

# PERRIS UNION HIGH SCHOOL DISTRICT

**Informal Bid Documents** 

Bid # 031220 Pinacate Middle School Shade Structure Project

Bid Responses due at 2:00 P.M. Thursday March 12, 2020

# **BID DOCUMENTS**

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#### 1. NOTICE TO BIDDERS

- 1. Notice is hereby given that the Board of Trustees of the Perris Union High School District ("District"), of the County of Riverside, State of California, will receive sealed informal bids for the construction associated with the Pinacate Middle School Shade Structure Project ("Project") up to, but not later than, 2:00 p.m., on Thursday, March 12, 2020, and will thereafter publicly open and read aloud the bids. All bids shall be received at the District Office, Purchasing Department located at 155 E. 4th Street, Perris CA 92570.
- 2. Each bid shall be completed on the Bid Proposal Form included in the Contract Documents, and must conform and be fully responsive to this invitation, the plans and specifications and all other Contract Documents. Copies of the Contract Documents are available on the district website or by contacting Dawn Bray, at dawn.bray@puhsd.org.
- 3. Each bid shall be accompanied by cash, a cashier's or certified check, or a bidder's bond executed by a surety licensed to do business in the State of California as a surety, made payable to the District, in an amount not less than ten percent (10%) of the maximum amount of the bid. The check or bid bond shall be given as a guarantee that the bidder to whom the contract is awarded will execute the Contract Documents and will provide the required payment and performance bonds and insurance certificates within ten (10) days after the notification of the award of the contract.
- 4. This is a public works project and the successful bidder shall comply with the provisions of the Labor Code pertaining to payment of the generally prevailing rate of wages and apprenticeships or other training programs. The Department of Industrial Relations has made available the general prevailing rate of per diem wages in the locality in which the work is to be performed for each craft, classification or type of worker needed to execute the contract, including employer payments for health and welfare, pension, vacation, apprenticeship and similar purposes. Copies of these prevailing rates are available to any interested party upon request and are online at <a href="http://www.dir.ca.gov/DLSR">http://www.dir.ca.gov/DLSR</a>. The Contractor and all subcontractors shall pay not less than the specified rates to all workers employed by them in the execution of the Contract. It is the Contractor's responsibility to determine any rate change.
- 5. The schedule of per diem wages is based upon a working day of eight hours. The rate for holiday and overtime work shall be at least time and one half.
- 6. The substitution of appropriate securities in lieu of retention amounts from progress payments in accordance with Public Contract Code § 22300 is permitted.
- 7. Pursuant to Public Contract Code § 4104, each bid shall include the name, license number, and location of the place of business of each subcontractor who shall perform work or service or fabricate or install work for the contactor in excess of one-half of one percent (0.5%) of the bid price. The bid shall describe the type of the work to be performed by each listed subcontractor.
- 8. No bid may be withdrawn for a period of sixty (60) days after the date set for the opening for bids except as provided by Public Contract Code § 5100 et seq. The District reserves the right to reject any and all bids and to waive any informalities or irregularities in the bidding.
- 9. Minority, female, and disabled veteran contractors are encouraged to submit bids.

- 10. The project is subject to compliance monitoring and enforcement by the California Department of Industrial Relations. In accordance with Labor Code §§ 1725.5 and 1771.1, all bidders, contractors and subcontractors working at the site shall be registered with the Department of Industrial Relations at time of bid opening and at all relevant times. Proof of registration shall be provided as to all such contractors prior to the commencement of any work.
- 11. Each bidder must possess at the time the bid is awarded the following classifications of California State Contractor's license: Class A or Class B General Contractor
  - The Contractor's California State License number shall be clearly stated on the bidder's proposal.
- 12. The Board of Trustees has not found that the Project is substantially complex and therefore requires a standard retention amount of only five percent (5%).
- 13. Bidders' Conference and Site Walk. A bidders' conference and site walk in compliance with Public Contract Code § 6610 will be held at Pinacate Middle School on Tuesday, March 3, 2020 at 10:00 a.m. for the purpose of acquainting all prospective bidders with the Contract Documents and the Project site. Failure to attend the conference may result in the disqualification of the bid of the non-attending bidder.
- 15. A payment bond is required for a public works contract involving an expenditure in excess of twenty-five thousand dollars (\$25,000). 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.

By: Perris Union High School District, Purchasing Department 155 E. 4<sup>th</sup> Street Perris, CA 92570 Attn: Dawn Bray, dawn.bray@puhsd.org

Notice sent to contractors listed with the District in compliance with Public Contract Code § 22034, on February 27, 2020.

#### 2. INSTRUCTIONS TO BIDDERS

Each bid submitted to the Perris Union High School District ("District") for the Pinacate Middle School Shade Structure Project ("Project") shall be in accordance with the following instructions and requirements, which are part of the Contract Documents for this Project.

1. <u>Deadline For Receipt of Bids.</u> Each bid shall be sealed and submitted to the Purchasing Department no later than 2:00 p.m. on March 12, 2020. The District suggests that bids be hand delivered in order to ensure their timely receipt. Any bids received after the time stated, regardless of the reason, shall be returned, unopened, to the bidder.

# 2. Schedule of Events.

Event	Dates
Provide Notice to Listed Contractors	2/27/20
Mandatory Site Visit at PMS	3/3/20 at 10:00 A.M.
Requests for Clarifications to the Bid Documents Due	3/6/20
Responses to Requests for Clarifications Sent	3/9/20
Bids Due	3/12/20 at 2:00 P.M.
District Sends Out Notice of Intent to Award	3/19/20
District Awards Project at April Board Meeting	4/15/20

- 3. <u>Bidders' Conference and Site Walk.</u> A bidders' conference and site walk will be held on March 3, 2030 at 10:00 a.m. at Pinacate Middle School, 1991 South A Street, Perris, CA 92570 for the purpose of acquainting all prospective bidders with the Contract Documents and the Project site. The failure to attend the conference may result in the disqualification of the bid of the non-attending bidder.
- 4. Requests for Information. A bidder's failure to request clarification or interpretation of an apparent error, inconsistency or ambiguity in the Contract Documents waives that bidder's right to thereafter claim entitlement to additional compensation based upon an ambiguity, inconsistency, or error, which should have been discovered by a reasonably prudent Contractor, subject only to the limitations of Public Contract Code § 1104. To the fullest extent permitted by law District expressly disclaims responsibility for assumptions a bidder may draw from the presence or absence of information in the bid documents. Any questions relative to the bid shall be in writing and directed to the Purchasing Department at the address specified for receipt of bid proposals. These requests shall be submitted to the District at least four (4) working days prior to the date the bid is due.
- 5. <u>Bid Proposal Forms</u>. All bid proposals shall be made on the form provided by the District. All items on the form shall be filled out in ink. Numbers should be stated in figures, and the signatures of all individuals must be in long hand. The completed form should be without interlineations, alterations, or erasures.

