plumb and true with the structure and other equipment. All materials shall be firmly secured in place and adequately supported and permanent. The recommendations of the National Electrical Contractors Association Standard of installation shall be followed except where otherwise specifically directed.

1.22 OPERATING TEST

- A. After the installation is complete, and at such time as the Engineer and other authorities having jurisdiction may request, the Contractor shall conduct an operating test for approval.

PART 2 – PRODUCTS

2.01 NOT USED

PART 3 – EXECUTION

3.01 GENERAL

- A. Manufacturer's Directions: Follow manufacturer's directions where manufacturers of articles used furnish directions covering points not specified or shown.
- B. All Work shall be done in orderly, workmanlike manner and present neat appearing installation when completed.
- C. Provide metal backing plates, anchor plates, and similar items that are required for anchorage for the Work of this Section; securely weld or bolt to metal framing. Wood blocking or backing will not be permitted in combination with metal framing.
- D. Equipment: Accurately set and level, neatly place support and anchor properly. Anchorage shall conform to the requirements of California Building Code. No allowance will be made for negligence to foresee means of placing, installing or supporting equipment in position.
- E. Electrical products shall be anchored and fastened to building elements and finishes as follows:
 - 1. Concrete Structural Elements: Provide expansion anchors and powder actuated anchors.
 - 2. Steel Structural Elements: Provide beam clamps and spring steel clips.
 - 3. Concrete Surfaces: Provide expansion anchors.

4. Solid Masonry Walls: Provide expansion anchors.
 5. Sheet Metal: Provide sheet metal screws.
 6. Wood Elements: Provide wood screws.
- F. All wiring shall be installed in conduit, unless specifically shown otherwise on plans.

3.02 EXCAVATING AND BACKFILLING

- A. Excavate and backfill as required for installation of electrical work. Restore all surfaces, roadways, sod, walks, curbs, walls, existing underground installation, etc., cut by installations to original condition in an acceptable manner. Maintain all warning signs, barricades, flares and lanterns as required by the Safety Orders and local ordinances.
- B. Excavation and Backfill: See Earthwork Section.

3.03 FIRESTOPPING

- A. Install material at fire rated construction perimeters and openings containing penetrating sleeves, piping, ductwork, conduit, and other items, requiring firestopping.
- B. Apply primer where recommended by manufacturer for type of firestopping material and substrate involved, and as required for compliance with required fire ratings.
- C. Apply firestopping material in sufficient thickness to achieve required fire and smoke rating.
- D. Place intumescent coating in sufficient coats to achieve rating required.
- E. Remove dam material after firestopping material has cured.
- F. Fire Rated Surface:
1. Seal opening at floor, wall, partition, ceiling, and roof as follows:
 - a. Install sleeve through opening and extending beyond minimum of 1 inch on both sides of building element.
 - b. Size sleeve allowing minimum of 1-inch void between sleeve and building element.
 - c. Pack void with backing material.
 - d. Seal ends of sleeve with UL listed fire resistive silicone compound to meet fire rating of structure penetrated.
 2. Where cable tray, bus, cable bus, conduit, wireway, and trough penetrates fire rated surface, install firestopping product in accordance with manufacturer's instructions.
- G. Non-Rated Surfaces:
1. Seal opening through non-fire rated wall, partition, floor, ceiling, and roof opening as follows:
 - a. Install sleeve through opening and extending beyond minimum of 1 inch on both sides of building element.
 - b. Size sleeve allowing minimum of 1-inch void between sleeve and building element.

- c. Install type of firestopping material recommended by manufacturer.
- 2. Install floor plates or ceiling plates where conduit, penetrates non-fire rated surfaces in occupied spaces. Occupied spaces include rooms with finished ceilings and where penetration occurs below finished ceiling.
- 3. Exterior wall openings below grade: Assemble rubber links of mechanical seal to size of conduit and tighten in place, in accordance with manufacturer's instructions.
- 4. Interior partitions: Seal pipe penetrations at clean rooms, laboratories, hospital spaces, computer rooms, telecommunication rooms, and data rooms. Apply sealant to both sides of penetration to completely fill annular space between sleeve and conduit.

3.04 EQUIPMENT IDENTIFICATION

- A. Provide screwed-on engraved nameplates of black lamicaid with 0.75 inch high white lettering for main switchboards (including each breaker and switch), all panelboards, transformers, all relays, timers, terminal cabinets (including each section) and all special panels and consoles.
- B. Provide identifying numbers for each breaker in all lighting and appliance panelboards in a permanently attached (not pasted on) directory with plexiglass cover with typewritten identification of each circuit.
- C. Provide screwed-on engraved nameplates of black lamicaid with white 0.5-inch-high lettering, identifying function, for all disconnect switches and starters.
- D. Provide labels at each end of each pull cord for all empty conduits/raceways.
- E. Indicate type of equipment, equipment designation and origination, ex. "PANEL-XXX fed from SWITCHBOARD-XXX", PANEL-XXX fed from TRANSFORMER-XXX", etc.
- F. Provide 0.25-inch-high white lettering labels for all receptacles to identify panel and circuit number.

3.05 CLOSING OF UNINSPECTED WORK

- A. Do not allow or cause any of work installed hereunder to be covered up or enclosed before it has been inspected and approved.
- B. Should any work be enclosed or covered up before it has been approved, uncover such work and after it has been inspected and approved, make all repairs necessary to restore work of others to conditions in which it was found at time of cutting, all without additional cost to Owner.

3.06 TESTING AND ADJUSTING

- A. Furnish all labor and test equipment required for the Work of this Division. Testing work is defined as that work necessary to establish that equipment has been properly assembled, connected, and checked to verify that intent and purpose of Drawings, manufacturer's instruction manuals, and directions of Architect have been accomplished in satisfactory manner.
- B. Test each individual circuit at panel with equipment connected for proper operation.

- C. Test each individual receptacle device for proper polarity and grounding.
- D. Test each ground fault circuit interrupter for proper operation.

END OF SECTION 26 00 00

**SECTION 26 05 05
SELECTIVE DEMOLITION FOR ELECTRICAL**

PART 1 – GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Removal of existing electrical equipment, wiring, and conduit in areas to be remodeled; removal of designated construction; dismantling, cutting and alterations for completion of the Work.
 - 2. Disposal of materials.
 - 3. Storage of removed materials.
 - 4. Identification of utilities.
 - 5. Salvaged items.
 - 6. Protection of items to remain as indicated on Drawings.
 - 7. Relocate existing equipment to accommodate construction.

1.02 QUALITY ASSURANCE

- A. Perform Work in accordance with State, Municipality, Highways, and Public Work's standard.

1.03 SCHEDULING

- A. Schedule work to coincide with new construction.
- B. Cease operations immediately when structure appears to be in danger and notify Architect/Engineer. Do not resume operations until directed.

1.04 COORDINATION

- A. Conduct demolition to minimize interference with adjacent and occupied building areas.
- B. Coordinate demolition work with Owner's representative and all other disciplines.
- C. Coordinate and sequence demolition so as not to cause shutdown of operation of surrounding areas.
- D. Shut-down Periods:
 - 1. Arrange timing of shut-down periods of in-service panels with Owner's representative. Do not shut down any utility without prior written approval and submitting a "Method of Procedure" for review.
 - 2. Keep shut-down period to minimum or use intermittent period as directed by Owner's representative.
 - 3. Maintain life-safety systems in full operation in occupied facilities, or provide notice minimum 72 hours in advance and fire watch.

- E. Identify salvage items in cooperation with Owner.

PART 2 – PRODUCTS

2.01 NOT USED

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Verify field measurements and circuiting arrangements are as indicated in the Contract Documents.
- B. Verify wiring and equipment indicated to be demolished serve only abandoned facilities.
- C. Verify termination points for demolished services.
- D. Demolition drawings are based on casual field observation and existing record documents.
- E. Report discrepancies to Owner's representative before disturbing existing installation.
- F. Beginning of demolition means installer accepts existing conditions.

3.02 PREPARATION

- A. Take care to ensure that there will be no damage to structural elements or portions thereof-which are not to be removed. Erect and maintain temporary shoring, bracing, and other means to safeguard the structural integrity of the existing buildings and structures.
- B. Erect, and maintain temporary safeguards, including warning signs and lights, barricades, and similar measures, for protection of the public, Owner, Contractor's employees, and existing improvements to remain.
- C. Protect existing structures, facilities, and plant life from damage. Items damaged because of demolition operations shall be repaired or replaced, at no cost to the Owner.
- D. Temporary egress signage and emergency lighting.
- E. Disconnect electrical systems in walls, floors, and ceilings scheduled for removal.
- F. Coordinate utility service outages as directed in the Contract documents.
- G. 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. Minimize outage duration.
 - 1. Permitting prior to initiating an outage or interruption of service.
 - 2. Make temporary connections to maintain service in areas adjacent to work area.

3.03 DEMOLITION AND EXTENSION OF EXISTING ELECTRICAL WORK

- A. Demolition Drawings are based on casual field observation and existing record documents. Report discrepancies to Owner or Architect/Engineer before disturbing existing installation.

- B. Remove exposed abandoned conduit, including abandoned conduit above accessible ceiling finishes. Cut conduit flush with walls and floors, and patch surfaces.
- C. Remove conduit, wire, boxes, and fastening devices to avoid any interference with new installation.
- D. Disconnect abandoned outlets and remove devices. Remove abandoned outlets if conduit and wiring servicing them is abandoned and removed. Provide blank cover for abandoned outlets which are not removed.
- E. Disconnect and remove abandoned panelboards and distribution equipment.
- F. Disconnect and remove electrical devices and equipment serving utilization equipment that has been removed.
- G. Disconnect and remove abandoned luminaires. Remove brackets, stems, hangers, and other accessories.
- H. Disconnect electrical systems in walls, floors, and ceilings scheduled for removal.
- I. Remaining Circuits and Equipment: Reinstall existing electrical installations disturbed or damaged during demolition. Certain existing electrical installations may be in walls, ceilings or floors that are to be removed or damaged during demolitions and are essential for the operation of other remaining installations. Where this condition occurs provide a new extension of original circuits, raceways, equipment, and outlets to retain service continuity. Installations shall be concealed in finished areas.
- J. Reconnect equipment being disturbed by renovation work and required for continue service to or nearest available panel.
- K. Disconnect or shut off service to areas where electrical work is to be removed. Remove electrical fixtures, equipment, and related switches, outlets, conduit, and wiring which are not part of final project.
- L. Install temporary wiring and connections to maintain existing systems in service during construction.
- M. Perform work on energized equipment or circuits with experienced and trained personnel.
- N. Remove, relocate, and extend existing installations to accommodate new construction.
- O. Repair adjacent construction and finishes damaged during demolition and extension work.
- P. Remove exposed abandoned grounding and bonding components, fasteners and supports, and electrical identification components, including abandoned components above accessible ceiling finishes. Cut embedded support elements flush with walls and floors.
- Q. Clean and repair existing equipment to remain or to be reinstalled.
- R. Protect and retain power to existing active equipment remaining.
- S. Cap abandoned empty conduit at both ends.
- T. Jackhammering

1. Jackhammering will be permitted only to a limited degree, and only with the prior written approval of the Owner.
2. Do not jack-hammer within 2-inches of reinforcing or structural steel to remain; remove final 2-inches of material with chipping gun.

3.04 EXISTING PANELBOARDS

- A. Ring out circuits in existing panel affected by the Work. Where additional circuits are needed, reuse circuits available for reuse. Install new breakers.
- B. Tag unused circuits as spare.
- C. Where existing circuits are indicated to be reused, use sensing measuring devices to verify circuits feeding Project area or are not in use.
- D. Remove existing wire no longer in use from panel to equipment.
- E. Provide new updated directories where more than three circuits have been modified or rewired.

3.05 SALVAGE ITEMS

- A. Remove and protect items indicated on Drawings to be salvaged and turn over to Owner.
- B. Items of salvageable value may be removed as work progresses. Transport salvaged items from site as they are removed.

3.06 REUSABLE ELECTRICAL EQUIPMENT

- A. Carefully remove equipment, materials, or fixtures which are to be reused.
- B. Disconnect, remove, or relocate existing electrical material and equipment interfering with new installation.
- C. Relocate existing lighting fixtures as indicated on Drawings. Clean fixtures and re-lamp. Test fixture to see if it is in good working condition before installation at new location.

3.07 CUTTING AND PATCHING

- A. Make new openings neat, as close as possible to profiles indicated, and only to extent necessary for new work.
- B. Do not cut or alter structural members unless specifically indicated or approved, and do not damage reinforcing or structural steel to remain.
- C. At concrete, masonry, paving, and other materials where edges of cuts and holes will remain exposed in the completed work, make cuts using power-sawing and coring equipment. Do not over cut at corners of cut openings – saw overruns will not be permitted. Core hole at corner of proposed openings to insert blade and chip square.
- D. Upon completion of cutting and coring, clean remaining surfaces of loose particles and dust.
- E. Repair and patch all holes and openings from the removed electrical equipment, outlet boxes, etc. Coordinate with the General Contractor and the Architect to include and provide finished to match adjacent area.

3.08 CLEANING

- A. Remove demolished materials as work progresses. Legally dispose.
- B. Keep workplace neat.
- C. Clean surfaces on which new materials will be applied, removing adhesives, bitumen, and other adhering materials, as necessary to furnish acceptable substrates for new materials.
- D. Perform sandblasting, chipping, grinding, acid washing, etching, and other work as required by conditions encountered and new materials involved
- E. Use of acids or other cleaning agents shall include neutralizing, washing, rinsing, and drying, as applicable.
- F. Determine substrate requirements for reconditions surfaces in cooperation with the manufacturer's representative and installer of each new installer involved.
- G. Clean surfaces on which new materials will be applied, removing adhesives, bitumen, and other adhering materials, as necessary to furnish acceptable substrates for new materials.

3.09 PROTECTION OF FINISHED WORK

- A. Do not permit traffic over unprotected floor surface.

END OF SECTION 26 05 05

**SECTION 26 05 19
LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS**

PART 1 – GENERAL

1.01 SUMMARY

- A. Section includes:
 - 1. Single conductor building wire.
 - 2. Wiring connectors and connections.
 - 3. Electrical tape.
 - 4. Wire pulling lubricant.
 - 5. Cable ties.

1.02 REFERENCES

- A. International Electrical Testing Association:
 - 1. NETA ATS - Acceptance Testing Specifications for Electrical Power Distribution Equipment and Systems.
- B. National Fire Protection Association:
 - 1. NFPA 70 - National Electrical Code with California Amendments.
 - 2. NFPA 262 - Standard Method of Test for Flame Travel and Smoke of Wires and Cables for Use in Air-Handling Spaces.
- C. Underwriters Laboratories, Inc.:
 - 1. UL 486A - Standard for Safety Wire Connectors and Soldering Lugs for Use with Copper Conductors
 - 2. UL 486B - UL Standard for Safety Wire Connectors for Use with Aluminum Conductors
 - 3. UL 486C - UL Standard for Safety Splicing Wire Connectors
 - 4. UL 486D - UL Standard for Safety Sealed Wire Connector Systems
 - 5. UL 510 - UL Standard for Safety Polyvinyl Chloride, Polyethylene, and Rubber Insulating Tape.
 - 6. UL 1277 - Standard for Safety for Electrical Power and Control Tray Cables with Optional Optical-Fiber Members

1.03 SYSTEM DESCRIPTION

- A. Product Requirements: Provide products as follows:
 - 1. Stranded conductor for feeders and branch circuits.
 - 2. Stranded conductors for control circuits.

3. Conductor not smaller than 12 AWG for power and lighting circuits.
4. Conductor not smaller than 12 AWG for line voltage control circuits (120-volt).
5. Conductor not smaller than 16 AWG for control circuits.
6. Increase wire size in branch circuits to limit voltage drop to a maximum of 3 percent.
7. 10 AWG conductors for 20 ampere or larger as designated on plans for 120-volt branch circuit home runs longer than 75 feet.

B. Conductor Applications:

1. Do not use conductors for applications other than as permitted by NFPA 70 with California Amendments and product listing.
2. Provide single conductor building wire installed in suitable raceway unless otherwise indicated, permitted, or required.
3. Metal clad and armored cable is not permitted.
4. Concealed Dry Interior Locations: Use only building wire, Type THHN/THWN-2 insulation, in raceway.
5. Exposed Dry Interior Locations: Use only building wire, Type THHN/THWN-2 insulation, in raceway.
6. Above Accessible Ceilings: Use only building wire, Type THHN/THWN-2 insulation, in raceway.
7. Wet or Damp Interior Locations: Use only building wire, Type THHN/THWN-2 insulation, in raceway.
8. Exterior Locations: Use only building wire, Type XHHW-2 insulation, in raceway.
9. Underground Locations: Use only building wire, Type XHHW-2 insulation, in raceway.

1.04 DESIGN REQUIREMENTS

- A. Conductor sizes are based on copper unless indicated as aluminum or "AL".

1.05 SUBMITTALS

- A. See Administrative Requirements, for submittal procedures.
- B. Product Data: Provide manufacturer's standard catalog pages and data sheets for conductors and cables, including detailed information on materials, construction, ratings, listings, and available sizes, configurations, and stranding.
- C. Manufactured Wiring System Shop Drawings: Provide plan views indicating proposed system layout with components identified; indicate branch circuit connections.
- D. Field Quality Control Test Reports.
- E. Project Record Documents: Record actual installed circuiting arrangements. Record actual routing for underground circuits.

1.06 QUALITY ASSURANCE

- A. Provide wiring materials located in plenums with peak optical density not greater than 0.5, average optical density not greater than 0.15, and flame spread not greater than 5 feet when tested in accordance with NFPA 262.
- B. Perform Work in accordance with State, Municipality, Highways, and Public Work's standard.
- C. Maintain one copy of each document on site.

1.07 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years documented experience.

1.08 FIELD MEASUREMENTS

- A. Verify field measurements are as indicated on Drawings.

1.09 COORDINATION

- A. Where wire and cable destination are indicated and routing is not shown, determine routing and lengths required.
- B. Wire and cable routing indicated is approximate unless dimensioned.
- C. Determine required separation between wire, cable and other work. Determine cable routing to avoid interference with other work.

PART 2 – PRODUCTS

2.01 BUILDING WIRE

- A. Product Description: Single conductor insulated wire.
- B. Conductor: Copper stranded.
- C. Insulation Voltage Rating: 600 volts.
- D. Insulation:
 - 1. Copper Building Wire in Conduit: Type THHN/THWN-2.
 - 2. Copper Exterior and Underground in Conduit: Type XHHW-2.

2.02 WIRING CONNECTORS

- A. Description: Wiring connectors appropriate for the application, suitable for use with the conductors to be connected, and listed as complying with UL 486A-486B or UL 486C as applicable.
- B. Connectors for Grounding and Bonding: Comply with Section 26 05 26.
- C. Wiring Connectors for Splices and Taps:
 - 1. Copper Conductors Size 8 AWG and Smaller: Use twist-on insulated spring connectors.

2. Copper Conductors Size 6 AWG and Larger: Use pre-insulated mechanical connectors or compression connectors.
- D. Wiring Connectors for Terminations:
1. Provide terminal lugs for connecting conductors to equipment furnished with terminations designed for terminal lugs.
 2. Provide compression adapters for connecting conductors to equipment furnished with mechanical lugs when only compression connectors are specified.
 3. Where over-sized conductors are larger than the equipment terminations can accommodate, provide connectors suitable for reducing to appropriate size, but not less than required for the rating of the overcurrent protective device.
 4. Copper Conductors Size 8 AWG and Larger: Use mechanical connectors or compression connectors where connectors are required.
 5. Conductors Size 10 AWG and Smaller: Use crimped terminals for connections to terminal screws.
- E. Do not use insulation-piercing or insulation-displacement connectors designed for use with conductors without stripping insulation.
- F. Do not use push-in wire connectors as a substitute for twist-on insulated spring connectors.
- G. Twist-on Insulated Spring Connectors: Rated 600-volt, 221 degrees F for standard applications and 302 degrees F for high temperature applications; pre-filled with sealant and listed as complying with UL 486D for damp and wet locations.
- H. Mechanical Connectors: Provide bolted type.
- I. Compression Connectors: Provide circumferential type or hex type crimp configuration.
- J. Crimped Terminals: Nylon-insulated, with insulation grip and terminal configuration suitable for connection to be made.

2.03 PLASTIC TAPE:

- A. Vinyl Insulating Electrical Tape: Complying with ASTM D3005 and listed as complying with UL 510; minimum thickness of 7 mil; resistant to abrasion, corrosion, and sunlight; conformable for application down to 0 degrees F and suitable for continuous temperature environment up to 221 degrees F.

2.04 WIRE PULLING LUBRICANT:

- A. Listed; suitable for use with the conductors or cables to be installed and suitable for use at the installation temperature.

2.05 CABLE TIES:

- A. Material and tensile strength rating suitable for application.

2.06 INSULATING RESIN:

- A. Use two-part liquid epoxy resin with resin and catalyst in premeasured, sealed mixing pouch. Scotchcast 4 or equivalent.

2.07 REDUCING ADAPTERS:

- A. Burndy, Thomas and Betts or approved equal.

2.08 TERMINATIONS

- A. Terminal Lugs for Wires 6 AWG and Smaller: Solderless, compression type copper.
- B. Lugs for Wires 4 AWG and Larger: Color keyed, compression type copper, with insulating sealing collars.

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Verify that interior of building has been protected from weather.
- B. Verify that work likely to damage wire and cable has been completed.
- C. Verify that raceways, boxes, and equipment enclosures are installed and are properly sized to accommodate conductors and cables in accordance with NFPA 70.
- D. Verify that field measurements are as indicated.
- E. Verify that conditions are satisfactory for installation prior to starting work.

3.02 PREPARATION

- A. Completely and thoroughly swab raceway before installing wire.

3.03 EXISTING WORK

- A. Remove exposed abandoned wire and cable, including abandoned wire and cable above accessible ceiling finishes. Patch surfaces where removed cables pass through building finishes.
- B. Disconnect abandoned circuits and remove circuit wire and cable. Remove abandoned boxes when wire and cable servicing boxes is abandoned and removed. Install blank cover for abandoned boxes not removed.
- C. Provide access to existing wiring connections remaining active and requiring access. Modify installation or install access panel.
- D. Extend existing circuits using materials and methods as specified.
- E. Clean and repair existing wire and cable remaining or wire and cable to be reinstalled.

3.04 INSTALLATION

- A. Circuiting Requirements:
 - 1. Unless dimensioned, circuit routing indicated is diagrammatic.
 - 2. When circuit destination is indicated without specific routing, determine exact routing required.
 - 3. Arrange circuiting to minimize splices.

4. Include circuit lengths required to install connected devices within 10 ft of location indicated.
5. Maintain separation of Class 1, Class 2, and Class 3 remote-control, signaling, and power-limited circuits in accordance with NFPA 70 with California Amendments.
6. Maintain separation of wiring for emergency systems in accordance with NFPA 70 with California Amendments.
7. Circuiting Adjustments: Unless otherwise indicated, when branch circuits are indicated as separate, combining them together in a single raceway is not permitted.
8. Provide dedicated neutral/grounded conductor for each individual branch circuit.
9. Do not install 480/277-volt and 208/120-volt systems in the same conduit, junction box, cable auxiliary gutter, wireway, or other enclosure.
- B. Neatly train and lace wiring inside boxes, equipment, and panelboards.
- C. Identify and color code wire and cable. Identify each conductor with its circuit number or other designation indicated.
- D. Special Techniques--Building Wire in Raceway:
 1. Tape ends of conductors and cables to prevent infiltration of moisture and other contaminants.
 2. Pull all conductors and cables together into raceway at same time.
 3. Do not damage conductors and cables or exceed manufacturer's recommended maximum pulling tension and sidewall pressure.
 4. Use suitable wire pulling lubricant where necessary, except when lubricant is not recommended by the manufacturer.
 5. Secure and support conductors and cables in accordance with NFPA 70 using suitable supports and methods approved by the authority having jurisdiction. Provide independent support from building structure. Do not provide support from raceways, piping, ductwork, or other systems.
 6. Installation Above Suspended Ceilings: Do not provide support from ceiling support system. Do not provide support from ceiling grid or allow conductors and cables to lay on ceiling tiles.
 7. Installation in Vertical Raceways: Provide supports where vertical rise exceeds permissible limits.
- E. Paralleled Conductors: Install and terminate conductors of the same length and electrical characteristics in the same manner.
- F. Special Techniques - Wiring Connections:
 1. Clean conductor surfaces before installing lugs and connectors.

2. Make splices, taps, and terminations to carry full ampacity of conductors with no perceptible temperature rise.
 3. Tape uninsulated conductors and connectors with electrical tape to 150 percent of insulation rating of conductor.
 4. Install split bolt connectors for copper conductor splices and taps, 6 AWG and larger.
 5. Install solderless pressure connectors with insulating covers for copper conductor splices and taps, 8 AWG and smaller.
 6. Install insulated spring wire connectors with plastic caps for copper conductor splices and taps, 10 AWG and smaller.
 7. Terminate aluminum conductors with tin-plated, aluminum-bodied compression connectors only. Fill with antioxidant compound before installing conductor.
 8. Install suitable reducing connectors or mechanical connector adaptors for connecting aluminum conductors to copper conductors.
 9. Encapsulate below grade splices at outlet, pull and junction boxes with specified insulating resin kits. Make all splices watertight.
 10. Install waterproof wire connectors with plastic caps for copper conductor splices and taps, 10 AWG and smaller in outdoor or wet locations.
 11. Where oversized cables are used to accommodate voltage drop, whether a single or parallel feeder, provide appropriate reducing adapter and conductors for termination.
- G. Install stranded conductors for branch circuits. Install crimp on fork terminals for device terminations. Do not place bare stranded conductors directly under screws.
- H. Install terminal lugs on ends of 600-volt wires unless lugs are furnished on connected device, such as circuit breakers.
- I. Size lugs in accordance with manufacturer's recommendations terminating wire sizes. Install 2-hole type lugs to connect wires 4 AWG and larger to copper bus bars.
- J. For terminal lugs fastened together such as on motors, transformers, and other apparatus, or when space between studs is small enough that lugs can turn and touch each other, insulate for dielectric strength of 2-1/2 times normal potential of circuit.

3.05 WIRE COLOR

- A. General:
1. For wire sizes 10 AWG and smaller, install wire colors in accordance with the following:
 - a. Black, red, and blue for circuits at 120/208 volts single or three phase.
 2. For wire sizes 8 AWG and larger, identify wire with colored tape at terminals, splices and boxes. Colors are as follows:
 - a. Black, red, and blue for circuits at 120/208 volts single or three phase.

- B. Neutral Conductors: White. When two or more neutrals are in one conduit, individually identify each with proper circuit number.
- C. Branch Circuit Conductors: Install three or four wire home runs with each phase uniquely color coded.
- D. Feeder Circuit Conductors: Uniquely color code each phase.
- E. Ground Conductors:
 - 1. For 6 AWG and smaller: Green.
 - 2. For 4 AWG and larger: Identify with green tape at both ends and visible points including junction boxes.

3.06 FIELD QUALITY CONTROL

- A. Inspect and test in accordance with NETA ATS, except Section 4.
- B. Perform inspections and tests listed in NETA ATS, Section 7.3.2. The insulation resistance test is required for all conductors.
- C. Correct deficiencies and replace damaged or defective conductors.

END OF SECTION 26 05 19

**SECTION 26 05 26
GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS**

PART 1 – GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Rod electrodes.
 - 2. Wire.
 - 3. Connectors.

1.02 REFERENCES

- A. Institute of Electrical and Electronics Engineers:
 - 1. IEEE 142 - Recommended Practice for Grounding of Industrial and Commercial Power Systems.
 - 2. IEEE 1100 - Recommended Practice for Powering and Grounding Electronic Equipment.
- B. International Electrical Testing Association:
 - 1. NETA ATS - Acceptance Testing Specifications for Electrical Power Distribution Equipment and Systems.
- C. National Fire Protection Association:
 - 1. NFPA 70 - National Electrical Code, with California Amendments.
- D. Underwriters Laboratories Inc.:
 - 1. UL 467 – UL Standard for Safety Grounding and Bonding Equipment.

1.03 SYSTEM DESCRIPTION

- A. Grounding systems use the following elements as grounding electrodes:
 - 1. Metal underground water pipe.
 - 2. Metal building frame.
 - 3. Concrete-encased electrode.
 - 4. Ground ring.
 - 5. Ground Riser.
 - 6. Ground Bars.
 - 7. Rod electrode.
 - 8. Plate electrode.

1.04 PERFORMANCE REQUIREMENTS

- A. Grounding System Resistance: 25 ohms maximum.

1.05 SUBMITTALS

- A. Product Data: Submit data on grounding electrodes and connections.
- B. Test Reports: Indicate overall resistance to ground and resistance of each electrode.
- C. Project Record Documents: Record actual locations of components and grounding electrodes.

1.06 QUALITY ASSURANCE

- A. Provide grounding materials conforming to requirements of NFPA 70 with California Amendments, IEEE 142, and UL labeled.
- B. Perform Work in accordance with State, Municipality, Highways, and Public Work's standard.
- C. Maintain one copy of each document on site.

1.07 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing Products specified in this section with minimum three years documented experience.
- B. Installer: Company specializing in performing work of this section with minimum 3 years documented experience.

1.08 DELIVERY, STORAGE, AND HANDLING

- A. Accept materials on site in original factory packaging, labeled with manufacturer's identification.
- B. Protect from weather and construction traffic, dirt, water, chemical, and mechanical damage, by storing in original packaging.
- C. Do not deliver items to project before time of installation. Limit shipment of bulk and multiple-use materials to quantities needed for immediate installation.

1.09 COORDINATION

- A. Complete grounding and bonding of building reinforcing steel prior concrete placement.

PART 2 – PRODUCTS

2.01 ROD ELECTRODES

- A. Material: Copper bonded (copper-clad) steel.
- B. Size: 3/4-inch diameter by 10 feet long, unless otherwise indicated.
- C. Connector: Connector for exothermic welded connection.

2.02 WIRE

- A. Use stranded, annealed copper conductors for all sizes unless otherwise indicated.

- B. Use insulated conductors unless otherwise indicated.
 - 1. Use green-colored insulation.
 - 2. Exceptions:
 - a. Use bare copper conductors where installed underground in direct contact with earth.
 - b. Use bare copper conductors where directly encased in concrete (not in raceway).
 - c. Use bare copper conductors where installed in cable tray system.
 - 3. Use #6 AWG, minimum, copper conductors where installed in cable tray systems.
 - 4. Use #4 AWG, minimum, copper conductors for raceway bonding penetrating into a designated space, as indicated on the drawings.

2.03 CONNECTORS

- A. Description: Connectors appropriate for the application and suitable for the conductors and items to be connected; listed and labeled as complying with UL 467.
- B. Unless otherwise indicated, use exothermic welded connections or irreversible compression connectors.
 - 1. Exceptions:
 - a. Use removable compression connectors for ground rods.

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Verify final backfill and compaction has been completed before driving rod electrodes.

3.02 PREPARATION

- A. Remove paint, rust, mill oils, surface contaminants at connection points.

3.03 EXISTING WORK

- A. Modify existing grounding system to maintain continuity to accommodate renovations.
- B. Extend existing grounding system using materials and methods as specified.
- C. Where existing grounding and bonding system components are indicated to be reused, they may be reused only where they are free from corrosion, integrity and continuity are verified, and where acceptable to the authority having jurisdiction.

3.04 INSTALLATION

- A. Install in accordance with IEEE 142 and 1100.
- B. Grounding Electrode System: Provide connection to required and supplemental grounding electrodes indicated to form grounding electrode system.
 - 1. Provide continuous grounding electrode conductors without splice or joint.

2. Install grounding electrode conductors in raceway where exposed to physical damage. Bond grounding electrode conductor to metallic raceways at each end.
- C. Ground Rod Electrode(s):
1. Provide ground access well for each electrode.
 2. Unless otherwise indicated, install ground rod electrodes vertically. Where encountered rock prohibits vertical installation, install at 45 degree angle or bury horizontally in trench at least 30 inches deep in accordance with NFPA 70 with California Amendments or provide ground plates.
 - a. Outdoor Installations: Unless otherwise indicated, install with top of rod 6 inches below finished grade.
 - b. Indoor Installations: Unless otherwise indicated, install with 4 inches of top of rod exposed.
- D. Provide additional ground electrode(s) as required to achieve specified grounding electrode system resistance.
- E. Where existing grounding and bonding system components are indicated to be reused, they may be reused only where they are free from corrosion, integrity and continuity are verified, and where acceptable to the authority having jurisdiction.
- F. Install grounding and bonding conductors concealed from view.
- G. Install grounding well pipe with cover at each rod location. Install well pipe top flush with finished grade.
- H. Bond together metal siding not attached to grounded structure; bond to ground.
- I. Bond together reinforcing steel and metal accessories in pool and fountain structures.
- J. Bond together each metallic raceway, pipe, duct and other metal object entering space under access floors. Bond to underfloor ground grid. Install 2 AWG bare copper bonding conductor.
- K. Install grounding and bonding in patient care areas to meet requirements of NFPA 99.
- L. Equipment Grounding Conductor: Install separate, insulated conductor within each feeder and branch circuit raceway. Terminate each end on suitable lug, bus, or bushing.
- M. Connect to site grounding system.
- N. Bond to lightning protection system.
- O. Install continuous grounding using underground cold water system and building steel as grounding electrode. Where water piping is not available, install artificial station ground by means of driven rods or buried electrodes.
- P. Permanently ground entire light and power system in accordance with NFPA 70 with California Amendments, including service equipment, distribution panels, lighting panelboards, switch and starter enclosures, motor frames, grounding type receptacles, and other exposed non-current carrying metal parts of electrical equipment.

- Q. Install branch circuits feeding isolated ground receptacles with separate insulated grounding conductor, connected only at isolated ground receptacle, ground terminals, and at ground bus of serving panel.
- R. Accomplish grounding of electrical system by using insulated grounding conductor installed with feeders and branch circuit conductors in conduits. Size grounding conductors in accordance with NFPA 70 with California Amendments. Install from grounding bus of serving panel to ground bus of served panel, grounding screw of receptacles, lighting fixture housing, light switch outlet boxes or metal enclosures of service equipment. Ground conduits by means of grounding bushings on terminations at panelboards with installed number 12 conductor to grounding bus.
- S. Grounding electrical system using continuous metal raceway system enclosing circuit conductors in accordance with NFPA 70 with California Amendments.
- T. Permanently attach equipment and grounding conductors prior to energizing equipment.
- U. Make grounding and bonding connections using specified connectors.
 - 1. Remove appropriate amount of conductor insulation for making connections without cutting, nicking, or damaging conductors. Do not remove conductor strands to facilitate insertion into connector.
 - 2. Remove nonconductive paint, enamel, or similar coating at threads, contact points, and contact surfaces.
 - 3. Exothermic Welds: Make connections using molds and weld material suitable for the items to be connected in accordance with manufacturer's recommendations.
 - 4. Mechanical Connectors: Secure connections according to manufacturer's recommended torque settings.
 - 5. Compression Connectors: Secure connections using manufacturer's recommended tools and dies.

3.05 FIELD QUALITY CONTROL

- A. Inspect and test in accordance with NETA ATS, except Section 4.
- B. Grounding and Bonding: Perform inspections and tests listed in NETA ATS, Section 7.13.
- C. Perform ground electrode resistance tests under normally dry conditions. Precipitation within the previous 72 hours does not constitute normally dry conditions.
- D. Investigate and correct deficiencies where measured ground resistances do not comply with specified requirements.
- E. Perform continuity testing in accordance with IEEE 142.
- F. When improper grounding is found on receptacles, check receptacles in entire project and correct. Perform retest.
- G. Submit detailed reports indicating inspection and testing results and corrective actions taken.

END OF SECTION 26 05 26

**SECTION 26 05 29
HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS**

PART 1 – GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Conduit supports.
 - 2. Formed steel channel.
 - 3. Spring steel clips.
 - 4. Sleeves.
 - 5. Mechanical sleeve seals.
 - 6. Firestopping relating to electrical work.
 - 7. Firestopping accessories.
 - 8. Equipment bases and supports.

1.02 REFERENCES

- A. ASTM International:
 - 1. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
 - 2. ASTM E119 - Standard Test Methods for Fire Tests of Building Construction and Materials.
 - 3. ASTM E814 - Standard Test Method for Fire Tests of Through-Penetration Fire Stops.
 - 4. ASTM E1966 - Standard Test Method for Fire-Resistive Joint Systems.
- B. FM Global:
 - 1. FM - Approval Guide, A Guide to Equipment, Materials & Services Approved by Factory Mutual Research for Property Conservation.
- C. National Fire Protection Association:
 - 1. NFPA 70 - National Electrical Code with California Amendments.
- D. Underwriters Laboratories Inc.:
 - 1. UL 263 - Fire Tests of Building Construction and Materials.
 - 2. UL 723 - Tests for Surface Burning Characteristics of Building Materials.
 - 3. UL 1479 - Fire Tests of Through-Penetration Firestops.
 - 4. UL 2079 - Tests for Fire Resistance of Building Joint Systems.

- 5. UL - Fire Resistance Directory.
- E. Intertek Testing Services (Warnock Hersey Listed):
 - 1. WH - Certification Listings.

1.03 DEFINITIONS

- A. Firestopping (Through-Penetration Protection System): Sealing or stuffing material or assembly placed in spaces between and penetrations through building materials to arrest movement of fire, smoke, heat, and hot gases through fire rated construction.

1.04 SYSTEM DESCRIPTION

- A. Firestopping Materials: ASTM E119, ASTM E814, UL 263, UL 1479, to achieve fire ratings of adjacent construction in accordance with FM, UL, and WH Design Numbers noted on Drawings.
- B. Firestop interruptions to fire rated assemblies, materials, and components.

1.05 PERFORMANCE REQUIREMENTS

- A. Firestopping: Conform to applicable code, FM, UL, and WH for fire resistance ratings and surface burning characteristics.
- B. Firestopping: Provide certificate of compliance from authority having jurisdiction indicating approval of materials used.

1.06 SUBMITTALS

- A. Shop Drawings: Indicate system layout with location and detail of trapeze hangers.
- B. Product Data:
 - 1. Hangers and Supports: Submit manufacturers catalog data including load capacity.
 - 2. Firestopping: Submit data on product characteristics, performance, and limitation criteria.
- C. Firestopping Schedule: Submit schedule of opening locations and sizes, penetrating items, and required listed design numbers to seal openings to maintain fire resistance rating of adjacent assembly.
- D. Design Data: Indicate load carrying capacity of trapeze hangers and hangers and supports.
- E. Submit details and calculations for support and anchors that are not specifically detailed on the Drawings where required by California Building Standards Code, California Code of Regulations, Title 24. Pre-approved systems may be used as noted below only if the pre-approval is current and accepted by the local agency having jurisdiction.
- F. Where pre-approved bracing systems will be employed, submit:
 - 1. System component brochure describing components used and detailed installation instructions.
 - 2. Loads to be transmitted to the structure at anchor points.

- G. Where pre-approved bracing systems are not used, submit details and calculations of proposed systems. Include:
 - 1. Detailed drawings and calculations showing system to be installed, stamped by a Structural Engineer registered in the state of California.
 - 2. Loads to be transmitted to the structure at anchor points.
 - 3. Submit detailed routing and installation drawings of all raceway systems requiring seismic supports for review. Include attachment points, raceway sizes and methods proposed for securing and attaching.
- H. Manufacturer's Installation Instructions:
 - 1. Hangers and Supports: Submit special procedures and assembly of components.
 - 2. Firestopping: Submit preparation and installation instructions.
- I. Manufacturer's Certificate: Certify products meet or exceed specified requirements.
- J. Firestopping Engineering Judgments: For conditions not covered by UL listed designs, submit judgments by licensed professional engineer suitable for presentation to authority having jurisdiction for acceptance as meeting code fire protection requirements.

1.07 QUALITY ASSURANCE

- A. Through Penetration Firestopping of Fire Rated Assemblies: UL 1479 or ASTM E814 with 0.10-inch water gage minimum positive pressure differential to achieve fire F-Ratings and temperature T-Ratings as indicated on Drawings, but not less than 1-hour.
 - 1. Wall Penetrations: Fire F-Ratings as indicated on Drawings, but not less than 1-hour.
 - 2. Floor and Roof Penetrations: Fire F-Ratings and temperature T-Ratings as indicated on Drawings, but not less than 1-hour.
 - a. Floor Penetrations Within Wall Cavities: T-Rating is not required.
- B. Through Penetration Firestopping of Non-Fire Rated Floor and Roof Assemblies: Materials to resist free passage of flame and products of combustion.
 - 1. Noncombustible Penetrating Items: Noncombustible materials for penetrating items connecting maximum of three stories.
 - 2. Penetrating Items: Materials approved by authorities having jurisdiction for penetrating items connecting maximum of two stories.
- C. Fire Resistant Joints in Fire Rated Floor, Roof, and Wall Assemblies: ASTM E1966 or UL 2079 to achieve fire resistant rating as indicated on Drawings for assembly in which joint is installed.
- D. Fire Resistant Joints Between Floor Slabs and Exterior Walls: ASTM E119 with 0.10-inch water gage minimum positive pressure differential to achieve fire resistant rating as indicated on Drawings for floor assembly.
- E. Surface Burning Characteristics: Maximum 25/450 flame spread/smoke developed index when tested in accordance with ASTM E84.

- F. Perform Work in accordance with State, Municipality, Highways, and Public Work's standard.
- G. Maintain one copy of each document on site.

1.08 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing Products specified in this section with minimum three years documented experience.
- B. Installer: Company specializing in performing work of this section with minimum 3 years documented experience.

1.09 PRE-INSTALLATION MEETINGS

- A. Convene minimum one week prior to commencing work of this section.

1.10 DELIVERY, STORAGE, AND HANDLING

- A. Accept materials on site in original factory packaging, labeled with manufacturer's identification.
- B. Protect from weather and construction traffic, dirt, water, chemical, and mechanical damage, by storing in original packaging.

1.11 ENVIRONMENTAL REQUIREMENTS

- A. Do not apply firestopping materials when temperature of substrate material and ambient air is below 60 degrees F.
- B. Maintain this minimum temperature before, during, and for minimum 3 days after installation of firestopping materials.
- C. Provide ventilation in areas to receive solvent cured materials.

PART 2 – PRODUCTS

2.01 CONDUIT SUPPORTS

- A. Hanger Rods: Threaded high tensile strength galvanized carbon steel with free running threads.
 - 1. Determine rod diameter based on actual loads supported plus a minimum safety factor of 25%. Unless otherwise indicated or required, do not use rod diameters less than the following for the stated application:
 - a. Equipment Supports: 1/2 inch diameter.
 - b. Busway Supports: 1/2 inch diameter.
 - c. Single Conduit up to 1 inch (27 mm) trade size: 1/4 inch diameter.
 - d. Single Conduit larger than 1 inch (27 mm) trade size: 3/8 inch diameter.
 - e. Trapeze Support for Multiple Conduits: 3/8 inch diameter.
 - f. Outlet Boxes: 3/8 inch diameter.
 - g. Luminaires: 1/2 inch diameter.
- B. Beam Clamps: Malleable Iron, with tapered hole in base and back to accept either bolt or hanger rod. Set screw: hardened steel.

- C. Conduit clamps for trapeze hangers: Galvanized steel, notched to fit trapeze with single bolt to tighten.
- D. Conduit clamps - general purpose: One-hole malleable iron for surface mounted conduits.
- E. Cable Ties: High strength nylon temperature rated to 185 degrees F. Self-locking.

2.02 FORMED STEEL CHANNEL

- A. Product Description: Galvanized 12 gage thick steel.

2.03 SPRING STEEL CLIPS

- A. Product Description: Mounting hole and screw closure.

2.04 SLEEVES

- A. Sleeves for Through Non-fire Rated Floors: 18 gage thick galvanized steel.
- B. Sleeves for Through Non-fire Rated Beams, Walls, Footings, and Potentially Wet Floors: Steel pipe or 18 gage thick galvanized steel.
- C. Sleeves for Through Fire Rated and Fire Resistive Floors and Walls, and Fire Proofing: Prefabricated fire rated sleeves including seals, UL listed.
- D. Fire-stopping Insulation: Glass fiber type, non-combustible.

2.05 MECHANICAL SLEEVE SEALS

- A. Product Description: Modular mechanical type, consisting of interlocking synthetic rubber links shaped to continuously fill annular space between object and sleeve, connected with bolts and pressure plates causing rubber sealing elements to expand when tightened, providing watertight seal and electrical insulation.

2.06 FIRESTOPPING

- A. Product Description: Different types of products by multiple manufacturers are acceptable as required to meet specified system description and performance requirements; provide only one type for each similar application.
 - 1. Silicone Firestopping Elastomeric Firestopping: Single component silicone elastomeric compound and compatible silicone sealant.
 - 2. Foam Firestopping Compounds: Single component foam compound.
 - 3. Formulated Firestopping Compound of Incombustible Fibers: Formulated compound mixed with incombustible non-asbestos fibers.
 - 4. Fiber Stuffing and Sealant Firestopping: Composite of mineral fiber stuffing insulation with silicone elastomer for smoke stopping.
 - 5. Mechanical Firestopping Device with Fillers: Mechanical device with incombustible fillers and silicone elastomer, covered with sheet stainless steel jacket, joined with collars, penetration sealed with flanged stops.
 - 6. Intumescent Firestopping: Intumescent putty compound which expands on exposure to surface heat gain.

- 7. Firestop Pillows: Formed mineral fiber pillows.
- B. Color: Dark gray.

2.07 FIRESTOPPING ACCESSORIES

- A. Primer: Type recommended by firestopping manufacturer for specific substrate surfaces and suitable for required fire ratings.
- B. Dam Material: Permanent:
 - 1. Mineral fiberboard.
 - 2. Mineral fiber matting.
 - 3. Sheet metal.
 - 4. Plywood or particle board.
 - 5. Alumina silicate fire board.
- C. Installation Accessories: Provide clips, collars, fasteners, temporary stops or dams, and other devices required to position and retain materials in place.
- D. General:
 - 1. Furnish UL listed products.
 - 2. Select products with rating not less than rating of wall or floor being penetrated.
- E. Non-Rated Surfaces:
 - 1. Stamped steel, chrome plated, hinged, split ring escutcheons or floor plates or ceiling plates for covering openings in occupied areas where conduit is exposed.
 - 2. For exterior wall openings below grade, furnish modular mechanical type seal consisting of interlocking synthetic rubber links shaped to continuously fill annular space between conduit and cored opening or water-stop type wall sleeve.

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Verify openings are ready to receive sleeves.
- B. Verify openings are ready to receive firestopping.

3.02 PREPARATION

- A. Clean substrate surfaces of dirt, dust, grease, oil, loose material, or other matter affecting bond of firestopping material.
- B. Remove incompatible materials affecting bond.
- C. Install backing materials to arrest liquid material leakage.
- D. Obtain permission from Architect/Engineer before using powder-actuated anchors.

- E. Obtain permission from Architect/Engineer before drilling or cutting structural members.

3.03 INSTALLATION - HANGERS AND SUPPORTS

A. Anchors and Fasteners:

1. Concrete Structural Elements: Provide precast inserts and expansion anchors.
2. Steel Structural Elements: Provide beam clamps, spring steel clips, steel ramset fasteners, and welded fasteners.
3. Concrete Surfaces: Provide self-drilling anchors and expansion anchors.
4. Hollow Masonry, Plaster, and Gypsum Board Partitions: Provide toggle bolts.
5. Solid Masonry Walls: Provide expansion anchors and preset inserts.
6. Sheet Metal: Provide sheet metal screws.
7. Wood Elements: Provide wood screws.

B. Inserts:

1. Install inserts for placement in concrete forms.
2. Install inserts for suspending hangers from reinforced concrete slabs and sides of reinforced concrete beams.
3. Provide hooked rod to concrete reinforcement section for inserts carrying pipe over 4 inches.
4. Where concrete slabs form finished ceiling, locate inserts flush with slab surface.
5. Where inserts are omitted, drill through concrete slab from below and provide through-bolt with recessed square steel plate and nut flush with top of slab.

C. Install conduit and raceway support and spacing in accordance with NFPA 70 with California Amendments.

D. Do not fasten supports to pipes, ducts, mechanical equipment, or conduit.

E. Install multiple conduit runs on common hangers.

F. Supports:

1. Fabricate supports from structural steel or formed steel channel. Install hexagon head bolts to present neat appearance with adequate strength and rigidity. Install spring lock washers under nuts.
2. Install surface mounted cabinets and panelboards with minimum of four anchors.
3. In wet and damp locations install steel channel supports to stand cabinets and panelboards 1 inch off wall.
4. Support vertical conduit at every floor.

3.04 INSTALLATION - FIRESTOPPING

- A. Install material at fire rated construction perimeters and openings containing penetrating sleeves, piping, ductwork, conduit and other items, requiring firestopping.
- B. Apply primer where recommended by manufacturer for type of firestopping material and substrate involved, and as required for compliance with required fire ratings.
- C. Apply firestopping material in sufficient thickness to achieve required fire and smoke rating.
- D. Place intumescent coating in sufficient coats to achieve rating required.
- E. Remove dam material after firestopping material has cured.
- F. Fire Rated Surface:
 - 1. Seal opening at floor, wall, partition, ceiling, and roof as follows:
 - a. Install sleeve through opening and extending beyond minimum of 1 inch on both sides of building element.
 - b. Size sleeve allowing minimum of 1-inch void between sleeve and building element.
 - c. Pack void with backing material.
 - d. Seal ends of sleeve with UL listed fire resistive silicone compound to meet fire rating of structure penetrated.
 - 2. Where cable tray, bus, cable bus, conduit, wireway, and trough penetrates fire rated surface, install firestopping product in accordance with manufacturer's instructions.
- G. Non-Rated Surfaces:
 - 1. Seal opening through non-fire rated wall, partition, floor, ceiling, and roof opening as follows:
 - a. Install sleeve through opening and extending beyond minimum of 1 inch on both sides of building element.
 - b. Size sleeve allowing minimum of 1-inch void between sleeve and building element.
 - c. Install type of firestopping material recommended by manufacturer.
 - 2. Install floor plates or ceiling plates where conduit, penetrates non-fire rated surfaces in occupied spaces. Occupied spaces include rooms with finished ceilings and where penetration occurs below finished ceiling.
 - 3. Exterior wall openings below grade: Assemble rubber links of mechanical seal to size of conduit and tighten in place, in accordance with manufacturer's instructions.
 - 4. Interior partitions: Seal pipe penetrations at clean rooms, laboratories, hospital spaces, computer rooms, telecommunication rooms, and data rooms. Apply sealant to both sides of penetration to completely fill annular space between sleeve and conduit.

3.05 INSTALLATION - EQUIPMENT BASES AND SUPPORTS

- A. Provide housekeeping pads of concrete, minimum 3-1/2 inches thick and extending 6 inches beyond supported equipment.

- B. Using templates furnished with equipment, install anchor bolts, and accessories for mounting and anchoring equipment.
- C. Construct supports of formed steel channel. Brace and fasten with flanges bolted to structure.

3.06 INSTALLATION - SLEEVES

- A. Exterior watertight entries: Seal with adjustable interlocking rubber links.
- B. Conduit penetrations not required to be watertight: Sleeve and fill with silicon foam.
- C. Set sleeves in position in forms. Provide reinforcing around sleeves.
- D. Size sleeves large enough to allow for movement due to expansion and contraction. Provide for continuous insulation wrapping.
- E. Extend sleeves through floors 1 inch above finished floor level. Caulk sleeves.
- F. Where conduit or raceway penetrates floor, ceiling, or wall, close off space between conduit or raceway and adjacent work with fire stopping insulation and caulk airtight. Provide close fitting metal collar or escutcheon covers at both sides of penetration.
- G. Install chrome plated steel escutcheons at finished surfaces.

3.07 FIELD QUALITY CONTROL

- A. Inspect installed firestopping for compliance with specifications and submitted schedule.

3.08 CLEANING

- A. Clean adjacent surfaces of firestopping materials.

3.09 PROTECTION OF FINISHED WORK

- A. Protect adjacent surfaces from damage by material installation.

END OF SECTION 26 05 29

**SECTION 26 05 33
RACEWAY AND BOXES FOR ELECTRICAL SYSTEMS**

PART 1 – GENERAL

1.01 SUMMARY

- A. Section includes conduit, surface raceways, J-hooks, wireways, outlet boxes, pull and junction boxes, concrete pull boxes and vaults, floor boxes.

1.02 REFERENCES

- A. American National Standards Institute:
1. ANSI C80.1 - Rigid Steel Conduit, Zinc Coated.
 2. ANSI C80.3 - Specification for Electrical Metallic Tubing, Zinc Coated.
 3. ANSI C80.5 - Aluminum Rigid Conduit - (ARC).
- B. National Electrical Manufacturers Association:
1. NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum).
 2. NEMA FB 1 - Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit and Cable Assemblies.
 3. NEMA OS 1 - Sheet Steel Outlet Boxes, Device Boxes, Covers, and Box Supports.
 4. NEMA OS 2 - Nonmetallic Outlet Boxes, Device Boxes, Covers, and Box Supports.
 5. NEMA RN 1 - Polyvinyl Chloride (PVC) Externally Coated Galvanized Rigid Steel Conduit and Intermediate Metal Conduit.
 6. NEMA TC 2 - Electrical Polyvinyl Chloride (PVC) Tubing and Conduit.
 7. NEMA TC 3 - PVC Fittings for Use with Rigid PVC Conduit and Tubing.

1.03 SYSTEM DESCRIPTION

- A. Raceway and boxes located as indicated on Drawings, and at other locations required for splices, taps, wire pulling, equipment connections, and compliance with regulatory requirements. Raceway and boxes are shown in approximate locations unless dimensioned. Provide raceway to complete wiring system.
- B. All wiring shall be installed in raceway.
- C. Underground More than 5 feet outside Foundation Wall: Provide thick wall nonmetallic conduit. Provide cast metal boxes or nonmetallic handhole.
- D. Underground Within 5 feet from Foundation Wall: Provide thick wall nonmetallic conduit. Provide cast metal or nonmetallic boxes.
- E. In Slab Above Grade: Not permitted.

- F. Below Slab on Grade: Use thick wall nonmetallic conduit. Terminate with coated rigid steel elbows and short length of coated rigid steel conduit out of concrete.
- G. Outdoor Locations, Above Grade: Provide galvanized rigid steel conduit. Provide cast metal outlet, pull, and junction boxes.
- H. Wet and Damp Locations: galvanized rigid steel conduit. Provide cast metal outlet, junction, and pull boxes. Provide flush mounting outlet box in finished areas.
- I. Concealed Dry Locations: Provide electrical metallic tubing. Provide sheet-metal boxes. Provide flush mounting outlet box in finished areas. Provide hinged enclosure for large pull boxes where shown on drawings. Provide J-hooks when shown on plans.
- J. Exposed Interior Dry Locations: Use rigid steel conduit or intermediate metal conduit below eight feet or where subject to damage. Use rigid steel conduit, intermediate metal conduit, or electrical metallic tubing above eight feet or in electrical, mechanical or telecommunication rooms. Use sheet-metal or cast metal boxes. Use flush mounting outlet box in finished areas. Provide hinged enclosure for large pull boxes.

1.04 DESIGN REQUIREMENTS

- A. Minimum Raceway Size:
 - 1. 0.75 inch unless otherwise specified.
 - 2. 1 inch for homeruns unless otherwise specified.

1.05 SUBMITTALS

- A. Product Data: Submit for the following:
 - 1. Flexible metal conduit.
 - 2. Liquid tight flexible metal conduit.
 - 3. Nonmetallic conduit.
 - 4. Raceway fittings.
 - 5. Conduit bodies.
 - 6. Pull and junction boxes.
 - 7. Handholes.
- B. Manufacturer's Installation Instructions: Submit application conditions and limitations of use stipulated by Product testing agency specified under Regulatory Requirements. Include instructions for storage, handling, protection, examination, preparation, and installation of Product.

1.06 CLOSEOUT SUBMITTALS

- A. Project Record Documents:
 - 1. Record actual routing of conduits larger than 2 inches.
 - 2. Record actual locations and mounting heights of outlet, pull, and junction boxes.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Protect conduit from corrosion and entrance of debris by storing above grade. Provide appropriate covering.
- B. Protect PVC conduit from sunlight.

1.08 COORDINATION

- A. Coordinate mounting heights, orientation and locations of outlets mounted above counters, benches, and backsplashes.
- B. Coordinate Work of this Division and Work of other Divisions in advance of installation. Provide additional Work to overcome tight conditions at no increase in Contract Sum.
- C. Coordinate installation of outlet boxes for equipment specified in other divisions.

PART 2 – PRODUCTS

2.01 FLEXIBLE METAL CONDUIT

- A. Product Description: Interlocked steel construction.
- B. Fittings: NEMA FB 1.

2.02 LIQUIDTIGHT FLEXIBLE METAL CONDUIT

- A. Product Description: Interlocked steel construction with PVC jacket.
- B. Fittings: NEMA FB 1.

2.03 ELECTRICAL METALLIC TUBING (EMT)

- A. Product Description: ANSI C80.3; galvanized tubing.
- B. Fittings and Conduit Bodies: NEMA FB 1; steel couplings and connectors. Box connectors shall have with insulated throat. Set screw type couplings.

2.04 NONMETALLIC CONDUIT

- A. Product Description: NEMA TC 2; Schedule 40 PVC for normal power.
- B. Fittings and Conduit Bodies: NEMA TC 3.

2.05 OUTLET BOXES

- A. Sheet Metal Outlet Boxes: NEMA OS 1, galvanized steel.
 - 1. Luminaire and Equipment Supporting Boxes: Rated for weight of equipment supported; furnish 0.5-inch male fixture studs where required.
 - 2. Boxes shall be 1.5-inch-deep by 4-inch square minimum.
 - 3. Provide rings as required.
- B. Cast Boxes: NEMA FB 1, Type FD, aluminum. Furnish gasketed cover by box manufacturer. Furnish threaded hubs.

2.06 BOX EXTENSIONS

- A. At rooms being remodeled and where existing walls are to receive new finish material, replace existing plaster rings with new rings.
- B. Provide extension rings as required so that boxes are flushed with finished wall or ceiling.

2.07 PULL AND JUNCTION BOXES

- A. Sheet Metal Boxes:
 - 1. Material: NEMA OS 1, galvanized steel.
- B. Surface Mounted Cast Metal Box: NEMA 250, Type 4X; flat-flanged, surface mounted junction box:
 - 1. Material: Galvanized cast iron.
 - 2. Cover: Furnish with ground flange, neoprene gasket, and stainless-steel cover screws.

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Verify outlet locations and routing and termination locations of raceway prior to rough-in.

3.02 EXISTING WORK

- A. Remove exposed abandoned raceway, including abandoned raceway above accessible ceiling finishes. Cut raceway flush with walls and floors, and patch surfaces.
- B. Remove concealed abandoned raceway to its source.
- C. Disconnect abandoned outlets and remove devices. Remove abandoned outlets when raceway is abandoned and removed. Install blank cover for abandoned outlets not removed.
- D. Maintain access to existing boxes and other installations remaining active and requiring access. Modify installation or provide access panel.
- E. Extend existing raceway and box installations using materials and methods [compatible with existing electrical installations, or] as specified.
- F. Clean and repair existing raceway and boxes to remain or to be reinstalled.

3.03 INSTALLATION

- A. Ground and bond raceway and boxes.
- B. Fasten raceway and box supports to structure and finishes.
- C. Identify raceway and boxes.
- D. Arrange raceway and boxes to maintain headroom and present neat appearance.

3.04 INSTALLATION - RACEWAY

- A. Raceway routing is shown in approximate locations unless dimensioned. Route to complete wiring system.
- B. Do not install PVC conduit above ground.
- C. Conduits installed on top of roof or covered walk structure (on top or below) shall be rigid steel or IMC.
- D. All Conduits Shall Be Rigid Steel or IMC, except EMT may be used at the following locations:
 - 1. In dry locations in furred spaces.
 - 2. In partitions other than concrete or solid masonry.
 - 3. In exposed (above eight feet (8') excluding top of roof or covered walk structure (on top or below)) interior/ exterior locations and in electrical/ mechanical/ communications rooms made up with watertight compression type connectors and couplings. Connectors to outlets shall be insulated throat type with integral non-removable plastic insulator lining.
- E. PVC Conduit with Code Size Ground Wire may be Used in Soil or in Concrete under the following conditions:
 - 1. Terminate with PVC coated rigid steel elbows and short length of galvanized rigid steel conduits out of soil or concrete, wrapped with 10 mils corrosion protection tape.
 - 2. Install PVC conduit in sand or fine earth envelope of at least three inches (3") all around inside foundation line. Bends and elbows shall be PVC Type 80 conduit centered at foundation line.
 - 3. Underground PVC conduit runs outside foundation line shall be installed under the following conditions:
 - a. Bends and elbows shall be PVC Type 80 coupled with proper adapters. Conduit through foundation wall shall have one length of PVC Schedule 80 conduit centered at foundation line.
 - b. Lay runs straight. Make couplings watertight.
 - c. Terminate conduit entering pull hole with manufactured end bells.
 - d. Place approximately twelve inches (12") below finished grade and over primary and secondary service conduit duct line, a five (5) mil. brightly colored plastic tape not less than three inches (3") in width and suitably inscribed at not more than ten feet (10') on centers with a continuous metallic backing and a corrosion resistant one (1) mil. metallic foil core to permit easy location of the duct line.
 - 4. Patch all coated conduit according to the manufacturer's recommendation. Completely coat all holidays and tool marks using paste recommended by manufacturer. Coat remaining exposed conduit threads with paste when installation is complete.
- F. Unless otherwise specified, all raceway shall be installed concealed. Raceway may be run exposed on unfinished walls, in attic spaces, in electrical rooms and when routed to surface panels, cabinets or gutters.
- G. Arrange raceway supports to prevent misalignment during wiring installation.

- H. Support raceway using coated steel or malleable iron straps, lay-in adjustable hangers, clevis hangers, and split hangers.
- I. Group related raceway; support using conduit rack. Construct rack using steel channel and provide space on each for 25 percent additional raceways.
- J. Do not support raceway with wire or perforated pipe straps. Remove wire used for temporary supports
- K. Do not attach raceway to ceiling support wires or other piping systems.
- L. Construct wire way supports from steel channel.
- M. Route exposed raceway parallel and perpendicular to walls.
- N. Route raceway installed above accessible ceilings parallel and perpendicular to walls.
- O. Route conduit in and under slab from point-to-point.
- P. Maintain clearance between raceway and piping for maintenance purposes.
- Q. Maintain 12-inch clearance between raceway and surfaces with temperatures exceeding 104 degrees F.
- R. Cut conduit square using saw or pipe cutter; de-burr cut ends.
- S. Bring conduit to shoulder of fittings; fasten securely.
- T. Join nonmetallic conduit using cement as recommended by manufacturer. Wipe nonmetallic conduit dry and clean before joining. Apply full even coat of cement to entire area inserted in fitting. Allow joint to cure for minimum 20 minutes.
- U. Install conduit hubs to fasten conduit to sheet metal boxes in damp and wet locations and to cast boxes.
- V. Install no more than equivalent of three 90-degree bends between boxes. Install conduit bodies to make sharp changes in direction, as around beams. Install factory elbows for bends in metal conduit larger than 2-inch size.
- W. Avoid moisture traps; install junction box with drain fitting at low points in conduit system.
- X. Install fittings to accommodate expansion and deflection where raceway crosses seismic and expansion joints.
- Y. Install suitable pull string or cord in each empty raceway except sleeves and nipples.
- Z. Install suitable caps to protect installed conduit against entrance of dirt and moisture.
- AA. Excavating and Trenching:
 - 1. Perform all excavations as required for the installation of the work included under this Section, including shoring of earth banks to prevent cave-ins and to protect workmen and equipment.
 - 2. Restore all surfaces, roadways, walks, curbs, walls, existing underground installation, etc., damaged or cut as a result of the excavations to their original condition in a manner approved by the Architect.

3. Stop machine excavation for trenches, in solid ground, several inches above required grade line, then trim trench bottom by hand to accurate grade so that a firm and uniform bearing throughout entire length of duct is provided. In lieu of above hand excavation in bottom of trench, Contractor may excavate to depth no less than 6" below required grade line and place a bed of sand or granular soil, properly compacted to provide a uniform grade and to provide a firm support for duct throughout its entire length.
4. Minimum conduit depth of pipe crown shall be 2'0" below finished or natural grade, unless detailed otherwise on Drawings. Conduits under parking lots, roadways, driveways, fire truck access routes, and other areas subject to vehicular traffic shall be installed a minimum of 24" below grade.

BB. Backfilling:

1. No backfilling operations shall begin until the required tests and inspection has been made. Should any of the work be enclosed or covered up before it has been approved, Contractor shall, at his expense, uncover the work.
2. After it has been inspected, tested, and approved, he shall make all repairs necessary to restore the work of other contractors to the condition in which it was found at the time of uncovering.
3. Except under existing paved area, walks, roads, or similar surfaces, and in cases where rock is encountered, backfill more than 12" above the top of the pipe shall be made using suitable excavated material placed in 6" layers measured before compaction, and tamped by machine.
4. Surface work shall be replaced to match the existing.
5. Entire backfill for bored excavations under existing pavement, walks, roads, or similar surfaces, shall be made with clean sand compacted by flooding.
6. The contractor shall install a marking tape 6" below grade and directly above all electrical conduits. The tape shall consist of a 4 mil insert plastic film specifically formulated for prolonged use underground. It shall be highly resistant to alkalis, acids and other destructive agents found in the soil. Tape shall have a minimum tensile strength of 20 lbs. per 3" with strips and a minimum elongation of 500%. Tape shall bear a continuous painted message repeated every 16" to 36" warning of the installation buried below. The message shall read "CAUTION – ELECTRICAL POWER LINE BURIED BELOW" or "CAUTION – ELECTRICAL SIGNAL LINES BURIED BELOW" as applies. Installation instruction for the tape shall be printed with each message along the entire length. The tape shall be as that manufactured by Reef Industries, Inc., or approved equal. For those installations involving non-metallic pipe, tape shall be aluminum foil encased in two layers of inert plastic film enabling the tape to be inductively located. Terre Tape "D" Warning Tapes are acceptable. When conduit below is plastic, tape shall have metallic content and shall respond to metal detectors. Do not exclude this. It will be required to verify the installation of this tape.

CC. Flashing and Sealing:

1. Flash and counter flash roof and wall penetrations in manner described under other applicable sections of this Specification and as approved by the Architect.

2. Conduits, ducts, etc., passing through finished walls and ceilings shall be fitted with steel escutcheon plates, chrome or paint finish as directed.
3. Conduits which penetrate floor slabs and concrete or masonry walls shall be grouted and sealed watertight at penetration.
4. Conduits penetrating exterior walls other than concrete or masonry shall be sealed watertight with polyurethane sealant.
5. Underground conduits stubbing up into a room shall be sealed around cables or pull string with foam sealant.
6. All flashing and sealing shall be provided by this Contractor.

3.05 INSTALLATION - BOXES

- A. Contractor shall refer to Drawings, specifications, and submittals covering work of the other trades to coordinate outlet location. In the event of conflict between planned locations of outlet and other equipment or furnishing, Contractor shall not proceed until direction has been given by Architect.
- B. Unless otherwise specified or shown on Drawings, boxes shall be flush mounted with front edge of box or ring flush with wall or ceiling finish. Use steel plaster ring of appropriate depth in plastered or gypboard applications. Contractor shall review architectural drawings and note wall and ceiling construction and finishes for each wall.
- C. Boxes shall not be installed back-to-back in walls. To prevent sound transfer, outlets, switches, etc. shown on opposing sides of the same wall shall be installed in separate stud spaces, except that outlets installed at different elevations may occupy the same stud space when box separation exceeds 18". Where these requirements cannot be met, Contractor shall provide insulation material between boxes.
- D. Orient boxes to accommodate wiring devices.
- E. Install wall mounted boxes at elevations to accommodate mounting heights as indicated on Drawings.
- F. Adjust box location up to 10 feet prior to rough-in to accommodate intended purpose.
- G. Orient boxes to accommodate wiring devices.
- H. Install pull boxes and junction boxes above accessible ceilings and in unfinished areas only.
- I. In Accessible Ceiling Areas: Install outlet and junction boxes no more than 6 inches from ceiling access panel or from removable recessed luminaire.
- J. Locate flush mounting box in masonry wall to require cutting of masonry unit corner only. Coordinate masonry cutting to achieve neat opening.
- K. Do not install flush mounting box back-to-back in walls; install with minimum 6 inches separation. Install with minimum 24 inches separation in acoustic rated walls.
- L. Secure flush mounting box to interior wall and partition studs. Accurately position to allow for surface finish thickness.
- M. Install stamped steel bridges to fasten flush mounting outlet box between studs.

- N. Install flush mounting box without damaging wall insulation or reducing its effectiveness.
- O. Install adjustable steel channel fasteners for hung ceiling outlet box.
- P. Do not fasten boxes to ceiling support wires or other piping systems.
- Q. Support boxes independently of conduit.
- R. Install gang box where more than one device is mounted together. Do not use sectional box.
- S. Install gang box with plaster ring for single device outlets.
- T. Junction box identification: All junction boxes located above suspended ceilings and below ceilings in non-public areas, shall be identified with permanent felt tip marker on cover indicating panel and circuit numbers. Black marker for normal branch power, Red marker for emergency branch power.

3.06 INTERFACE WITH OTHER PRODUCTS

- A. Install conduit to preserve fire resistance rating of partitions and other elements.
- B. Route conduit through roof openings for piping and ductwork or through suitable roof jack with pitch pocket. Coordinate location with roofing installation.
- C. Locate outlet boxes to allow luminaires positioned as indicated on reflected ceiling plan.
- D. Align adjacent wall mounted outlet boxes for switches, thermostats, and similar devices.

3.07 ADJUSTING

- A. Adjust flush-mounting outlets to make front flush with finished wall material.
- B. Install knockout closures in unused openings in boxes.

3.08 CLEANING

- A. Clean interior of boxes to remove dust, debris, and other material.
- B. Clean exposed surfaces and restore finish.

3.09 ADDITIONAL COORDINATION

- A. Flexible conduit used from junction boxes to luminaires and electrical devices shall be no more than 6-feet in length.
 - 1. Flexible conduit size shall be no smaller than 0.5-inch.
 - 2. Conductor size and type shall be the same as the branch circuit.
 - 3. Quantity of conductors installed shall be as shown per plans.
 - 4. Should unforeseen conditions come up where the junction box shown on plans that has two or more flexible connections from box to devices and creates an excess length of 6-feet, contractor shall install an additional junction box closer to device(s) that require flexible connection.

- B. Electrical contractor shall be responsible for providing raceways/conduits from electrical disconnects to mechanical equipment, unless otherwise noted.
1. For all raceways/conduits exiting electrical disconnect to mechanical equipment, the raceway/conduit shall be the same size as the homerun unless otherwise noted.
 2. For raceways exiting electrical disconnect devices, flexible connection shall be installed within 6-feet of connection to mechanical equipment.
 3. For equipment provided by others mounted on the exterior, the flexible connection shall be liquid-tight.
 4. Conductor size and type shall be the same on the line and load side of the disconnect, unless otherwise noted.

END OF SECTION 26 05 33

SECTION 26 05 53
IDENTIFICATION FOR ELECTRICAL SYSTEMS

PART 1 – GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Nameplates.
 - 2. Labels.
 - 3. Wire markers.
 - 4. Conduit markers.
 - 5. Stencils.
 - 6. Underground Warning Tape.
 - 7. Lockout Devices.
 - 8. Brass Tags.

1.02 SUBMITTALS

- A. Product Data:
 - 1. Submit manufacturer's catalog literature for each product required.
 - 2. Submit electrical identification schedule including list of wording, symbols, letter size, color coding, tag number, location, and function.
- B. Manufacturer's Installation Instructions: Indicate installation instructions, special procedures, and installation.

1.03 CLOSEOUT SUBMITTALS

- A. Project Record Documents: Record actual locations of tagged devices; include tag numbers.

1.04 QUALITY ASSURANCE

- A. Perform Work in accordance with State, Municipality, Highways, Public Work's standard.

1.05 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing Products specified in this section with minimum three years documented experience.
- B. Installer: Company specializing in performing Work of this section with minimum three years documented experience.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Accept identification products on site in original containers. Inspect for damage.

- B. Accept materials on site in original factory packaging, labeled with manufacturer's identification, including product density and thickness.
- C. Protect insulation from weather and construction traffic, dirt, water, chemical, and mechanical damage, by storing in original wrapping.

1.07 ENVIRONMENTAL REQUIREMENTS

- A. Install labels and nameplates only when ambient temperature and humidity conditions for adhesive are within range recommended by manufacturer.

PART 2 – PRODUCTS

2.01 NAMEPLATES

- A. Product Description: Laminated three-layer plastic with engraved black letters on white contrasting background color.
- B. Letter Size:
 - 1. 0.125-inch-high letters for identifying individual equipment and loads.
 - 2. 0.25-inch-high letters for identifying grouped equipment and loads.
- C. Minimum nameplate thickness: 0.125 inch.

2.02 LABELS

- A. Labels: Embossed adhesive tape, with 0.125-inch white letters on black background.

2.03 WIRE MARKERS

- A. Description: Self-adhering, pre-printed, machine printable or write-on, self-laminating vinyl wrap around strips. Blank markers shall be inscribed using the printer or pen recommended by manufacturer for this purpose.
- B. Legend:
 - 1. Power and Lighting Circuits: Branch circuit or feeder number as indicated on Drawing
 - 2. Control Circuits: Control wire number as indicated on shop drawings.

2.04 CONDUIT AND RACEWAY MARKERS

- A. Description: Nameplate fastened with straps.
- B. Color:
 - 1. 208 Volt System: Blue lettering on white background.
- C. Legend:
 - 1. 208 Volt System: 208 VOLTS.

2.05 UNDERGROUND WARNING TAPE

- A. Description: 4-inch-wide plastic tape, detectable type, colored red with suitable warning legend describing buried electrical lines.

2.06 LOCKOUT DEVICES

- A. Lockout Hasps:
 - 1. Anodized aluminum hasp with erasable label surface; size minimum 7.25 x 3 inches.

2.07 BRASS TAGS

- A. Description: 2" Round, 20-gauge brass.
- B. Letter Size: 0.25 inch minimum.

PART 3 – EXECUTION

3.01 PREPARATION

- A. Degrease and clean surfaces to receive adhesive for identification materials.

3.02 EXISTING WORK

- A. Install identification on existing equipment to remain in accordance with this section.
- B. Install identification on unmarked existing equipment.
- C. Replace lost nameplates, labels, and markers.
- D. Re-stencil existing equipment.

3.03 INSTALLATION

- A. Install identifying devices after completion of painting.
- B. Nameplate Installation:
 - 1. Install nameplate parallel to equipment lines.
 - 2. Install nameplate for each electrical distribution and control equipment enclosure with corrosive-resistant mechanical fasteners, or adhesive.
 - 3. Install nameplates for each control panel and major control components located outside panel with corrosive-resistant mechanical fasteners, or adhesive.
 - 4. Secure nameplate to equipment front using screws.
 - 5. Secure nameplate to inside surface of door on recessed panelboard in finished locations.
 - 6. Install nameplates for the following:
 - a. Distribution Panelboards
 - b. Breakers at individual breakers in switchboards, switchgear, and distribution panelboards.
 - c. Panelboards.
 - d. Fused and Non-Fused Disconnects.

- C. Provide color coded nameplates that present, as applicable, the following information:
1. Equipment or device designation.
 2. Amperage, kVA, or horsepower rating where applicable.
 3. Voltage or signal system name.
 4. Source or power or control.
 5. Examples:
 - a. Boards: CH2A; 1000A; 480Y/277V, 3-Phase, 4-Wire.
 - b. Feeder Power Supply for Panel "XXX" Originates at Panel "XXX".
 - c. Transformers: T-1; 112.5kVA; 480V to 208Y/120V, 3-Phase, 4-Wire; Served from H2A; Load Served L2A.
 - d. Disconnects and Individual Motor Starters: AHU-1; 25HP; 480V, 3-Phase, 3-Wires; Served from EHD5.
 - e. Available Fault Current: XX,XXX Amperes. Date Calculated: XX/XX/XX.
 - f. Breakers: 200A; 3-POLE.
 - g. Terminal Backboards: SIGNAL TERMINAL BACKBOARD STB-A.
 - h. Terminal Cabinets: SIGNAL TERMINAL CABINET STC-A.
- D. Color coding for nameplates for power systems:
1. 208Y/120V Normal – Blue with white letters.
- E. Label Installation:
1. Install label parallel to equipment lines.
 2. Install label for identification of individual control device stations, receptacles, and switches.
 3. Install labels for permanent adhesion and seal with clear lacquer.
 4. Identify receptacle and light switch cover plate with panel and branch circuit number, (for example L2A-3), with thermal transfer laminated adhesive tape with 0.125-inch black letters on clear tape cartridge.
 5. Install labels for the following:
 - a. Lighting controls
 - b. Receptacles
 - c. Controlled receptacles
 - d. Fire alarm devices located above ceilings. Install label on access door or on t-bay at lay-in ceilings.
 - e. As noted on plans.
 6. Examples:
 - a. Light controls: HA1-15.
 - b. Receptacle: LA1-15.
 - c. Controlled Receptacle: CONTROLLED.
 - d. FA device above ceiling: DETECTOR ABOVE CEILING.
- F. Wire Marker Installation:

1. Install wire marker for each conductor at panelboard gutters, pull boxes, outlet and junction boxes, and each load connection.
 2. Power and Lighting Circuits: Branch circuit or feeder number as indicated on Drawings.
 3. Signal and Control Circuits: Control wire number as indicated on shop drawings.
 4. Mark data cabling at each end. Install additional marking at accessible locations along the cable run.
 5. Install labels at data outlets identifying patch panel and port designation as indicated on Drawings.
- G. Conduit Marker Installation:
1. Install conduit marker for each conduit longer than 6 feet.
 2. Conduit Marker Spacing: 20 feet on center.
- H. Junction Box Identification
1. Color code and identify all junction boxes located above suspended ceilings and below ceilings in non-public areas.
 2. Use finish paint suitable for use on metal surfaces.
 3. Boxes shall be identified with permanent felt tip marker on cover indicating panel and circuit numbers. Paint junction box covers using the color coding listed below.
 - a. 208Y/120 Volt System: Blue.
- I. Underground Warning Tape Installation:
1. Install underground warning tape along length of each underground conduit, raceway, or cable 8 inches below finished grade, directly above buried conduit, raceway, or cable.
- J. BRASS TAGS:
1. Provide brass tags for all feeder cables in underground vaults and pull boxes.
 - a. Example: PANEL LA FEEDER.
 2. Provide brass tags for empty conduits in underground vaults, pull boxes and stubs.
- K. WARNING, CAUTION AND INSTRUCTION SIGNS
1. Provide warning, caution or instruction signs where required by OSHA, where indicated, or where reasonably required to assure safe operation and maintenance of electrical systems.
 - a. Install engraved plastic-laminated instruction signs with approved legend where instructions or explanations are needed for system of equipment operation

- b. Provide polyester film self-adhesive signs for indoor/outdoor equipment and door warning. Use rigid polyethylene non-adhesive signs where adhesives will not work; for example, installing on a metal fence. Provide sign color and marking that meets OSHA regulations. For example, DANGER (red background with white letters), HIGH VOLTAGE (white with black letters).
 - i. Use 2 by 4-inch signs for small equipment or enclosure doors.
 - ii. Use 7 by 10 inch or 10 by 14-inch signs for large equipment or enclosure doors.

END OF SECTION 26 05 53

**SECTION 26 05 83
WIRING CONNECTIONS**

PART 1 – GENERAL

1.01 SUMMARY

- A. Section includes electrical connections to equipment.

1.02 REFERENCES

- A. National Electrical Manufacturers Association:
 - 1. NEMA WD 1 - General Requirements for Wiring Devices.
 - 2. NEMA WD 6 - Wiring Devices-Dimensional Requirements.

1.03 SUBMITTALS

- A. Product Data: Provide wiring device manufacturer's catalog information showing dimensions, configurations, and construction.
- B. Manufacturer's Instructions: Indicate application conditions and limitations of use stipulated by product testing agency. Include instructions for storage, handling, protection, examination, preparation, and installation of product.
- C. Project Record Documents: Record actual locations, sizes, and configurations of equipment connections.

1.04 COORDINATION

- A. Obtain and review shop drawings, product data, manufacturer's wiring diagrams, and manufacturer's instructions for equipment furnished under other sections.
- B. Determine connection locations and requirements.
- C. Sequence rough-in of electrical connections to coordinate with installation of equipment.
- D. Sequence electrical connections to coordinate with start-up of equipment.

PART 2 – PRODUCTS

2.01 MATERIALS

- A. Disconnect Switches: As specified in Section 26 28 16.16 and in individual equipment sections.
- B. Wiring Devices: As specified in Section 26 27 26.
- C. Conduit: As specified in Section 26 05 33.
- D. Wire: As specified in Section 26 05 19.
- E. Boxes: As specified in Section 26 05 33.

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Verify equipment is ready for electrical connection, for wiring, and to be energized.

3.02 EXISTING WORK

- A. Remove exposed abandoned equipment wiring connections, including abandoned connections above accessible ceiling finishes.
- B. Disconnect abandoned utilization equipment and remove wiring connections. Remove abandoned components when connected raceway is abandoned and removed. Install blank cover for abandoned boxes and enclosures not removed.
- C. Extend existing equipment connections using materials and methods as specified.

3.03 INSTALLATION

- A. Make electrical connections in accordance with equipment manufacturer's instructions.
- B. Make conduit connections to equipment using flexible conduit. Use liquid tight flexible conduit with watertight connectors in damp or wet locations.
- C. Connect heat producing equipment using wire and cable with insulation suitable for temperatures encountered.
- D. Install receptacle outlet to accommodate connection with attachment plug.
- E. Do not field-supply cord and plugs; use manufacturer-provided only if equipment is NRTL listed and required to have one.
- F. Install suitable strain-relief clamps and fittings for cord connections at outlet boxes and equipment connection boxes.
- G. Install disconnect switches, controllers, control stations, and control devices to complete equipment wiring requirements.
- H. Install terminal block jumpers to complete equipment wiring requirements.
- I. Install interconnecting conduit and wiring between devices and equipment to complete equipment wiring requirements.
- J. Coolers and Freezers: Cut and seal conduit openings in freezer and cooler walls, floor, and ceilings.

3.04 ADJUSTING

- A. Cooperate with utilization equipment installers and field service personnel during checkout and starting of equipment to allow testing and balancing and other startup operations. Provide personnel to operate electrical system and checkout wiring connection components and configurations.