- 6. Execution of Forms. Each bid shall give the full business address of the bidder and must be signed by the bidder or bidder's authorized representative with his or her usual signature. Bids by partnerships must furnish the full names of all partners and must be signed in the partnership name by a general partner with authority to bind the partnership in such matters. Bids by corporations must be signed with the legal name of the corporation, followed by the signature and designation of the president, secretary, or other person authorized to bind the corporation in this matter. The name of each person signing shall also be typed or printed below the signature. When requested by the District, satisfactory evidence of the authority of the officer signing on behalf of the corporation or partnership shall be furnished. A bidder's failure to properly sign required forms may result in rejection of the bid. All bids must include the bidder's contractor license number(s) and expiration date(s).
- 7. Bid Security. Bid proposals shall be accompanied by a certified or cashier's check or bid bond for an amount not less than ten percent (10%) of the bid amount, payable to the District. A bid bond shall be secured from an admitted surety company, licensed in the State of California, and satisfactory to the District. The bid security shall be given as a guarantee that the bidder will enter into the Contract if awarded the work, and in the case of refusal or failure to enter into the Contract within ten (10) calendar days after notification of the award of the Contract or failure to provide the payment and performance bonds and proof of insurance as required by the Contract Documents, the District shall have the right to award the Contract to another bidder and declare the bid security forfeited. The District reserves the right to pursue all other remedies in law or equity relating to such a breach including, but not limited to, seeking recovery of damages for breach of contract. Failure to provide bid security, or bid security in the proper amount, may result in rejection of the bid.
- 8. <u>Withdrawal of Bid Proposals</u>. Bid proposals may be withdrawn by the bidders prior to the time fixed for the opening of bids, but may not be withdrawn for a period of sixty (60) days after the opening of bids, except as permitted pursuant to Public Contract Code § 5103.
- 9. <u>Addenda or Bulletins</u>. The District reserves the right to issue addenda or bulletins prior to the opening of the bids subject to the limitations of Public Contract Code § 4104.5. Any addenda or bulletins issued prior to bid time shall be considered a part of the Contract Documents.
- 10. <u>Bonds</u>. The successful bidder shall be required to submit payment and performance bonds as specified in and using the bond forms included with the Contract Documents. All required bonds shall be based on the maximum total contract price as awarded, including additive alternates, if applicable.
- 11. <u>Rejection of Bids and Award of Contract</u>. The District reserves the right to waive any irregularities in the bid and reserves the right to reject any and all bids. The Contract will be awarded, if at all, within sixty (60) calendar days after the opening of bids to the lowest responsible and responsive bidder, subject to Board of Trustees approval. The time for

- awarding the Contract may be extended by the District with the consent of the lowest responsible, responsive bidder.
- 12. Execution of Contract. The successful bidder shall, within ten (10) calendar days of the Notice of Award of the Contract, sign and deliver to the District the executed contract along with the bonds and certificates of insurance required by the Contract Documents. In the event the successful bidder fails or refuses to execute the Contract or fails to provide the bonds and certificates as required, the District may declare the bidder's bid deposit or bond forfeited as liquidated damages, and may award the work to the next lowest responsible, responsive bidder, or may reject all bids and, in its sole discretion, call for new bids. In all cases, the District reserves the right, without any liability, to cancel the award of Contract at any time prior to the full execution of the Contract.
- 13. <u>Drawings and Specifications</u>. All drawings, specifications and other documents used or prepared during the project shall be the exclusive property of the District.
- 14. Evidence of Responsibility. Upon the request of the District, a bidder shall submit promptly to the District satisfactory evidence showing the bidder's financial resources, the bidder's experience in the type of work being required by the District, the bidder's availability to perform the Contract and any other required evidence of the bidder's qualifications and responsibility to perform the Contract. The District may consider such evidence before making its decision to award the Contract. Failure to submit requested evidence may result in rejection of the bid.
- 15. <u>Taxes</u>. Applicable taxes shall be included in the bid prices.
- 16. <u>Bid Exceptions</u>. Bid exceptions are not allowed. If the Bidder has a comment regarding the bid documents or the scope of work, the Bidder shall submit those comments to the District for evaluation at least four (4) working days prior to the opening of the bids. No oral or telephonic modification of any bid submitted will be considered and a sealed written modification may be considered only if received prior to the opening of bids. Emailed or faxed bids or modifications will not be accepted.
- 17. <u>Discounts</u>. Any discounts which the bidder desires to provide the District must be stated clearly on the bid form itself so that the District can calculate the net cost of the bid proposal. Offers of discounts or additional services not delineated on the bid form will not be considered by the District in the determination of the lowest responsible responsive bidder.
- 18. <u>Quantities</u>. The quantities shown on the plans and specifications are approximate. The District reserves the right to increase or decrease quantities as desired.
- 19. <u>Prices.</u> Bidders must quote prices F.O.B. unless otherwise noted. Prices should be stated in the units specified and bidders should quote each item separately.