END OF SECTION 26 05 83

**SECTION 26 24 16
PANELBOARDS**

PART 1 – GENERAL

1.01 SUMMARY

A. Section Includes:

1. Distribution and branch circuit panelboards.

1.02 REFERENCE STANDARDS

A. Institute of Electrical and Electronics Engineers:

1. IEEE C62.41 - Recommended Practice on Surge Voltages in Low-Voltage AC Power Circuits.

B. National Electrical Manufacturers Association:

1. NEMA FU 1 - Low Voltage Cartridge Fuses.
2. NEMA ICS 2 - Industrial Control and Systems: Controllers, Contactors, and Overload Relays, Rated Not More Than 2000 Volts AC or 750 Volts DC.
3. NEMA ICS 5 - Industrial Control and Systems: Control Circuit and Pilot Devices.
4. NEMA KS 1 - Enclosed and Miscellaneous Distribution Equipment Switches (600 Volts Maximum).
5. NEMA PB 1 - Panelboards.
6. NEMA PB 1.1 - General Instructions for Proper Installation, Operation, and Maintenance of Panelboards Rated 600 Volts or Less.

C. International Electrical Testing Association:

1. NETA ATS - Acceptance Testing Specifications for Electrical Power Distribution Equipment and Systems.

D. National Fire Protection Association:

1. NFPA 70 - National Electrical Code with California Amendments.

E. UL:

1. UL 50 - Cabinets and Boxes
2. UL 67 - Safety for Panelboards.
3. UL 489 - Molded-Case Circuit Breakers, Molded-Case Switches, and Circuit-Breaker Enclosures.
4. UL 1283 - Electromagnetic Interference Filters.
5. UL 1449 - Transient Voltage Surge Suppressors.
6. UL 1699 - Arc-Fault Circuit Interrupters.

1.03 SUBMITTALS

- A. Product Data: Submit catalog data showing specified features of standard products.
- B. Shop Drawings: Indicate outline and support point dimensions, voltage, main bus ampacity, integrated short circuit ampere rating, circuit breaker, and fusible switch arrangement and sizes.
- C. Source Quality control submittals: Indicate results of factory tests and inspections.
- D. Field Quality Control Submittals: Indicate results of Contractor furnished tests and inspections.

1.04 CLOSEOUT SUBMITTALS

- A. Project Record Documents: Record actual locations of panelboards and record actual circuiting arrangements.
- B. Operation and Maintenance Data: Submit spare parts listing, source and current prices of replacement parts and supplies, and recommended maintenance procedures and intervals.

1.05 QUALITY ASSURANCE

- A. Qualifications
 - 1. Manufacturer: Company specializing in manufacturing products specified in this Section with minimum three years' documented experience.

PART 2 – PRODUCTS

2.01 DISTRIBUTION PANELBOARDS

- A. Description: NEMA PB 1, circuit breaker type panelboard.
- B. Operation:
 - 1. Minimum integrated short circuit rating as indicated on Drawings.
- C. Materials
 - 1. Panelboard Bus: Copper current carrying components, ratings as indicated on Drawings. Furnish copper ground bus in each panelboard.
 - 2. Molded Case Circuit Breakers: UL 489, circuit breakers with integral thermal and instantaneous magnetic trip in each pole. Furnish circuit breakers UL listed as Type HACR for air conditioning equipment branch circuits.
 - 3. Molded Case Circuit Breakers with Current Limiters: UL 489, circuit breakers with replaceable current limiting elements, in addition to integral thermal and instantaneous magnetic trip in each pole.
 - 4. Circuit Breaker Accessories: Trip units and auxiliary switches as indicated on Drawings.
 - 5. Enclosure: NEMA PB 1, Type 1 for indoor and 3R for outdoor applications.

6. Cabinet Front: Surface door-in-door type, fastened with concealed trim clamps, hinged door with flush lock, and metal directory frame.
- D. Finishes:
1. Manufacturer's standard gray enamel.

2.02 BRANCH CIRCUIT PANELBOARDS

- A. Description: NEMA PB1, circuit breaker type, lighting and appliance branch circuit panelboard.
- B. Materials:
1. Panelboard Bus: Copper current carrying components, ratings as indicated on Drawings. Furnish copper ground bus in each panelboard.
 2. For non-linear load applications subject to harmonics furnish 200 percent rated, plated copper, solid neutral.
 3. Minimum Integrated Short Circuit Rating or as indicated on Drawings.
 4. Molded Case Circuit Breakers: UL 489, bolt-on type thermal magnetic trip circuit breakers, with common trip handle for all poles, listed as Type SWD for lighting circuits, Type HACR for air conditioning equipment circuits, Class A ground fault interrupter circuit breakers as indicated on Drawings. Provide UL class 760 arc-fault interrupter circuit breakers as indicated on Drawings. Do not use tandem circuit breakers..
 5. Current Limiting Molded Case Circuit Breakers: UL 489, circuit breakers with integral thermal and instantaneous magnetic trip in each pole, coordinated with automatically resetting current limiting elements in each pole. Interrupting rating 100,000 symmetrical A, let-through current and energy level less than permitted for same size NEMA FU 1, Class RK-5 fuse.
 6. Enclosure: NEMA PB 1, Type 1 for indoor and Type 3R outdoor applications.
 7. Cabinet Box: 6 inches deep, 20 inches.
- C. Cabinet Front: Flush or surface cabinet front as indicated on drawings with door-in-door concealed trim clamps, concealed hinge, metal directory frame, and flush lock keyed alike. Finishes:
1. Finish in manufacturer's standard gray enamel.

PART 3 – EXECUTION

3.01 INSTALLATION

- A. Install panelboards according to NEMA PB 1.1.
- B. Install panelboards plumb.
- C. Height: 6 feet to top of panelboard; install panelboards taller than 6 feet with bottom no more than 4 inches above floor.
- D. Install filler plates for unused spaces in panelboards.

- E. Provide typed circuit directory for each branch circuit panelboard. Revise directory to reflect circuiting changes to balance phase loads. Identify each circuit as to its clear, evident and specific purpose of use.
- F. Install engraved plastic nameplates.
- G. Install spare conduits out of each recessed panelboard to accessible location above ceiling. Minimum spare conduits: five empty 1 inch. Identify each as spare.
- H. Ground and bond panelboard enclosure. Connect equipment ground bars of panels according to NFPA 70 with California Amendments.
- I. Modifications to existing panelboards shall be as indicated on the Drawings. New equipment shall match existing where possible and in all cases be compatible with existing. Where new breakers are installed in existing equipment, provide all hardware and trim pieces as required for a complete closed installation. Provide new nameplates at equipment where existing breakers are identified by nameplates and provide new breaker identification in directory where existing breakers are identified in a directory.
- J. Where new breakers are indicated to be installed in existing panel, but insufficient space exists, provide enclosed circuit breakers externally and tap existing bussing. Tap conduit and wire sizes shall be same as breaker line side conduit and wire.

3.02 REPAIR/RESTORATION

- A. Repair existing panelboards to remain or to be reinstalled.

3.03 FIELD QUALITY CONTROL

- A. Inspect and test according to NETA ATS, except Section 4.
- B. Perform circuit breaker inspections and tests listed in NETA ATS, Section 7.6.
- C. Perform switch inspections and tests listed in NETA ATS, Section 7.5.
- D. Perform controller inspections and tests listed in NETA ATS, Section 7.16.1.

3.04 ADJUSTING

- A. Measure steady state load currents at each panelboard feeder; rearrange circuits in panelboard to balance phase loads to within 20 percent of each other. Maintain proper phasing for multi-wire branch circuits.

3.05 CLEANING

- A. Clean existing panelboards and load centers to remain or to be reinstalled.

END OF SECTION 26 24 16

**SECTION 26 27 26
WIRING DEVICES**

PART 1 – GENERAL

1.01 SUMMARY

- A. Section includes receptacles and wall plates

1.02 REFERENCES

- A. National Electrical Contractors Association:
 - 1. NECA 1 - Standard for Good Workmanship in Electrical Construction.
 - 2. NECA 130 - Standard for Installing and Maintaining Wiring Devices.
- B. National Electrical Manufacturers Association:
 - 1. NEMA WD 1 - General Requirements for Wiring Devices.
 - 2. NEMA WD 6 - Wiring Devices-Dimensional Requirements.
- C. National Fire Protection Association:
 - 1. NFPA 70 - National Electrical Code with California Amendments.
- D. Underwriters Laboratories:
 - 1. UL 498 - Attachment Plugs and Receptacles.
 - 2. UL 514D - Cover Plates for Flush-Mounted Wiring Devices.
 - 3. UL 943 - Ground-Fault Circuit-Interrupters.

1.03 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 - 1. Coordinate the placement of outlet boxes with furniture, equipment, etc. installed under other sections or by others.
 - 2. Coordinate wiring device ratings and configurations with the electrical requirements of actual equipment to be installed.
 - 3. Coordinate the placement of outlet boxes for wall switches with actual installed door swings.
 - 4. Coordinate the installation and preparation of uneven surfaces, such as split face block, to provide suitable surface for installation of wiring devices.
- B. Sequencing:
 - 1. Do not install wiring devices until final surface finishes and painting are complete.

1.04 SUBMITTALS

- A. Product Data: Submit manufacturer's catalog information showing dimensions, colors, and configurations.
- B. Field Quality Control Test Reports.
- C. Manufacturer's Installation Instructions: Indicate application conditions and limitations of use stipulated by product testing agency. Include instructions for storage, handling, protection, examination, preparation, and installation of product.
- D. Operation and Maintenance Data:
 - 1. GFCI Receptacles: Include information on status indicators.

1.05 QUALITY ASSURANCE

- A. Comply with requirements of NFPA 70 with California Amendments.
- B. Products: Listed, classified, and labeled as suitable for the purpose intended.
- C. Product Listing Organization Qualifications: An organization recognized by OSHA as a Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.

PART 2 – PRODUCTS

2.01 WIRING DEVICE APPLICATIONS

- A. Provide wiring devices suitable for intended use and with ratings adequate for load served.
- B. For single receptacles installed on an individual branch circuit, provide receptacle with ampere rating not less than that of the branch circuit.
- C. GFCI Protection: Provide GFCI protection for all single-phase receptacles rated 150-volt to ground or less, 50-amps or less and all three-phase receptacles rated 150-volt to ground or less, 100-amps or less in the following locations:
 - 1. Within 6 feet from the top inside edge of the bowl of the sink.
 - 2. Bathrooms.
 - 3. Kitchens.
 - 4. Rooftops.
 - 5. Outdoors and Indoor Wet Locations. Provide weather resistant GFCI type receptacle with extra duty weatherproof while in use cover.
 - 6. Serving electric drinking fountains.
 - 7. Garages, service bays, and similar areas other than vehicle exhibition halls and showrooms.
 - 8. Locker rooms with associated showering facilities.
 - 9. Crawl spaces installed at or below grade level.
 - 10. Unfinished portions or areas of the basement not intended as habitable rooms.

- 11. Kitchen dishwasher branch circuit.
- 12. Crawl space lighting outlets.
- D. Unless noted otherwise, do not use combination switch/receptacle devices.

2.02 WIRING DEVICE FINISHES

- A. Provide wiring device finishes as described below unless otherwise indicated.
- B. Wiring Devices, Unless Otherwise Indicated: White with white nylon wall plate.
- C. Wiring Devices Installed in Finished Spaces: White with white nylon wall plate.
- D. Wiring Devices Installed in Unfinished Spaces: White with galvanized steel wall plate.
- E. Wiring Devices Installed in Wet or Damp Locations: White with specified weatherproof while in use cover.

2.03 WALL SWITCHES

- A. Wall Switches - General Requirements: AC only, quiet operating, general-use snap switches with silver alloy contacts, complying with NEMA WD 1 and NEMA WD 6, and listed as complying with UL 20; types as indicated on the drawings.
 - 1. Wiring Provisions: Terminal screws for side wiring and screw actuated binding clamp for back wiring with separate ground terminal screw.
- B. Standard Wall Switches: Heavy duty specification grade, 20-amp, 120/277-volt with standard toggle type switch actuator and maintained contacts; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.
- C. Momentary Contact Wall Switches: Commercial specification grade, 20-amp, 120/277-volt with toggle type three position switch actuator and momentary contacts; single pole double throw, off with switch actuator in center position.
- D. Locator Light Wall Switches: Lighted handle type switch; red color handle.

2.04 RECEPTACLES

- A. Manufacturers:
 - 1. Furnish wiring devices and associated components produced by a single manufacturer and obtained from a single supplier.
- B. General Requirements: Self-grounding, complying with NEMA WD 1 and NEMA WD 6, and listed as complying with UL 498; types as indicated on the drawings.
 - 1. Wiring Provisions: Terminal screws for side wiring or screw actuated binding clamp for back wiring with separate ground terminal screw.
 - 2. NEMA configurations specified are according to NEMA WD 6.
- C. Convenience Receptacle: Standard Convenience Receptacles: Heavy duty specification grade, 20-amp, 125-volt, NEMA 5-20R, with finger grooves; single or duplex as indicated on the drawings. Refer to application above for hospital grade receptacle requirements.
- D. GFCI Receptacles:

1. GFCI Receptacles - General Requirements: Self-testing, with feed-through protection and light to indicate ground fault tripped condition and loss of protection; listed as complying with UL 943, class A.
 - a. Provide test and reset buttons of same color as device.
 2. Standard GFCI Receptacles: Heavy duty specification grade, duplex, 20-amp, 125-volt, NEMA 5-20R. Refer to application above for hospital grade receptacle requirements.
 3. Weather Resistant GFCI Receptacles: Heavy duty specification grade, 20-amp, 125-volt, NEMA 5-20R, listed and labeled as weather resistant type complying with UL 498 Supplement SE suitable for installation in damp or wet locations, single or duplex as indicated on the drawings.
 4. Blank Face GFCI Receptacles: Heavy duty specification grade, 20-amp, 125-volt.
- E. Special Purpose Receptacles: Type and rating and number of poles indicated or required for the equipment. NEMA configuration of special purpose receptacle shall be coordinated with equipment prior to ordering.

2.05 WALL PLATES

- A. Wall Plates: Comply with UL 514D.
1. Configuration: One-piece cover as required for quantity and types of corresponding wiring devices.
 2. Size: Standard.
 3. Screws: Metal with slotted heads finished to match wall plate finish.
- B. Nylon Wall Plates: Smooth finish, high-impact thermoplastic.
- C. Stainless Steel Wall Plates: Brushed satin finish, Type 302 stainless steel.
- D. Weatherproof Covers for Wet Locations: Gasketed, thermoplastic, with hinged lockable cover and corrosion-resistant screws; listed as suitable for use in wet locations while in use with attachment plugs connected and identified as extra-duty type.

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Verify that field measurements are as indicated.
- B. Verify that outlet boxes are installed in proper locations and at proper mounting heights and are properly sized to accommodate devices and conductors in accordance with NFPA 70 with California Amendments.
- C. Verify that wall openings are neatly cut and will be completely covered by wall plates.
- D. Verify that final surface finishes are complete, including painting.
- E. Verify that branch circuit wiring installation is completed, tested, and ready for connection to wiring devices.
- F. Verify that core drilled holes for poke-through assemblies are in proper locations.

- G. Verify that openings in access floor are in proper locations.
- H. Verify that conditions are satisfactory for installation prior to starting work.

3.02 PREPARATION

- A. Clean debris from outlet boxes.

3.03 EXISTING WORK

- A. Disconnect and remove abandoned wiring devices.
- B. Modify installation to maintain access to existing wiring devices to remain active.
- C. Clean and repair existing wiring devices to remain or to be reinstalled.

3.04 INSTALLATION

- A. Install devices plumb and level.
- B. Install switches with OFF position down.
- C. Install wall dimmers to achieve full rating specified and indicated after derating for ganging as instructed by manufacturer.
- D. Do not share neutral conductor on load side of dimmers.
- E. Install receptacles with grounding pole on top.
- F. Connect wiring device grounding terminal to outlet box with bonding jumper and branch circuit equipment grounding conductor.
- G. Install wall plates on flush mounted switches, receptacles, and blank outlets.
- H. Install decorative plates on switch, receptacle, and blank outlets in finished areas.
- I. Connect wiring devices by wrapping solid conductor around screw terminal. Install stranded conductor for branch circuits 10 AWG and smaller. When stranded conductors are used in lieu of solid, use crimp on fork terminals for device terminations. Do not place bare stranded conductors directly under device screws.
- J. Use jumbo size plates for outlets installed in masonry walls.
- K. Install galvanized steel plates on outlet boxes and junction boxes in unfinished areas, above accessible ceilings, and on surface mounted outlets.
- L. Provide isolated ground receptacles for all receptacles serving computers and electronic cash registers.
- M. Unless noted otherwise, do not use combination switch/receptacle devices.
- N. For flush floor service fittings, use tile rings for installations in tile floors.
- O. For flush floor service fittings, use carpet flanges for installations in carpeted floors.

3.05 FIELD QUALITY CONTROL

- A. Inspect each wiring device for defects.

- B. Operate each wall switch with circuit energized and verify proper operation.
- C. Verify each receptacle device is energized.
- D. Test each receptacle device for proper polarity.
- E. Test each GFCI receptacle device for proper operation.

3.06 ADJUSTING

- A. Adjust devices and wall plates to be flush and level.

3.07 CLEANING

- A. Clean exposed surfaces to remove splatters and restore finish.

END OF SECTION 26 27 26

**SECTION 26 28 16.16
ENCLOSED SWITCHES**

PART 1 – GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Enclosed switches.

1.02 REFERENCE STANDARDS

- A. National Electrical Manufacturers Association:
 - 1. NEMA FU 1 - Low Voltage Cartridge Fuses.
 - 2. NEMA KS 1 - Enclosed and Miscellaneous Distribution Equipment Switches (600 Volts Maximum).
 - 3. NEMA 250 – Enclosures for Electrical Equipment (1000 Volts Maximum)
- B. International Electrical Testing Association:
 - 1. NETA ATS - Acceptance Testing Specifications for Electrical Power Distribution Equipment and Systems.
- C. National Fire Protection Agency
 - 1. NFPA 70 - National Electrical Code with California Amendments
- D. Underwriters Laboratories:
 - 1. UL 50 - Enclosures for Electrical Equipment, Non-Environmental Considerations.
 - 2. UL 50E - Enclosures for Electrical Equipment, Environmental Considerations.
 - 3. UL 98 - Enclosed and Dead-Front Switches.
 - 4. UL 869A - Reference Standard for Service Equipment.

1.03 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 - 1. Coordinate the work with other trades. Avoid placement of ductwork, piping, equipment, or other potential obstructions within the dedicated equipment spaces and within working clearances for electrical equipment required by NFPA 70 with California Amendments.
 - 2. Coordinate arrangement of electrical equipment with the dimensions and clearance requirements of the actual equipment to be installed.
 - 3. Verify with manufacturer that conductor terminations are suitable for use with the conductors to be installed.

1.04 SUBMITTALS

- A. Product Data: Provide manufacturer's standard catalog pages and data sheets for enclosed switches and other installed components and accessories.
- B. Shop Drawings: Indicate outline and support point dimensions, voltage and current ratings, short circuit current ratings, conduit entry locations, conductor terminal information, and installed features and accessories.
 - 1. Include dimensioned plan and elevation views of enclosed switches and adjacent equipment with all required clearances indicated.
 - 2. Include wiring diagrams showing all factory and field connections.
 - 3. Identify mounting conditions required for equipment seismic qualification.
- C. Manufacturer's equipment seismic qualification certification.
- D. Field Quality Control Test Reports.
- E. 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.
- F. Project Record Documents: Record actual locations of enclosed switches.
- G. Maintenance Data: Include information on replacement parts and recommended maintenance procedures and intervals.

1.05 QUALITY ASSURANCE

- A. Comply with requirements of NFPA 70 with California Amendments.
- B. Maintain at the project site a copy of each referenced document that prescribes execution requirements.
- C. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.
- D. Product Listing Organization Qualifications: An organization recognized by OSHA as a Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.

PART 2 – PRODUCTS

2.01 ENCLOSED SAFETY SWITCHES

- A. Description: Quick-make, quick-break enclosed safety switches listed and labeled as complying with UL 98; heavy duty; ratings, configurations, and features as indicated on the drawings.
- B. Provide products listed, classified, and labeled as suitable for the purpose intended.
- C. Seismic Qualification: Provide enclosed safety switches suitable for application under the seismic design criteria where required. Include certification of compliance with submittals.
- D. Unless otherwise indicated, provide products suitable for continuous operation under the following service conditions:
 - 1. Altitude: Less than 6,600 feet.

2. Ambient Temperature: Between -22 degrees F and 104 degrees F.
- E. Horsepower Rating: Suitable for connected load.
- F. Voltage Rating: Suitable for circuit voltage.
- G. Short Circuit Current Rating:
1. Provide enclosed safety switches, when protected by the fuses or supply side overcurrent protective devices to be installed, with listed short circuit current rating not less than the available fault current at the installed location as determined by short circuit study.
- H. Enclosed Safety Switches Used for Service Entrance: Listed and labeled as suitable for use as service equipment according to UL 869A.
- I. Provide with switch blade contact position that is visible when the cover is open.
- J. Conductor Terminations: Suitable for use with the conductors to be installed.
- K. Provide insulated, groundable fully rated solid neutral assembly where a neutral connection is required, with a suitable lug for terminating each neutral conductor.
- L. Provide solidly bonded equipment ground bus in each enclosed safety switch, with a suitable lug for terminating each equipment grounding conductor.
- M. Enclosures: Comply with NEMA 250, and list and label as complying with UL 50 and UL 50E.
1. Environment Type per NEMA 250: Unless otherwise indicated, as specified for the following installation locations:
 - a. Indoor Clean, Dry Locations: Type 1.
 - b. Outdoor Locations: Type 3R.
 2. Finish for Painted Steel Enclosures: Manufacturer's standard, factory applied grey unless otherwise indicated.
- N. Provide safety interlock to prevent opening the cover with the switch in the ON position with capability of overriding interlock for testing purposes.
- O. Heavy Duty Switches:
1. Comply with NEMA KS 1.
 2. Conductor Terminations:
 - a. Provide mechanical lugs unless otherwise indicated.
 - b. Provide compression lugs where indicated.
 - c. Lug Material: Aluminum, suitable for terminating aluminum or copper conductors.
 3. Provide externally operable handle with means for locking in the OFF position, capable of accepting three padlocks.
 - a. Provide means for locking handle in the ON position where indicated.

- P. Provide the following features and accessories where indicated or where required to complete installation:
1. Auxiliary Switch: SPDT switch suitable for connection to system indicated, with auxiliary contact operation before switch blades open and after switch blades close.
 2. Viewing Window: Positioned over switch blades for visual confirmation of contact position with door closed.
 3. Interlocked Receptacle: Integral pre-wired three phase, three wire, grounded type receptacle interlocked with switch mechanism to prevent insertion or removal of plug with switch in the ON position and to prevent switch from being placed in the ON position without matching plug inserted. Provide receptacle configuration as required to accept plug as indicated on the drawings.

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Verify that field measurements are as indicated.
- B. Verify that the ratings of the enclosed switches are consistent with the indicated requirements.
- C. Verify that mounting surfaces are ready to receive enclosed safety switches.
- D. Verify that conditions are satisfactory for installation prior to starting work.

3.02 DEMOLITION

- A. Disconnect and remove abandoned enclosed switches.
- B. Maintain access to existing enclosed switches and other installations remaining active and requiring access. Modify installation or provide access panel.

3.03 INSTALLATION

- A. Install enclosed switches where indicated.
- B. Install enclosed switches plumb.
- C. Arrange equipment to provide minimum clearances in accordance with manufacturer's instructions and NFPA 70 with California Amendments.
- D. Provide required support and attachment.
- E. Except where indicated to be mounted adjacent to the equipment they supply, mount enclosed switches such that the highest position of the operating handle does not exceed 79 inches above the floor or working platform.
- F. For enclosed switches rated 100 A or less, mount enclosed switches such that the bottom of the switch enclosure is not less than 36 inches above the floor or working platform.
- G. Provide grounding and bonding.

- H. Where accessories are not self-powered, provide control power source as indicated or as required to complete installation.
- I. Install engraved plastic nameplates. Engrave nameplates with the equipment served and the panel and circuit number supplying the switch.
- J. Apply adhesive tag on inside door of each fused switch indicating NEMA fuse class and size installed.
- K. Installation of electrical disconnect shall be as close as possible to point-of-entry on mechanical equipment. Electrical contractor shall coordinate with mechanical contractor for location.
- L. Electrical disconnect may need to be installed in a location different than shown on plans, due to location of point-of-entry, code requirement, or conditions.
 - 1. Electrical contractor shall coordinate with mechanical engineer and mechanical contractor prior to installing a disconnect directly onto mechanical equipment.

3.04 REPAIR/RESTORATION

- A. Repair existing enclosed switches to remain or to be reinstalled.

3.05 FIELD QUALITY CONTROL

- A. Inspect and test in accordance with NETA ATS, except Section 4.
- B. Perform inspections and tests listed in NETA ATS, Section 7.5.1.1.
- C. Correct deficiencies and replace damaged or defective enclosed safety switches or associated components.

3.06 ADJUSTING

- A. Adjust tightness of mechanical and electrical connections to manufacturer's recommended torque settings.

3.07 CLEANING

- A. Clean dirt and debris from switch enclosures and components according to manufacturer's instructions.
- B. Repair scratched or marred exterior surfaces to match original factory finish.

END OF SECTION 26 28 16.16

**SECTION 31 00 00
EARTHWORK**

PART 1 - GENERAL

1.01 INCLUSION OF OTHER CONTRACT DOCUMENTS

- A. The General Conditions, Supplementary Conditions and Division 1 are fully applicable to this Section, as if repeated herein.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 31 23 33: Trenching and Backfilling.

1.03 QUALITY ASSURANCE

- A. Use only new materials and products, unless existing materials or products are specifically shown otherwise on the Drawings to be salvaged and re-used.
- B. All materials, components, assemblies, workmanship and installation are to be observed by the Owner's Inspector of Record. Work not so inspected is subject to uncovering and replacement.
- C. The representatives of the Owner's testing lab will not act as supervisor of construction, nor will they direct construction operations. Neither the presence of the Owner's testing lab representatives nor the testing by the Owner's testing lab shall excuse the contractors or subcontractors for defects discovered in their work during or following completion of the project. Correcting of inadequate compaction or moisture content is the sole responsibility of the contractor.
- D. Tests (See Part 3 for Compaction Testing).
- E. Contractor shall be solely responsible for all subgrades built. Failures resulting from inadequate compaction or moisture content are the responsibility of the contractor. Contractor shall be solely responsible for any and all repairs.

1.04 SUBMITTALS

- A. Submit per the requirements of the General Conditions.
- B. Manufacturer's Data: Submit list and complete descriptive data of all products proposed for use. Include manufacturer's specifications, published warranty or guarantee, installation instructions, and maintenance instructions.

1.05 WARRANTY

- A. Submit per the requirements of the General Conditions.

1.06 REFERENCES AND STANDARDS

- A. General: Site survey, included in the drawings, was prepared by Warren Consulting Engineers, Inc., and is the basis for data regarding current conditions. While the survey is deemed generally accurate, there exists discrepancies and variations due to elapsed time, weather, etc. Existing dirt grades may vary 0.2 ft. from that shown.
- B. Geotechnical Engineering Report: No geotechnical information is provided. All work is designed

for installation over soil conditions with minimum bearing pressures and the possibility of expansive materials. Generally, all new work includes the over excavation of native materials and the installation of new engineered import fill and/or aggregate base material.

- C. Site Visitation: All bidders interfacing with existing conditions shall visit the site prior to bid to verify general conditions of improvements. Discrepancies must be reported prior to the bid for clarification.
- D. ANSI/ASTM D698-00 - Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures, Using 5.5 lb (2.49 Kg) Rammer and 12 inch (304.8 mm) Drop.
- E. ANSI/ASTM D1556-00 - Test Method for Density of Soil in Place by the Sand-Cone Method.
- F. ANSI/ASTM D1557-02e2 - Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10 lb. (4.54 Kg) Rammer and 18 inch (457 mm) Drop.
- G. ANSI/ASTM D 3017-05 Test Methods for Moisture Content of Soils and Soil-Aggregate Mixture by Nuclear Methods (Shallow Depth).
- H. ANSI/ASTM D 422-63(2007) E1 Test Method for Particle Size Analysis of Soil.
- I. ANSI/ASTM D 4318-05 Test Method for Liquid Limit, Plastic Limit, and Plasticity Limit.
- J. CALTRANS Standard Specifications Section 17.
- K. CAL-OSHA, Title 8, Section 1590 (e).
- L. Any work within the street, highway or right-of-way shall be performed in accordance with the requirement of the governmental agencies having jurisdiction, and shall not begin until all of those governing authorities have been notified.

1.07 DELIVERY, STORAGE AND HANDLING

- A. Transport, store and handle in strict accord with the local jurisdiction.
- B. Make delivery to job when notified by Contractor verifying that the job is ready to receive the work of this Section and that arrangements have been made to properly store, handle and protect such materials and work.

1.08 PROJECT CONDITIONS

- A. Existing civil, mechanical and electrical improvements are shown on respective site plans to the extent known. Should the Contractor encounter any deviation between actual conditions and those shown, he is to immediately notify the Architect before continuing work.
- B. Excavation dewatering may be necessary. Contractor shall provide any and all tools, equipment and labor necessary for excavation dewatering no matter what the source. Dewatering shall be continuous until all site utilities are installed and backfilled.

1.09 EXISTING SITE CONDITIONS

- A. Contractor shall acquaint himself with all site conditions. If unknown active utilities are encountered during work, notify Architect promptly for instructions. Failure to notify will make Contractor liable for damage to these utilities arising from Contractor's operations subsequent to discovery of such unknown active utilities.

1.10 ON SITE UTILITY VERIFICATION AND REPAIR PROCEDURES

A. Underground Utility Locating:

1. The contractor shall hire an Underground Utility Locating Service to locate existing underground utility pathways in areas affected by the scope of work for excavation.
2. Contractor must use an underground utility locator service with a minimum of 3 years' experience. The equipment operator must have demonstrated experience.
3. The Underground Utility Locator Service must have the use of equipment with the ability to locate by means of inductive clamping, induction, inductive metal detection, conductive coupling, or TransOnde (Radio detection) to generate signals, passive locating (free scoping) for "hot" electric, and metal detector.
4. The Underground Utility Locator Service must be able to locate existing utilities at a depth of at least 72".
5. The Underground Utility Locator Service must be able to locate but are not limited to locating the following types of utility pathways:
 - a) All conduit pathways containing 110 volt or greater 50-60Hz electrical wire.
 - b) All conduit pathways containing an active cable TV system.
 - c) All conduit pathways containing wire or conductor in which a signal can be attached and generated without damaging or triggering the existing systems.
 - d) All empty conduit pathways or pipe in which a signal probe or sonde (miniature transmitter) can be inserted.
 - e) All conduit pathways containing non-conductive cables or wires in which a signal probe or sonde (miniature transmitter) can be inserted.
 - f) All plastic and other nonconductive water lines in which a TransOnde Radio detection) or other "transmitter" can be applied to create a low frequency pressure wave (signal) without damaging or triggering the existing systems.
 - g) All copper or steel waterlines and plastic or steel gas lines
6. All markings made by the Underground Utility Locator Service or other shall be clear and visible.
7. The contractor shall maintain all markings made by Underground Utility Locator Service or other throughout the entire length of the project.
8. The Underground Utility Locator Service shall provide the contractor with two sets of maps showing the location of utilities and average depth. They will be referenced to permanent buildings. Contractor will deliver one copy to the district at no additional charge.
9. Contractor is responsible to contact Underground Service Alert (U.S.A. 800/227-2600) and receive clearance prior to any excavation operations.
10. Contractor shall inform the (District's Construction Manager) (Architect) (Owner) no later than five (5) days prior to the date scheduled for the utility locator service to be on site.

1.11 PROTECTION

- A. Adequate protection measures shall be provided to protect workmen and passers-by on and off the site. Adjacent property shall be fully protected throughout the operations. Blasting will not be permitted. Prevent damage to adjoining improvements and properties both above and below grade. Restore such improvements to original condition should damage occur. Replace trees and shrubs outside building area disturbed by operations.
- B. In accordance with generally accepted construction practices, the Contractor shall be solely and completely responsible for working conditions at the job site, including safety of all persons and property during performance of the work. This requirement shall apply continuously and shall not be limited to normal working hours.

- C. Any construction review of the Contractor's performance conducted by the Geotechnical Engineer is not intended to include review of the adequacy of the Contractor's safety measures, in, on, or near the construction site.
- D. Provide shoring, sheeting, sheet piles and or bracing to prevent caving, erosion or gullyng of sides of excavation.
- E. Surface Drainage: Provide for surface drainage during period of construction in manner to avoid creating nuisance to adjacent areas. The contractor shall make a reasonable effort on a daily basis to keep all excavations and the site free from water during entire progress of work, regardless of cause, source, or nature of water.
- F. Adjacent streets and sidewalks shall be kept free of mud, dirt or similar nuisances resulting from earthwork operations.
- G. The site and adjacent influenced areas shall be watered as required to suppress dust nuisance. Dust control measures shall be in accordance with the local jurisdiction.

1.12 SEASONAL LIMITS

- A. No fill material shall be placed, spread or rolled during unfavorable weather conditions. When work is interrupted by rains, fill operations shall not be resumed until field tests indicate that moisture content and density of fill are satisfactory.
- B. Excessively wet fill material shall be bladed and aerated per section 3.08, B.

1.13 TESTING

- A. Submit per the requirements of the General Conditions.
- B. Geotechnical Engineer: Owner may retain a Geotechnical Engineer to determine compliance of fill with Specifications, and to direct adjustments in fill operations. Costs of Geotechnical Engineer will be borne by Owner; except those costs incurred for re-tests or re-inspection will be paid by Owner and back charged to Contractor.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Engineered Fill Materials: All fill shall be of approved local materials supplemented by imported fill if necessary. "Approved" local materials are defined as local soils tested and approved by Geotechnical Engineer free from debris, and concentrations of clay and organics; and contain rocks no larger than 3-inches in greatest dimension. The soil and rock should be thoroughly blended so that all rock is surrounded by soil. This may require mixing of the soil and rock with a dozer prior to placement and compaction. Clods, rocks, hard lumps or cobbles exceeding 3-inches in final size shall not be allowed in the upper 12-inches of any fill.
- B. Imported Engineered Fill Material: Imported fill may be required to complete work. Proposed import fill material shall meet the above requirements; shall be similar to the native soils. Import fill shall meet the above requirements; shall have plasticity index less than 15; an Expansion Index of less than 20; be free of particles greater than 3-inches in largest dimension. Material shall be free of contaminants and have corrosion characteristics within the acceptable limits. All import fill material shall be tested and approved by Soils Engineer prior to transportation to the site

- C. Water: Furnish all required water for construction purposes, including compaction and dust control. Water shall be potable.
- D. Aggregate Base: Provide Class 2, 3/4" Aggregate Base conforming to standard gradation as specified in Cal Trans Standard Specifications, Section 26-1.02A.

PART 3 – EXECUTION

3.01 INSPECTION LAYOUT AND PREPARATION

- A. Prior to installation of the work of this Section, carefully inspect and verify by field measurements that installed work of all other trades is complete to the point where this installation may properly commence.
- B. Layout all work, establish grades, locate existing underground utilities, set markers and stakes, setup and maintain barricades and protection facilities; all prior to beginning actual earthwork operations. Layout and staking shall be done by a licensed Land Surveyor or Professional Civil Engineer.
- C. Verify that specified items may be installed in accordance with the approved design.
- D. In event of discrepancy, immediately notify Owner and the Architect. Do not proceed in discrepant areas until discrepancies have been fully resolved.

3.02 PERFORMANCE

- A. GENERAL:
 - 1. General: Do all grading, excavating and cutting necessary to conform finish grade and contours as shown. All cuts shall be made to true surface of subgrade.
 - 2. Archaeological Artifacts: Should any artifacts of possible historic interest be encountered during earthwork operations, halt all work in area of discovery and immediately contact the Architect for notification of appropriate authorities.
 - 3. Degree of Compaction: Percentage of maximum density, hereinafter specified as degree of compaction required, means density equivalent to that percentage of maximum dry density determined by ASTM D1557 Compaction Test method, and such expressed percentage thereof will be minimum acceptable compaction for specified work.
 - 4. Moisture Content: Moisture content shall be as noted below and as called for on the plans. Moisture content shall be maintained until subgrade is covered by surfacing materials.

3.03 DEMOLITION, DISPOSAL AND DISPOSITION OF UNDESIRABLE MAN-MADE FEATURES

- A. All other obstructions, such as abandoned utility lines, septic tanks, concrete foundations, and the like shall be removed from site. Excavations resulting from these removal activities shall be cleaned of all loose materials, dish shaped, and widened as necessary to permit access for compaction equipment. Areas exposed by any required over-excavation should be scarified to a depth of 12-inches, moisture-conditioned to above optimum moisture content, and recompacted to 90% relative compaction.

3.04 TESTING AND OBSERVATION

- A. All grading and earthwork operations shall be observed by the Geotechnical Engineer, Project Inspector, Architect or Owner's Representative.

- B. Field compaction tests shall be made by the Geotechnical Engineer or his representative. If moisture content and/or compaction are not satisfactory, Contractor will be required to change equipment or procedure or both, as required to obtain specified moisture or compaction. Notify Geotechnical Engineer at least 48 hours in advance of any filling operation.
- C. Earthwork shall not be performed without the notification or approval of the Geotechnical Engineer or his representative. The Contractor shall notify the Geotechnical Engineer at least two (2) working days prior to commencement of any aspect of the site earthwork.
- D. If the Contractor should fail to meet the compaction or design requirements embodied in this document and on the applicable plans, he shall make the necessary readjustments until all work is deemed satisfactory, as determined by the Geotechnical Engineer or Architect/Engineer.
- E. After each rain event Geotechnical Engineer shall test fill material for optimum moisture. Do not place any fill material until desired moisture is achieved.

3.05 CLEARING AND GRUBBING

- A. Prior to grading, remove all debris off-site. Remove trees and brush including the root systems. Holes resulting from tree and brush removal should be prepared and backfilled in accordance with paragraphs 3.07, 3.08, 3.09, and 3.10. This may require deepening and/or widening the holes to adequately remove disturbed soil and provide room for compaction equipment. Strip the surface of all organics and to a minimum depth of 4 inches. Stripping's meeting the requirements of Section 32 90 00 may be used in landscape areas only.

3.06 CUTTING

- A. Do all cutting necessary to bring finish grade to elevations shown on Drawings.
- B. When excavation through roots is necessary, cut roots by hand.
- C. Carefully excavate around existing utilities to avoid unnecessary damage. The contractor shall anticipate and perform hand work near existing utilities as shown on the survey, without additional claims or cost.

3.07 STRUCTURAL EXCAVATION

- A. General: Excavate to bear on firm material at contract depth shown on Structural Drawings.
- B. Footings: All footing excavations shall be of sufficient width for installation of formwork, unless earth will retain its position during concreting. All portions of footings above grade must be formed. In the event that footings are placed against earth, footing widths below grade shall be increased 2 inches from those shown on Drawings and positive protection shall be provided for top corners of trench.
- C. Unsuitable Ground: Any errors in structural excavation, soft ground, or clay soils found when excavating shall be reported to Architect. In no case shall work be built on any such soft or clayey unsuitable surface without direction from the Architect. Restore excavations to proper elevation with engineered fill material compacted to between 87% and 92% relative compaction.

3.08 SUBGRADE PREPARATION

- A. Grade compact and finish all subgrades within a tolerance of 0.10' of grades as indicated on

Drawings and so as not to pool water. Subgrade within building pads and concrete walks shall be within 0.05' of grades indicated.

- B. After clearing, grubbing and cutting, subsurface shall be plowed or scarified to a depth of at least 6-inches, until surface is free from ruts, hummocks or other uneven features and uniform and free from large clods. Moisture condition to above optimum moisture content and 90% relative compaction as determined by ASTM Test Method D1557. If the existing soils are at a water content higher than specified, the contractor shall provide multiple daily aerations by ripping, blading, and/or disking to dry the soils to a moisture content where the specified degree of compaction can be achieved. After seven consecutive working days of daily aerations, and the moisture content of the soil remains higher than specified, the contractor shall notify the architect. If the existing soils have a moisture content lower than specified, the contractor shall scarify, rip, water and blade existing soil to achieve specified moisture content. The contractor shall make proper allowance in schedule and methods to complete this work.
- C. Subgrade in areas to receive landscaping shall be compacted to 90%.
- D. Where Contractor over-excavates building pads through error, resulting excavation shall be recompacted as engineered fill at Contractor's expense.

3.09 PLACING, SPREADING AND COMPACTING FILL MATERIAL IN BUILDING PAD AND PAVEMENT AREAS

- A. Selected fill material shall be placed in layers which, when compacted, shall not exceed 6 inches in compacted thickness. Each layer shall be spread evenly and thoroughly mixed to insure uniformity in moisture content.
- B. Selected fill material shall be moisture-conditioned to specified moisture content. Selected fill material shall be unfrozen. When moisture content of fill material is below that specified, add water until proper moisture content is achieved. When moisture content is above that specified, aerate by blading or other methods mentioned in 3.08 B until moisture content is satisfactory.
- C. After each layer has been placed, mixed and spread evenly, it shall be thoroughly compacted to a minimum of 90% as determined by the ASTM D1557 Compaction Test. Compact each layer over its entire area until desired density has been obtained.
- D. Recomposition of Fill in Trenches and Compaction of Fill Adjacent to Walls: Where trenches must be excavated, backfill with material excavated. Place in lifts that when compacted do not exceed 8" loose thickness, moisture conditioned to above optimum moisture content, and compact to a minimum of 90% relative compaction in building pad and paved areas, and to 90% relative compaction in landscape areas.
- E. Jetting of fill materials will not be allowed.