- 20. <u>Samples</u>. On request, samples of any products being bid shall be furnished to the District.
- 21. <u>Substitutions</u>. In describing any item, the use of a manufacturer or brand does not restrict bidding to that manufacturer or brand, but is intended only to indicate quality and type of item desired, except as provided in Public Contract Code § 3400. Substitute products may be considered either prior to or after the award of the Contract in accordance with § 3400 and as set forth in either the Special Conditions or the Specifications. All data substantiating the proposed substitute as an "equal" item shall be submitted with the written request for substitution. The District reserves the right to make all final decisions on product and vendor selection.
- 22. <u>Container Costs and Delivery.</u> All costs for containers shall be borne by the bidder. All products shall conform to the provisions set forth in the federal, county, state and city laws for their production, handling, processing and labeling. Packages shall be so constructed to ensure safe transportation to the point of delivery.
- 23. <u>Bid Negotiations</u>. A bid response to any specific item of the bid using terms such as "negotiable," "will negotiate," or similar phrases, will be considered non-responsive.
- 24. <u>Prevailing Law.</u> In the event of any conflict or ambiguity between these instructions and state or federal law or regulations, the latter shall prevail. All equipment to be supplied or services to be performed under the bid proposal shall conform to all applicable requirements of local, state and federal law, including, but not limited to, Labor Code §§ 1771, 1778 and 1779.
- 25. <u>Allowances</u>. An "allowance" means an amount included in the bid proposal for work that may or may not be included in the Project, depending on conditions that will become known only after the Project is underway.
- 26. <u>Subcontractors.</u> Pursuant to the Subletting and Subcontracting Fair Practices Act, Public Contract Code §§ 4100 et sq., every bidder shall, on the enclosed Subcontractor List Form, set forth:
  - 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 bidder in or about the work or fabricate and install work in an amount in excess of one-half of the one percent (0.5%) of the bidder's total bid.
  - b. If the bidder fails to specify a Subcontractor for any portion of the work to be performed under the Contract in excess of one-half of one percent (0.5%) of the bidder's total bid, bidder agrees that bidder is fully qualified to and shall perform that portion of the work. The successful bidder shall not, without the written consent of the District or compliance with Public Contract Code §§ 4100 et seq., either:

- 1) Substitute any person as Subcontractor in place of the Subcontractor designated in the original bid;
- 2) Permit any subcontract to be voluntarily assigned or transferred or allow the work to be performed by anyone other than the original Subcontractor listed in the bid: or
- 3) Sublet or subcontract any portion of the work in excess of one-half of one percent (0.5%) of the total bid as to which the bidder's original bid did not designate a Subcontractor.
- 27. Examination of Contract Documents and Work Site. Before submitting a bid proposal, all bidders shall carefully examine the Contract Documents, including the plans and specifications, shall visit the site of the proposed work, and shall fully inform themselves of all conditions in and about the work site, as well as applicable federal, state and local laws and regulations that may affect the work. No bidder shall visit the site without prior authorization of the District. Bidders shall contact Purchasing Department designee for coordination of site visits.
- 28. <u>Form and Approval of Contract</u>. The Contract Documents must be approved by the Board of Trustees of the District and its legal counsel. The bidder selected by the District shall execute the contract provided by the District.
- 29. <u>Licenses and Permits</u>. Each bidder shall at all times possess all appropriate and required licenses or other permits to perform the work as identified in the Contract Documents. Upon request, each bidder shall furnish the District with evidence demonstrating possession of the required licenses or permits.
- 30. <u>Denial of Right to Bid.</u> Contractors or Subcontractors who have violated state law governing public works shall be denied the right to bid on this public works contract pursuant to Labor Code § 1777.7.
- 31. <u>Bidders Interested in More Than One Bid.</u> No person, firm, or corporation shall make, or file, or be interested in more than one bid. However, a person, firm, or corporation that has submitted a subproposal to a bidder, or that has quoted prices of materials to a bidder, is not thereby disqualified from submitting a sub-proposal or quoting prices to other bidders or from submitting a prime proposal.
- 32. <u>Contractor's State License Board</u>. Contractors and Subcontractors are required by law to be licensed and regulated by the California Contractors' License Board.
- 33. <u>Fingerprinting</u>. By law it is the District's responsibility to determine whether a contractor must provide fingerprint certification. Pursuant to Education Code § 45125.2, the District considers the totality of the circumstances in order to determine if fingerprinting of employees of a contractor working on a school site is required. Factors to be considered

include the length of time the contractor's employees are on school grounds, whether students are in proximity to the location where the contractor's employees are working, and whether the contractor's employees are working alone or with others.

- 34. <u>Labor Compliance Monitoring</u>. The Project is subject to compliance monitoring and enforcement by the California Department of Industrial Relations. In accordance with Labor Code § 1771.1, all bidders, contractors and subcontractors working at the site shall be duly registered with the Department of Industrial Relations at time of bid opening and at all relevant times. Proof of registration shall be provided as to all such contractors prior to the commencement of any work.
- 35. Additive and Deductive Items: Method of Determining Lowest Bid. Pursuant to Public Contract Code § 20103.8, if the bid solicitation includes additive and/or deductive items, the checked [X] method shall be used to determine the lowest bid:
  - <u>X</u> (a) The lowest bid shall be the lowest bid price on the base contract without consideration of the prices on the additive or deductive items.
  - \_\_\_\_\_ (b) The lowest bid shall be the lowest total of the bid prices on the base contract and those additive or deductive items that were specifically identified in the bid solicitation or Bid Proposal Form as being used for the purpose of determining the lowest bid price.
  - \_\_\_\_\_ (c) The lowest bid shall be the lowest total of the bid prices on the base contract and those additive or deductive items taken in order from a specifically identified list of those items that, when in the solicitation, and added to, or subtracted from, the base contract, are less than, or equal to, a funding amount publicly disclosed by the District before the first bid is opened.
  - \_\_\_\_\_ (d) The lowest bid shall be determined in a manner that prevents any information that would identify any of the bidders or the proposed Subcontractors or suppliers from being revealed to the public entity before the ranking of all bidders from lowest to highest has been determined.

If no method is checked, sub-paragraph (a) shall be used to determine the lowest bid.

Notwithstanding the method used by the District to determine the lowest responsible bidder, the District retains the right to add to or deduct from the Contract any of the items included in the bid solicitation.

36. Public Records Act. Responses to the Bid Documents will become the property of the District and subject to the California Public Records Act, Government Code sections 6250, et seq. Those elements in each response that are trade secrets as that term is defined in Civil Code section 3426.1(d) or otherwise exempt by law from disclosure and which are prominently marked as "TRADE SECRET," "CONFIDENTIAL," or "PROPRIETARY" may not be subject to disclosure. The District shall not be liable or responsible for the

disclosure of any such records including, without limitation, those so marked if disclosure is deemed to be required by law or by an order of the Court. Any responses that indiscriminately identify all or most of its response as exempt from disclosure without justification may be deemed non-responsive. In the event the District is required to defend an action on a Public Records Act request for any of the contents of a response marked "Confidential," "Trade Secret," or "Proprietary," each respondent agrees, by submission of its response for the District's consideration, to defend and indemnify the District from all costs and expenses, including attorneys' fees, in any action or liability arising under the Public Records Act.

- 37. <u>Quality.</u> All equipment and materials used in the installation should be new. Used, refurbished or repurposed equipment or material will not be acceptable.
- 38. <u>Bid Protest</u>. Any bid protest must be in writing and received by the District Office before 5:00 p.m. no later than five (5) calendar days following the issuance of a Notice of Intent to Award the bid, and shall comply with the following requirements:
  - a. The bid protest must contain a complete statement of the basis for the protest and all supporting documentation.
  - b. The party filing the protest must have actually submitted a bid for the Project. A Subcontractor of a bidder submitting a bid for the Project may not submit a bid protest. A bidder may not rely on the bid protest submitted by another bidder, but must timely pursue its own protest.
  - c. The protest must refer to the specific portion or portions of the Contract Documents upon which the protest is based.
  - d. The protest must include the name, address and telephone number of the person representing the protesting bidder.
  - e. The bidder filing the protest must concurrently transmit a copy of the bid protest and all supporting documentation to all other bidders with a direct financial interest which may be affected by the outcome of the protest, including all other bidders who appear to have a reasonable prospect of receiving an award depending upon the outcome of the protest.
  - f. The bidder whose bid has been protested may submit a written response to the bid protest. Such response shall be submitted to the District before 5 p.m. no later than two (2) working days after the deadline for submission of the bid protest or receipt of the bid protest, whichever is sooner, and shall include all supporting documentation. Such response shall also be transmitted by the responding party concurrently to the protesting bidder and to all other bidders who appear to have a reasonable prospect of receiving an award depending upon the outcome of the protest.

- g. The procedure and time limits set forth in this section are mandatory and are the bidder's sole and exclusive remedy in the event of bid protest. By submitting a bid each bidder agrees that failure to comply with these procedures shall constitute a waiver of any right to further pursue the bid protest, including filing a Government Code claim or legal proceedings.
- h. If the District determines that a protest is frivolous, the protesting bidder may be determined to be non-responsible and that bidder may be determined to be ineligible for future contract awards by the District.
- i. A "working day" for purposes of this section means a weekday during which the District's office is open and conducting business, regardless of whether or not school is in session.

# 3. BID FORMS

Board of Trustees of the Perris Union High School District

Dear Members of the Board of Trustees:		
The undersigned, doing business under the nan		
of the proposed work, the local conditions of the place Bidders, the General Conditions, the Instructions to lother Contract Documents for the proposed instal Middle School Shade Structure Project ("Project"), a Questionnaire, proposes to perform all work and Documents, including all of its component parts, equipment, transportation and services required for conformity with the Contract Documents, including the	ce where the work is to be dor Bidders, the Plans and Specification services associated with and having accurately complete activities in accordance with and to furnish all required later the construction of the F	ne, the Notice to ications, and all the Pinacate ted the Bidder's the Contract abor, materials, Project in strict
BASE BID:		
For the sum of		
Dollars (\$	).	
ADDITIVE/DEDUCTIVE ALTERNATE [if application of the content of the		
Additive/Deductive Alternate #1Add/Subtract	Dollars (\$	)
Additive/Deductive Alternate #2		
Add/Subtract		
Additive/Deductive Alternate #3 Add/Subtract	Dollars (\$	)
The undersigned has checked carefully all the above responsible for any errors or omissions on the part of	_	
Enclosed find certified or cashier's check Bank	no	of the
Dollars (\$) or Bidder's Bond of t	he	surety
company in an amount of not less than ten percent (10	0%) of the entire bid. The und	lersigned further
agrees, on the acceptance of this proposal, to execute		
and insurance and that in case of default in executing	these documents within the ti	ime fixed by the

Contract Documents, the proceeds of the check or bond accompanying this bid shall be forfeited and shall become the property of the District.

Contractor agrees to commence the work within the time specified in the Notice to Proceed. It is understood that this bid is based upon completing the work within the number of calendar days specified in the Contract Documents.

Addendum #	Dated:	Addendum #	Dated:
Addendum #	Dated:	Addendum #	Dated:
Addendum #	Dated:	Addendum #	Dated:
		Respectfully submitted,	
_		Respectionly submitted,	
Company:			
Address:			
By:	(Plea	use Print Or Type)	
	,	VI /	
Signature:			
Title:			
Date:			
Telephone:			
Contractor's Lice	nse No:	Expiration Date	te
Required Attachn	nents: Subc	ontractor List Form	
		xers' Compensation Certifica	ate
		Collusion Declaration	
	Bid F	Bond (or Cashier's or Certific	ed Check)

# SUBCONTRACTOR LIST FORM

Each bidder shall list below the name, license number, and location of place of business for each Subcontractor who will perform a portion of the Contract work in an amount in excess of one half of one percent (0.5%) of the total contract price. The nature of the work to be subcontracted shall also be described.

DESCRIPTION OF WORK	NAME	LOCATION	LICENSE #

#### WORKERS' COMPENSATION CERTIFICATE

Labor Code § 3700 in relevant part provides:

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

- (a) By being insured against liability to pay compensation in one or more insurers duly authorized to write compensation insurance in this State.
- (b) By securing from the Director of Industrial Relations a certificate of consent to self-insure, which may be given upon furnishing proof satisfactory to the Director of Industrial Relations of ability to self-insure and to pay any compensation that may become due to his employees."

I am aware of the provisions of Labor Code § 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 provisions before commencing the performance of the work of this Contract and will require all Subcontractors to do the same.

	Contractor	
_		
By:	 	

In accordance with Labor Code § 1860, the above certificate must be signed and filed with the awarding body prior to performing any work under this Contract.