3.10 FINAL SUBGRADE COMPACTION

- A. Building Pads: Upper 12" of all final building pad subgrades shall be uniformly compacted at specified moisture content to at least 90% of maximum dry density, as determined by ASTM D1557 Compaction Test, regardless of whether final subgrade elevation is attained by filling, excavation, or is left at existing grade. After acceptance of final compaction test, contractor shall maintain the required moisture content of subgrade until concrete flatwork is placed.
- B. Paved Areas: Upper 12" of all final subgrades supporting pavement sections and all other

flatwork shall be brought to specified moisture content and shall be uniformly compacted to not less than 90% of maximum dry density, regardless of whether final subgrade elevation is attained by filling, excavation, or is left at existing grade. After acceptance of final compaction test, contractor shall maintain the required moisture content of subgrade until concrete flatwork is placed.

- C. Other Fill and Backfill: Upper 6-inches of all other final subgrades or finish grades shall be compacted to 90% of maximum dry density.
- D. Gravel Fill: Do not place compacted gravel fill until after underground work and foundations are in place. Compact gravel fill with vibratory plate or similar equipment to preclude settlement.

3.11 PLACING, SPREADING, AND COMPACTION OF LANDSCAPE BACKFILL MATERIALS

- A. All landscaped areas shall receive 6-inches of topsoil. After subgrade under landscape area has been scarified and brought to 90% maximum dry density, topsoil shall be placed evenly to depth of 6-inches at 85% of maximum dry density. See Landscape specifications for additional requirements.
- B. Project Inspector must verify that materials are uniformly spread to minimum depth specified.

3.12 FINISH GRADING

- A. At completion of project, site shall be finished graded, as indicated on Drawings. Finish grades shall be "flat graded" to grades shown on the drawing. Mounding of finish grades will not be allowed unless otherwise directed on the landscape drawings. Tolerances for finish grades in drainage swales shall be $\pm 0.05'$. Tie in new and existing finish grades. Leave all landscaped areas in finish condition for lawn seeding. Landscaped planters shall be graded uniformly from edge of planter to inlets. If sod is used for turf areas the finish grade on which it is placed shall be lowered to allow for sod thickness.
- B. All landscape areas shall be left free of rock or foreign material as specified in Section 32 90 00.
- C. All landscape areas shall be approved by Architect prior to any planting.

3.13 SURPLUS MATERIAL

- A. Excavated material not required for grading or backfill shall be removed from site at contractor's expense.

3.14 CLEANING

- A. Remove from fill all vegetation, wood, form lumber, casual lumber, and shavings, in contact with ground; buried wood will not be permitted in any fill.

END OF SECTION 31 00 00

**SECTION 31 23 33
TRENCHING AND BACKFILLING**

PART 1 – GENERAL

1.01 INCLUSION OF OTHER CONTRACT DOCUMENTS

- A. The general conditions, supplementary conditions and Division 1 are fully applicable to this section as if repeated herein.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 31 00 00: Earthwork.

1.03 QUALITY ASSURANCE

- A. Use only new materials and products, unless existing materials or products are specifically shown otherwise on the Drawings to be salvaged and re-used.
- B. All materials, components, assemblies, workmanship and installation are to be observed by the Owner's Inspector of Record. Work not so inspected is subject to uncovering and replacement.
- C. Contractor / Installer shall have been in business for five (5) years providing/finishing similar size projects and complexity.

1.04 SUBMITTALS

- A. Submit per the requirements of the General Conditions.
- B. Submit manufacturers data and shop drawings.

1.05 WARRANTY

- A. Submit per the requirements of the General Conditions.

1.06 REFERENCES AND STANDARDS

- A. California Building Code, CBC 2022, and as indicated on the Drawings.

1.07 DELIVERY, STORAGE AND HANDLING

- A. Transport, store and handle in strict accord with the local jurisdiction.
- B. Make delivery to job when notified by Contractor verifying that the job is ready to receive the work of this Section and that arrangements have been made to properly store, handle and protect such materials and work.

1.08 PROJECT CONDITIONS

- A. Contractor shall acquaint himself with all existing site conditions. If unknown active utilities are encountered during work, notify Architect promptly for instructions. Failure to notify will make Contractor liable for damage to these utilities arising from Contractor's operations subsequent to discovery of such unknown active utilities.

- B. Field verify that all components, backing, etc. by others are installed correctly to proceed with installation of products as herein specified.
- C. Trench dewatering may be necessary. Contractor shall provide any and all tools, equipment and labor necessary for trench dewatering no matter what the source. Dewatering shall be continuous until all site utilities are installed and backfilled.

1.09 PROTECTION

- A. Adequate protection measures shall be provided to protect workers and passers-by on and off the site. Adjacent property shall be fully protected throughout the operations. Blasting will not be permitted. Prevent damage to adjoining improvements and properties both above and below grade. Restore such improvements to original condition should damage occur.
- B. Contractor shall be solely and completely responsible for working conditions at the job site, including safety of all persons and property during performance of the work. This requirement shall apply continuously and shall not be limited to normal working hours.
- C. Any construction review of the Contractor's performance conducted by the Architect or Owner is not intended to include review of the adequacy of the Contractor's safety measures, in, on or near the construction site.
- D. Provide shoring, sheeting, sheet piles and or bracing to prevent caving, erosion or gulying of sides of excavation.
- E. Surface Drainage: Provide for surface drainage during period of construction in manner to avoid creating nuisance to adjacent areas. Keep all excavations free from water during entire progress of work, regardless of cause, source or nature of water.
- F. Adjacent streets and sidewalks shall be kept free of mud, dirt or similar nuisances resulting from earthwork operations.
- G. The site and adjacent influenced areas shall be watered as required to suppress dust nuisance.

1.10 TRENCH SAFETY PROVISIONS

- A. General Contractor shall be solely responsible for safety design, construction and coordination with agencies having jurisdiction. If such plan varies from shoring system standards established by Construction Safety Orders, plan shall be prepared by registered civil or structural engineer.
- B. Nothing herein shall be deemed to allow use of shoring, sloping or protective system less effective than that required by Construction Safety Orders of California State Division of Industrial Safety.
- C. When trenching through paved surface, provide steel trench plates to cover open trenches daily until trenches are backfilled.

1.11 SEASONAL LIMITS

- A. No backfill material shall be placed, spread or rolled during unfavorable weather conditions. When work is interrupted by heavy rains, full operations shall not be resumed until field tests indicate that moisture content and density of fill are satisfactory.
- B. Material above optimum moisture shall be processed per Section 31 00 00.

PART 2 – PRODUCTS

2.01 MATERIALS

- A. Backfill materials: Pipeline and conduit trench backfill as shown on the plans and as specified below.
 - 1. $\frac{3}{4}$ inch crush rock.
 - 2. Native Materials: Soil native to Project Site, free of wood, organics, and other deleterious substances. Rocks shall not be greater than 3-inches.
 - 3. Sand: Fine granular material, free of organic matter, mica, loam or clay.
 - 4. Lean Mix Concrete/Controlled Density Backfill: 3 sacks of cement per yard plus sand.
 - 5. Class 2 aggregate base, $\frac{3}{4}$ " rock, per Caltrans Section 26-1.02B.
- B. Water: Furnish all required water for construction purposes, including compaction and dust control. Water shall be potable.
- C. Provide other bedding and backfill materials as described and specified in Section 31 00 00 and Electrical / Plumbing sections.

PART 3 – EXECUTION

3.01 INSPECTION

- A. Verification of Conditions:
 - 1. Examine areas and conditions under which work is to be performed.
 - 2. Identify conditions detrimental to proper or timely completion of work and coordinate with General Contractor to rectify.

3.02 COORDINATION

- A. General Contractor shall coordinate work as herein specified, in accordance with drawings and as required to complete scope of work with all related trades.

3.03 INSTALLATION

- A. Perform work in accordance with pipe manufacturer's recommendations, as herein specified and in accordance with drawings.

3.04 TRENCHING

- A. Make all trenches open vertical construction with sufficient width to provide free working space at both sides of trench around installed item as required for caulking, joining, backfilling and compacting; not less than 12 inches wider than pipe or conduit diameter, unless otherwise noted.
- B. Carefully excavate around existing utilities to avoid unnecessary damage. The contractor shall anticipate and perform hand work near existing utilities as shown on the survey, without additional claims or cost.
- C. Trench straight and true to line and grade with bottom smooth and free of edges or rock points.
- D. Where depths are not shown on the plans, trench to sufficient depth to give minimum fill above top of installed item measured from finish grade above the utility as follows:

1. Sewer pipe: depth to vary
2. Storm drain pipe: depth to vary
3. Water pipe - Fire Supply: 36 inches
4. Water pipe - Domestic Supply: 30 inches

E. Where trench through existing pavement saw cut existing pavement in straight lines. Grind existing asphalt on each side of trench 3" wide x $\frac{1}{2}$ the depth of the section. Apply tack coat to vertical surfaces before installing new asphalt. Replace asphalt and concrete pavement sections to matched existing conditions. In concrete pavement provide expansion and control joints to match existing joint layout.

3.05 BACKFILL

A. Pipe Trench Backfill is divided into three zones:

1. Bedding: Layer of material directly under the pipe upon which the pipe is laid.
2. Pipe Zone: Backfill from the top of the bedding to 6 inches (compacted) over the top of the pipe.
3. Upper Zone: Backfill between top of Pipe Zone and to surface of subgrade.

B. Bedding: Type of material and degree of compaction for bedding backfill shall be as defined in the Details and Specifications.

C. Pipe Zone and Upper Zone Backfill:

1. Type of material and degree of compaction Pipe Zone and Upper Zone Backfill shall be as required by Drawings, Details, & Specifications.
2. Upper Zone Backfill shall not be placed until conformance of Bedding and Pipe Zone Backfill with specified compaction test requirements has been confirmed.
3. Backfill shall be brought up at substantially the same rate on both sides of the pipe and care shall be taken so that the pipe is not floated or displaced. Material shall not be dropped directly on pipe.

D. Backfill Compaction:

1. Backfill shall be placed in layers which, when compacted shall not exceed 6 inches in thickness. Each layer shall be spread evenly and thoroughly mixed to insure uniformity. Do not backfill over, wet, frozen or soft subgrade surfaces. Employ a placement method that does not disturb or damage foundation walls, perimeter drainage, foundation damp-proofing, waterproofing or protective cover.
2. When moisture content of fill material is below that required to achieve specified density, add water until proper moisture content is achieved. When moisture content is above that required, aerate by blading or other methods until specified moisture content is met, see section 31 00 00, 3.08, B.
3. After each layer has been placed, mixed and spread evenly, it shall be thoroughly compacted to 90% of maximum dry density while at specified moisture content. Compact each layer over its entire area until desired density has been obtained.
4. The top 18-inches of subgrade compaction under pavement or building shall be per Earthwork section 31 00 00.
5. Compaction: All backfill operations shall be observed by the Inspector of Record and/or Geotechnical Engineer. Field density tests shall be made to check compaction of fill material. If densities are not satisfactory, Contractor will be required to change equipment or procedure or both, as required to obtain specified densities. Notify Inspector and Architect at least 24 hours in advance of any operation.

3.06 TRENCH AND SITE RESTORATION

- A. Finished surface of trenches shall be restored to a condition equal to, or better than the condition as existed prior to excavation work.

3.07 PROTECTION

- A. Protect existing surfaces, structures, and utilities from damage. Protect work by others from damage. In the event of damage, immediately repair or replace to satisfaction of Owner.
- B. Replace damaged pavement with new compatible matching materials. Concrete walks to be removed to nearest expansion joint and entire panel replaced. Asphalt to be cut neatly and replaced with new materials.
- C. Any existing materials removed or damaged due to trenching to be returned to new condition.

3.08 SURPLUS MATERIAL

- A. Remove excess excavated material, unused materials, damaged or unsuitable materials from site.

3.09 CLEANING

- A. Contractor will keep the work areas in a clean and safe condition so his rubbish, waste, and debris do not interfere with the work of others throughout the project and at the completion of work.
- B. After completion of work in this section, remove all equipment, materials, and debris. Leave entire area in a neat, clean, acceptable condition.

END OF SECTION 31 23 33

**SECTION 32 12 00
ASPHALT CONCRETE PAVING**

PART 1 - GENERAL

1.01 INCLUSION OF OTHER CONTRACT DOCUMENTS

- A. The General Conditions, Supplementary Conditions and Division 1 are fully applicable to this Section, as if repeated herein.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 31 00 00: Earthwork.
- B. Section 31 23 33: Trenching and Backfilling.

1.03 QUALITY ASSURANCE

- A. Use only new materials and products, unless existing materials or products are specifically shown otherwise on the Drawings to be salvaged and re-used.
- B. All materials, components, assemblies, workmanship and installation are to be observed by the Owner's Inspector of Record. Work not so inspected is subject to uncovering and replacement.
- C. The representatives of the Owner's testing lab will not act as supervisor of construction, nor will they direct construction operations. Neither the presence of the Owner's testing lab representatives nor the testing by the Owner's testing lab shall excuse the contractors or subcontractors for defects discovered in their work during or following completion of the project. Correcting inadequate compaction is the sole responsibility of the contractor.
- D. Contractor shall provide verification that asphalt mix temperature meets the requirements of this specification at time of application.
- E. Contractor shall be solely responsible for all subgrades built. Any repairs resulting from inadequate compaction are the responsibility of the contractor.
- F. Sieve analysis from testing laboratories identifying rock/sand percentages within the asphalt mix shall have a testing date within 90 days of contract signing.
- G. Sieve analysis from a testing laboratory identifying rock/sand percentages within the class 2 aggregate base rock shall have a testing date within 90 days of contract signing.

1.04 SUBMITTALS

- A. Submit per the requirements of the General Conditions.
- B. Manufacturer's Data: Submit list and complete descriptive data of all products proposed for use. Include manufacturer's specifications, published warranty or guarantee, installation instructions, and maintenance instructions.

1.05 WARRANTY

- A. Submit per the requirements of the General Conditions.

1.06 REFERENCES AND STANDARDS

- A. ANSI/ASTM D698-00 - Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures, Using 5.5 lb (2.49 Kg) Rammer and 12 inch (304.8 mm) Drop.
- B. ANSI/ASTM D1556-00 - Test Method for Density of Soil in Place by the Sand-Cone Method.
- C. ANSI/ASTM D1557-02 - Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10 lb. (4.54 Kg) Rammer and 18 inch (457 mm) Drop.
- D. ANSI/ASTM D 3017-05 Test Methods for Moisture Content of Soils and Soil-Aggregate Mixture by Nuclear Methods (Shallow Depth).
- E. ANSI/ASTM D 422-63 Test Method for Particle Size Analysis of Soil.
- F. ANSI/ASTM D 4318-05 Test Method for Liquid Limit, Plastic Limit, and Plasticity Limit.
- G. CALTRANS Standard Specifications.
- H. CAL-OSHA, Title 8, Section 1590 (e).
- I. Any work within the street, highway or right-of-way shall be performed in accordance with the requirement of the governmental agencies having jurisdiction, and shall not begin until all of those governing authorities have been notified.

1.07 DELIVERY, STORAGE AND HANDLING

- A. Transport, store and handle in strict accord with the local jurisdiction.
- B. Make delivery to job when notified by Contractor verifying that the job is ready to receive the work of this Section and that arrangements have been made to properly store, handle and protect such materials and work.

1.08 PROJECT CONDITIONS

- A. Environmental Requirements:
 - 1. Base Course: Do not lay base course on muddy subgrade, during wet weather, or when atmospheric temperature is below 40 degrees F.
 - 2. Asphalt Surfacing: Do not apply asphaltic surfacing on wet base, during wet weather, or when atmospheric temperature is below 50 degrees F.

1.09 EXISTING SITE CONDITIONS

- A. Contractor shall acquaint himself with all site conditions. If unknown active utilities are encountered during work, notify Architect promptly for instructions. Failure to notify will make Contractor liable for damage to these utilities arising from Contractor's operations subsequent to discovery of such unknown active utilities.

1.10 PROTECTION

- A. Adequate protection measures shall be provided to protect workmen and passers-by on and off the site. Adjacent property shall be fully protected throughout the operations. Blasting will not be permitted. Prevent damage to adjoining improvements and properties both above and below

grade. Restore such improvements to original condition should damage occur. Replace trees and shrubs outside building area disturbed by operations.

- B. In accordance with generally accepted construction practices, the Contractor shall be solely and completely responsible for working conditions at the job site, including safety of all persons and property during performance of the work. This requirement shall apply continuously and shall not be limited to normal working hours.
- C. Any construction review of the Contractor's performance conducted by the owner's representative is not intended to include review of the adequacy of the Contractor's safety measures, in, on, or near the construction site.
- D. Surface Drainage: Provide for surface drainage during period of construction in manner to avoid creating nuisance to adjacent areas. The contractor shall make a reasonable effort on a daily basis to keep all excavations and the site free from water during entire progress of work, regardless of cause, source, or nature of water.
- E. Adjacent streets and sidewalks shall be kept free of mud, dirt or similar nuisances resulting from earthwork operations.
- F. The site and adjacent influenced areas shall be watered as required to suppress dust nuisance. Dust control measures shall be in accordance with the local jurisdiction.

1.11 SEASONAL LIMITS

- A. No fill material shall be placed, spread or rolled during unfavorable weather conditions. When work is interrupted by rains, fill operations shall not be resumed until field tests indicate that moisture content and density of fill are satisfactory.

1.12 TESTING

- A. Geotechnical Engineer: Owner may retain a Geotechnical Engineer to determine compliance of fill with Specifications, and to direct adjustments in fill operations. Costs of Geotechnical Engineer will be borne by Owner; except those costs incurred for re-tests or re-inspection will be paid by Owner and backcharged to Contractor.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Sterilant: Soil sterilizer shall be CIBA GEIGY's Pramitol 25-E, Treflan EC or Thompson-Hayward Casoron.
 - 1. Soil sterilizer shall be applied in strict accordance with manufacturer's instructions.
- B. Base Course Aggregate: State Specifications, Section 26, Class 2 aggregate base (3/4" max.).
- C. Asphalt Binder: Steam-refined paving asphalt conforming to State Specifications, Section 92, viscosity grade PG 64-10. Asphalt binder additives for WMA per Caltrans approved list of manufacturer's.
- D. Liquid Asphalt Tack Coat: Per CALTRANS section 94.
- E. Surface Course Aggregate: Mineral aggregates for Type "B" asphalt concrete, conforming to

State Specifications 39-2.02, Type B, ½" maximum, medium grading. 3/8" maximum grading at Playcourt.

- F. Seal Coat: shall be a pre-mixed asphalt emulsion blended with select fillers and fibers such as:
 - 1. "Park-Top No. 302", Western Colloid Products.
 - 2. "OverKote", Reed and Gram.
 - 3. "Drivewalk", Conoco Oil.
- G. Wood Headers and Stakes: Pressure treated.
- H. Pavement Marking: Colors as directed by Architect. Colors of painted traffic stripes and pavement markings must comply with ASTM D 6628.
 - 1. Waterborne traffic line - colors white, yellow and red, State specification PTWB-01R3.
 - 2. Waterborne traffic line for the international symbol of accessibility and other curb markings – blue, red and green, Federal specification TT-P-1952F.
- I. Precast Concrete Bumpers: 3000 psi at 28 day minimum strength; 48" length unless otherwise indicated; provide with steel dowel anchors and concrete epoxy.
- J. Pavement Epoxy; K-Lite; Ktep-x-590; Ennis Epoxy HPS2 or an approved equal.
- K. Crack Filler;
 - 1. Cracks up to ½": QPR model CAR08, 10oz asphalt crack filler; Star STA-FLEX Trowel Grade crack filler or approved equal.
 - 2. Cracks ¼" – 1": "Docal 1100 Viscolastic, distributed by Conoco, Inc., Elk Grove, CA, (916) 685-9253, or approved equal.
 - 3. Cracks greater than 1": Hot Mix, Topeka.
- L. Reclaimed Asphalt Pavingment (RAP). HMA Type A or Type B may be produced using RAP providing it does not exceed 15% of the aggregate blend.

2.02 MIXES

- A. General: Plant mixed conforming to State Specifications, Section 39, Type B, ½" maximum, medium grading. 3/8" maximum grading shall be used at hardcourt.
- B. Temperature of Hot Mix Asphalt: Not less than 275 degrees F nor more than 325 degrees F when added to aggregate.
- C. Temperature of Hot Mix Aggregate: Not less than 250 degrees F nor more than 325 degrees F when asphalt is added.
- D. Temperature of Hot Mix Asphalt Concrete: Asphalt shall be not less than 285 degrees at time of application, nor more than 350 degrees. Asphalt not meeting the required temperature shall not be used.
- E. Temperature of Warm Mix Asphalt: Mixing and placement; Per the approved manufacturer's heat range recommendations for mixing and placement.

PART 3 - EXECUTION

3.01 EXAMINATION OF CONDITIONS

- A. Conditions of Work in Place: Subsurfaces which are to receive materials specified under this Section shall be carefully examined before beginning work hereunder, and any defects therein shall be reported, in writing, to the Architect. Work shall not be started until such defects have been corrected. Starting of work shall imply acceptance of conditions as they exist.

3.02 PREPARATION

- A. Sub-Grade: Clean, shape and compact to hard surface free from elevations or depressions exceeding 0.05' in 10' from true plan. Compact per Section 310000. Compaction and moisture content shall be verified immediately prior to placement of aggregate base. Proof roll subbase in presence of geotechnical engineer prior to placement of aggregate base.
- B. Cleaning: Existing surfaces and new surface shall be clean of all dirt, sand, oil or grease. All cracks shall be cleaned and free of all debris and vegetation. Hose down entire area with a strong jet of water to remove all debris.

3.03 INSTALLATION

- A. Headers:
 - 1. General: Install as edging to asphalt paving, except where adjoining existing pavement, concrete curbs, walks or building.
 - 2. Existing Headers: Remove existing headers where new paving will join existing. Saw cut existing asphalt to provide clean edge.
 - 3. Lines and Levels: Install true to line and grade. Cut off tops of stakes 2-inches below top of header so they will not be visible on completion of job.
- B. Asphalt Paving:
 - 1. Base Course: Install in accord with State Specifications, Section 26. Compact to relative compaction of not less than 95%, ASTM D1557. The material shall be deposited on the subgrade in such a manner as to provide a uniform section of material within five percent tolerance of the predetermined required depth. Deposition will be by spreader box or bottom dump truck to prevent segregation of the material. The material so deposited on the subgrade shall have sufficient moisture which, in the opinion of the Architect is adequate to prevent excessive segregation. It shall then be immediately spread to its planned grade and cross section. Undue segregation of material, excessive drifting or spotting of material will not be permitted. If in the opinion of the site geotechnical engineer, the material is unsuitably segregated, it shall be removed or completely reworked to provide the desired uniformity of the material.
 - a. Moisture content and compaction of base material shall be tested immediately prior to placement of asphalt paving.
 - 2. Sterilant: Apply specified material at manufacturer's recommended rate. Applicator of sterilant material shall be responsible for determining location of all planter areas. Apply specified material over entire base course area just prior to application of asphalt. Follow manufacturer's printed directions.
 - 3. Liquid Asphalt Tack Coat: Apply as "tack coat" to all vertical surfaces of existing paving, curbs, walks, and construction joints in surfacing against which paving is to be placed.

4. Asphalt Concrete Surface Course:
 - a. Comply with State Specifications, 39-6 except as modified below.
 - 1) Final gradation shall be smooth, uniform and free of ruts, humps, depressions or irregularities, with a minimum density of 95% of the test maximum density determined by California Test Methods #304 and 375. Maximum variation 1/8 inch in 10' when measured with steel straightedge in any one direction. Test paved areas for proper drainage by applying water to cover area. Correct portions that do not drain properly by patching with plant mix. In no case shall accessible parking spaces or loading and unloading areas exceed 2% slope in any direction.
 - 2) Asphalt material shall be delivered to the project site in a covered condition to maintain acceptable temperature. Onsite inspector shall verify temperature of asphalt upon truck arrival to the site.
 5. Placement and adjustment of Frames, Covers, Boxes and Grates: The Contractor shall set and adjust to finish grade all proposed and existing frames, covers, boxes, and grates of all manholes, drop inlets, drain boxes, valves, cleanouts, electrical boxes and other appurtenant structures prior to placement of asphaltic concrete.
 6. Water Testing: All paved areas shall be water tested, to check drainage, in the presence of the project inspector prior to placement of seal coat. The surface of asphalt paving shall not vary more than 1/8 inch above or below the grade established on the plans. If variations in grade are present, they will be corrected by overlaying paving and/or pavement removal and replacement as directed by the Architect.
 7. Patching: Cut existing paving square and plumb at all edges to be joined by new paving. In trenches; grind existing asphalt on each side of trench 3" wide x 1/2 the depth of the section. Apply tack coat to vertical surfaces before installing new work. Warp carefully to flush surface, with seal over joints, and feather edge. Sawcut, remove and patch existing paving where cutting is necessary for installation of piping or conduits under Divisions 2, 15 and 16.
- C. Seal Coat:
1. Seal coat shall be applied no sooner than 30 days from time of asphalt placement, no exceptions.
 2. Surface Preparation: surface and cracks shall be clean of all dirt, sand, oil or grease. All cracks shall be filled to a level condition after curing. Make multiple fill applications until a level condition is achieved. Failure to do so will be the reason for rejection. Hose down entire area with a strong jet of water to remove all debris. Remove soft, loose, or otherwise damaged areas of asphalt concrete to full depth of damage and replace with compacted hot mix asphalt concrete as specified herein. Minor holes and imperfections may be patched using hot mix asphalt or mastic using sand/SS-1-H. Use wire brush for removal of oil and grease; prime with shellac or synthetic resin as recommended by manufacturer of pavement sealer material.
 3. Seal Coat Seal Application: Thoroughly mix materials and apply in the presence of the onsite inspector. Failure to do so will be cause for rejection. Apply in accordance with manufacturer's written instructions.
 - a. The minimum application rate for each applied coat shall be 30gals per 1000 sq. ft. Two coats of sealcoat will be required.
 - b. Clean-Up and Precautions: As recommended by pavement sealer material

manufacturer.

D. Asphalt Concrete Overlay Paving:

1. Comply with State Specifications, 39-6 except as modified below.
2. Grind or remove existing asphalt concrete paving at limits of overlay paving to provide a minimum 1 1/2" overlay thickness. Limits of grinding or removal shall be field verified to insure that finished paving surface will have a one percent minimum slope.
3. Thoroughly clean surface to remove vegetation, dirt, sand, gravel and water from surface and from cracks. Vegetation shall be treated 7 days prior to removal with an herbicide.
4. Cracks greater than 1 inch shall be filled with hot mix asphalt and rolled and compacted. Cracks less than one inch shall be filled with crack filler. Potholes shall be filled with hot-mix rolled and compacted. Contractor shall have Engineer approve crack and pothole repair prior to overlay. Provide leveling courses of hot mix asphalt as required to achieve finish grades shown on the drawings.
 - a. Cracks less than one inch in width shall be level after curing. Contractor shall make multiple filling applications as necessary to achieve a level condition.
5. Place overlay when ambient air temperature is 40 degrees F. and rising, and when pavement is dry.
6. An asphalt tack coat shall be applied to existing surface area at a rate of 0.20 gallons per square yard. Application width shall be width of fabric plus 2 to 6 inches.
7. Place, spread and compact asphalt overlay to provide a minimum density of 95% of maximum theoretical unit weight as determined by California Test Method #304. Maximum variation 1/8" in 10' when measured with steel straight edge in any one direction. Test paved areas for proper drainage by applying water to cover area. Correct portions that do not drain properly by patching with plant mix. Minimum compacted overlay thickness 1 1/2 inches.

E. Pavement Marking: pavement markings shall be done only after the seal coat has thoroughly dried. Existing surfaces to be striped with traffic paint shall be cleaned of dust, dirt, grime, oil, rust or other contaminants which will impair the quality of work or interfere with proper bond of paint coats. Surfaces shall be thoroughly cleaned by whatever means necessary that will satisfactorily accomplish the purpose without damage to asphalt concrete. Provide measured layouts, temporary markings, templates, and other means necessary to provide required marking. Prepare and apply paint in accordance with manufacturer's instructions; paint shall be applied by spray and shall achieve complete coverage free from voids and thin spots. Where indicated on the Drawings, paint parking stall strips, lettering, arrows, accessible symbols, playfield markings, etc. on asphalt concrete paving. Paint strips shall be 4 inches wide (except otherwise indicated) and applied with two (2) coats of herein specified Traffic Line Paint; white (except as otherwise specified or indicated).

1. Paints shall be delivered to the site in unopened containers.
 - a. Paint shall not be diluted, or watered down.
 - b. Paint shall be applied in 10-12 wet mil thickness (4-6 mil dried). Each coat thickness shall be verified by the project inspector.
2. International Accessible Symbol: Symbol shall be white figures on a blue background. Blue shall be equal to color No. 15090 in Fed. Std. 595c. Lines and symbols shall be accurately formed and true to line and form; lines shall be straight and uniform in width.

Painted edges shall be clean cut and free from raggedness, and corners shall be cut sharp and square. Tolerances: Apply striping within a tolerance 1/2 inch in 50 feet. Apply markings and striping to widths indicated with a tolerance of 1/4 inch on straight sections and 1/2 inch on curved sections.

- F. Colors: As directed by Architect
- G. Precast Concrete Bumpers: Install in location where shown, using steel rebar dowels, and epoxy.

3.04 DEFECTIVE ASPHALT; Defective asphalt is as described below.

- A. Exposed rock pockets on the finished surface that lack the # 8- #200 fines that is required per the sieve analysis.
- B. Asphalt not placed to the design grades.
- C. Asphalt that ponds water.
- D. Asphalt that was compacted below the minimum required temperature and is cracked.
- E. Asphalt that fails to meet the minimum compaction requirements.
- F. Asphalt that lacks the minimum thickness required per plan.
- G. New asphalt contaminated by a petroleum product, or spilled paint.
- H. Asphalt that has depressions, cracks, scored divits from dumpster wheels, heavy equipment use, heavy construction products,
- I. Asphalt placed on pumping, unstable sub-grades.

3.05 CLEANING

- A. Upon completion of work of this Section promptly remove from the working area all scraps, debris and surplus material of this Section.
- B. Clean excess material from surface of all concrete walks and utility structures.

END OF SECTION 32 12 00

**SECTION 32 16 00
SITE CONCRETE**

PART 1 - GENERAL

1.01 WORK INCLUDES

- A. Exterior non-structural slabs, including walks, vehicular paved surfaces, manhole bases, poured-in-place drop inlets, curbs, valley gutters, curb & gutter, accessible ramps, and other concrete of like nature.
- B. For building related structural concrete, see Specification Section 03 30 00 - Cast-in-Place Concrete.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. The General Conditions, Supplementary Conditions and Division 1 are fully applicable to this Section, as if repeated herein.
- B. Section 03 30 00: Cast-in-Place Concrete.
- C. Section 31 00 00: Earthwork.

1.03 QUALITY ASSURANCE

- A. Use only new materials and products.
- B. Use materials and products of one manufacturer whenever possible.
- C. All materials, components, assemblies, workmanship and installation are to be observed by the Owner's Inspector of Record. Work not so inspected is subject to uncovering and replacement.
- D. Sieve analysis from testing laboratories identifying rock/sand percentages within the concrete mix; or class 2 aggregate base shall have the current project name and project location identified on the report. Outdated analytical reports greater than 90 days old will not be accepted.

1.04 SUBMITTALS

- A. Submit per the requirements of the General Conditions.
- B. Manufacturer's Data: Submit list and complete descriptive data of all products proposed for use. Include manufacturer's specifications, published warranty or guarantee, installation instructions, and maintenance instructions.
- C. Materials list: Submit to the Architect a complete list of all materials proposed to be used in this portion of the work. Submitted items should include but are not limited to sand, gravel, admixtures, surface treatments, coloring agents, sealers, fibers, cast-in-place accessories, forming and curing products and concrete mix designs.
- D. With concrete submittal, provide documented history of mix design performance.

1.05 WARRANTY

- A. Submit per the requirements of the General Conditions.

1.06 REFERENCES AND STANDARDS

- A. California Building Code, CBC 2022 edition.
- B. ACI Standards, ACI 211.1, ACI 318-14, ACI 302, IR-04, ACI 301-16, ACI 305R-10, ACI 306R-16, ACI 308-16.
- C. ASTM C-94, Specification for Ready-Mixed Concrete.
- D. Concrete Reinforcing Steel Institute (CRSI) Manual of Standard Practice (latest edition).
- E. ASTM – American Society for Testing and Materials.

1.07 DELIVERY, STORAGE AND HANDLING

- A. Deliver undamaged products to job in manufacturer's sealed containers and/or original bundles with tags and labels intact.
- B. Store materials in protected, dry conditions off of ground and in areas so as to not interfere with the progress of the work.
- C. Transport, store and handle in strict accord with the manufacturer's written recommendations.
- D. Make delivery to job when notified by Contractor verifying that the job is ready to receive the work of this Section and that arrangements have been made to properly store, handle and protect such materials and work.
- E. Store cement in weather tight building, permitting easy inspection and identification. Protect from dampness. Lumpy or stale cement will be rejected.
- F. Aggregates: Prevent excessive segregation, or contamination with other materials or other sizes of aggregate. Use only one supply source for each aggregate stock pile.

1.08 TESTING

- A. Cement and Reinforcing shall be tested in accordance with CBC Section 1910A. Testing of reinforcing may be waived in accordance with Section 1910A.2 when approved by Architect.

1.09 ADEQUACY AND INSPECTION

- A. Design, erect, support, brace and maintain formwork and shoring to safely support all vertical and lateral loads that might be applied until such loads can be carried by concrete.
- B. Notify Inspector and Owner's Representative at least 48 hours prior to placing of concrete.

1.10 PROTECTION

- A. Finish surfaces shall be protected at all times from concrete pour. Inspect forming against such work and establish tight leak-proof seal before concrete is poured. Finish work damaged, defaced or vandalized during the course of construction shall be replaced by contractor at

contractor expense.

1.11 FIELD MEASUREMENTS

- A. Make and be responsible for all field dimensions necessary for proper fitting, slopes and completion of work. Report discrepancies to Architect before proceeding.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Cement: Portland cement, ASTM C150, Type II, per ACI 318-14 Section 26.4.
- B. Concrete Aggregates: Normal weight aggregates shall conform to ASTM C33, except as modified by this section. Combined grading shall meet limits of ASTM C33. Lightweight aggregate shall conform to ASTM C330, suitably processed, washed and screened, and shall consist of durable particles without adherent coatings.
- C. Water: Clean and free from deleterious amounts of acids, alkalis, scale, or organic materials and per ACI 318-14 Section 26.4.1.3.1.
- D. Fly Ash: Western Fly Ash, conforming to ASTM C618 for Class N or Class F materials (Class C is not permitted). Not more than 15% (by mass) may be substituted for portland cement.
- E. Water Reducing Admixture: Admixture to improve placing, reduce water cement ratio, and ultimate shrinkage may be used. Provide WRDA 64 by Grace Construction Products or approved equal. Admixture shall conform to ASTM C494 and ACI 318-14 Section 26.4.1.4.19(a). Such admixture must receive prior approval by the Architect, Structural Engineer, and the Testing Lab, and shall be included in original design mix.
- F. Air-entraining Admixture: Daravair 1000 by Grace Construction Products or approved equal. Admixture must conform to ASTM C260 and ACI 318-14, section 26.4.1.4.
- G. Exterior Flatwork Expansion Joint Sealant: 1-part polyurethane sealant, Sikaflex -1c SL or approved equal.
- H. Surface Retarder (for exposed aggregate finishes): Rugasol-S by Sika Corporation or approved equal.
- I. Form Coating: Material which will leave no residue on concrete surface that will interfere with surface coating, as approved by the Architect.
- J. Expansion Joint Material: Preformed 3/8" fiber material, full depth of concrete section, with bituminous binder manufactured for use as concrete expansion joint material, as accepted by the Architect.
- K. Reinforcement Bars: New billet steel deformed bars conforming to requirements of ASTM A615 or ASTM A706; Grade 60. Dowels for installation through expansion joints or construction joints to existing sidewalks or concrete features shall be smooth or shall be sleeved on one end for slippage.
- L. Reinforcing supports: Galvanized metal chairs or spacers or metal hangers, accurately placed 3'-

0" O.C.E.W. Staggered and each support securely fastened to steel reinforcement in place. Bottom bars in footings may be supported with 3" concrete blocks with embedded wire ties. Concrete supports without wire ties will not be allowed.

- M. Curing Compound (for exterior slabs only): Burke Aqua Resin Cure by Burke by Edoco, 1100 Clear by W.R. Meadows or accepted equal. Water based membrane-forming concrete curing compound meeting ASTM C 309 and C1315.
- N. Concrete Bonding Agent: Weld-Crete by Larson Products Corp., Daraweld C by Grace Construction Products or accepted equal.
- O. Patching Mortar: Meadow-Crete GPS, one-component, trowel applied, polymer enhanced, shrinkage-compensated, fiber reinforced, cementitious repair mortar for horizontal, vertical and overhead applications as manufactured by W.R. Meadows or accepted equal.
- P. Non-shrink Grout: Masterflow 713 Plus by Master Builders or approved equal. Premixed, non-metallic, no chlorides, non-staining and non-shrinking per CRD-C621, Corps of Engineers Specification and ASTM C 1107, Grades B and C.
- Q. Aggregate Base: Class 2 AB per Caltrans specification section 26-1.02A.
- R. Joint sealant for expansion joints: Single component silicone sealant, Type S, ASTM D5893
- S. Pre- Formed plastic Expansion Joint; W.R. Meadows 3/8" "Snap Cap", Tex-Trude expansion joint cap, or an approved equal.
- T. Adhesive Anchoring (Epoxy): Hilty HIT-HY 200 Safe Set or approved equal.

2.02 CONCRETE DESIGN AND CLASS

- A. **Class "B"**: Concrete shall have 1" max. size aggregate, shall have 3000 psi min. at 28-day strength with a maximum water to cementitious ratio no greater than 0.50. Use for exterior slabs, including walks, vehicular paved surfaces, manhole bases, poured-in-place drop inlets, curbs, valley gutters, curb & gutter, accessible ramps, and other concrete of like nature.
- B. Slump Limits: Provide concrete, at point of final discharge, of proper consistency determined by Test Method ASTM C143 with a slumps of 4" plus or minus 1".
- C. Mix Design: All concrete used in this work will be designed for strength in accordance with provisions of ASI 318-14 Section 26.4. Should the Contractor desire to pump concrete, a modified mix design will need to be submitted for review. Fly ash may be used in concrete to improve workability in amounts up to 15% of the total cementitious weight.
- D. Air Entrainment; Per the Local Jurisdiction minimum requirements, or 3% minimum.

2.03 MIXING OF CONCRETE

- A. Conform to requirements of CBC, Chapter 19A.
- B. All concrete shall be mixed until there is uniform distribution of material and mass is uniform and homogenous; mixer must be discharged completely before the mixer is recharged.

- C. Concrete shall be Ready-mixed Concrete: Mix and deliver in accordance with the requirements set forth in ASTM C94 and ACI 301. Batch Plant inspection may be waived in accordance with CBC Section 1705A.3.3.1, when approved by Structural Engineer and DSA.
1. Approved Testing Laboratory shall check the first batching at the start of the work and furnish mix proportions to the Licensed Weighmaster.
 2. Licensed Weighmaster to positively identify materials as to quantity and to certify to each load by ticket.
 3. Ticket shall be transmitted to Project Inspector by truck driver with load identified thereon. Project Inspector will not accept load without load ticket identifying mix and will keep daily record of pours, identifying each truck, its load and time of receipt and will transmit two copies of record to DSA.
 4. At end of project, Weighmaster shall furnish affidavit to DSA on form satisfactory to DSA, certifying that all concrete furnished conforms in every particular and to proportions established by mix designs.
 5. Placement of concrete shall occur as rapidly as possible after batching and in a manner which will assure that the required quality of the concrete is maintained. In no case may concrete be placed more than 90 minutes from batch time.
 6. Water may be added to the mix only if neither the maximum permissible water-cement ratio nor the maximum slump is exceeded. In no case shall more than 10 gallons of water shall be added to a full 9 yard load, or 1 gal. per yard on remaining concrete within the drum providing load tag indicates at time of mixing at plant will allow for additional water.

2.04 MATERIALS TESTING

- A. Materials testing of concrete and continuous batch plant inspection may be waived in accordance CBC Sections 1704A.4.4 when approved by Structural Engineer and DSA.
- B. Testing of concrete shall be performed per article 3.12 of this specification.

2.05 EQUIPMENT

- A. Handling and mixing of concrete: Project Inspector may order removal of any equipment which in his opinion is insufficient or in any way unsuitable.

PART 3 - EXECUTION

3.01 APPROVAL OF FORMS AND REINFORCEMENTS

- A. Forms and reinforcements are subject to approval by the Project Inspector, and notice of readiness to place first pour shall be given to DSA, Architect and Structural Engineer 48 hours prior to placement of concrete. Before placing concrete, clean tools, equipment and remove all debris from areas to receive concrete. Clean all reinforcing and other embedded items off all coatings oil, and mud that may impair bond with concrete.
- B. All reinforcing steel shall be adequately supported by approved devices on centers close enough to prevent any sagging.
- C. All reinforcing bar lap splices shall be staggered a minimum of 5 ft.
- D. Additional reinforcing steel shall be placed around all utility boxes, valve boxes, manhole frames

and covers that are located within the concrete placements.