# NON-COLLUSION DECLARATION

10 be executed by the blader and submitted with the bla.						
	declares	that	he	or	she	. is
of						
bid, and affirms that the bid is not made in the intere	*					
partnership, company, association, organization, or corpo			_			
or sham; that the bidder has not directly or indirectly indu		•		_		
or sham bid, and has not directly or indirectly colluded, c	onspired, con	nived, or	r agreed	with a	ny bidd	er or
anyone else to put in a sham bid, or that anyone shall ref	rain from bid	ding; tha	t the bi	dder ha	s not ir	ı any
manner, directly or indirectly, sought by agreement, com-	munication, o	r confere	ence wit	h anyoi	ne to fi	x the
bid price of the bidder or any other bidder, or to fix any of	overhead, prot	fit, or co	st eleme	ent of th	ne bid p	rice
or of that of any other bidder, or to secure any advantage	against the pu	ablic bod	ly award	ding the	contra	ict of
anyone interested in the proposed contract; that all state	ments contain	ned in th	e bid aı	e true	and cor	rrect
and, further, that the bidder has not, directly or indirectly,	submitted his	s or her b	oid price	e or any	breakc	lown
thereof, or the contents thereof, or divulged information of	or data relativ	e thereto	, or paid	d, and v	vill not	pay
any fee to any corporation, partnership, company asso-						
member or agent thereof to effectuate a collusive or sham	_	ĺ				,
<i>5.</i>						
I declare under penalty of perjury under the laws of the	State of Calif	ornia tha	t the fo	regoing	is true	e and
correct.	31000 01 Guill	0111100 0110		8	, 15 0100	
Date:						
	Signature	;				

# **BID BOND**

D : 4
Project
Now, therefore, if the Principal does not withdraw its Bid within the period specified, and if the Principal is awarded the Contract and within the period specified fails to enter into a written contract with District, in accordance with the Bid as accepted, or fails to provide the proof of required insurance, the performance bond and/or the payment bond by an admitted surety within the time required, or in the event of unauthorized withdrawal of the Bid, if the Principal pays the District the difference between the amount specified in the Bid and the amount for which District may otherwise procure the required work and/or supplies, if the latter amount is in excess of the former, together with all related costs incurred by District, then the above obligation shall be void and of no effect. Otherwise, the Principal and Surety shall pay to the District the penal sum described above as liquidated damages.  Surety, for value received, hereby agrees that no change, extension of time, alteration or addition to the term of the Contract or the call for bids, or to the work to be performed thereunder, or the Specifications accompanying the same, shall in any way affect its obligation under this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition.
In witness whereof the above-bound parties have executed this instrument under their several seals this day of, 2020, the name and corporate seal of each corporate
Party being hereunder affixed and these presents duly signed by its undersigned representative, pursuant to the authority of its governing body.
(Corporate Seal)
Principal/Contractor
By
Title:

(Corporate Seal)		
		Surety
Attach Attorney-In-Fact Certificate		
	Ву	
		Title

To be signed by Principal and Surety and Acknowledgment and Notary Seal to be attached.

#### 4. CONTRACT

This Contract ("Contract") is made by and	d between the Perris Union High School District
("District"), and	("Contractor").

District and Contractor hereby agree as follows:

# 1. <u>Description of Work</u>

The Contractor agrees to furnish all labor, equipment, tools, supervision, appurtenances, and services, including transportation and utilities, required to perform and satisfactorily to complete the following work:

- Assembly and installation of shade structure provided by District and associated work per plans and specifications.
- Work is to follow plans and specifications provided by District.
- DSA Project- will be overseen by Project Inspector provided by District.

The scope of the Project as covered in the plans and Specifications, attached hereto, is incorporated herein, and where different, supersedes the above list. Bidders are instructed review the plans and Specifications for detail regarding the scope of work for this Project.

# 2. Contract Documents

The Contract Documents consist of the executed Contract and all Addenda, all approved change orders, the completed Bid Forms, the required Bonds and the Insurance forms, the Notice to Bidders, the Instructions to Bidders, the Notice of Award, the Notice to Proceed, the General Conditions and any special conditions, and the Plans and Specifications.

# 3. <u>Compensation</u>

As full compensation f	or the Contr	actor's co	omplete a	nd sati	sfactory pe	erformance o	of the	work and
activities described in the Co.	ntract Docu	ments, th	ne Distric	t agree	es to pay	Contractor,	and C	ontractor
agrees to accept the sum of _								_ Dollars
(\$	), which	shall be	paid to	the C	Contractor	according t	o the	Contract
Documents.								

#### 4. Prevailing Wages

This Project is a public works project subject to prevailing wage requirements and Contractor and its Subcontractors are required to pay all workers employed for the performance of this Contract no less than the applicable prevailing wage rate for each such worker. Contractor acknowledges that the project is subject to compliance monitoring and enforcement by the California Department of Industrial Relations in accordance with Labor Code § 1770 et seq.

# 5. <u>Time for Completion</u>

The starting date of the Contract shall be the day listed by the District in the Notice to Proceed, estimated to be approximately June 8, 2020, and the Contractor shall fully complete all the work before July 31, 2020. Time is of the essence in the performance of this Contract.

# 6. <u>Liquidated Damages</u>

PERRIS UNION HIGH SCHOOL DISTRICT

Liquidated damages for the Contractor's failure to complete the Contract within the time fixed for completion are established in the amount of five hundred dollars (\$500.00) per calendar day.

# 7. Audit.

The District and Contractor are subject to the examination and audit of the California State Auditor for a period of three (3) years after the final payment under this Contract, in compliance with Government Code §8546.7.

IN WITNESS WHEREOF, the parties agree to the terms of this Contract on the day and year written below.

Name	Contractor Name
Signature	Contractor License No. and Expiration Date
Title	Individual Signature
Date	Title
	Date
	For:Corporation or Partnersh

If Corporation, Seal Below.