1. The bars shall be placed so that there will be a minimum of 1 ½" clearance and a maximum of 3" clearance. The reinforcing steel shall be placed mid-depth of concrete slab.
- E. At all right angles or intersections of concrete walks, additional 2'x2' #5, 90 degree bars shall be added at all inside corners for additional crack control. The bars shall be placed 2" from concrete forms and supports at mid-depth of slab.

3.02 PROTECTION

- A. Protect work and materials of this Section prior to and during installation, and protect the installed work and materials of other trades.
- B. In the event of damage, make all repairs and replacements necessary to the approval of the Architect at no additional cost to the Owner.
- C. Sub-Grade in vehicular concrete paved areas: Subgrade shall be clean, shaped and compact to hard surface free from elevations or depressions exceeding 0.05' in 10' from true plan. Compact per Section 31 00 00. Compaction and moisture content shall be verified immediately prior to placement of concrete. Proof roll subbase in presence of geotechnical engineer prior to placement of aggregate base.

3.03 CLEANING

- A. Reinforcement and all other embedded items at time of placing concrete to be free of rust, dirt oil or any other coatings that would impair bond to concrete.
- B. Remove all wood chips, sawdust, dirt, loose concrete and other debris just before concrete is to be poured. Use compressed air for inaccessible areas. Remove all standing water from excavations.

3.04 FORMING

- A. Form material shall be straight, true, sound and able to withstand deformation due to loading and effects of moist curing. Materials which have warped or delaminated, or require more than minor patching of contact surfaces, shall not be reused.
- B. Build forms to shapes, lines, grades and dimensions indicated. Construct form work to maintain tolerances required by ACI 301. Forms shall be substantial, tight to prevent leakage of concrete, and properly braced and tied together to maintain position and shape. Butt joints tightly and locate on solid backing. Chamfer corners where indicated. Form bevels, grooves and recesses to neat, straight lines. Construct forms for easy removal without hammering, wedging or prying against concrete.
- C. Space clamps, ties, hangers and other form accessories so that working capacities are not exceeded by loads imposed from concrete or concreting operations.
- D. Build openings into vertical forms at regular intervals if necessary to facilitate concrete placement, and at bottoms of forms to permit cleaning and inspection.

- E. Build in securely braced temporary bulkheads, keyed as required, at planned locations of construction joints.
- F. Slope tie-wires downward to outside of wall.
- G. Brace, anchor and support all cast-in items to prevent displacement or distortion.
- H. During and immediately after concrete placing, tighten forms, posts and shores. Readjust to maintain grades, levels and camber.
- I. Concrete paving, Curbs, Curb and Gutters, Ramps:
 - 1. Expansion Joints: Install at locations indicated, and so that maximum distance between joints is 20' for exterior concrete unless otherwise shown. Expansion joint material shall be full depth of concrete section. Recess for backer rod and sealant where required. Expansion joints shall not exceed ¼ inch depth measured from finish surface to top of felt or sealant, and ½ inch width.
 - 2. Curbs, Valley Gutter, and Curb & Gutter: Install expansion joints at 60' on center, except when placing adjacent to concrete walks, the expansion joints shall align with the expansion joints shown for the concrete walks. Expansion joint material shall be full depth of concrete section. Recess for backer rod and sealant will be required.
 - 3. Isolation Joints: 3/8" felt between walls and exterior slabs or walks so that paved areas are isolated from all vertical features, unless specifically noted otherwise on plans.
 - 4. Exterior Concrete Paving: Install expansion joints at 20' on center maximum, both directions, unless shown otherwise on plans.
 - 5. Ramps; whether shown or not all ramps shall have control joints and expansion joints.
 - a. Control joints on ramps shall be aligned and be placed in between with the vertical posts for the handrails. The curbs, if required shall have control joints that align with the handrail posts.
 - b. Expansion joints shall be placed at the upper, intermediate, and bottom landings.

3.05 FORM COATING

- A. Before placement of reinforcing steel, coat faces of all forms to prevent absorption of moisture from concrete and to facilitate removal of forms. Apply specified material in conformance with manufacturer's written directions.
- B. Before re-using form material, inspect, clean thoroughly and recoat.
- C. Seal all cut edges.

3.06 INSTALLATION

- A. General: Reinforcement shall be accurately placed at locations indicated on the drawings within required tolerances and providing required clearances. Reinforcement shall be secured prior to placement of concrete such that tolerances and clearances are maintained. Coverage shall be in accordance with Section 1907A.7 of the CBC. Keep a person on the job to maintain position of reinforcing as concrete is placed. Reinforcement must be in place before concreting is begun. Install dowels as shown on drawings. Give notice whenever pipes, conduits, sleeves, and other construction interferes with placement; obtain method of procedure to resolve interferences. All expansion and construction joints in concrete shall have dowels of size and spacing as shown, or

as approved by Architect.

B. Placing Tolerances:

1. Per ACI 301 or CRSI/WCRSI Recommended Practice for Placing Reinforcing Bars, unless otherwise shown.
2. Clear distance between parallel bars in a layer shall be no less than 1", the maximum bar diameter not 1 ½ times the maximum size of coarse aggregate.

C. Splices:

1. General: Unless otherwise shown on drawings, splice top reinforcing at midspan between supports, splice bottom reinforcing at supports and stagger splices at adjacent splices 5 foot minimum. Bar laps shall be wired together. Reinforcing steel laps shall be as follows:
 - a. Lap splices in concrete: Lap splice lengths shall not be less than 62 bar diameter for No. 5 bar, 56" minimum for No. 6 bars. No. 4 bar shall have a minimum of 24" splice. 93 bar diameters for No. 7 bars and larger.
 - b. All splices shall be staggered at 5 feet minimum.

3.07 INSPECTION

- A. Approval of reinforcing steel, after installation, must be received from Inspector. Architect, Structural Engineer and DSA must be notified 48 hrs. in advance of beginning of concrete placement operations.
- B. Slope of concrete forms and finish condition shall be checked with a two foot (2') digital level.

3.08 PLACING OF CONCRETE

- A. Adjacent finish surfaces shall be protected at all times during the concrete pour and finishing. Verify that all formwork is tight and leak-proof before concrete is poured. Finish work defaced during the concrete pour and finishing shall be replaced at no extra cost to the owner.
- B. Transport concrete from mixer to place of final deposit as rapidly as practicable by methods which will prevent separation or loss of ingredients. Deposit as close as practicable in final position to avoid re-handling or flowing. Partially hardened concrete must not be deposited in work. Concrete shall not be wheeled directly on top of reinforcing steel.
- C. Placing: Once started, continue concrete pour continuously until section is complete between predetermined construction joints. Prevent splashing of concrete onto adjacent forms or reinforcement and remove such accumulation of hardened or partially hardened concrete from forms or reinforcement before work proceeds in that area. Free fall of concrete shall not to exceed 4'-0" in height. If necessary, provide lower openings in forms to inject concrete and to reduce fall height.
- D. Remove form spreaders as placing of concrete progresses.
- E. Place footings as monolithic and in one continuous pour.
- F. Keep excavations free of standing water, but moisture condition sub-grade before concrete placement.

- G. Compacting: All concrete shall be compacted by mechanical vibrators. Concrete shall be thoroughly worked around reinforcement and embedded fixtures and into corners of forms. Vibrating shall not be applied to concrete which has already begun to initially set nor shall it be continued so long as to cause segregation of materials.
- H. Grout under column bearing plates: Dry pack with specified Non-shrink Grout, as recommended by manufacturer. Use as little water as practicable. Ram grout solid into place.
- I. Concrete Flatwork:
 - 1. All flatwork shall be formed and finished to required line and grades. Flatwork shall be true and flat with a maximum tolerance of 1/8" in 10' for flatness. Flatwork which is not flat and are outside of the maximum specified tolerances shall be made level by the Contractor at no additional expense to the Owner.
 - 2. Thoroughly water and soak the flatwork subgrade as required to achieve required moisture content prior to the concrete pour. Provide damming as required to keep water within the formed area and to allow for proper saturation of the subgrade.
 - 3. Concrete vibrator shall be used to assist concrete placement. Contractor shall have spare concrete vibrator on site during concrete placement.
- J. Placing in hot weather: Comply with ACI 305R-10. Concrete shall not exceed 85 degrees F at time of placement. Concrete shall be delivered, placed and finished in a sufficiently short period of time to avoid surface dry checking. Concrete shall be kept wet continuously after tempering until implementation of curing compound procedure in accordance with this specification.
- K. Placing in cold weather: Comply with ACI 306R-16. Protect from frost or freezing. No antifreeze admixtures are permitted. When deposited concrete during freezing or near-freezing weather, mix shall have temperature of at least 50 degrees F but not more than 90 degrees F. Concrete shall be maintained at temperature of at least 50 degrees F for not less than 72 hours after placing or until it has thoroughly hardened. Provide necessary thermal coverings for any flat work exposed to freezing temperatures.
- L. Horizontal construction joint: Keep exposed concrete face of construction joints continuously moist from time of initial set until placing of concrete; thoroughly clean contact surface by chipping entire surface not earlier than 5 days after initial pour to expose clean hard aggregate solidly embedded, or by approved method that will assure equal bond, such as green cutting. If contact surface becomes contaminated with soil, sawdust or other foreign matter, clean entire surface and re-chip entire surface to assure proper adhesion.

3.09 CONCRETE FINISHES

- A. Concrete Slab Finishing: Finish slab as required by ACI 302.1R. Use manual screeds, vibrating screeds to place concrete level and smooth. Use "jitterbugs" or other special tools designed for the purpose of forcing the coarse aggregate below the surface leaving a thick layer of mortar 1 inch in thickness. Surface shall be free from trowel marks, depressions, ridges or other blemishes. Tolerance for flatness shall be 1/8" in 10'. Provide final finish as follows:
 - 1. Flatwork, medium broom finish: Typical finish to be used at all exterior walks and stairs.
 - 2. Ramps, heavy broom finish: Concrete surfaces with slope greater than 5% including all ramps. Brooming direction shall run perpendicular to slope to form non-slip surface
 - 3. Under no circumstances can water be added to the top surface of freshly placed

concrete.

- B. Curb Finishing: Steel trowel.
- C. Joints and Edges: Mark-off exposed joints, where indicated, with $\frac{1}{4}$ " radius x 1" deep jointer or edging tool. Joints to be clean, cut straight, parallel or square with respect to concrete walk edge. Tool all edges of exposed expansion and contraction joints, walk edges, and wherever concrete walk adjoins other material or vertical surfaces.
 - 1. The expansion joints shall be full depth as shown in the plan details. Failure to do so will result in non-compliance and shall be immediately machine cut by the contractor at his expense.
- D. Exposed Concrete Surface Finishing (not including top surface of flatwork): Remove fins and rough spots immediately following removal of forms from concrete which is to be left exposed. Damaged and irregular surfaces and holes left by form clamps and sleeves shall be patched with grout. Tie wires are to be removed to below exposed surface and holes pointed up with neat cement paste similar to procedure noted under "Patching" below. Removal of tie wires shall extend to distance of 2" below established grade lines. Ends of tie wires shall be cut off flush at all other, unexposed locations. Care shall be taken to match adjacent finishes of exposed concrete surface. After patching, all concrete that is to remain exposed, shall be sacked with a grout mixture of 1-part cement, 1 1/2- parts fine sand and sufficient water to produce a consistency of thick paint. After first wetting the concrete surface, apply mixture with a brush and immediately float entire surface vigorously using a wood float. Keep damp during periods of hot weather. When set, excess grout shall be scraped from wall with edge of steel trowel, allowed to set for a time, then wiped or rubbed with dry burlap. Entire finishing operation of any area shall be completed on the same day. This treatment shall be carried to 4" below grade, and all patching and sacking shall be done immediately upon removal of the forms.
- E. Stair Treads and Risers: Tool exterior stair tread nosing per ADA requirements and as detailed. Paint or stain tooled area at every stair tread nosing or as detailed. Stair tread nosing shall contain no pockets, voids or spalls. Patching is not allowed. Damaged nosing shall be replaced.

3.10 CURING

- A. Cured Concrete in Forms: Keep forms and top on concrete between forms continuously wet until removal of forms, 7 days minimum. Maintain exposed concrete in a continuous wet condition for 14 days following removal of forms.
- B. Flatwork/Variable Height Curbs, Curb and gutter, Valley Gutter: Cure utilizing Curing Compound. If applicable, the Contractor shall verify that the approved Curing Compound is compatible with the approved colorant system. Upon completion of job, wash clean per manufacturer's recommendations.
 - 1. Curing compound shall be applied in a wet puddling application. Spotty applications shall be reason for rejection and possibly concrete removal and replacement at the contractor's expense with no compensation from the owner.
- C. No Curing Compound shall be applied to areas scheduled to receive resilient track surface including, curbs, ramps, run ways, etc.

3.11 DEFECTIVE CONCRETE

- A. Determination of defective concrete shall be made by the Architect or Engineer. His opinion shall be final in identifying areas to be replaced, repaired or patched.
- B. The Owner reserves the right to survey the flatwork, if it is determined to be outside of the maximum tolerance for flatness. If the flatwork is found to be out of tolerance, then the Contractor will be required to replace concrete. The Contractor will be responsible for reimbursing the Owner for any surveying costs incurred. Determination of flatwork flatness, surveying and any remedial work must be completed far enough in advance so that the project schedule is maintained, delays are avoided and the new flatwork or flatwork repairs are properly cured.
- C. As directed by Architect, cut out and replace defective concrete. All defective concrete shall be removed from the site. No patching is to be done until surfaces have been examined by Architect and permission to begin patching has been provided.
- D. Permission to patch any area shall not be considered waiver of right, by the Owner, to require removal of defective work, if patching does not, in opinion of Architect, satisfactorily restore quality and appearance of surface.
- E. Defective concrete is:
 - 1. Concrete that does not match the approved mix design for the given installation type.
 - 2. Concrete not meeting specified 28-day strength.
 - 3. Concrete which contains rock pockets, voids, spalls, transverse cracks, exposed reinforcing, or other such defects which adversely affect strength, durability or appearance.
 - 4. Concrete which is incorrectly formed, out of alignment or not plumb or level.
 - 5. Concrete containing embedded wood or debris.
 - 6. Concrete having large or excessive patched voids which were not completed under Architect's direction.
 - 7. Concrete not containing required embedded items.
 - 8. Excessive Shrinkage, Traverse cracking, Crazing, Curling; or Defective Finish. Remove and replace if repair to an acceptable condition is not feasible.
 - 9. Concrete that is unsuitable for placement or has set in truck drum for longer than 90 minutes from the time it was batched.
 - 10. Expansion joint felt that is not isolating the full depth of the concrete section, and recessed as required for backer rod and sealant where required.
 - 11. Concrete that is excessively wet or excessively dry and will not meet the minimum or maximum slump required per mix design.
 - 12. Finished concrete with oil stains from equipment use, and or rust spots that cannot be removed.
 - 13. Control joints (weakened planed joints) that do not meet the required minimum depth shown on the drawings.
- F. Patching: Install specified Patching Mortar per manufacturer's recommendations.
REPAIRS TO DEFECTIVE CONCRETE WHICH AFFECT THE STRENGTH OF ANY STRUCTURAL CONCRETE MEMBER OR COMPONENT ARE SUBJECT TO APPROVAL BY THE ARCHITECT AND DSA.

3.12 CONCRETE TESTING

- A. Comply with CBC Section 1903A, 1905A.1.16, 1910A and 1705A.3 and as specified in B. below. Costs of tests will be borne by the Owner.
- B. Four identical cylinder samples for strength tests of each class of concrete placed each day shall be taken not less than once a day, or not less than once for each 50 cubic yards of concrete, or not less than once for each 2,000 square feet of surface area for slabs or walls. In addition, samples for strength tests for each class of concrete shall be taken for seven-day tests at the beginning of the concrete work or whenever the mix or aggregate is changed.
- C. Strength tests will be conducted by the Testing Lab on one cylinder at seven (7) days and two cylinders at twenty-eight (28) days. The fourth remaining cylinder will be available for testing at fifty-six (56) days if the 28-day cylinder test results do not meet the required design strength.
- D. On a given project, if the total volume of concrete is such that the frequency of testing required by paragraph B. above would provide less than five strength tests for a given class of concrete, tests shall be made from at least five randomly selected batches or from each batch if fewer than five batches are used.
- E. Cost of retests and coring due to low strength or defective concrete will be paid by Owner and back-charged to the Contractor.
- F. Each truck shall be tested for slump before concrete is placed.

3.13 REMOVAL OF FORMS

- A. Remove without damage to concrete surfaces.
- B. Sequence and timing of form removal shall insure complete safety of concrete structure.
- C. Forms shall remain in place for not less than the following periods of time. These periods represent cumulative number of days during which temperature of air in contact with concrete is 60 degrees F and above.
 - 1. Vertical forms of foundations, walls and all other forms not covered below: 5 days.
 - 2. Slab edge screeds or forms: 7 days.
 - 3. Concrete columns and beam soffits: 28 days.
- D. Concrete shall not be subjected to superimposed loads (structure or construction equipment) until it has attained its full design strength and not for a period of at least 21 days after placing. Concrete systems shall not be subjected to construction loads in excess of design loads.

3.14 CLEANING

- A. Upon completion of work of this Section promptly remove from the working area all scraps, debris and surplus material of this Section.
- B. Clean excess material from surface of all concrete walks and utility structures.
- C. Power wash all concrete surfaces to remove stains, dried mud, tire marks, and rust spots.

END OF SECTION 32 16 00

SECTION 32 31 13
CHAIN LINK FENCES AND GATES

PART 1 – GENERAL

1.01 SUMMARY

- A. Furnish all labor, materials, equipment, facilities, transportation and services to complete all chain link fencing installations and related work as shown on the Drawings and/or specified herein including:
 - 1. Galvanized chain link fabric, posts, gates, hardware, and related appurtenances.
 - 2. Chain link fence with integrally woven privacy plastic "slats".
 - 3. Concrete footings.

1.02 RELATED SECTIONS

- A. The Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.03 REFERENCES

- A. ANSI/ASTM A53/A53M-04a Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless
- B. ANSI/ASTM A123/A123M-02 Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
- C. ANSI/ASTM A123 / A123M-09 - Zinc (Hot Dip Galvanized) Coatings on Iron and Steel Products.
- D. ANSI/ASTM F567- 07 - Installation of Chain Link Fence.
- E. ANSI/ASTM A153/A153M-04 Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware
- F. ASTM A153- A153M-09 - Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
- G. ASTM A392-03 Standard Specification for Zinc-Coated Steel Chain-Link Fence Fabric
- H. ASTM F1043 Standard Specification for Strength and Protective Coatings on Steel Industrial Chain Link Fence Framework
- I. ASTM F1083 Standard Specification for Pipe, Steel, Hot-Dipped Zinc-Coated (Galvanized) Welded, for Fence Structures
- J. ASTM A500 (HSS) Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes
- K. ASTM C94 / C94M – 09a - Ready-mixed Concrete.

- L. Chain Link Fence Manufacturers' Institute (CLFMI) - Product Manual.
- M. Industrial Steel Guide for Fence, Rails, Posts, Gates and Accessories

1.04 SYSTEM DESCRIPTION

- A. Fence Height: 6'-0" and 8'-0" as indicated on the Drawings
- B. Line Post Spacing: At intervals not exceeding 8 feet.

1.05 QUALITY ASSURANCE

- A. Manufacturer: Company specializing in manufacturing the products specified in this section with minimum three years experience.
- B. Installer: Company specializing in installations of chain-link fencing with a minimum of five years of experience. If any welding is required provide welders' certificates, verifying AWS qualification within the previous 12 months.

1.06 FIELD MEASUREMENTS

- A. Verify field measurements are as indicated on shop drawings.

1.07 SUBMITTALS

- A. Product Data: Submit manufacturer's descriptive literature and/or standard catalog "cut-sheets" of all materials, coatings, fittings and equipment proposed to be furnished and installed under this portion of the work. Include the manufacturer's name and catalog number for each item where applicable. Clearly annotate (star or asterisk-in black ink) which portions of "cut-sheets" are applicable if more than one product is shown.
- B. Shop Drawings: Submit complete Shop Drawings for all different types and sizes of backstop unit(s), gates and fencing systems.
 - 1. Shop Drawings shall include, but may not be limited to:
 - b. All information regarding clearances, connections, components and any miscellaneous related appurtenances (such as wood baseboards at backstops, locking mechanisms etc.).
 - c. Concrete footing and reinforcement information.
- C. Installation Instructions and/or Drawings: Submit as applicable.

1.08 SEQUENCE AND SCHEDULING

- A. Contractor shall coordinate construction timing of all chain link fencing and related work with installation of concrete, paving and other site related work.

1.09 WARRANTY:

- A. Manufacture of slats to provide a 25-year warranty against color fading and breakage of slats.

PART 2 – PRODUCTS

2.01 MATERIALS: General. Conform to CLFMI Product Manual

- A. Fabric:
 - 1. Non-Slatted Fabric: Standard Industrial grade, 2" mesh, 9-gauge zinc coated steel wire, top selvage knuckled tight, bottom selvage knuckled end closed.
- B. Selvage: Knuckled finish top and bottom.
- C. Steel Fabric: Comply with Chain Link Fence Manufacturers Institute (CLFMI) Product Manual. Furnish one-piece fabric widths for fencing up to 16 feet high. Wire sizes includes zinc coating.
- D. Galvanized Wire: Zinc coated wire-ASTM A 392, Class 1, with not less than 1.2 oz. zinc per sq. ft.
- E. Framing:
 - 1. Strength requirements for posts and rails shall conform to ASTM F 1043.
 - 2. Pipe shall be straight, true to section, material, and sizes specified, and shall conform to the following weights per foot:

<u>NPS in inches</u>	<u>Outside Diameter (OD) in inches</u>	<u>Type I Steel</u>	<u>Type II Steel</u>
1	1.315	1.68	1.35
1.25	1.660 (1-5/8")	2.27	1.84
1.5	1.900 (2")	2.72	2.28
2	2.375 (2-1/2")	3.65	3.12
2.5	2.875 (3")	5.79	4.64
3	3.500	7.58	5.71
3.5	4.000	9.11	6.56

<u>NPS in inches</u>	<u>Outside Diameter (OD) in inches</u>	<u>Type I Steel</u>	<u>Type II Steel</u>
4	4.500	10.79	---
6	6.625	18.97	---
8	8.625	28.55	---

- F. Steel Framework:
 - 1. Posts, Rails and Braces:
 - a. Type I Steel Pipe: Hot-dipped galvanized steel pipe conforming to ASTM F 1083, plain ends, standard weight (WT40) with not less than 1.8 oz. zinc per sq. ft. of surface area coated.
 - b. Type II pipe: not applicable.

- c. Finish: Galvanized.
- 2. End, corner, and pull posts for following fabric heights:
 - a. 6 feet to 10 feet: 2.875" OD (3" OD) (with privacy slats provide 3.5" OD)
- 3. Line or intermediate posts for following fabric heights:
 - a. 6 feet to 8 feet: 2.375" OD (2-1/2" OD) (with privacy slats provide 3" OD)
- 4. Top, Bottom and Horizontal Intermediate Rails:
 - a. Top, bottom and horizontal intermediate rails (as applicable) shall be 1.66" OD (1-5/8"OD)
- F. Concrete: ASTM C94 / C94M-09a; Portland Cement, 2,500 p.s.i. strength at 28 days, 3-inch slump; one-inch maximum sized coarse aggregate.
- G. Fittings and Accessories
 - 1. Material: Comply with ASTM F 626. Mill-finished aluminum or galvanized iron or steel, to suit manufacturer's standards.
 - a. Zinc Coating: Unless specified otherwise, steel fence fittings and accessories shall be galvanized in accordance with ASTM A 153, with zinc weights per Table 1 of ASTM A153.
 - 2. Tension Wire: 7-gauge (.177-inch diameter) steel single strand with black vinyl coating.
 - 3. Tie Wires: 12-gauge (.148-inch diameter) aluminum alloy steel wire with black vinyl coating.
 - 4. Caps: Cast steel galvanized; sized to post diameter, set screw retainer.
 - a. Provide weather tight closure cap for each post. Provide line post caps with loop to receive wire or top rail with finish to match fabric.
 - b. Tension Clips: Minimum 3/4-inch-wide 12-gauge (.105 inch) thick with finish to match fabric.
 - 5. Truss Rods: Hot dipped galvanized steel rods with a minimum diameter of 5/16" (7.9 mm).
 - 6. Fittings: Sleeves, bands, clips, rail ends, tension bars, fasteners and fittings; steel galvanized and powder coated black.
 - 7. Slats: At all fabric locations provide woven vinyl privacy slats. Color to be selected by Architect from manufacturer's full range of standard colors.
- H. Finishes

1. Fence posts, enclosures, other structural components: Galvanized to ANSI/ASTM A123 / A123M - 09; 1.2 oz./sq. ft. and powder coated.
2. Fabric: Galvanized.
3. Hardware: Galvanized to ASTM A153 / A153M-09, 1.2 oz./sq. ft. coating and powder coated to match vinyl color.

2.02 WARRANTY:

- A. Manufacture of slats to provide a 25-year warranty against color fading and breakage of slats.

PART 3 – EXECUTION

3.01 PREPARATION

- A. Prior to excavation, layout all fencing locations for review and acceptance by Owner's Representative.

3.02 INSTALLATION

- A. Conform to layout shown on Drawings, except as modified by the Owner's Representative.
- B. Erect fencing in strict conformance with reviewed and accepted Drawings, Shop Drawings, and manufacturer's recommendations.
- C. Install new footings as indicated herein – Top of footing shall be 2" below finish grade where paving does not occur..
- D. Posts shall be installed vertical and plumb.
- E. General: Install fence in compliance with ASTM F 567. Do not begin installation and erection before final grading is completed, unless otherwise permitted.
- F. Excavation & Footings: Drill or hand-excavate holes for posts to diameter and spacing indicated in firm, undisturbed or compacted soil.
 1. Unless noted otherwise, excavate holes for each post to minimum diameter of 4 times largest cross section of post, but never less than 12" diameter.
 2. Unless noted otherwise, excavate hole depths approximately 3 inches lower than post bottom, with bottom of posts set not less than 36 inches below finish grade surface.
- G. Setting Posts: Center and align posts in holes 3 inches above bottom of excavation. Space chain link posts maximum 8 feet o.c. unless noted otherwise. Surface mount posts with mounting plates where indicated. Fasten with lag bolts and shields. Set intermediate, terminal and gate posts plumb in concrete footings. Slope top of concrete for water runoff.
- H. Top Rails: Run rail continuously through line posts caps, bending to radius for curved runs and at other posts termination into rail end attached to posts or post caps fabricated to receive rail. Provide expansion couplings as recommended by fencing manufacturer.

Provide top rail through line post tops and splice with 6-inch-long rail sleeves.

- I. Center and Bottom Rails: Install bottom rails between posts with fittings and accessories as shown in Drawings (as applicable). Install center and bottom brace rail at corner gate leaves and all-around enclosures where shown on drawings.
- J. Brace Assemblies: Install braces so posts are plumb when diagonal rod is under proper tension. Install center brace for all fences higher than 6 feet.
- K. Fabric: Leave approximately 2 inches between finish grade and bottom selvages unless otherwise indicated. Pull fabric taut and tie to posts, rails, and tension wires. Install fabric on infield or primary use side of fence (unless noted otherwise), and anchor to framework so that fabric remains in tension after pulling force is released.
 - 1. Fasten fabric with tie wires to top rail, line posts and bottom tension wire with tie wire at maximum 12 inches on centers.
 - 2. Attach fabric to end, corner and gate posts with tension bars and tension bar clips.
- L. Tension Bars: Provide one bar for each gate and end post, and two for each corner and pull post, except where fabric integrally woven into post. Thread through fabric, and secure to end, corner, pull, and gate posts with tension clips spaced not over fifteen (15) inches on center.
- M. Tie Wires: Use U-shaped wire of proper length to secure fabric firmly to posts and rails with ends twisted at least 2 full turns. Bend ends of wire to minimize hazard to persons or clothing. Tie fabrics to line posts with a minimum 4 ties, 15 inches maximum on center and to rails and braces 15 inches maximum on center.
- N. Fasteners: Install nuts for tension clips and hardware bolts on side of fence opposite fabric side. Peen ends of bolts or score threads to prevent removal of nuts. Cut all bolts within three threads of nut or less.
- O. Terminal and Gate Post:
 - 1. Line Terminal and Gate Post Footing Depth Below Finish Grade: 3 feet deep minimum and 4 times the diameter of the post or 12 inches minimum. Extend footing 2 inches above finished surface and slope for water run-off.
 - 2. Brace each gate and corner post to adjacent line post with horizontal center brace rail and diagonal truss rods. Install brace rail, one bay from end and gate post.
 - 3. Install bottom tension wire stretched taut between terminal posts.
 - 4. Do not swing gate from building wall; provide gate posts.
 - 5. Install gate with fabric to match fence. Install three hinges per leaf, latch, catches, retainer and locking clamp.
- P. Welding: All welds shall be shop fabricated prior to galvanizing unless otherwise acceptable to Owner's Representative. Any and all field welds shall be completed by a Certified Structural Welder and shall be "spray-galvanized" or otherwise treated subject to the discretion of the Owner's Representative.

1. All field welding to be performed by certified welder and all welds are to be ground down smooth.
 2. All areas of welds are to be thoroughly cleaned and treated with two coats of cold galvanized spray.
 3. All hinges shall be spot welded to the gate post.
- Q. All clamping bolts protruding from clamp shall be cut off flush to nut and exposed end of bolt shall be galvalumed. Galvanized acorn nut is also an acceptable means of protecting students from sharp edges.
- R. All fence post caps and backstop caps shall be spot welded to post.

3.03 ERECTION TOLERANCES

- A. Maximum variation from plumb: 1/8 inch.
- B. Maximum offset from true position: 3/8 inch.
- C. Components shall not infringe adjacent property lines.

END OF SECTION 32 31 13

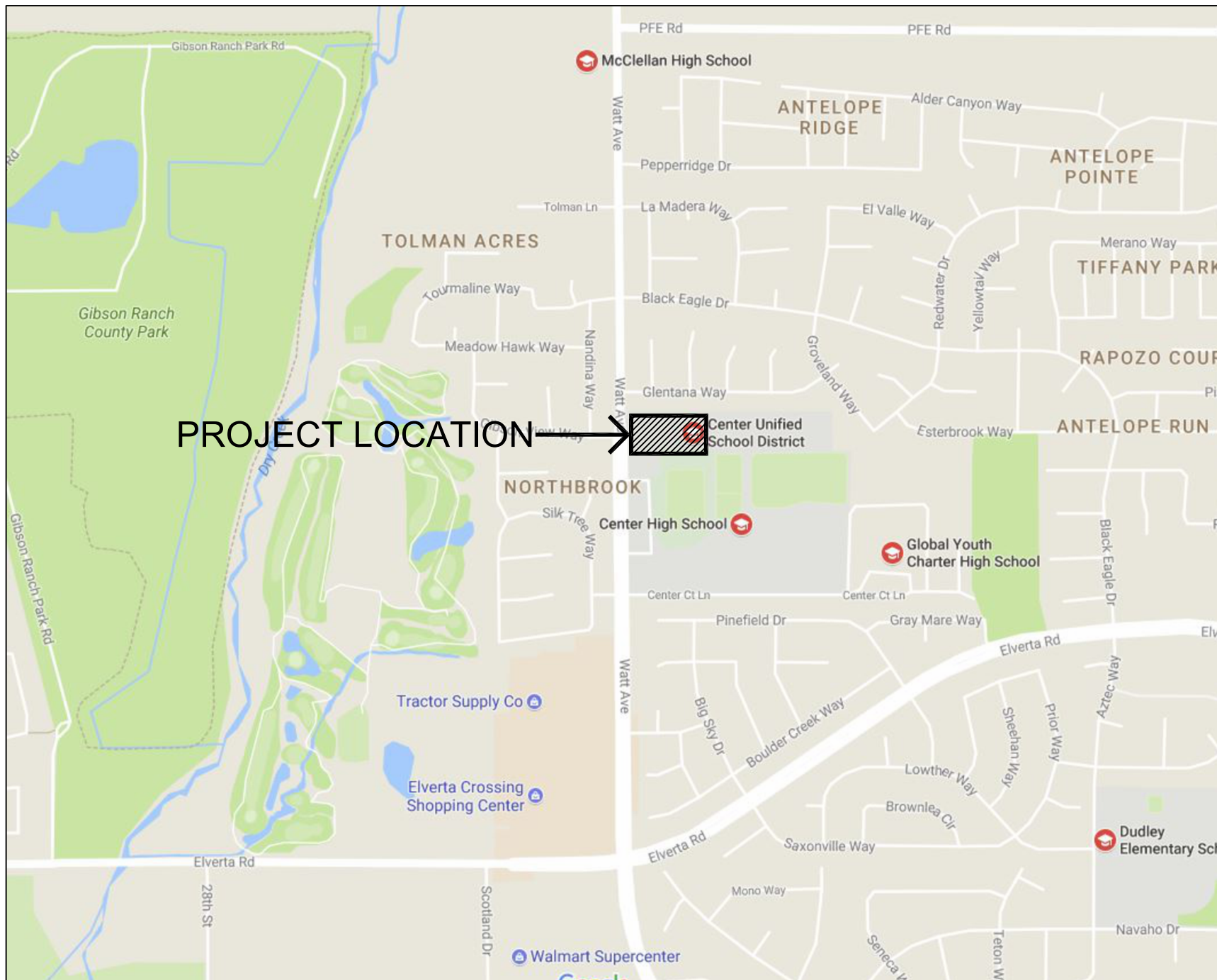

ONE AND ONE-HALF INCH = ONE FOOT
ONE INCH = ONE FOOT
THREE-QUARTERS INCH = ONE FOOT
ONE-HALF INCH = ONE FOOT
ONE-QUARTER INCH = ONE FOOT
ONE-EIGHTH INCH = ONE FOOT
ONE-SIXTEENTH INCH = ONE FOOT
ONE INCH = TWENTY FEET

CENTRAL FREEZER FACILITY

--- SITE DEVELOPMENT PACKAGE ---

8408 Watt Avenue, Antelope, California 95843

Center Joint Unified School District

APPLICABLE CODES			SCOPE OF WORK			VICINITY MAP			SHEET INDEX		
<div>ALL WORK SHALL CONFORM TO THE FOLLOWING AND ALL OTHER APPLICABLE CODES AND ORDINANCES:</div> <div>2022 CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE, PART 1, TITLE 24, C.C.R. 2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24, C.C.R. 2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24, C.C.R. 2022 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24, C.C.R. 2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24, C.C.R. 2022 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24, C.C.R. 2022 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24, C.C.R. 2022 CALIFORNIA GREEN CODE, PART 11, TITLE 24, C.C.R. 2022 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24, C.C.R. 2022 TITLE 19 C.C.R., PUBLIC SAFETY, DIVISION 1 STATE FIRE MARSHAL REGULATIONS.</div> <div>CONTRACTOR SHALL COMPLY WITH CFC CHAPTER 33 - FIRE SAFETY DURING DEMOLITION & CONSTRUCTION.</div>			<div>1. REMOVAL OF THREE EXISTING EXTERIOR UNIT FREEZERS, CONCRETE FOUNDATIONS, CONDENSERS, PIPING AND ELECTRICAL SERVICE.</div> <div>2. REMOVAL OF PORTION OF EXISTING AC PAVING AND SUBGRADE.</div> <div>3. PAD PREPARATION, EXCAVATION, GRADING AND INSTALLATION OF CONCRETE FOUNDATION AND INSULATED CONCRETE SLAB FOR NEW HIGH-BAY PALLET FREEZER / REFRIGERATOR - FREEZER BUILDING AND REFRIGERATION TO BE PROVIDED BY RMI / AIRDYNE AND ARE NOT A PART OF THIS SCOPE.</div> <div>4. CONCRETE HOUSEKEEPING PAD AND PRE-ENGINEERED FREESTANDING ALUMINUM SHADE STRUCTURE OVER CONDENSER EQUIPMENT</div> <div>5. PATCH AND REPAIR OF EXISTING AC PAVING AS REQUIRED TO ACCOMMODATE NEW WORK AND CONFORM WITH EXISTING GRADE.</div> <div>6. CHAINLINK FENCE WORK.</div> <div>7. ELECTRICAL SERVICE FOR NEW FREEZER UNIT AND CONNECTIONS OF NEW SERVICES TO FREEZER EQUIPMENT, INCLUDING LIGHTING, CONTROLS AND ALARMS.</div> <div>8. INSTALLATION OF CONDENSATE DRYWELLS AND CONNECTION TO FREEZER BUILDING POINTS OF CONNECTION.</div> <div>9. COORDINATION WITH FREEZER VENDOR AND THEIR ON-SITE INSTALLERS.</div> <div>10. MISCELLANEOUS ADDITIONAL SCOPE AS INDICATED IN THESE DRAWINGS AND THE SPECIFICATIONS.</div>			<div></div> <div>CENTER JOINT UNIFIED SCHOOL DISTRICT 8408 WATT AVENUE ANTELOPE, CA 9844</div> <div></div>					
ABBREVIATIONS			FEMA FLOOD ZONE			DEFERRED APPROVALS			SYMBOLS LEGEND		
<div><div><div>CL</div><div>Ø</div><div>#</div><div>(E)</div><div>AC/ A/C</div><div>A.C.C.</div><div>A.D.</div><div>A.F.F.</div><div>ALUM.</div><div>ASPH</div><div>BD.</div><div>BLDG.</div><div>BOT.</div><div>CAB.</div><div>C.B.</div><div>C.D.</div><div>C.G.</div><div>CJ</div><div>CL.G.</div><div>CLR.</div><div>C.M.U.</div><div>COL.</div><div>CONC.</div><div>CONT.</div><div>C.F.C.I.</div><div>CTR.</div><div>DEMO.</div><div>D.F.</div><div>DIA.</div><div>DIM.</div><div>D.S.</div><div>DTL.</div><div>DWG.</div><div>E.F.</div><div>EJ</div><div>EMERG.</div><div>ELEV.</div><div>E.W.C.</div></div><div><div>JT.</div><div>M.B.</div><div>M.H.</div><div>MTL.</div><div>(N)</div><div>N.I.C.</div><div>NO. or #</div><div>N.T.S.</div><div>O.C.</div><div>O.D.</div><div>O.F.C.I.</div><div>O.F.O.I.</div><div>O.F.S.</div><div>OPNG.</div><div>OPP.</div><div>OSB</div><div>P.L.</div><div>PL.LAM.</div><div>PLYWD.</div><div>PREP.</div><div>P.M.</div><div>P.P.</div><div>PTN.</div><div>P.V.</div><div>R.</div><div>R.D.</div><div>REF.</div><div>REQ'D.</div><div>R.H.</div><div>R.W.L.</div><div>S.C.</div><div>SIM.</div><div>STOR.</div><div>SPEC.</div><div>S.S.</div><div>STD.</div><div>STL.</div><div>STR.</div><div>SUSP.</div><div>SYM.</div><div>T.B.</div><div>TAC</div><div>TOC</div><div>TYP.</div><div>U.O.N.</div><div>U.V.</div><div>VERT.</div><div>V.H.</div><div>VTR</div><div>W/</div><div>W.C.</div><div>WD.</div><div>W/O</div><div>W.W.F.</div><div>W.V.</div><div>NEW</div><div>NOT IN CONTRACT</div><div>NUMBER</div><div>NOT TO SCALE</div><div>ON CENTER</div><div>OUTSIDE DIAMETER (DIM.)</div><div>OWNER FURNISHED</div><div>OWNER FURNISHED</div><div>OWNER INSTAL.</div><div>OVER FLOW SCUPPER</div><div>OPPOSITE</div><div>ORIENTED STRAND BOARD</div><div>PROPERTY LINE</div><div>PLASTIC LAMINATE</div><div>PLYWOOD</div><div>PREPARATION</div><div>PRESSED METAL</div><div>PIPE PENTRATION</div><div>PARTITION</div><div>PIPE VENT</div><div>RISER/RADIUS</div><div>ROOF DRAIN</div><div>ROOF EXHAUST FAN</div><div>REQUIRED</div><div>ROOF HATCH</div><div>RAIN WATER LEADER</div><div>SOLID CORE</div><div>SIMILAR</div><div>STORAGE</div><div>SPECIFICATION</div><div>STAINLESS STEEL</div><div>STANDARD</div><div>STEEL</div><div>STRUCTURAL</div><div>SUSPENDED</div><div>SYMMETRICAL</div><div>TACK BOARD</div><div>TOP OF AC</div><div>TOP OF CONCRETE</div><div>TYPICAL</div><div>UNLESS OTHERWISE NOTED</div><div>UNIT VENTILATOR</div><div>VERTICAL</div><div>VENT HOOD</div><div>VENT THROUGH ROOF</div><div>WITH</div><div>WATER CLOSET</div><div>WOOD</div><div>WITHOUT</div><div>WELDED WIRE FABRIC</div><div>WATER VALVE</div></div></div>			<div>F.I.R.M. MAP #: 06067C0060H</div> <div>F.I.R.M. PANEL #: 0060H (60 OF 705)</div> <div>MAP DATE: AUGUST 16, 2012</div> <div>FLOOD ZONE: ZONE 'X'</div>			NONE			SEE INDIVIDUAL SHEETS FOR ADDITIONAL SHEET SPECIFIC SYMBOLS/ LEGENDS NOT INDICATED HERE.		
			NONE			NONE			NONE		
ABBREVIATIONS			FEMA FLOOD ZONE			DEFERRED APPROVALS			SYMBOLS LEGEND		
<div><div><div>CL</div><div>Ø</div><div>#</div><div>(E)</div><div>AC/ A/C</div><div>A.C.C.</div><div>A.D.</div><div>A.F.F.</div><div>ALUM.</div><div>ASPH</div><div>BD.</div><div>BLDG.</div><div>BOT.</div><div>CAB.</div><div>C.B.</div><div>C.D.</div><div>C.G.</div><div>CJ</div><div>CL.G.</div><div>CLR.</div><div>C.M.U.</div><div>COL.</div><div>CONC.</div><div>CONT.</div><div>C.F.C.I.</div><div>CTR.</div><div>DEMO.</div><div>D.F.</div><div>DIA.</div><div>DIM.</div><div>D.S.</div><div>DTL.</div><div>DWG.</div><div>E.F.</div><div>EJ</div><div>EMERG.</div><div>ELEV.</div><div>E.W.C.</div></div><div><div>JT.</div><div>M.B.</div><div>M.H.</div><div>MTL.</div><div>(N)</div><div>N.I.C.</div><div>NO. or #</div><div>N.T.S.</div><div>O.C.</div><div>O.D.</div><div>O.F.C.I.</div><div>O.F.O.I.</div><div>O.F.S.</div><div>OPNG.</div><div>OPP.</div><div>OSB</div><div>P.L.</div><div>PL.LAM.</div><div>PLYWD.</div><div>PREP.</div><div>P.M.</div><div>P.P.</div><div>PTN.</div><div>P.V.</div><div>R.</div><div>R.D.</div><div>REF.</div><div>REQ'D.</div><div>R.H.</div><div>R.W.L.</div><div>S.C.</div><div>SIM.</div><div>STOR.</div><div>SPEC.</div><div>S.S.</div><div>STD.</div><div>STL.</div><div>STR.</div><div>SUSP.</div><div>SYM.</div><div>T.B.</div><div>TAC</div><div>TOC</div><div>TYP.</div><div>U.O.N.</div><div>U.V.</div><div>VERT.</div><div>V.H.</div><div>VTR</div><div>W/</div><div>W.C.</div><div>WD.</div><div>W/O</div><div>W.W.F.</div><div>W.V.</div><div>NEW</div><div>NOT IN CONTRACT</div><div>NUMBER</div><div>NOT TO SCALE</div><div>ON CENTER</div><div>OUTSIDE DIAMETER (DIM.)</div><div>OWNER FURNISHED</div><div>OWNER FURNISHED</div><div>OWNER INSTAL.</div><div>OVER FLOW SCUPPER</div><div>OPPOSITE</div><div>ORIENTED STRAND BOARD</div><div>PROPERTY LINE</div><div>PLASTIC LAMINATE</div><div>PLYWOOD</div><div>PREPARATION</div><div>PRESSED METAL</div><div>PIPE PENTRATION</div><div>PARTITION</div><div>PIPE VENT</div><div>RISER/RADIUS</div><div>ROOF DRAIN</div><div>ROOF EXHAUST FAN</div><div>REQUIRED</div><div>ROOF HATCH</div><div>RAIN WATER LEADER</div><div>SOLID CORE</div><div>SIMILAR</div><div>STORAGE</div><div>SPECIFICATION</div><div>STAINLESS STEEL</div><div>STANDARD</div><div>STEEL</div><div>STRUCTURAL</div><div>SUSPENDED</div><div>SYMMETRICAL</div><div>TACK BOARD</div><div>TOP OF AC</div><div>TOP OF CONCRETE</div><div>TYPICAL</div><div>UNLESS OTHERWISE NOTED</div><div>UNIT VENTILATOR</div><div>VERTICAL</div><div>VENT HOOD</div><div>VENT THROUGH ROOF</div><div>WITH</div><div>WATER CLOSET</div><div>WOOD</div><div>WITHOUT</div><div>WELDED WIRE FABRIC</div><div>WATER VALVE</div></div></div>			<div>F.I.R.M. MAP #: 06067C0060H</div> <div>F.I.R.M. PANEL #: 0060H (60 OF 705)</div> <div>MAP DATE: AUGUST 16, 2012</div> <div>FLOOD ZONE: ZONE 'X'</div>			NONE			SEE INDIVIDUAL SHEETS FOR ADDITIONAL SHEET SPECIFIC SYMBOLS/ LEGENDS NOT INDICATED HERE.		
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<div><div><div>CL</div><div>Ø</div><div>#</div><div>(E)</div><div>AC/ A/C</div><div>A.C.C.</div><div>A.D.</div><div>A.F.F.</div><div>ALUM.</div><div>ASPH</div><div>BD.</div><div>BLDG.</div><div>BOT.</div><div>CAB.</div><div>C.B.</div><div>C.D.</div><div>C.G.</div><div>CJ</div><div>CL.G.</div><div>CLR.</div><div>C.M.U.</div><div>COL.</div><div>CONC.</div><div>CONT.</div><div>C.F.C.I.</div><div>CTR.</div><div>DEMO.</div><div>D.F.</div><div>DIA.</div><div>DIM.</div><div>D.S.</div><div>DTL.</div><div>DWG.</div><div>E.F.</div><div>EJ</div><div>EMERG.</div><div>ELEV.</div><div>E.W.C.</div></div><div><div>JT.</div><div>M.B.</div><div>M.H.</div><div>MTL.</div><div>(N)</div><div>N.I.C.</div><div>NO. or #</div><div>N.T.S.</div><div>O.C.</div><div>O.D.</div><div>O.F.C.I.</div><div>O.F.O.I.</div><div>O.F.S.</div><div>OPNG.</div><div>OPP.</div><div>OSB</div><div>P.L.</div><div>PL.LAM.</div><div>PLYWD.</div><div>PREP.</div><div>P.M.</div><div>P.P.</div><div>PTN.</div><div>P.V.</div><div>R.</div><div>R.D.</div><div>REF.</div><div>REQ'D.</div><div>R.H.</div><div>R.W.L.</div><div>S.C.</div><div>SIM.</div><div>STOR.</div><div>SPEC.</div><div>S.S.</div><div>STD.</div><div>STL.</div><div>STR.</div><div>SUSP.</div><div>SYM.</div><div>T.B.</div><div>TAC</div><div>TOC</div><div>TYP.</div><div>U.O.N.</div><div>U.V.</div><div>VERT.</div><div>V.H.</div><div>VTR</div><div>W/</div><div>W.C.</div><div>WD.</div><div>W/O</div><div>W.W.F.</div><div>W.V.</div><div>NEW</div><div>NOT IN CONTRACT</div><div>NUMBER</div><div>NOT TO SCALE</div><div>ON CENTER</div><div>OUTSIDE DIAMETER (DIM.)</div><div>OWNER FURNISHED</div><div>OWNER FURNISHED</div><div>OWNER INSTAL.</div><div>OVER FLOW SCUPPER</div><div>OPPOSITE</div><div>ORIENTED STRAND BOARD</div><div>PROPERTY LINE</div><div>PLASTIC LAMINATE</div><div>PLYWOOD</div><div>PREPARATION</div><div>PRESSED METAL</div><div>PIPE PENTRATION</div><div>PARTITION</div><div>PIPE VENT</div><div>RISER/RADIUS</div><div>ROOF DRAIN</div><div>ROOF EXHAUST FAN</div><div>REQUIRED</div><div>ROOF HATCH</div><div>RAIN WATER LEADER</div><div>SOLID CORE</div><div>SIMILAR</div><div>STORAGE</div><div>SPECIFICATION</div><div>STAINLESS STEEL</div><div>STANDARD</div><div>STEEL</div><div>STRUCTURAL</div><div>SUSPENDED</div><div>SYMMETRICAL</div><div>TACK BOARD</div><div>TOP OF AC</div><div>TOP OF CONCRETE</div><div>TYPICAL</div><div>UNLESS OTHERWISE NOTED</div><div>UNIT VENTILATOR</div><div>VERTICAL</div><div>VENT HOOD</div><div>VENT THROUGH ROOF</div><div>WITH</div><div>WATER CLOSET</div><div>WOOD</div><div>WITHOUT</div><div>WELDED WIRE FABRIC</div><div>WATER VALVE</div></div></div>			<div>F.I.R.M. MAP #: 06067C0060H</div> <div>F.I.R.M. PANEL #: 0060H (60 OF 705)</div> <div>MAP DATE: AUGUST 16, 2012</div> <div>FLOOD ZONE: ZONE 'X'</div>			NONE			SEE INDIVIDUAL SHEETS FOR ADDITIONAL SHEET SPECIFIC SYMBOLS/ LEGENDS NOT INDICATED HERE.		
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CENTRAL FREEZER
SITE DEVELOPMENT PACKAGE

8408 Watt Avenue
Antelope, CA 95843


Center Joint Unified School District

CONSULTANT

nacht&lewis

600 Q Street, Suite 100
Sacramento, CA 95811
www.nachtlewis.com
916.329.4000

ARCHITECT



REVISIONS

NO.	DESCRIPTION	DATE

DATE: 04/12/2024

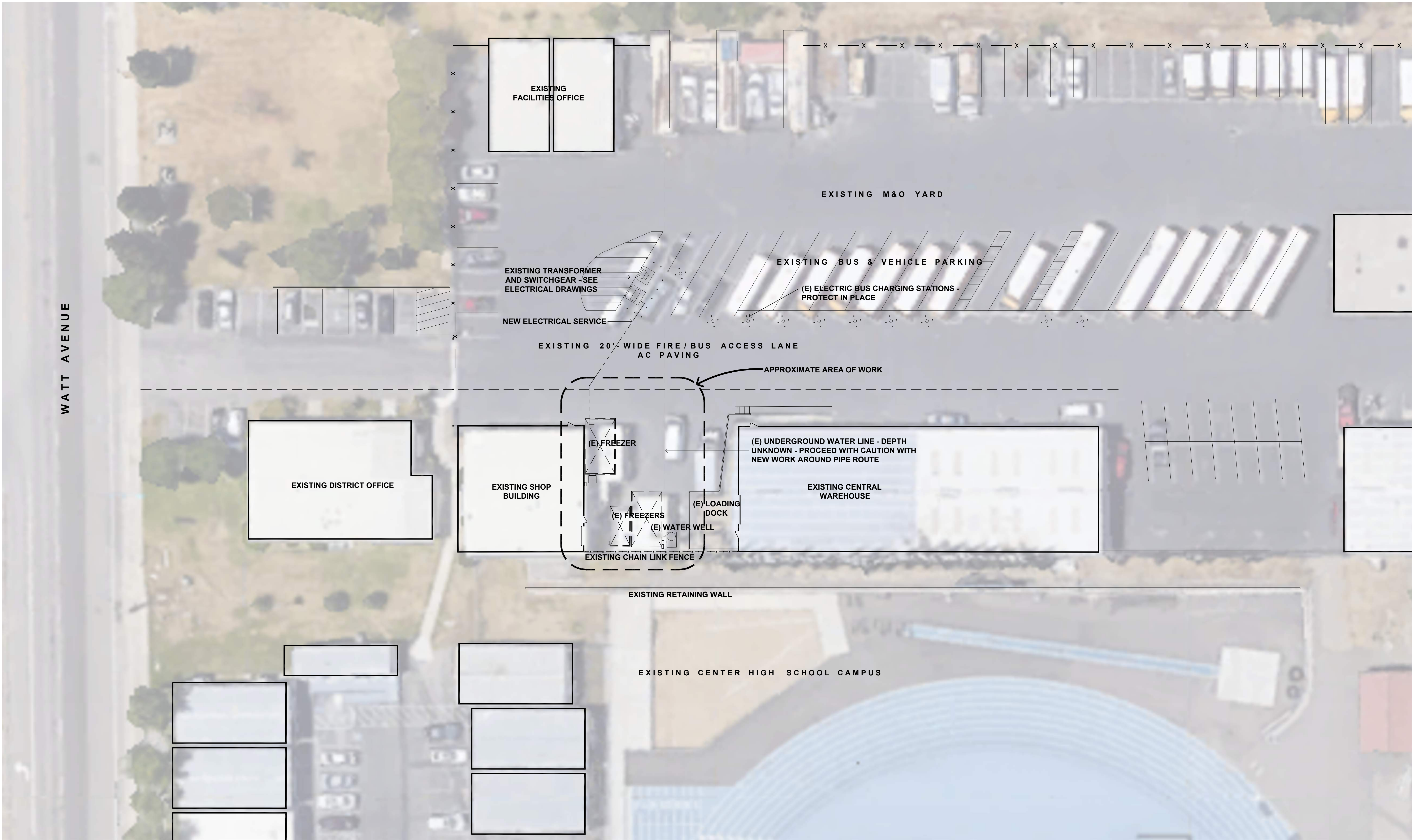
JOB NO.: Y2407.00

SHEET TITLE

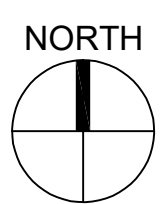
TITLE SHEET

SHEET NO. T0

ONE INCH = TWENTY FEET
ONE SIXTEENTH INCH = ONE FOOT
ONE EIGHTH INCH = ONE FOOT
ONE QUARTER INCH = ONE FOOT
ONE HALF INCH = ONE FOOT
THREE QUARTERS INCH = ONE FOOT
ONE INCH = ONE FOOT
ONE AND ONE HALF INCH = ONE FOOT



1 OVERALL SITE PLAN
SCALE: 1/16" = 1'-0"



CENTRAL FREEZER

SITE DEVELOPMENT PACKAGE

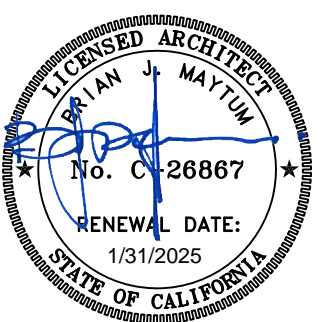
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JOB NO.: Y2407.00

SHEET TITLE

OVERALL
SITE PLAN

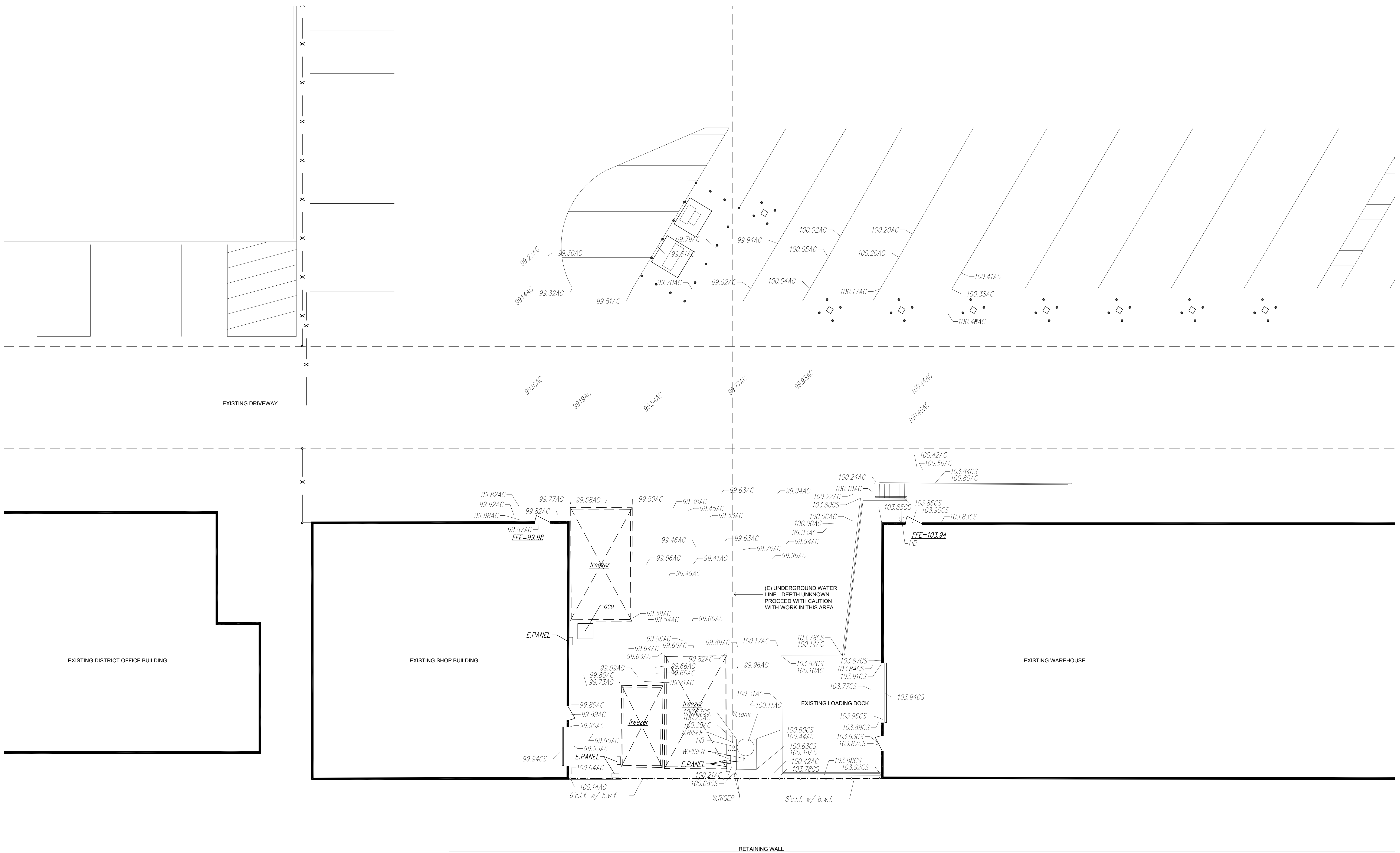
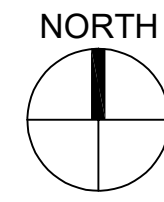
SHEET NO.

A1

ONE INCH = TWENTY FEET
ONE SIXTEENTH INCH = ONE FOOT
ONE EIGHTH INCH = ONE FOOT
ONE QUARTER INCH = ONE FOOT
ONE HALF INCH = ONE FOOT
THREE QUARTERS INCH = ONE FOOT
ONE INCH = ONE FOOT
ONE AND ONE HALF INCH = ONE FOOT

1

EXISTING TOPOGRAPHIC SURVEY
SCALE: 1/8" = 1'-0"



CENTRAL FREEZER
SITE DEVELOPMENT PACKAGE

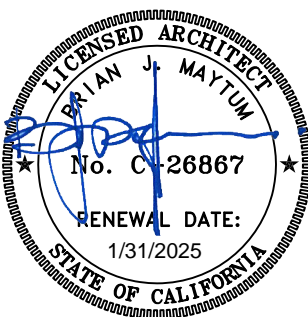
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ARCHITECT

REVISIONS

NO.	DESCRIPTION	DATE

DATE: 04/12/2024

JOB NO.: Y2407.00

SHEET TITLE

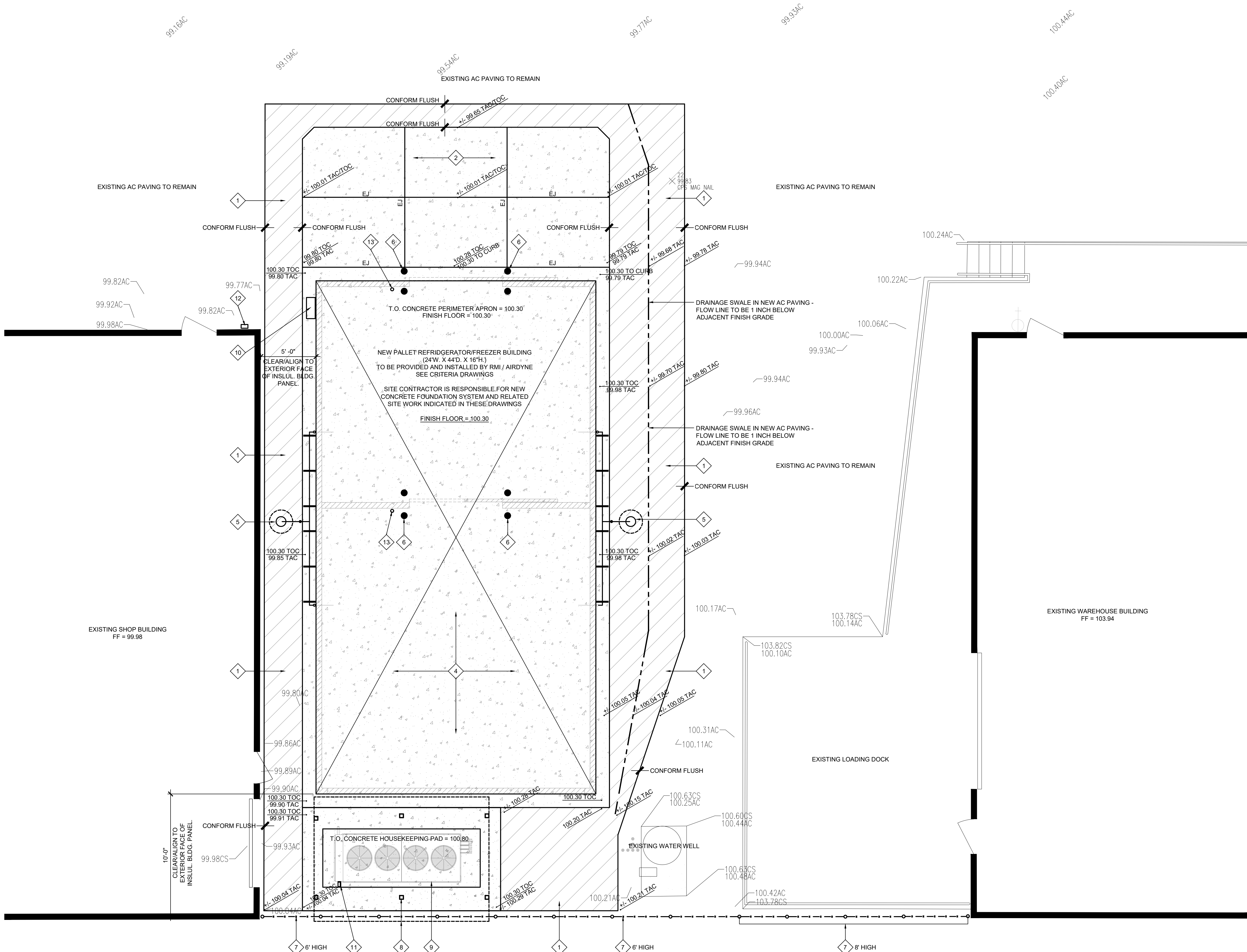
EXISTING
TOPOGRAPHIC
SURVEY

SHEET NO.

A2

ONE AND ONE-HALF INCH = ONE FOOT
ONE INCH = ONE FOOT
THREE-QUARTERS INCH = ONE FOOT
ONE-HALF INCH = ONE FOOT
ONE-QUARTER INCH = ONE FOOT
ONE-EIGHTH INCH = ONE FOOT
ONE-SIXTEENTH INCH = ONE FOOT
ONE INCH = TWENTY FEET

1 ENLARGED SITE PLAN
SCALE: 1/4" = 1'-0"



- KEYNOTES:**
THESE NOTES APPLY TO THIS SHEET ONLY.
- 2.5" AC PAVING OVER 8" CLEAN COMPACTED AGGREGATE BASE OVER COMPACTED EXISTING SUBGRADE. PROVIDE SEAL COAT AND LAP OVER EXISTING MINIMUM 12" - SEE SPEC. SECTION 32 12 00.
 - 6" PCC PAVING WITH NO. 4 REINFORCING BARS AT 18" O.C. EACH WAY OVER 12" CLEAN COMPACTED AGGREGATE BASE OVER COMPACTED EXISTING SUBGRADE. DOWEL INTO NEW FREEZER BUILDING FOUNDATION WITH 12" X NO. 4 DOWELS AT 24" O.C. - SEE SPEC. SECTION 32 16 00.
 - RAISED CONCRETE HOUSEKEEPING PAD. MINIMUM 6" THICK ABOVE ADJACENT CONCRETE/AC GRADE WITH NO. 4 REINFORCING BARS AT 18" O.C. EACH WAY. COORDINATE SIZE AND LOCATION WITH RMI/ARDYNE. SEE DETAIL 17/A5 AND SPEC. SECTION 03 30 00.
 - INSULATED CONCRETE SLAB AND FOUNDATION SYSTEM - SEE DETAIL 9/A5 AND SPEC. SECTION 03 30 00.
 - CONDENSATE DRY WELL - SITE CONTRACTOR TO PROVIDE WELL AND COPPER CONDENSATE LINES FROM WELL TO BUILDING CONDENSATE POINT OF CONNECTION. ANY PIPING RUNNING ALONG GRADE SHALL BE FULLY SUPPORTED BY PRE-MANUFACTURED PIPE SUPPORTS EQUAL TO B-LINE DRI DURA-BLOCK OR SIMILAR AND AS REQUIRED TO MAINTAIN PIPE SLOPE - SEE DETAIL 21/A5.
 - INTERIOR AND EXTERIOR CONCRETE FILLED STEEL PIPE BOLLARD (TYPICAL OF 8) - SEE DETAILS 14 & 18/A5.
 - 8' TALL CHAIN LINK FENCE WITH VINYL PRIVACY SLATS. EXTEND TO 8' TALL AT LOCATION OF EXISTING LOADING DOCK TO MATCH ORIGINAL CONFIGURATION - SEE SPEC. SECTION 32 31 13.
 - PRE-ENGINEERED / PRE-MANUFACTURED FREE STANDING ALUMINUM SHADE STRUCTURE - SEE DESIGN CRITERIA NOTES ON DETAIL 15/A5.
 - CONDENSER UNIT PROVIDED AND INSTALLED BY RMI / AIRDYNE. SEE CRITERIA REFERENCE DRAWINGS X1 AND R-1 AND SPEC. SECTION 11 40 00 FOR BASIS OF DESIGN.
 - PRIMARY ELECTRICAL SERVICE PANEL - SEE ELECTRICAL DRAWINGS.
 - HVAC CONDENSER UNIT ELECTRICAL DISCONNECT - SEE ELECTRICAL DRAWINGS - SITE CONTRACTOR TO PROVIDE ALL REQUIRED BRACKETS TO INSTALL DISCONNECT TO CONDENSER AS REQUIRED TO ROTATE DISCONNECT 90 DEGREES TO ACHIEVE REQUIRED CLEAR SPACE IN FRONT OF DISCONNECT.
 - DOOR POSITION AND TEMPERATURE ALARM JUNCTION BOX - SEE ELECTRICAL DRAWINGS. UNDERFLOOR CONDUIT STUB UP FOR DOOR POSITION AND TEMPERATURE ALARM CIRCUITS. ROUTE TO NEW JUNCTION BOX ON ADJACENT BUILDING - SEE ELECTRICAL DRAWINGS.

- GENERAL SHEET NOTES:**
SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- VERIFY EXISTING GRADES AND PROPOSED NEW GRADES ONCE EXISTING AC PAVING AND FREEZER FOUNDATIONS HAVE BEEN REMOVED. COORDINATE WITH ARCHITECT FOR ANY POTENTIAL EXCESSIVE SLOPES GREATER THAN 1:15 THAT MAY RESULT. IF REQUIRED, THE REMOVAL OF ADDITIONAL EXISTING AC PAVING MAY BE REQUIRED TO CONTROL SLOPE.

- ALUMINUM SHADE STRUCTURE BASIS OF DESIGN:**
SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- SEE DETAIL 15/A5 FOR DESIGN CRITERIA FOR NEW PRE-ENGINEERED, FREESTANDING ALUMINUM SHADE STRUCTURE. SITE CONTRACTOR SHALL PROVIDE COMPLETE AND INSTALLED ASSEMBLY MEETING CRITERIA DESCRIBED HEREIN.

CENTRAL FREEZER
SITE DEVELOPMENT PACKAGE

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CONSULTANT
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ARCHITECT

REVISIONS		
NO.	DESCRIPTION	DATE

DATE: 04/12/2024
JOB NO.: Y2407.00
SHEET TITLE

ENLARGED
SITE PLAN

SHEET NO.
A4

ONE AND ONE-HALF INCH = ONE FOOT
ONE INCH = ONE FOOT
THREE-QUARTERS INCH = ONE FOOT
ONE-HALF INCH = ONE FOOT
ONE-QUARTER INCH = ONE FOOT
ONE-EIGHTH INCH = ONE FOOT
ONE-SIXTEENTH INCH = ONE FOOT
ONE INCH = TWENTY FEET

24 NOT USED

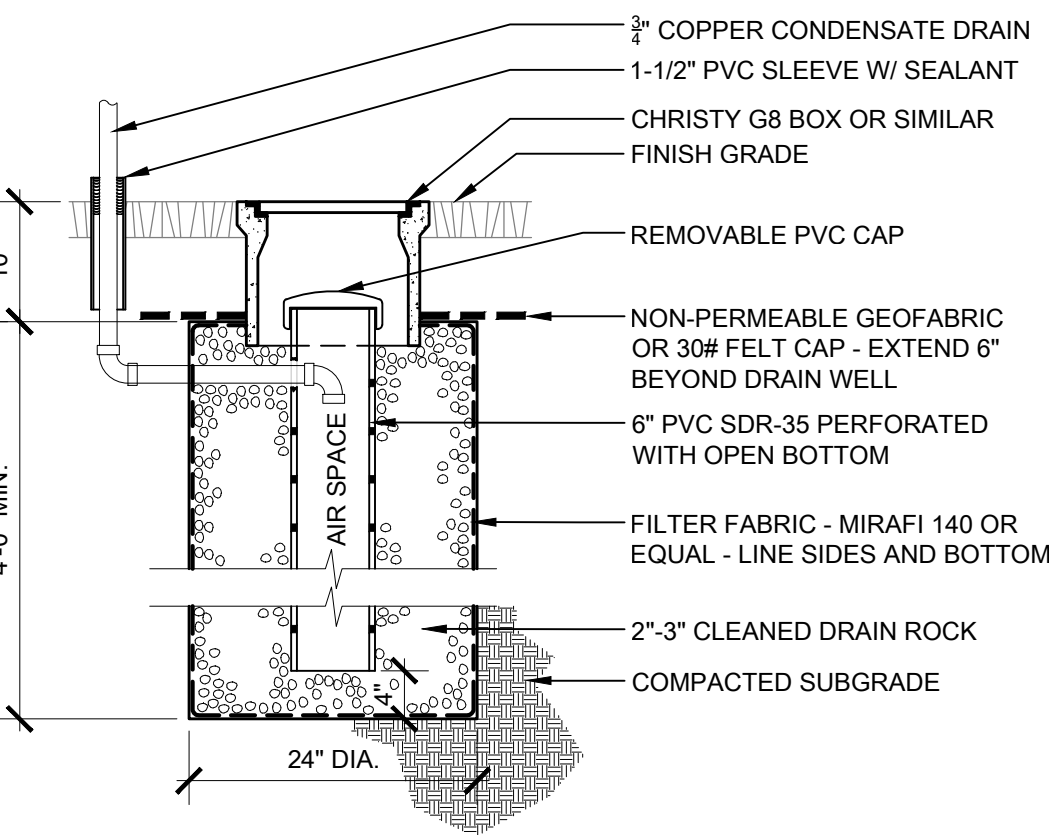
20 NOT USED

23 NOT USED

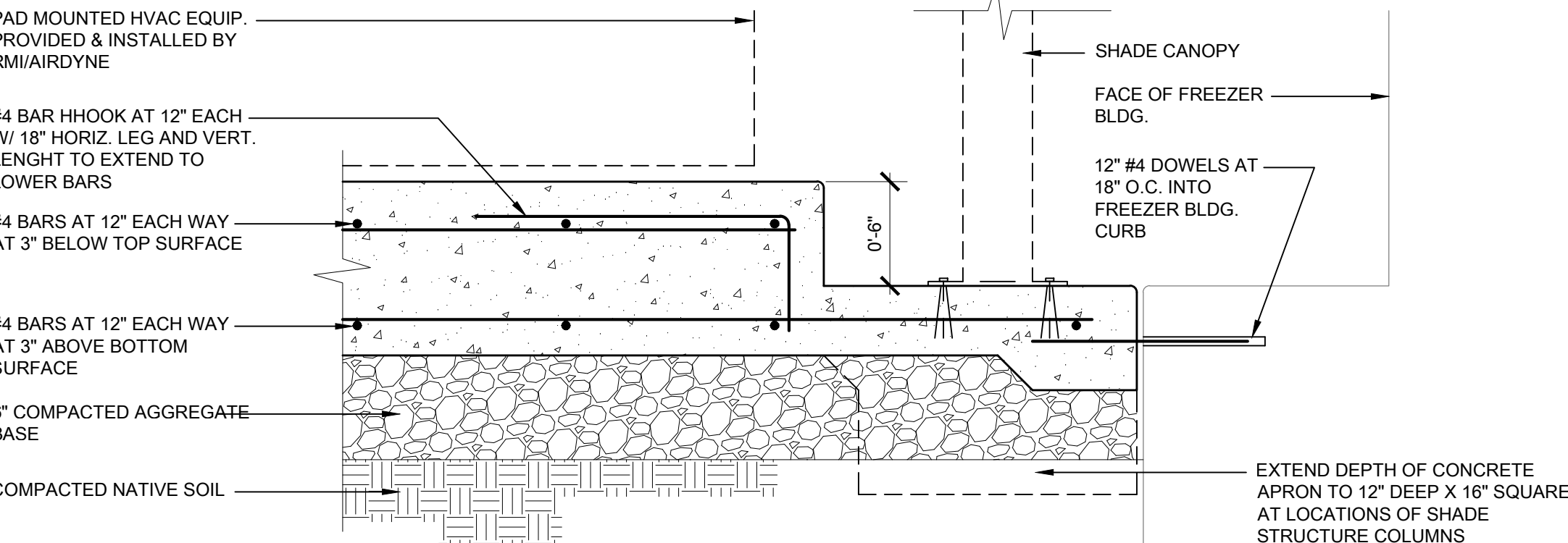
19 NOT USED

22 NOT USED

21 DRY WELL
SCALE: 3/4" = 1'-0"



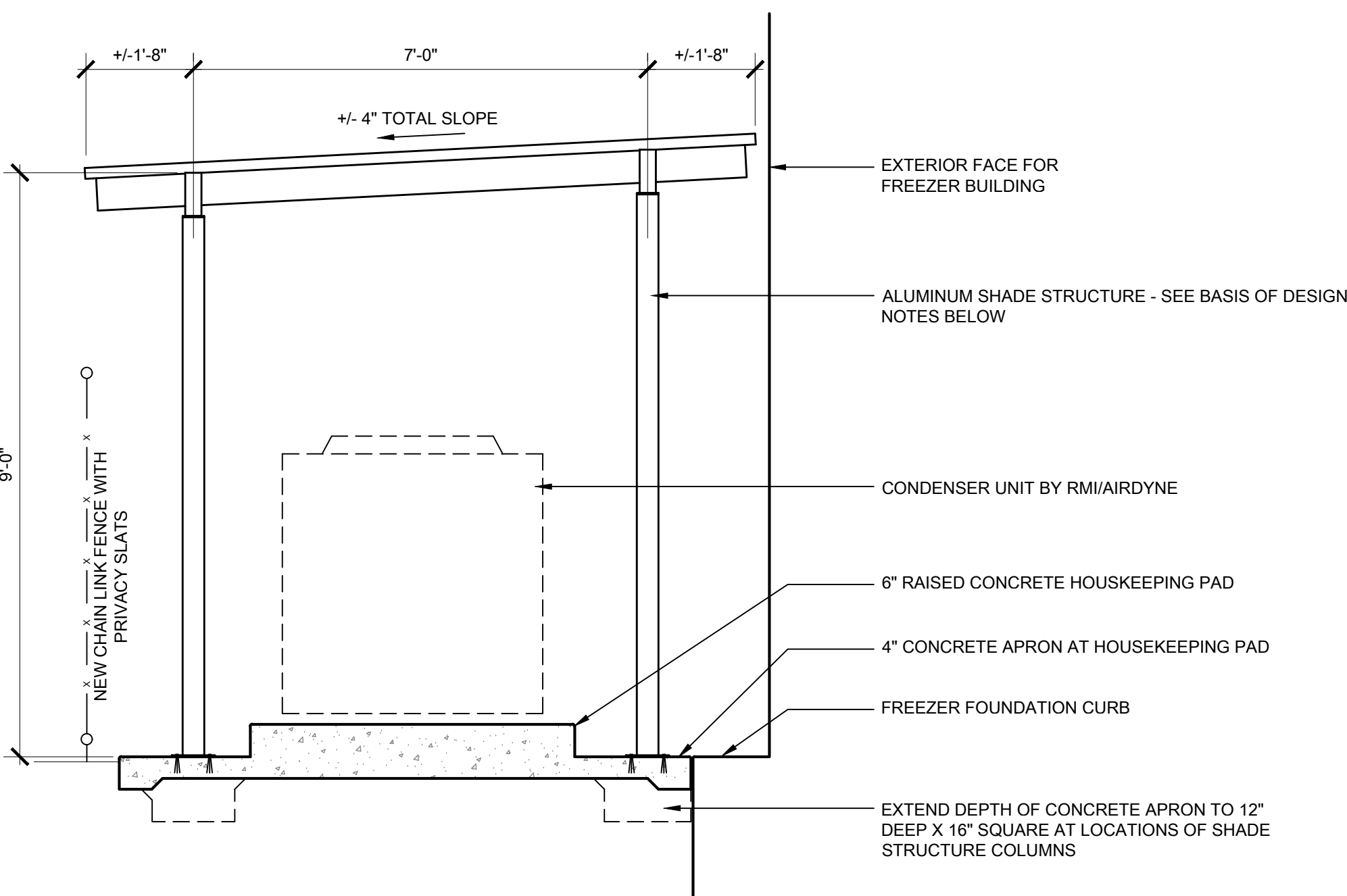
17 HOUSEKEEPING PAD
SCALE: 1 1/2" = 1'-0"



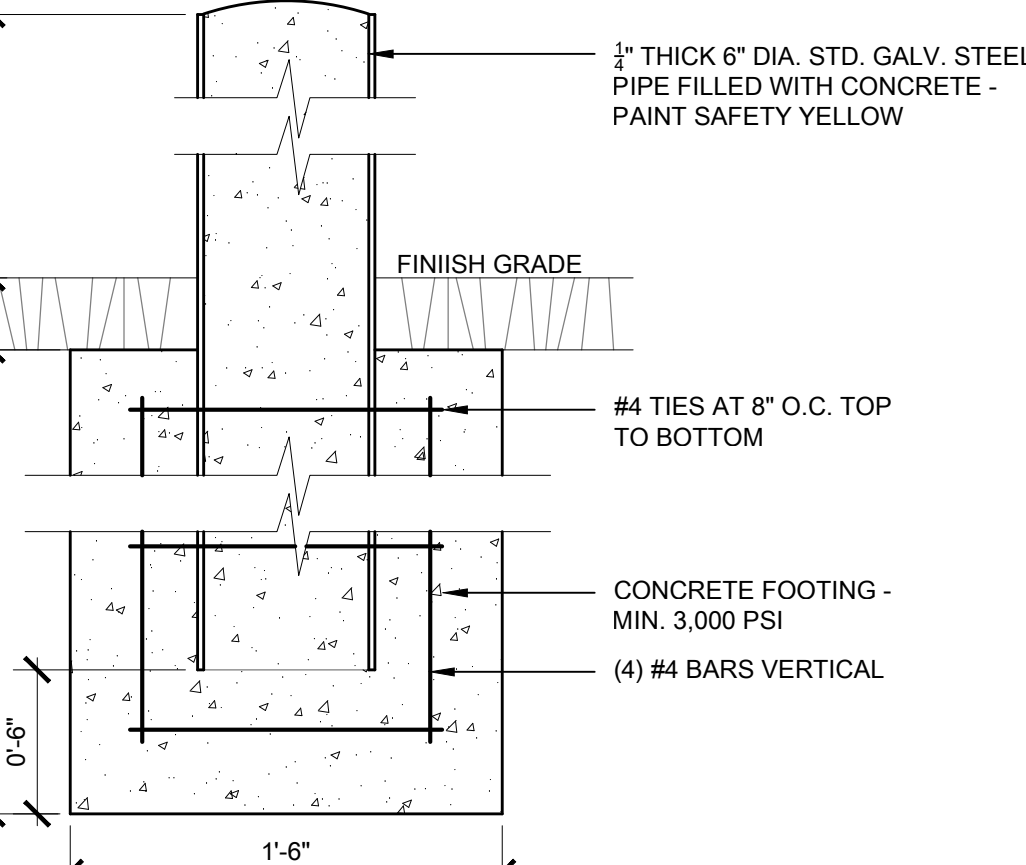
SHADE CANOPY BASIS OF DESIGN

- SHADE STRUCTURE SHALL BE A FREESTANDING, PRE-ENGINEERED, PRE-FABRICATED, SEMI-CUSTOM PRE-FINISHED KIT OF PARTS ASSEMBLED ON-SITE FROM PRE-FABRICATED COMPONENTS. DESIGN SHALL NOT REQUIRE CONNECTION TO BUILDING STRUCTURE ON ONE OR MORE SIDES. STRUCTURE SHALL BE EQUAL TO:
- PRODUCT: SOLID TOP NON-INSULATED PATIO COVER KIT
MFR: ALUMASHADE
WEBSITE: Alumashade.com
PHONE: 888-619-8849
- FLAT SHED ROOF WITH MINIMAL SLOPE FOR DRAINAGE.
- DESIGNED TO 50 LB SNOW LOAD AND 130 MPH WIND LOAD, EXPOSURE C AND FREESTANDING STRUCTURE.
- MIN 3" X 8" HEADER, 2X8 6" SIDE RAFTERS & FRONT FASCIA.
- ALL ALUMINUM COMPONENTS WITH FACTORY PROVIDED FINISH.
- PROVIDE SUBMITTAL INCLUDING PROJECT SPECIFIC SHOP DRAWINGS STAMPED AND SIGNED BY A QUALIFIED LICENSED ENGINEER IN CALIFORNIA AND COLOR SAMPLES FOR FINISH COLOR SELECTION.