#### 5. PERFORMANCE BOND

WHEREAS, the Board of Trustees of the Perris Union High School District ("District"), at its meet	ting on
, 2020, has awarded to	
("Principal"), the Contract for performance of the following project ("Project"):	
Project.	
WHEREAS, the Principal is required under the terms of the Contract to furnish a bond to the Dist	trict as
obligee ensuring its full and faithful performance of the Contract Documents, which are fully incorp	orated
herein by this reference,	
NOW, THEREFORE, we, the Principal and, as S	Surety,
hereby guarantee the Principal's full, faithful and complete performance of the Contract Doc	-
	dollars
(\$) for the payment of which sum will and truly be made, we bind our	selves,
our heirs, executors, administrators and successors, jointly, severally, and firmly by this agreem	nent to
perform or have performed all of the work and activities required to complete the Project pursuant	to the
Contract Documents and to pay to the District all damages the District incurs as a result of the Prince	cipal's
failure to fully perform in accordance with the Contract Documents.	_

The condition of the obligation is such that if the Principal, its heirs, executors, administrators, successors or assigns shall in all things abide by, and well and truly keep and perform the covenants, conditions and agreements in the Contract Documents and any amendment thereof made as therein provided, on its or their parts to be kept and performed at the time and in the manner therein specified, and in all respects according to their true intent and meaning, and shall insure and indemnify and save harmless the District, its officers and agents, as therein stipulated, 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 no change, extension of time, alteration or addition to the Contract Documents shall in any way affect its obligations on this bond and it does hereby waive notice of any such change, extension of time, alteration or addition.

In the event of the District's termination of the Contract due to the Principal's breach or default of the Contract Documents, within sixty (60) days after written notice from the District to the Surety of the Principal's breach or default of the Contract Documents and District's termination of the Contract, the Surety shall notify District in writing of Surety's assumption of obligations hereunder by its election to either remedy the default or breach of the Principal or to take charge of the Work of the Contract Documents and complete the Work at its own expense ("Notice of Election"); provided, however, that the procedure by which the Surety undertakes to discharge its obligations under this Bond shall be subject to the advance written approval of the District, which approval shall not be unreasonably withheld, limited or restricted. The insolvency of the Principal or the Principal's mere denial of a failure of performance or default under the Contract Documents shall not by itself, without the Surety's prompt, diligent inquiry and investigation of such denial, be justification for Surety's failure to give the Notice of Election or for its failure to promptly remedy the failure of performance or default of the Principal or to complete the Work.

In the event the Surety fails to issue its Notice of Election to District within the time specified herein, the District may take all such action or actions necessary to cure or remedy the Principal's failure of performance or default or to complete the Work. The Principal and the Surety shall be each jointly and severally liable to the District for all damages and costs sustained by the District as a result of the Principal's failure of performance under the Contract Documents or default in its performance of obligations thereunder, including without limitation the costs of cure or completion exceeding the then remaining balance of the Contract Price; provided that the Surety's liability hereunder for the costs of performance, damages and other costs sustained by the District upon the Principal's failure of performance under or default under the Contract Documents shall be limited to the penal sum hereof, which shall be deemed to include the costs or value of any Changes of any Work which increases the Contract Price.

Principal and Surety further agree to pay all costs incurred by the District in connection with enforcement of this bond, including, but not limited to the District's reasonable attorney's fees and costs incurred, with or without suit, in addition to any other sum required by this bond. Surety further agrees that death, dissolution, or bankruptcy of the Principal shall not relieve the Surety of its obligations hereunder.

of,	2020.		
To be signed by Principal and Surety and acknowledgment		PRINCIPAL	
and notarial seal to be attached.	Ву:		
	TITLE		
		SURETY	
	Ву:		
	TITLE		
The above bond is accepted an	d approved this	day of	, 2020.
	Ву:	Authorized District Signature	

#### PAYMENT BOND

WHEREAS, the Perris Union High School District ("District") and the Contractor, \_\_\_\_\_

("Principal") have entered into a contract ("Con	ntract") for the furni	shing of all materials, labor, services,
equipment, tools, supervision and transportation	on necessary, conve	enient and proper for the installation
services associated with the Pinacate Middle Se	chool Shade Structu	re Project ("Project") which Contract
dated, 2020, and all of the Contra	act Documents mad	le part thereof are fully incorporated
herein by this reference; and		
WHEREAS, Contractor/Principal is required b	y California Civil C	Code Section 9550 et seq. to furnish a
bond in connection with the contract;		
NOW, THEREFORE, we, the Contractor/Prin	cipal and	as Surety, are held firmly bound
unto District in the penal sum of \$	Dollars (\$	), lawful money of the United
States of America for the payment of which sur	m well and truly to b	be made, we bind ourselves, our heirs,
executors, administrators, successors, and assign	ns, jointly and severa	ally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that if the Contractor/Principal, his/her or its heirs, executors, administrators, successors, or assigns, or a subcontractor, shall fail to pay any person or persons named in Civil Code Section 9100 or fail to pay for any materials 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 Section 13020 of the Unemployment Insurance Code with respect to work and labor thereon of any kind, then said Surety will pay for the same, in or to an amount not exceeding the amount set forth above, and in case suit is brought upon this bond Surety will also pay such reasonable attorney's 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 of the persons named in California Civil Code Section 9100 so as to give a right of action to such person or their assigns 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, specifications, or agreement pertaining or relating to any scheme or work of improvement described above 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 the time for any payment pertaining or relating to any scheme or work of improvement described above, 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 Surety be released from liability to those for whose benefit such

bond has been given, by reason of any breach of contract between the District and original contractor or on the part of any obligee named in such bond, unless permitted pursuant to law.										
In witness whereof, this instrume day of			-	executed	by	the	Principal	and	Surety	this
To be signed by Principal and Surety and acknowledgment and notarial seal to be attached.		Pl	RINC	IPAL		_				
	By:									
			Title	2						
	SURETY									
	By:									
					Title					
The above bond is accepted and appro	oved thi	is	_ day	of		, 2	2019.			

Authorized District Signature

# 6. GENERAL CONDITIONS

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#### 1. DEFINITIONS

<u>Addendum</u>: A written change or revision to the Contract Documents issued to the prospective bidders prior to the time of receiving bids.

<u>Alternate</u>: The sum to be added to or deducted from the base Bid if the change in scope of work as described in Alternates is accepted by the District.

<u>Approved</u>: Approved by the District or the District's authorized representative unless otherwise indicated in the Contract Documents.

<u>Architect</u>: The person or firm holding a valid license to practice architecture or engineering which has been designated (if any designated) to provide architectural or engineering design services on this Project. When Architect is referred to within the Contract Documents and no architect or engineer has in fact been designated, the matter shall be referred to the District.

<u>As Directed</u>: As directed by the District or its Architect, unless otherwise indicated in the Contract Documents.

As Selected: As selected by the District or its Architect, unless otherwise indicated in the Contract Documents.