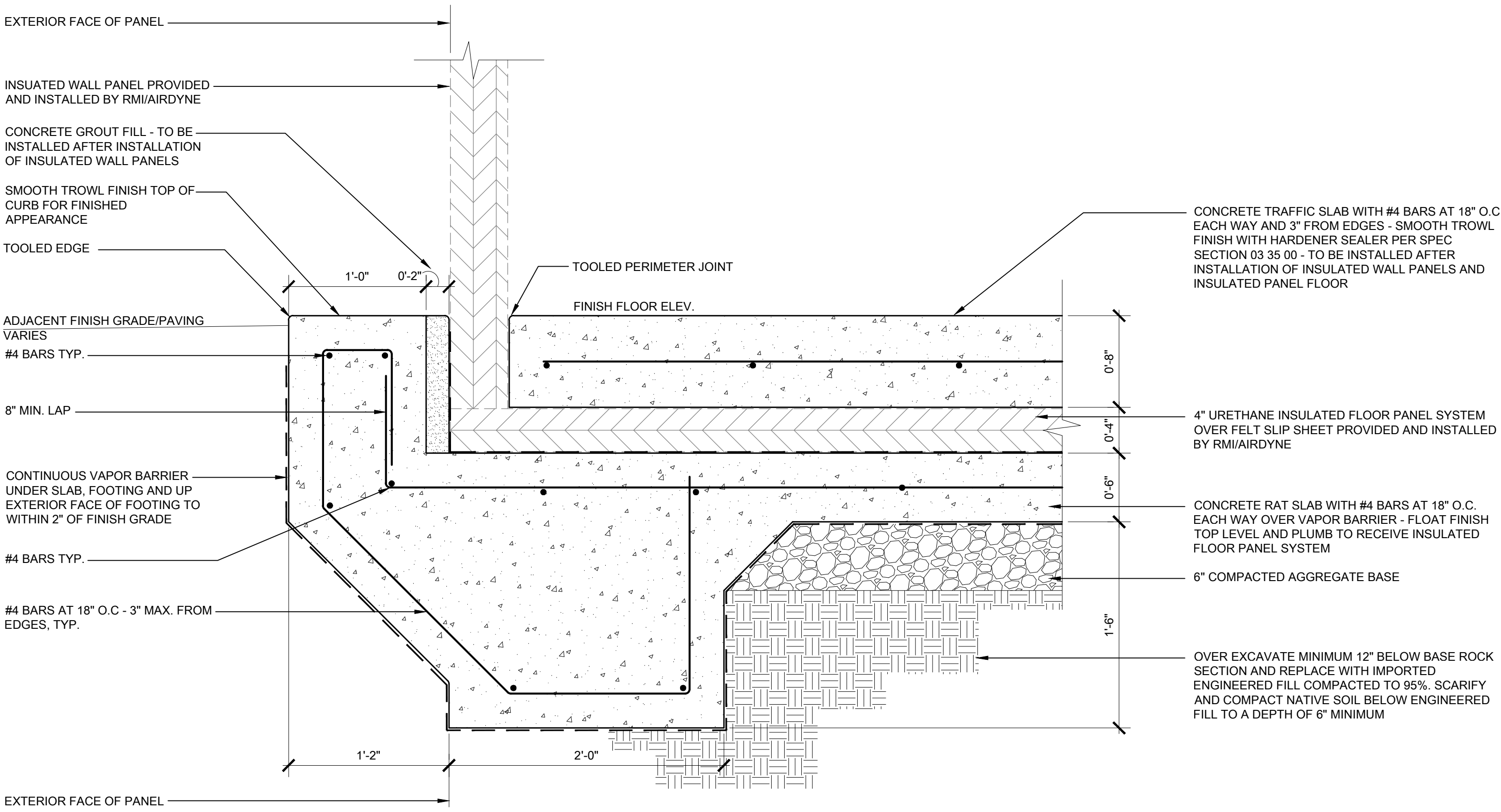
15 SECTION AT SHADE CANOPY
SCALE: 1/2" = 1'-0"



14 EXTERIOR BOLLARD
SCALE: 1 1/2" = 1'-0"

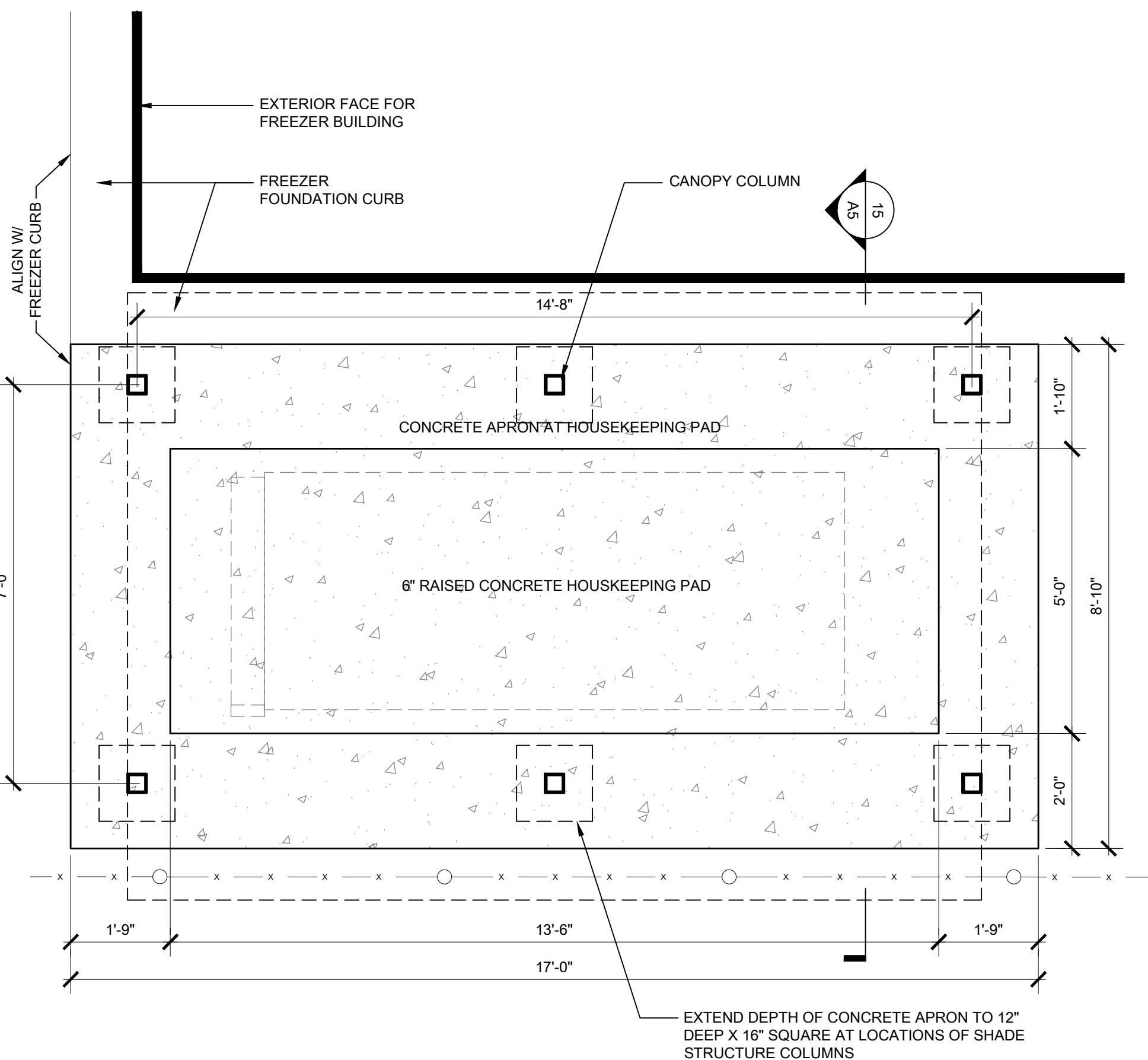


9 FOUNDATION DETAIL
SCALE: 1 1/2" = 1'-0"



NOTE: INSTALLATION SEQUENCING OF FOUNDATION SYSTEM SHALL BE COORDINATED BY THE SITE DEVELOPMENT CONTRACTOR WITH RMI/AIRDYNE. ALL WORK TO BE PROVIDED AND INSTALLED BY SITE CONTRACTOR UNLESS OTHERWISE INDICATED.

7 ENLARGED PLAN - HOUSEKEEPING PAD
SCALE: 1/2" = 1'-0"



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REGISTERED ARCHITECT
No. C-26867
RENEWAL DATE: 1/31/2025
STATE OF CALIFORNIA

ARCHITECT

REVISIONS		
NO.	DESCRIPTION	DATE

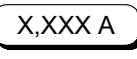
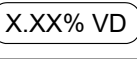
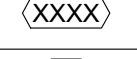


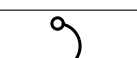
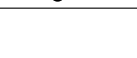

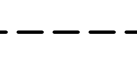

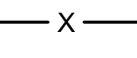






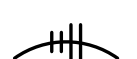


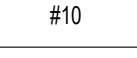

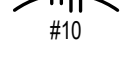
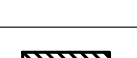

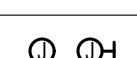
DATE: 04/12/2024
JOB NO.: Y2407.00
SHEET TITLE

DETAILS

SHEET NO.

A5

ONE AND ONE-HALF INCH = ONE FOOT
ONE INCH = ONE FOOT
THREE-QUARTERS INCH = ONE FOOT
ONE-HALF INCH = ONE FOOT
ONE-QUARTER INCH = ONE FOOT
ONE-EIGHTH INCH = ONE FOOT
ONE-SIXTEENTH INCH = ONE FOOT
ONE INCH = TWENTY FEET

STANDARD ELECTRICAL SYMBOLS	
SYMBOL	DESCRIPTION
	CALCULATED AVAILABLE SHORT-CIRCUIT CURRENT.
	PERCENT VOLTAGE DROP.
	FEEDER TAG, SEE FEEDER SCHEDULE.
	NUMBERED NOTE.
	EQUIPMENT, PROVIDED UNDER ANOTHER DIVISION, PROVIDE POWER CONNECTION AS INDICATED.
	CIRCUIT BREAKER.
	RACEWAY INSTALLED IN CEILING OR WALL. ROUTE EXPOSED IN ALL UNFINISHED AREAS.
	RACEWAY INSTALLED BELOW FINISHED FLOOR, GRADE, OR STRUCTURE CEILING.
	EXISTING CONDUIT RUN TO BE ABANDONED. CONDUIT ABOVE THE FLOOR AND BELOW THE STRUCTURE ABOVE SHALL BE REMOVED. CONDUCTORS SHALL BE REMOVED.
	EXISTING CONDUIT RUN, VERIFY ROUTING ON THE JOB.
	REMOVE (E) WIRE, PULL IN NEW WIRES, #12 AWG UNLESS NOTED.
	ARROW AT END OF RACEWAY INDICATES HOME RUN TO RESPECTIVE PANELBOARD OR SWITCHBOARD.
	BRANCH CIRCUIT WITHOUT FURTHER DESIGNATION INDICATES A 2 #12 AWG CIRCUIT WITH 1 #12 AWG GROUND.
	STRAIGHT CROSS-LINES IN BRANCH CIRCUIT RACEWAY INDICATE NUMBER OF #12 AWG WIRES IN A CIRCUIT. SHORT LINES INDICATE UNGROUNDED CONDUCTORS. LONG LINES INDICATE NEUTRAL CONDUCTORS. WIRES SHOWN ARE IN ADDITION TO 1 #12 AWG GROUNDING CONDUCTOR.
	BRANCH CIRCUIT WITH GROUNDING WIRE LARGER THAN #12 AWG. NUMBER ADJACENT TO CURVED CROSS-LINE INDICATES WIRE SIZE.
	BRANCH CIRCUIT RACEWAY WITH WIRE OTHER THAN #12 AWG. NUMBER ADJACENT TO STRAIGHT OR CURVED CROSS-LINES INDICATES WIRE SIZE. UNGROUNDED AND NEUTRAL CONDUCTORS SHALL BE THE SAME SIZE UNLESS OTHERWISE NOTED.
	SWITCHBOARD.
	BRANCH CIRCUIT PANELBOARD, SURFACE MOUNTED.
	JUNCTION BOX, SIZE AND TYPE AS INDICATED OR REQUIRED.
	FUSED DISCONNECT SWITCH W/ CLASS 'R' DUAL ELEMENT FUSES, SIZED PER EQUIPMENT NAME PLATE RATING. NUMBER ADJACENT INDICATES AMPERE RATING OF SWITCH / POLES / FUSE RATING. REFER TO PLANS FOR ACTUAL RATINGS. FUSE SIZE INDICATED ON PLANS IS USED AS THE BASIS OF DESIGN. FINAL FUSE SIZE INSTALLED SHALL BE CONFIRMED ON THE FIELD AGAINST EQUIPMENT NAMEPLATE RATING.
	20 AMP 125V 3W DUPLEX CONVENIENCE RECEPACLE W/ GROUND FAULT INTERRUPTER.
	NON FUSED DISCONNECT SWITCH. NUMBER ADJACENT INDICATES AMPERE RATING OF SWITCH. MOUNT AT +48" AFF TO TOP OF DISCONNECT.
	WALL MOUNTED LUMINAIRE.
	FLEX CONDUIT.
	CONTROL AND/OR EQUIPMENT, PROVIDED UNDER ANOTHER DIVISION, PROVIDE POWER CONNECTION AS INDICATED.
	SINGLE POLE TOGGLE SWITCH. SEE FLOOR PLANS AND <u>DEVICE MOUNTING DETAIL</u> ON DETAIL SHEET FOR ADDITIONAL MOUNTING HEIGHT REQUIREMENT.
SUBSCRIPTS: WP	DEVICE SUBSCRIPTS DESIGNATE THE FOLLOWING: = WEATHERPROOF

ELECTRICAL SCOPE NOTE
THESE ELECTRICAL DRAWINGS INDICATE THE GENERAL SCOPE OF THE PROJECT IN TERMS OF ELECTRICAL DESIGN CONCEPT, MAJOR ELECTRICAL ELEMENTS, AND THE TYPE OF ELECTRICAL SYSTEMS. AS SCOPE DOCUMENTS, THESE DRAWINGS DO NOT NECESSARILY INDICATE OR DESCRIBE ALL WORK REQUIRED FOR FULL PERFORMANCE AND COMPLETION OF THE REQUIREMENTS. ON THE BASIS OF THE GENERAL SCOPE INDICATED OR DESCRIBED, THE CONTRACTOR SHALL FURNISH ALL ITEMS REQUIRED FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK.

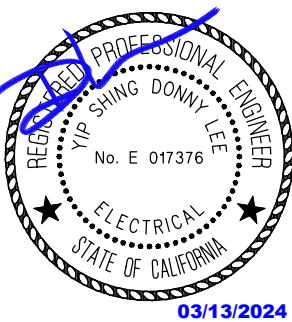
GENERAL NOTES
1. ALL WORK SHOWN IS NEW UNLESS NOTED AS EXISTING.
2. EXISTING UNDERGROUND UTILITIES ARE PRESENT, BUT THEIR EXACT LOCATIONS ARE NOT KNOWN. CONTRACTOR SHALL LOCATE AND PROTECT BEFORE TRENCHING OR EXCAVATING IN ANY AREA. CONSULT UTILITY COMPANIES, "AS-BUILT" DRAWINGS, AND SCHOOL MAINTENANCE PERSONNEL FOR LOCATION OF EXISTING UNDERGROUND WORK. IF EXISTING PIPING OR UTILITIES ARE DAMAGED DURING CONSTRUCTION, CONTRACTOR SHALL REPAIR IMMEDIATELY AT OWN EXPENSE. NEW UNDERGROUND SHALL BE MODIFIED AS NECESSARY TO CONFORM TO EXISTING CONDITIONS.
3. INFORMATION GIVEN, CONCERNING EXISTING ELECTRICAL INSTALLATION IS AS EXACT AS COULD BE SECURED, BUT EXTREME ACCURACY IS NOT GUARANTEED. CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO BIDS AND SATISFY HIMSELF AS TO THE CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED.
4. EXISTING CIRCUITS AND SERVICES SHALL NOT BE INTERRUPTED EXCEPT BY SPECIFIC APPROVAL OF THE SCHOOL. ALL SHUTDOWNS SHALL BE SCHEDULED WITH THE SCHOOL.
5. ALL INTERIOR CONDUIT SHALL BE RUN CONCEALED. FISH FLEX IN EXISTING WALLS AND USE CUT-IN BOXES, UNLESS NOT POSSIBLE. WHERE CONDUIT MUST RUN EXPOSED, PROVIDE WIREMOLD SURFACE NONMETALLIC RACEWAY, SIZE AS REQUIRED (800 SERIES MINIMUM SIZE). ROUTE AS INCONSPICUOUS AS POSSIBLE. MAKE ANGLES CUTS AS REQUIRED. ATTACH TO WALL WITH SCREWS SPACED 48" MAX. SCREWS MUST PENETRATE STRUCTURAL MEMBERS WITH 1" PENETRATION. COORDINATE ROUTING WITH ARCHITECT PRIOR TO INSTALLATION.
6. CONTRACTOR SHALL VISIT SITE PRIOR TO BIDDING AND WALK ROUTES OF NEW UNDERGROUND CONDUITS. NOTE AREAS OF CONCRETE AND ASPHALT BEING CROSSED AND INCLUDE IN BID ALL COSTS FOR CUTTING AND PATCHING AS SHOWN ON DETAILS.
7. PROVIDE TRAFFIC RATED (H/20 LOAD) COVER AND BOXES FOR ALL PULLBOXES UNLESS SPECIFICALLY NOTED OTHERWISE.
8. REFER TO DETAILS ON ARCHITECTURAL DRAWINGS FOR PENETRATION REQUIREMENTS THROUGH FRAMING TOP PLATES, SILL PLATES, BEAMS, JOIST, RAFTERS, ETC. PROVIDE NOTCHING BORING, DRILLING, ANCHOR BOLTS AND OTHER WORK IN STRICTEST CONFORMANCE TO STRUCTURAL DETAILS.
9. COORDINATE THE EXACT LOCATIONS OF FLOOR OUTLETS/BOXES WITH OWNER AND INSPECTOR PRIOR TO ROUGH-IN.
10. PROVIDE GROUND ROD AND GROUND BOX AT EACH RELOCATABLE CLASSROOM AND CONNECT TO (E) PANEL, METAL WATER PIPING, AND BUILDING STEEL FRAME. SEE "GROUNDING DETAIL".
11. PORTABLE BUILDINGS HAVING NON-PINNED SLIDING FOUNDATIONS SHALL BE CONNECTED USING 10. FLEXIBLE CONDUIT PER DETAILS. PORTABLE BUILDINGS WITH NON-SLIDING PINNED FOUNDATIONS SHALL BE CONNECTED WITH RIGID CONDUIT, TIGHT TO BUILDING (FLEX CONNECTIONS WILL NOT BE ACCEPTABLE). VERIFY FOUNDATION TYPE WITH INSPECTOR OF RECORD OR DISTRICT PRIOR TO INSTALLATION OF ANY CONDUIT ON BACK OF BUILDING.
12. ALL CONDUIT RUNS PASSING DIRECTLY FROM ONE PORTABLE BUILDING TO ANOTHER SHALL SPAN THE SPACE BETWEEN BUILDINGS WITH SEALTITE FLEX. THIS REQUIREMENT IS INDEPENDENT OF FOUNDATION TYPE.

ABBREVIATIONS			
1PH, 3PH 1P, 2P, 3P 3W, 4W (D) (E) (ER) (N) (R)	1 PHASE, 3 PHASE 1 POLE, 2 POLE, 3 POLE 3 WIRE, 4 WIRE DEMO, DEMOLISH EXISTING EXISTING RELOCATED NEW RELOCATE	MCA MCB MCC MLO MOCF MT	-M- MINIMUM CIRCUIT AMPACITY MAIN CIRCUIT BREAKER MOTOR CONTROL CENTER MAIN LUGS ONLY MAXIMUM OVER-CURRENT PROTECTION EMPTY CONDUIT W/ PULL-LINE
A, AMPS AC AF AFF AIC	AMPERES ALTERNATING CURRENT FRAME RATING IN AMPERES ABOVE FINISHED FLOOR AMPERES INTERRUPTING CAPACITY ALUMINUM AUTO TRANSFER SWITCH TRIP RATING IN AMPERES AMERICAN WIRE GAUGE	NC NCTC NEC NEMA NIES	-N- NORMALLY CLOSED NURSE CALL TERMINAL CABINET NATIONAL ELECTRIC CODE NATIONAL ELECTRICAL MANUFACTURER ASSOCIATION NOT INCLUDED IN ELECTRICAL SCOPE
AL, ALUM ATS AT AWG	ALUMINUM AUTO TRANSFER SWITCH TRIP RATING IN AMPERES AMERICAN WIRE GAUGE	NL NO NTS	NIGHT LIGHT NORMALLY OPEN NOT TO SCALE
BTR	BUILDING TELECOM ROOM	OCP OFCI OFOI	-O- OVER-CURRENT PROTECTION OWNER FURNISHED CONTRACTOR INSTALLED OWNER FURNISHED OWNER INSTALLED
C CB,C/B CEC CT CU	CONDUIT CIRCUIT BREAKER CALIFORNIA ELECTRICAL CODE CURRENT TRANSFORMER COPPER	PT PVC	-P- POTENTIAL TRANSFORMER POLYVINYL CHLORIDE CONDUIT
DC	DIRECT CURRENT	RLA RSC	-R- RUNNING LOAD AMP RIGID STEEL CONDUIT
EA ELEC EMT	EACH ELECTRICAL ELECTRICAL METALLIC TUBING	SPD SPDT SPST SST	-S- SURGE PROTECTION DEVICE SINGLE POLE DOUBLE THROW SINGLE POLE SINGLE THROW SOLID STATE TRIP
FA FACP FATC FLA FT	FIRE ALARM FIRE ALARM CONTROL PANEL FIRE ALARM TERMINAL CABINET FULL LOAD AMPS FOOT OR FEET	TER TR TM TTB	-T- TELECOM EQUIPMENT ROOM TELECOM ROOM THERMAL MAGNETIC TERMINAL BACKBOARD
G, GND GA GFCI	GROUND GAUGE GROUND FAULT CIRCUIT INTERRUPTER GROUND FAULT INTERRUPTER	UG UL UON UPS	-U- UNDERGROUND UNDERWRITERS LAB. UNLESS OTHERWISE NOTED UNINTERRUPTIBLE POWER SUPPLY
HOA HP	HAND-OFF-AUTO HORSE POWER	V VA VAC	-V- VOLTS VOLT-AMPS VOLTS ALTERNATE CURRENT
J-BOX	JUNCTION BOX	W WCR WP	-W- WATTS WITHSTAND & CLOSING RATING WEATHERPROOF
KVA KW	ONE THOUSAND VOLT-AMPS ONE THOUSAND WATTS	XFMR XFER	-X- TRANSFORMER TRANSFER SWITCH
LCP LTG	LIGHTING CONTROL PANEL LIGHTING		

SHEET INDEX	
SHEET	DESCRIPTION
E01	ABBREVIATIONS, SYMBOLS, NOTES & SHEET INDEX
E11	OVERALL SITE PLAN - ELECTRICAL
E21	PARTIAL SITE PLAN - FRIDGE & FREEZER - DEMO ELECTRICAL
E22	PARTIAL SITE PLAN - FRIDGE & FREEZER - NEW ELECTRICAL
E31	ONE LINE DIAGRAM & SCHEDULES
E41	ELECTRICAL DETAILS



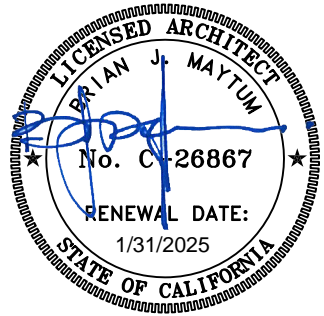
Project Number
L063
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SHEET TITLE

ABBREVIATIONS,
SYMBOLS, NOTES &
SHEET INDEX

SHEET NO.

E01

CENTRAL FREEZER
SITE DEVELOPMENT PACKAGE

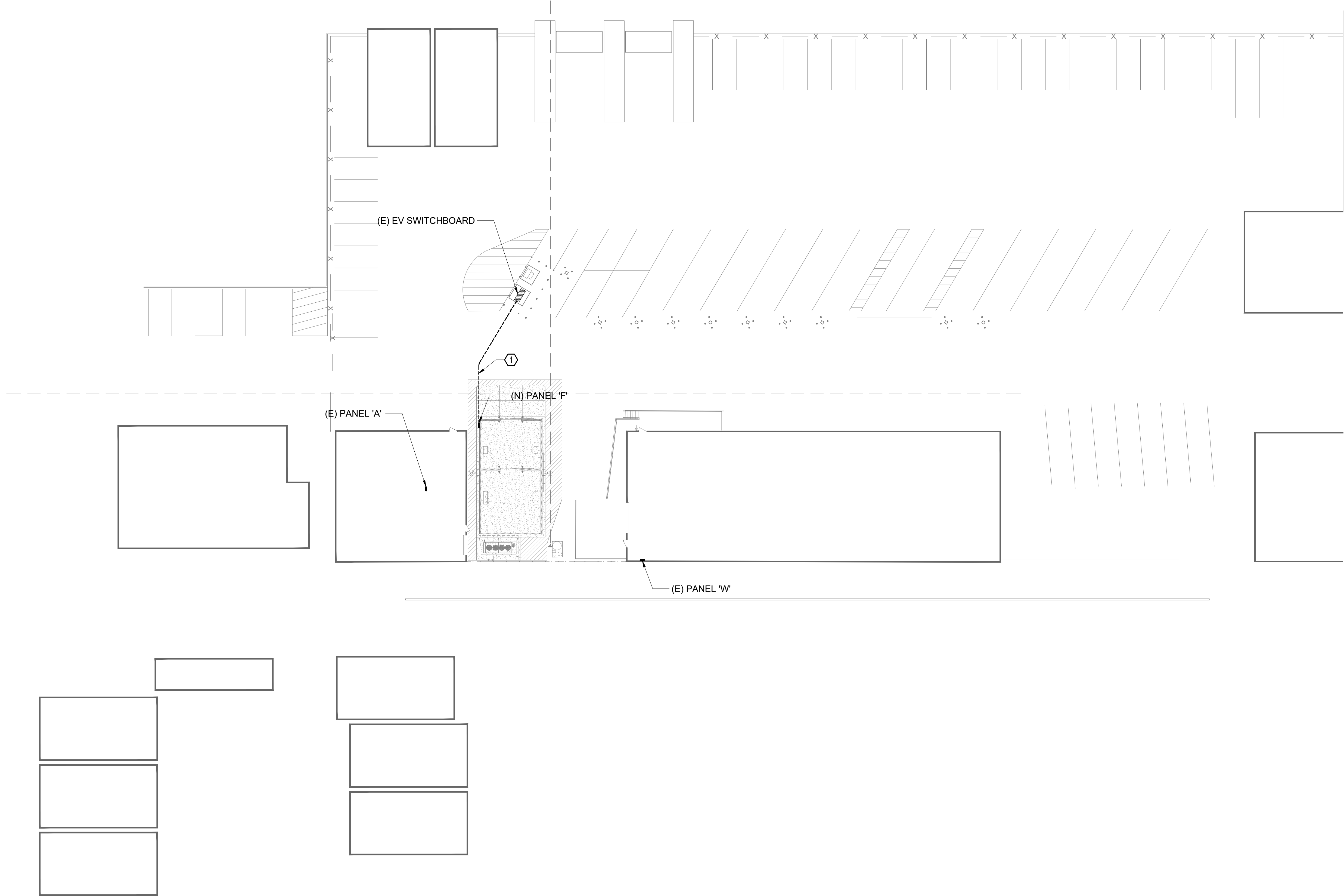
8408 Watt Avenue
Antelope, CA 95843

Center Joint Unified School District

ONE INCH = TWENTY FEET
ONE-SIXTEENTH INCH = ONE FOOT
ONE-EIGHTH INCH = ONE FOOT
ONE-FOURTH INCH = ONE FOOT
ONE-HALF INCH = ONE FOOT
THREE-QUARTERS INCH = ONE FOOT
ONE INCH = ONE FOOT
ONE AND ONE-HALF INCH = ONE FOOT

1 OVERALL SITE PLAN - ELECTRICAL

SCALE: 1" = 20' - 0"



NUMBERED NOTES

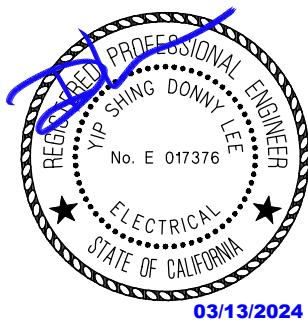
1 REFER TO ONE-LINE DIAGRAM 1/E31 FOR CONDUIT AND FEEDER SIZES AND QUANTITIES. SAW CUT (E) ASPHALT AND PATCH TO MATCH (E).

CENTRAL FREEZER
SITE DEVELOPMENT PACKAGE

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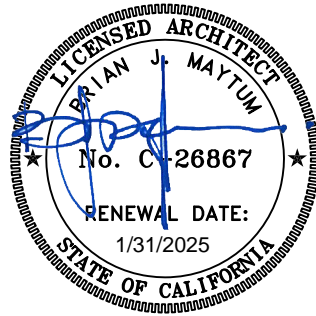
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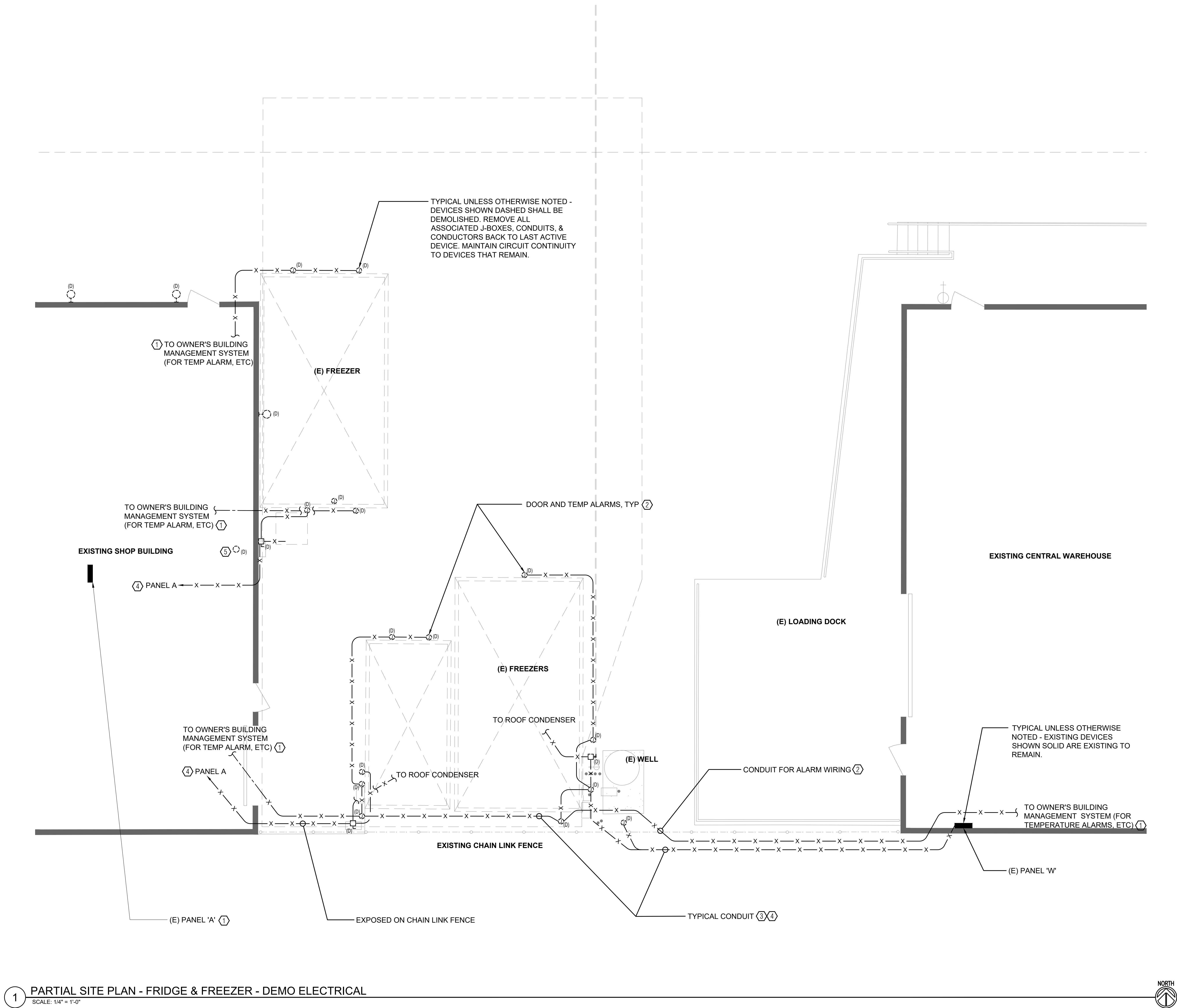
JOB NO.: Y2407.00

SHEET TITLE

OVERALL SITE PLAN -
ELECTRICAL

SHEET NO.

ONE AND ONE-HALF INCH = ONE FOOT
ONE INCH = ONE FOOT
THREE-QUARTERS INCH = ONE FOOT
ONE-HALF INCH = ONE FOOT
ONE-QUARTER INCH = ONE FOOT
ONE-QUARTER INCH = ONE FOOT
ONE-EIGHTH INCH = ONE FOOT
ONE-SIXTEENTH INCH = ONE FOOT
ONE INCH = TWENTY FEET



1 PARTIAL SITE PLAN - FRIDGE & FREEZER - DEMO ELECTRICAL
SCALE: 1/4" = 1'-0"

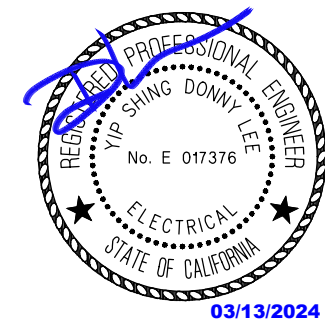
NUMBERED NOTES

- 1 FIELD VERIFY LOCATION.
- 2 NOT ALL RACEWAY CONNECTIONS ARE SHOWN. COORDINATE REMODEL WITH OWNER'S IT/LOW VOLTAGE DEPARTMENT.
- 3 EXPOSED ON CHAIN LINK FENCE OR CASE OF FREEZER.
- 4 ALL CONDUITS, CONDUCTORS, BOXES, SUPPORTS, ETC FROM FREEZER TO BE DEMOLISHED SHALL BE DEMOLISHED ALL THE WAY BACK TO PANEL. LABEL CIRCUIT BREAKERS AS SPARE. PATCH ALL HOLES AND MAKE THEM WEATHER TIGHT INTO THE BUILDING. CONTRACTOR SHALL TRACE CIRCUIT BEFORE CREATING SPARE AND RELABELING.
- 5 REMOVE EXISTING ANTENNA MAST, GUYS, WIRES AND CABLING, ETC. ON TOP OF ROOF OF SHOP BUILDING.

CENTRAL FREEZER
SITE DEVELOPMENT PACKAGE

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Antelope, CA 95843

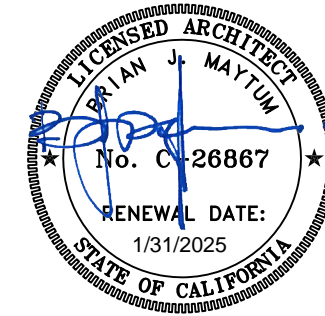
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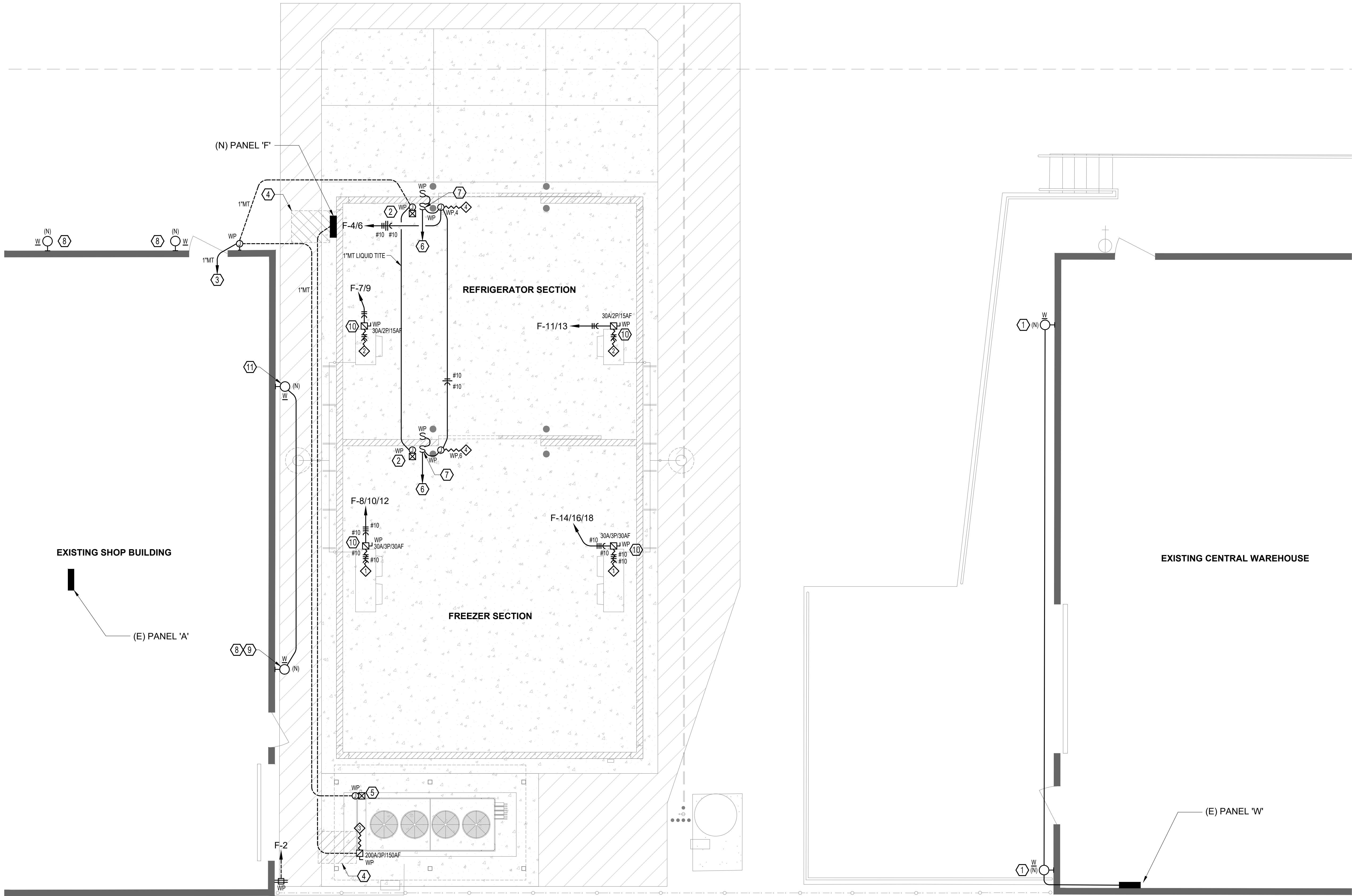
SHEET TITLE

PARTIAL SITE PLAN -
FRIDGE & FREEZER -
DEMO ELECTRICAL

SHEET NO.

E21

ONE INCH = TWENTY FEET
ONE SIXTEENTH INCH = ONE FOOT
ONE EIGHTH INCH = ONE FOOT
ONE QUARTER INCH = ONE FOOT
ONE HALF INCH = ONE FOOT
THREE QUARTERS INCH = ONE FOOT
ONE INCH = ONE FOOT
ONE AND ONE HALF INCH = ONE FOOT



1 PARTIAL SITE PLAN - FRIDGE & FREEZER - NEW ELECTRICAL
SCALE: 1/4" = 1'-0"



SHEET NOTES

- REFER TO DETAIL 2/E41 FOR ELECTRICAL CONDUIT SEALING REQUIREMENTS WHEN PENETRATING THE CEILING OR WALL OF COLD STORAGE BOXES.
- CONTRACTOR SHALL COORDINATE ALL LOCATIONS AND QUANTITIES WITH FREEZER VENDORS FINAL LAYOUT PRIOR TO INSTALLATION.

NUMBERED NOTES

- CONNECT (N) LIGHT FIXTURES TO (E) CIRCUIT 5 ON PANEL 'W'.
- TEMPERATURE ALARM CONTROL CONNECTION POINTS, COORDINATE EXACT LOCATION WITH FREEZER VENDOR
- TO BMS ALARM, COORDINATE LOCATION WITH SCHOOL DISTRICT REPRESENTATIVE.
- ELECTRICAL EQUIPMENT CLEARANCE.
- SMART CONTROLLER, COORDINATE EXACT LOCATION WITH FREEZER VENDOR.
- TO CEILING MOUNTED LIGHT FIXTURES PROVIDED BY FREEZER VENDOR, BUT INSTALLED BY ELECTRICAL CONTRACTOR. CONTRACTOR SHALL PROVIDE LIQUID TIGHT CONNECTIONS TO ALL LIGHT FIXTURES. COORDINATE LIGHT FIXTURE LOCATIONS AND QUANTITIES WITH FREEZER VENDOR.
- PROVIDE WEATHERPROOF ELECTRICAL BOX LEVER SWITCH COVER WITH SINGLE POLE SWITCH.
- PROVIDE (N) LIGHT FIXTURES AT (E) LIGHT FIXTURE LOCATIONS, RECONNECT TO (E) CIRCUIT.
- EXTEND (E) CIRCUIT TO (N) DEVICE AS INDICATED.
- MOUNT DISCONNECT ADJACENT TO FAN UNIT.
- NEW LIGHT SHALL BE MOUNTED AT HEIGHT TO MATCH THE REPLACEMENT ONE BY DOOR INDICATED BELOW.

EQUIPMENT NOTES

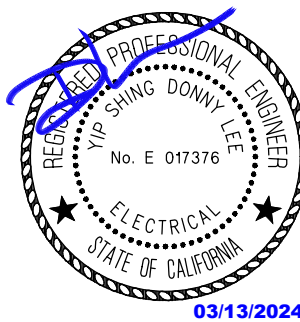
- FREEZER COIL, 208V, 3PH, 30A.
- COOLER COIL, 208V, 1PH, 15A.
- CONDENSING UNIT AND COMPRESSORS, 208V, 3PH, 107.2 FLA, MCA 134A, MOCP 150A. CONNECT TO PANEL 'F' CIRCUITS 1/3/5.
- DOOR HEATER AND LIGHTS, 120V, 1PH, 30A.

CENTRAL FREEZER

SITE DEVELOPMENT PACKAGE

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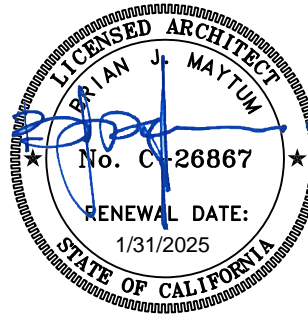
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SHEET TITLE

PARTIAL SITE PLAN -
FRIDGE & FREEZER -
NEW ELECTRICAL

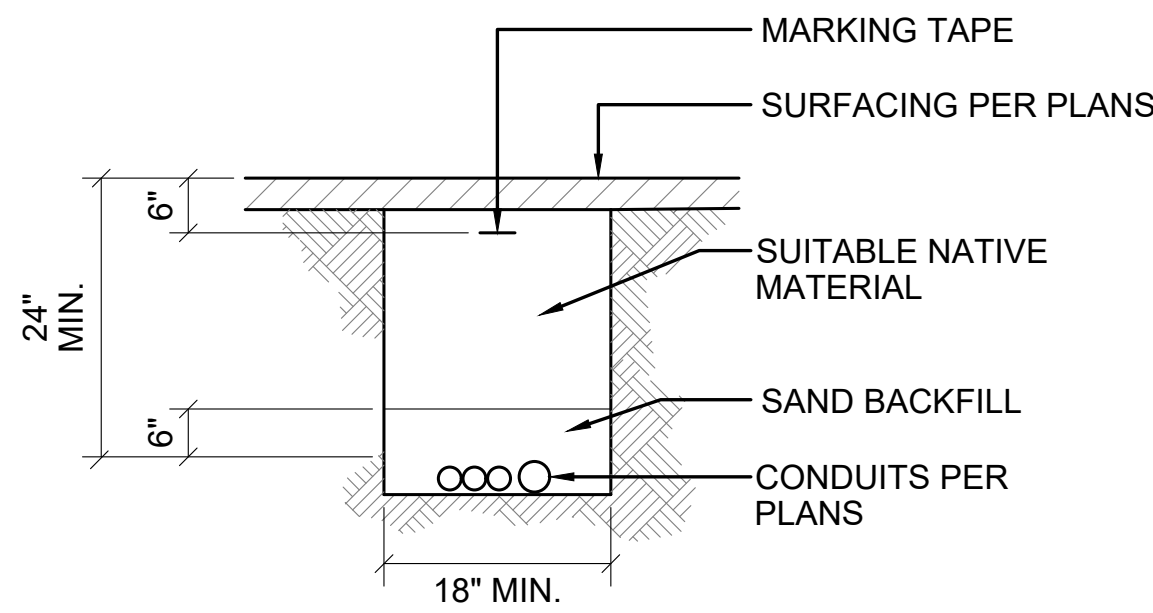
SHEET NO.

E22

(E) EV SWITCHBOARD CEC LOAD CALCULATION			
NOTE: ALL LOADS SHOWN ARE EXPRESSED IN KVA, UNLESS OTHERWISE NOTED.			
LOAD TYPE	CONNECTED LOAD	CEC ADJUSTMENT FACTOR	CALCULATED CEC LOAD
(E) EV BUS CHARGERS	119.79	X 125%	149.74
(E) EV CAR CHARGERS	13.34	X 125%	16.68
(E) POWER MONITOR	0.25	X 100%	0.25
(N) RECEPTS	0.18	X100%	0.18
(N) MOTOR LOADS	61.95	X 100%	61.95
(N) LARGEST MOTOR LOAD	39.70	X 25%	9.93
(N) NON-CONTINUOUS LOADS	4.00	X 100%	4.00
(N) CONTINUOUS LOADS	1.60	X 125%	2.00
TOTAL CONNECTED KVA: 240.81		TOTAL CALCULATED KVA: 244.72	
PANEL DESCRIPTION: 1000A,208/120V, 3-PHASE		TOTAL CALCULATED AMP: 679.77	

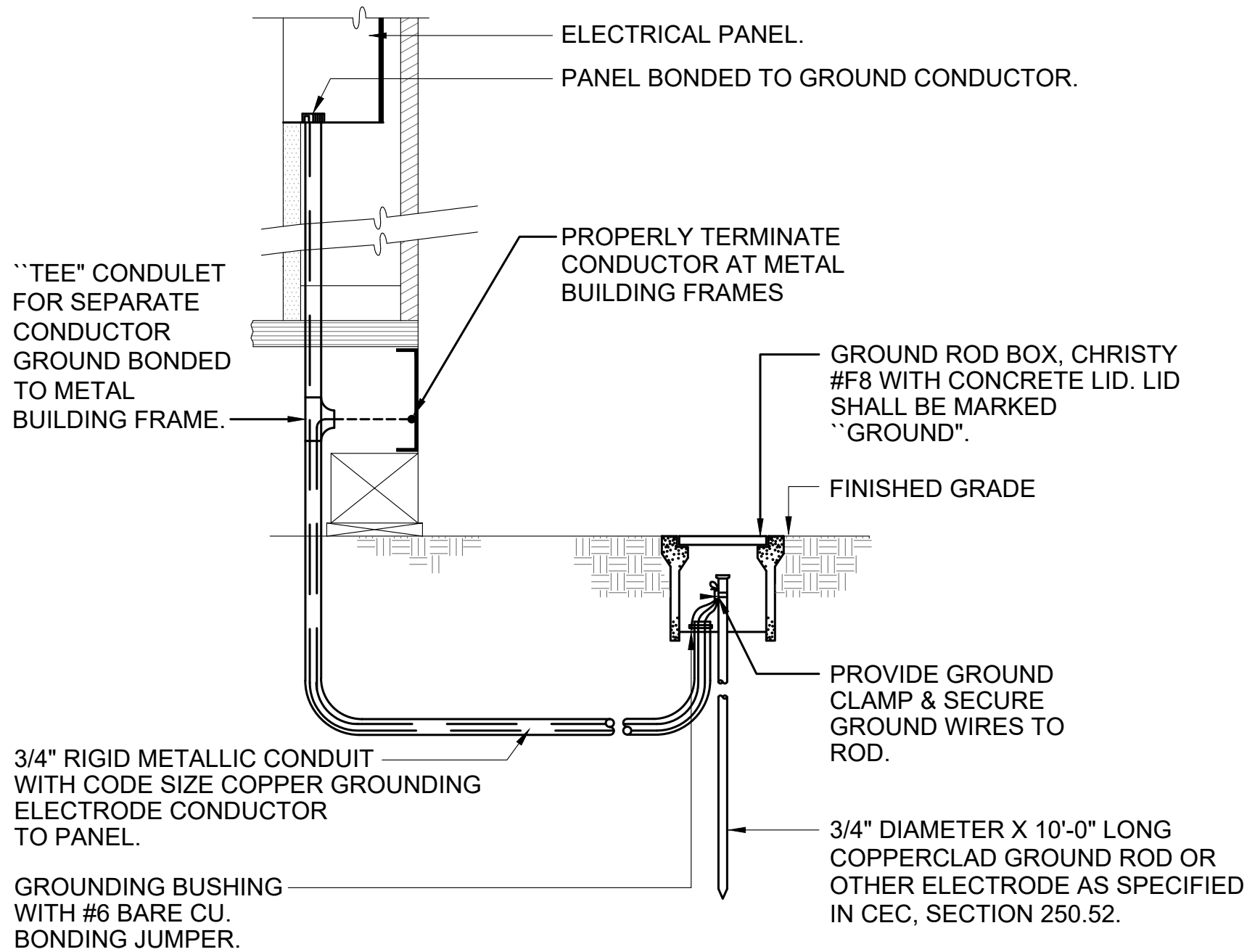
(E) EV SWITCHBOARD		SECTION 1 OF 1		BUS RATING: 1000 AMP		THREE PHASE		VOLTAGE	
LOCATION: PARKING LOT EXISTING		SERVING NORMAL		X MAIN BREAKER: 1000 AMP		4-WIRE		208Y/120	
MOUNTING: X SURFACE		FLUSH		MAIN LUGS ONLY					
PANEL A.I.C.		X SURFACE		FED-THRU LUGS					
LOAD DESCRIPTION		KVA LOAD		C. B.		KVA LOAD		LOAD DESCRIPTION	
		CONT.	RECP.	MOTOR	NON	CONT.	RECP.	MOTOR	NON
EV #1									
-									
-									
EV #3									
-									
-									
EV #5									
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EV #7									
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ONE INCH = TWENTY FEET



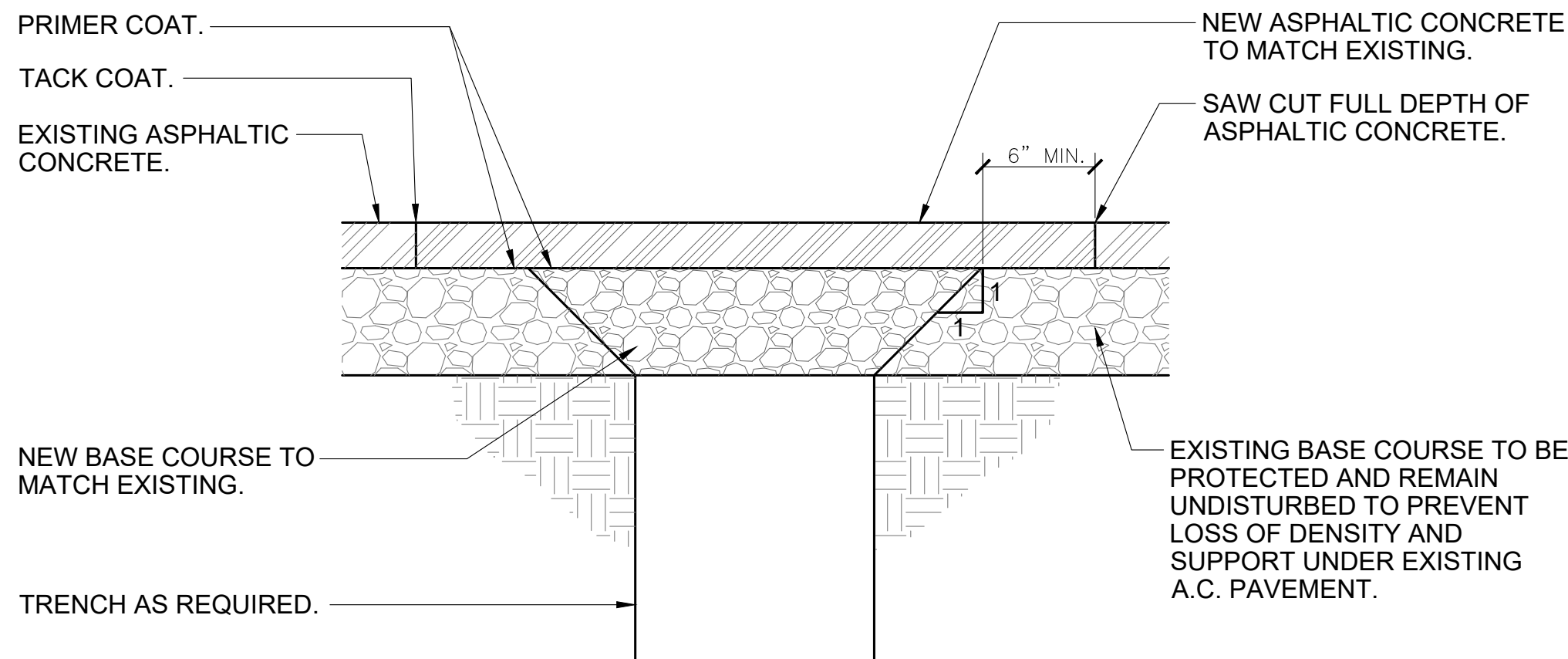
- NOTES:
1. BOTTOM OF TRENCH SHALL BE SQUARE AND CLEAN.
 2. REFER TO PLANS FOR QUANTITY AND SIZES OF CONDUITS.
 3. NATIVE MATERIALS SHALL BE NATIVE TO THE PROJECT SITE, FREE OF WOOD, ORGANICS, AND OTHER DELETERIOUS SUBSTANCES. ROCKS SHALL NOT BE GREATER THAN 3" INCHES.
 4. SAND SHALL BE FINE GRANULAR MATERIAL, FREE OF ORGANIC MATTER, MICA, LOAM OR CLAY.

4 ELECTRICAL TRENCH DETAIL
NO SCALE



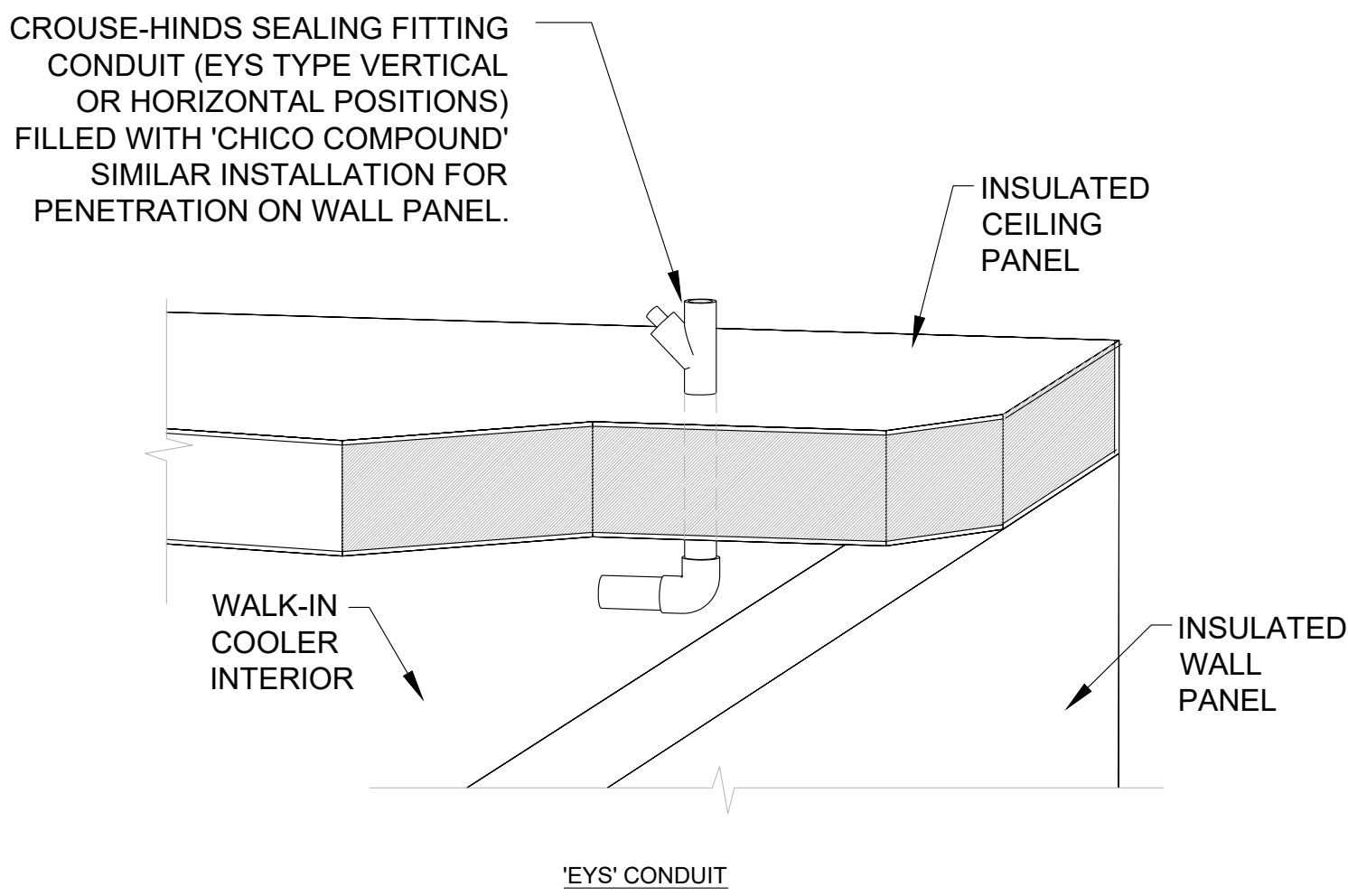
1. SIZE OF CONDUCTORS SHALL COMPLY CEC TABLE 250.66.
2. BOND SEPARATE CONDUCTORS FROM GROUND ROD TO ELECTRICAL PANEL TO METAL BUILDING FRAME (CEC 250.52). IN ADDITION TO THE DETAIL SHOWN ABOVE, BOND THE ELECTRICAL GROUND TO METAL UNDERGROUND WATER PIPE IN DIRECT CONTACT WITH THE EARTH FOR 10 FT. OR MORE, IF AVAILABLE (CEC250.52).
3. CHECK RESISTANCE TO GROUND. IF RESISTANCE EXCEEDS 25 OHMS, INSTALL ADDITIONAL GROUND ROD GREATER SIX FEET AWAY (CEC 250.56). QUANTITY AS REQUIRED TO ACHIEVE 25 OHMS OR LESS.
4. OTHER GROUNDING METHODS IDENTIFIED CEC 250 SHALL BE ACCEPTABLE MEANS TO ACHIEVE ADEQUATE GROUNDING OF METAL BUILDINGS IN COMPLIANCE WITH THE ABOVE.
5. ALL MODULES OF METAL FRAME BUILDINGS SHALL BE ELECTRICALLY BONDED TOGETHER. (BOLTING ONLY IS NOT ACCEPTABLE BONDING). BONDING SHALL INCLUDE METAL RAMP.
6. ELECT. TRADE SHALL CHECK AREA FOR EXIST. CONDUITS, SEWER, GAS & WATER PIPING BEFORE DRIVING GROUND RODS.
7. TESTING FOR GROUNDING SHALL BE WITNESSED AND VERIFIED BY THE PROJECT INSPECTOR.

5 GROUNDING DETAIL
NO SCALE

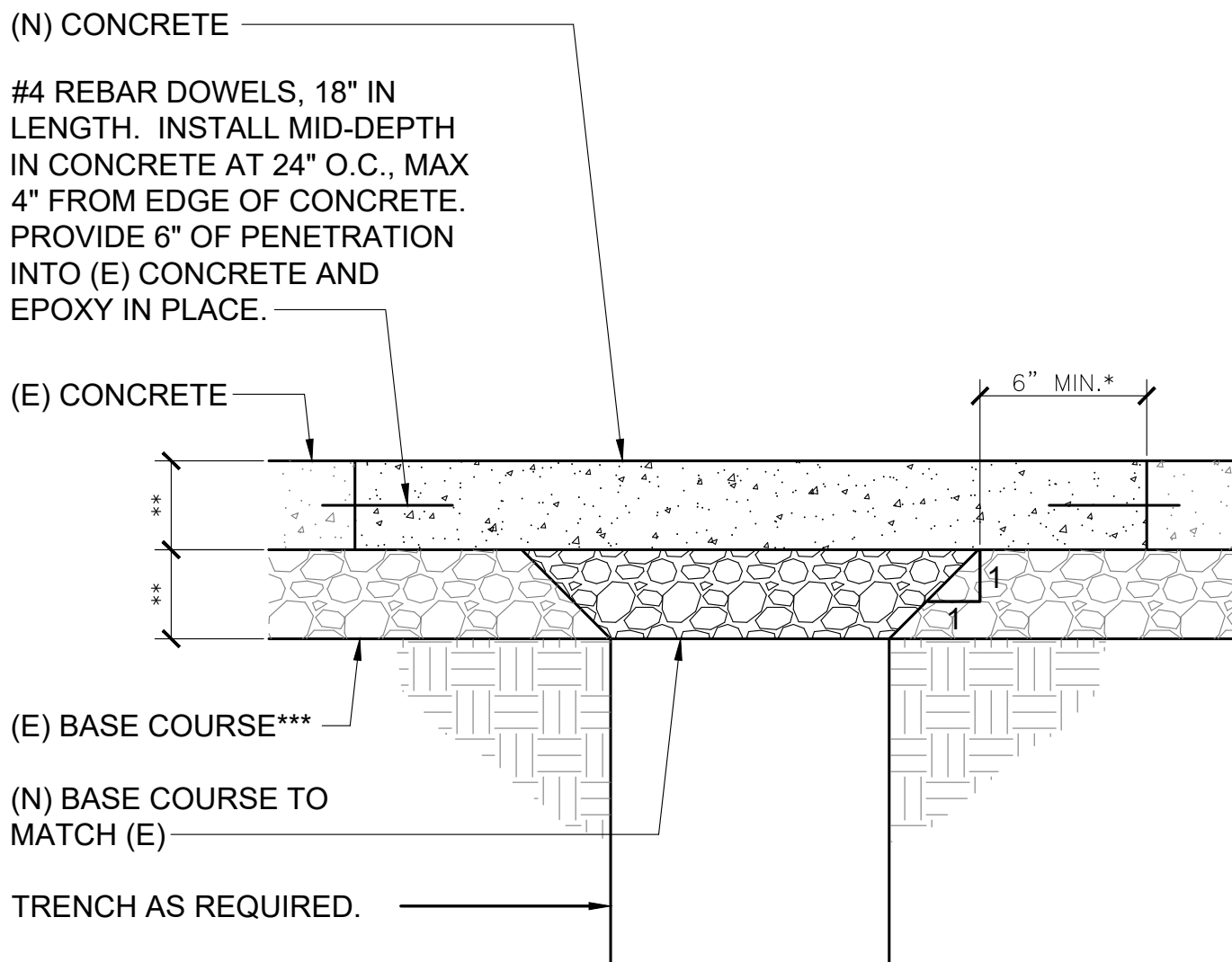


- NOTES:
1. PROVIDE SEAL COAT OVER NEW WORK AND EXTEND A MINIMUM OF 12" OVER EXISTING ASPHALT.

1 ASPHALTIC CONCRETE REPAIR DETAIL
SCALE: NONE



2 WALK-IN FREEZER/COOLER PENETRATION
NO SCALE



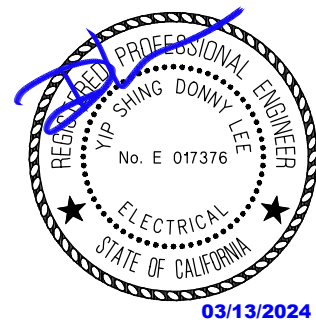
- * WHERE JOINT EXISTS WITHIN 18" OF CUT, REMOVE CONCRETE TO (E) JOINT.
- ** TO MATCH (E).
- *** (E) BASE COURSE TO BE PROTECTED AND TO REMAIN UNDISTURBED TO PREVENT LOSS OF DENSITY AND SUPPORT UNDER (E) CONCRETE.

3 CONCRETE REPAIR DETAIL
NO SCALE

CENTRAL FREEZER
SITE DEVELOPMENT PACKAGE

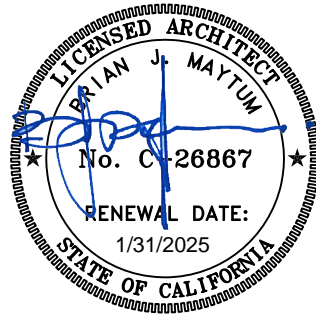
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Antelope, CA 95843

Center Joint Unified School District



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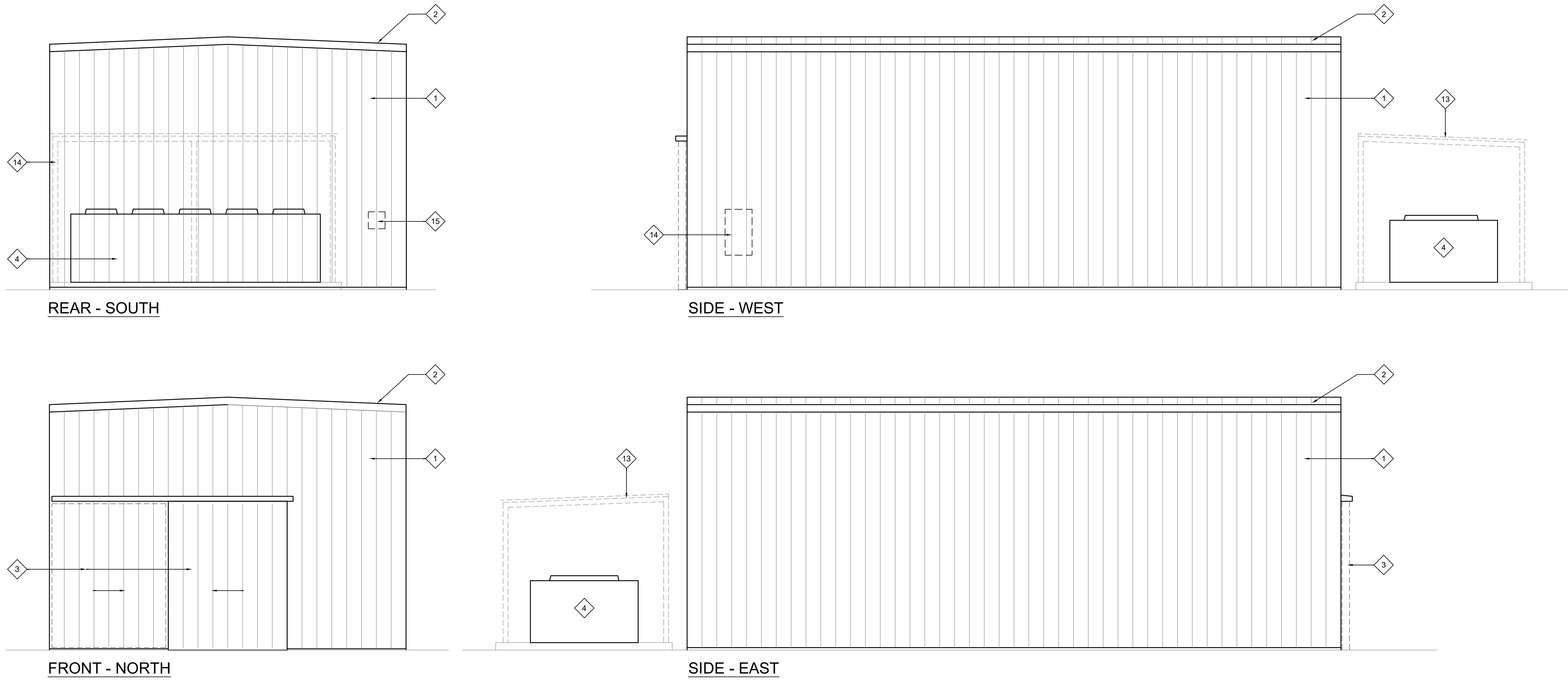
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JOB NO.: Y2407.00
SHEET TITLE

ELECTRICAL
DETAILS

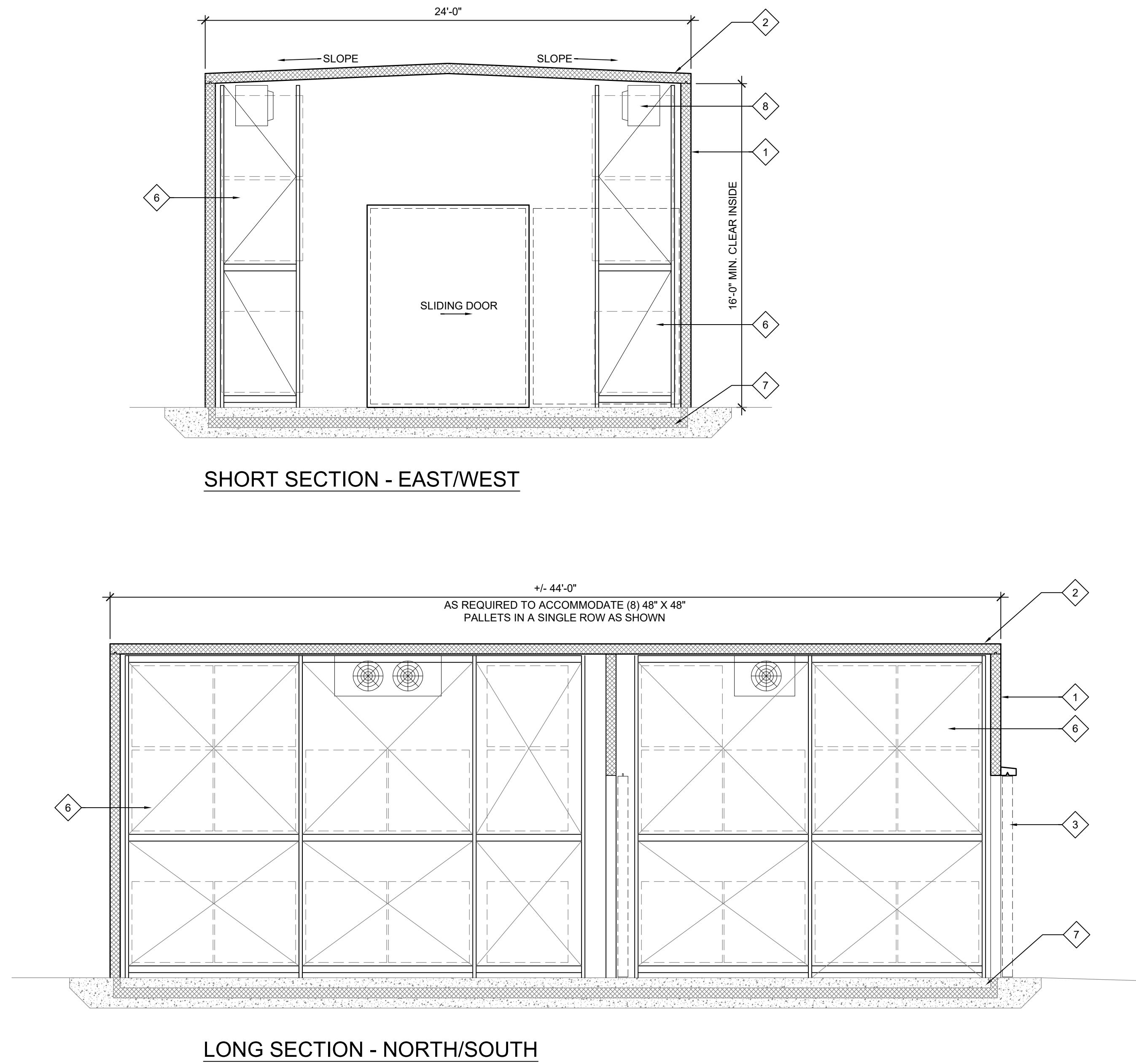
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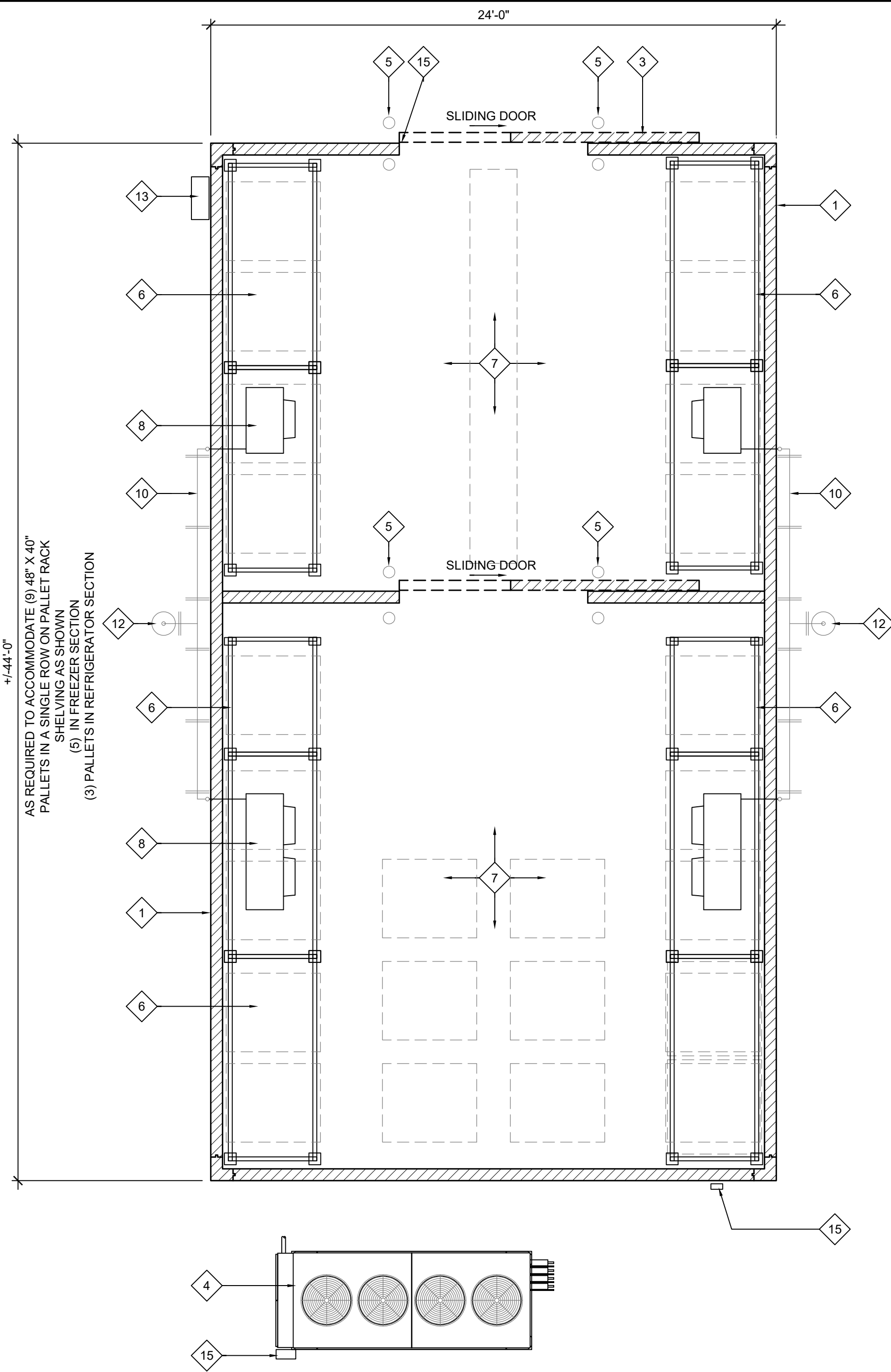
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3 EXTERIOR ELEVATIONS
SCALE: 1/4" = 1'-0"



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



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

- KEYNOTES:**
THESE NOTES APPLY TO THIS SHEET ONLY.
- 1 INSULATED COMPOSITE WALL PANEL SYSTEM BY RMIAIRDYNE.
 - 2 HEAVY-DUTY INSULATED COMPOSITE ROOF PANEL SYSTEM BY RMIAIRDYNE.
 - 3 8' W. X 10' H. MANUALLY OPERATED INSULATED ROLLING DOOR BY RMIAIRDYNE.
 - 4 PAD MOUNTED CONDENSER UNIT BY RMIAIRDYNE. CONCRETE HOUSEKEEPING PAD AND OVERHEAD SHADE STRUCTURE TO BE PROVIDED BY SITE DEVELOPMENT CONTRACTOR.
 - 5 CONCRETE FILLED STEEL BOLLARDS TO BE PROVIDED BY SITE DEVELOPMENT CONTRACTOR (TYPICAL OF 8).
 - 6 HEAVY-DUTY FLOOR MOUNTED 2-TIER PALLET RACK SYSTEM. PROVIDE IN CONFIGURATION AS REQUIRED TO ACCOMMODATE 48" X 40" PALLETS IN A SINGLE ROW AS SHOWN. TO BE PROVIDED BY RMIAIRDYNE.
 - 7 INSULATED CONCRETE FOUNDATION / SLAB SYSTEM. DESIGN TO BE COORDINATED WITH RMIAIRDYNE AND CONSTRUCTED BY SITE DEVELOPMENT CONTRACTOR. DESIGN SHALL BE SUITABLE FOR SOIL WITH UNKNOWN BEARING PRESSURE. SLAB SHALL BE DESIGNED FOR FORKLIFT LOADS. INTERIOR TOPPING SLAB WILL BE INSTALLED AFTER INTERIOR AND EXTERIOR WALLS HAVE BEEN INSTALLED.
 - 8 CEILING OR WALL MOUNTED FANCOIL UNIT BY RMIAIRDYNE.
 - 9 CLEAR FLOOR SPACE FOR ADDITIONAL PALLET STORAGE AND PORTABLE ROLLING CONVEYORS.
 - 10 NOT USED.
 - 11 COPPER CONDENSATE DRAIN FROM BUILDING POINT OF CONNECTION TO DRYWELL. TO BE PROVIDED BY SITE DEVELOPMENT CONTRACTOR. CONDENSATE DRAIN MAY BE SURFACE MOUNTED ON GRADE ON UNISTRUT AND 4X6 PRESSURE TREATED BLOCKING.
 - 12 DRY WELL BY SITE DEVELOPMENT CONTRACTOR.
 - 13 PRE-ENGINEERED, PRE-FABRICATED ALUMINUM SHADE STRUCTURE BY SITE DEVELOPMENT CONTRACTOR.
 - 14 PRIMARY ELECTRICAL DISTRIBUTION PANEL BY SITE DEVELOPMENT CONTRACTOR.
 - 15 ELECTRICAL DISCONNECT FOR HVAC CONDENSER BY SITE DEVELOPMENT CONTRACTOR.
 - 16 DOOR AND TEMPERATURE ALARM JUNCTION BOX BY SITE DEVELOPMENT CONTRACTOR. PROVIDE DOOR CONTACT SWITCH AND CONNECT TO EXISTING SITE ALARM CIRCUIT.

- GENERAL SHEET NOTES:**
SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- THESE DRAWINGS PROVIDE A GENERAL ILLUSTRATION OF THE REQUIRED DESIGN CRITERIA AND ESTABLISH THE MINIMUM BASIS OF DESIGN. REFER TO THE CRITERIA SPECIFICATIONS FOR MORE DETAILED INFORMATION REGARDING FREEZER/REFRIGERATOR BUILDING DESIGN AND REQUIRED FEATURES.
 - RMIAIRDYNE SHALL BE RESPONSIBLE FOR THE DESIGN, FABRICATION, SHIPPING, AND ERECTION OF THE FREEZER UNIT, INSULATED FLOOR PANELS, PAD MOUNTED CONDENSERS, PALLET RACKS AND ALL OTHER MISCELLANEOUS FREEZER ACCESSORIES IDENTIFIED IN THESE DRAWINGS AND IN THE SPECIFICATIONS.
 - RMIAIRDYNE SHALL PROVIDE ALL FINAL START UP TESTING AND SYSTEM COMMISSIONING.
 - RMIAIRDYNE SHALL PROVIDE ALL STRUCTURAL ENGINEERING, DESIGN AND DETAILING OF THE THE FREEZER BOX, ROOF, REFRIGERATION SYSTEM AND PALLET RACKS. ALL WORK SHALL BE SIGNED AND STAMPED BY A QUALIFIED AND LICENSED ENGINEER IN THE STATE OF CALIFORNIA.
 - OWNER WILL RETAIN A SITE DEVELOPMENT CONTRACTOR TO PREPARE THE SITE, INSTALL THE INSULATED CONCRETE FOUNDATION/SLAB, PROVIDE POWER AND ALARM INTERFACE AND MAKE ALL FINAL CONNECTIONS TO CONDENSATE DRAINS, POWER AND SIGNAL.

VENDOR CRITERIA DRAWINGS
PROVIDED FOR REFERENCE AND
COORDINATION ONLY
NOT A PART OF THE SITE DEVELOPMENT BID
PACKAGE

VENDOR CRITERIA DRAWINGS
CENTRAL FREEZER

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CRITERIA DESIGN
DRAWINGS

SHEET NO.

X1