<u>Bid</u>: The properly completed and signed proposal to perform the construction work for the Project as described in the Contract Documents.

<u>Construction Manager</u>: The individual or entity named as such by the District. If no Construction Manager is designated for the Project, all references to the Construction Manager in these Contract Documents shall mean the District and/or its designee.

<u>Contract</u>: The legally binding agreement between the District and the Contractor wherein the Contractor agrees to furnish the labor, materials, equipment, and appurtenances required to perform the work described in the Contract Documents and the District agrees to pay the Contractor for such work.

Contract Documents: The Contract Documents are described in the Contract for this Project.

<u>Contractor</u>: The person or entity holding a valid license in the State of California required for performing this Project and who has contracted with the District to perform the construction work described in the Contract Documents. The term Contractor shall be construed to mean all of the officers, employees, Subcontractors, suppliers, or other persons engaged by the Contractor for the work of this Project.

<u>District and/or Owner</u>: The District, its Board of Trustees, authorized officers and employees, and authorized representatives.

<u>DSA</u>: The State of California Division of the State Architect which has the authority to review, approve and inspect the design, alteration and construction of school buildings.

<u>Final Completion</u>: Final Completion is achieved when the Contractor has fully completed all Contract Document requirements, including, but not limited to, all final punch list items, to the District's satisfaction.

<u>Inspector:</u> The person engaged by the District to conduct the inspections required by the Education Code and Title 24.

Furnish: Purchase and deliver to the site of installation.

Board of Trustees: The Board of Trustees of the District.

<u>Indicated or As Shown</u>: Shown on drawings and/or as specified.

<u>Install</u>: Fix in place, for materials; and fix in place and connect, for equipment.

<u>Modification</u>: An authorized change to the Contract Documents which may or may not include a change in contract price and/or time.

Project: The total construction work and activities described in these Contract Documents.

Secure: Obtain.

<u>Subcontractor</u>: A person, firm, or corporation, duly licensed by the State of California, who has a contract with the Contractor to furnish labor, materials and equipment, and/or to install materials and equipment for work in this Contract.

# 2. ARCHITECT

The Architect is responsible for the overall design of the Project. The working drawings, technical Specifications, sketches and other information necessary to define the work covered by these Contract Documents have been prepared by the Architect. The Architect shall visit, inspect and observe the construction to determine general compliance with the Contract Documents, and interpret the drawings and Specifications consistent with their intent. The Architect shall evaluate the samples and other submittals required in the technical Specifications, and maintain an up-to-date log of all such items processed. The Architect will consult with the District, Contractor, and any state, county or city agency having jurisdiction over the work whenever necessary to further the best interests of the Project.

# 3. CONTRACT DOCUMENTS

#### a. Contents and Precedence

The Contract Documents consist of the executed Contract and all Addenda, all approved change orders, the completed Bid Form, the required Bonds and the Insurance forms, the Notice to Bidders, the Instructions to Bidders, the Notice of Award, the Notice to Proceed, the General Conditions, any special conditions, and the Specifications. The Contract Documents are complementary and anything required by one shall be as binding as if required by all. In case of conflicts within the Contract Documents, the order of precedence of interpretation shall be as listed above, with the executed Contract and any change order thereto having priority, and subsequent Addenda having priority over prior Addenda only to the extent modified by the subsequent Addenda. In case of conflict within the drawings, larger scale drawings shall govern smaller scale drawings, and written dimensions shall govern over scaled dimensions.

#### b. Ambiguities, Errors, and Inconsistencies

If, in the opinion of the Contractor, the construction details indicated on the drawings or otherwise specified are in conflict with accepted industry standards for quality construction and therefore might interfere with its full guarantee of the work involved, the Contractor shall promptly bring this information to the attention of the Architect for appropriate action before submittal of the bid. Contractor's failure to request clarification or interpretation of an apparent ambiguity, error or inconsistency waives that Contractor's right to thereafter claim any entitlement to additional compensation based upon an ambiguity, inconsistency, or error, which should have been discovered by a reasonably prudent Contractor, subject to the limitations of Public Contract Code §1104. During the Project, should any discrepancy appear or any misunderstanding arise as to the import of anything contained in the Contract Documents, the matter shall be promptly referred to the Architect (with written notice to the District's Construction Manager), who will issue instructions or corrections.

#### c. Lines and Planes

All lines and planes appearing on Contract drawings to be horizontal or vertical and not explicitly indicated otherwise shall be constructed true and plumb. All lines and planes appearing on Contract drawings to intersect at right angles and not explicitly indicated otherwise shall be constructed at true right angles. Where details are indicated covering specific conditions, such details also apply to all similar conditions not specifically indicated.

# d. Standards

The specification standards of the various sections of the Specifications shall be the procedural, performance, and material standards of the applicable association publications identified and shall be the required level of installation, materials, workmanship, and

performance for the applicable work. Except where a specific date of issue is mentioned hereinafter, references to specification standards shall mean the edition, including amendments and supplements, in effect on the date of the Notice to Bidders. Where no standard is identified and a manufacturer is specified, the manufacturer's specifications are the standards. All standards shall be subordinate to the requirements of the applicable codes and regulations.

# e. <u>Reference to the Singular</u>

Wherever in the Specifications an article, device or piece of equipment is referred to in the singular number, such reference shall include as many such items as are shown on drawings or required to complete the installation.

# 4. INTENT OF DRAWINGS AND SPECIFICATIONS

- a. Drawings and Specifications are to be read as an integrated document. The Contractor shall promptly report to the Architect any ambiguities, discrepancies, or errors which come to the Contractor's attention.
- b. Figured dimensions shall be followed in preference to scaled dimensions, and the Contractor shall make all additional measurements necessary for the work and shall be responsible for their accuracy. Before ordering any material or doing any work, the Contractor shall verify all measurements at the Project site and shall be responsible for the correctness of same.
- c. It is the intent of the drawings and Specifications to show and describe complete installations. Items shown but not specified, or specified but not shown, shall be included unless specifically omitted.
  - 1) The Specifications shall be deemed to include and require everything necessary and reasonably incidental to the completion of all work described and indicated on the drawings, whether particularly mentioned or shown, or not.

### 5. TRADE DIVISIONS

Segregation of the Specifications into the designated trade divisions is only for the purpose of facilitating descriptions and shall not be considered as limiting the work of any subcontract or trade. Subject to other necessary provisions set forth in the Specifications, the terms and conditions of such limitations or inclusions shall lie solely between the Contractor and its Subcontractors. "Scope" as indicated in each section of the Specifications shall serve only as a general guide to what is included in that section. Neither the stated description nor the division of the plans and Specifications to various sections, which is done solely for convenience, shall be deemed to limit the work required, divide or indicate it by labor jurisdiction or trade practice, or set up any bidding barriers to the various sub-contractors or suppliers.

- a. The Contractor shall be responsible for the proper execution of all work required by the Contract Documents and for allocating such portions as the Contractor sees fit to the various Subcontractors, subject to applicable law. The Contractor is cautioned that the various individual sections may not contain all work that the Contractor may wish to allocate to a particular Subcontractor or everything bearing on the work of a particular trade, some of which may appear in other portions of the plans or Specifications.
- b. If the Contractor elects to enter into any subcontract for any section of the work the Contractor assumes all responsibility for ascertaining that the Subcontractor for the work is competent, licensed, solvent, thoroughly acquainted with all conditions and legal requirements of the work, has included all materials and appurtenances in connection therewith in the subcontract, and has performed its work in strict compliance with the Contract Documents.
- c. It shall be the responsibility of the Contractor to notify each prospective Subcontractor at the time of request for bids of all portions of the Contract Documents, including the General Conditions, special conditions and any parts of sections of Specifications or plans that the Contractor intends to include as part of the subcontract.

# 6. MASTER MANDATORY PROVISIONS

- a. Any material, item, or piece of equipment mentioned, listed or indicated without definition of quality, shall be consistent with the quality of adjacent or related materials, items, or pieces of equipment on the Project.
- b. Any method of installation, finish, or workmanship of an operation called for, without definition of standard of workmanship, shall be followed or performed and finished in accordance with best practices and consistent with adjacent or related installations on the Project.
- c. Any necessary material, item, piece of equipment or operation not called for but reasonably implied as necessary for proper completion of the work shall be furnished, installed or performed and finished; and shall be consistent with adjacent or related materials, items, or pieces of equipment on the Project, and in accordance with best practices.
- d. Names or numbered products are to be used according to the manufacturers' directions or recommendations unless otherwise specified.

# 7. <u>CONTRACTOR</u>

a. The Contractor shall perform all the work and activities required by the Contract Documents and furnish all labor, materials, equipment (other than those specified as being provided by the District), tools and appurtenances necessary to perform the work and complete it to the District's satisfaction within the time specified. The Contractor shall at

all times perform the work of this Contract in a competent and workmanlike manner and, if not specifically stated, accomplish the work according to the best standards of construction practice. 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. The Contractor shall employ a full-time competent superintendent and necessary assistants who shall have complete authority to act for the Contractor on all matters pertaining to the work. The superintendent shall be satisfactory to the District and, if not satisfactory, shall be replaced by the Contractor with one that is acceptable. Also, the superintendent shall not be changed without the written consent of the District unless the superintendent ceases to be employed by the Contractor.
- c. Contractor shall make the layout of lines and elevations and shall be responsible for the accuracy of both the Contractor's and the Subcontractors' work resulting therefrom. All dimensions affecting proper fabrication and installation of all Contract work must be verified by the Contractor prior to fabrication and installation by taking field measurements of the true conditions. The Contractor shall take, and assist Subcontractors in taking, all field dimensions required in performance of the work, and shall verify all dimensions and conditions on the site. If there are any discrepancies between dimensions in drawings and existing conditions which will affect the work, the Contractor shall promptly bring such discrepancies to the attention of the Architect for adjustment before proceeding with the work. Contractor shall be responsible for the proper fitting of all work and for the coordination of all trades, Subcontractors and persons engaged upon this Contract.
- d. Contractor shall do all cutting, fitting, or patching of Contractor's work that may be required to make its several parts come together properly and fit it to receive or be received by work of other contractors as shown, or reasonably implied by, the drawings and Specifications for the completed work. Any cost incurred by the District due to defective or ill-timed work shall be borne by the Contractor.

# 8. RESPONSIBILITY OF CONTRACTOR

- a. Contractor shall be held strictly responsible for the proper performance of all work covered by the Contract Documents, including all work performed by Subcontractors. All work performed under this Contract shall comply in every respect to the rules and regulations of all agencies having jurisdiction over the Project or any part thereof.
- b. Contractor shall submit Verified Reports as defined in 24 California Code of Regulations ("CCR") §§ 4-336 and 4-343(c). The duties of the Contractor are as defined in 24 CCR § 4-343. Contractor shall keep and make available a copy of Title 24 of the CCR at the job site at all times.
- c. Where any item of fabricated materials and/or equipment, indicated on drawings or specified is unobtainable and it becomes necessary, with the consent of the Architect and

District, to substitute equivalent items differing in details or design, the Contractor shall promptly submit complete drawings and details indicating the necessary modifications of the work. To the extent the items represent a lower cost to contractor than what was originally specified, District shall be entitled to a corresponding decrease in the contract price. This provision shall be governed by the terms of the General Conditions regarding Submittals: Shop Drawings, Cuts and Samples.

d. With respect to work performed at or near a school site, Contractor shall at all times take all appropriate measures to ensure the security and safety of students and staff, including, but not limited to, ensuring that all of Contractor's employees, Subcontractors, and suppliers entering school property strictly adhere to all applicable District policies and procedures, e.g., sign-in requirements, visitor badges, and access limitations.

# 9. SUBCONTRACTORS

- a. Nothing contained in the Contract Documents shall create any contractual relationship between any Subcontractor and the District. The District shall be deemed to be the third party beneficiary of the contract between the Contractor and each Subcontractor. If the Contractor does not specify a Subcontractor for any portion of the work to be performed under this Contract, as required by law, Contractor shall perform that portion of the work with its own forces. The Contractor shall not substitute any other person or firm as a Subcontractor for those listed in the bid submitted by the Contractor, without the written approval of the District and in conformance with the requirements of the Public Contract Code. The District reserves the right of approval of all Subcontractors proposed for use on this Project, and to this end, may require financial, performance, and such additional information as is needed to secure this approval. If a Subcontractor is not approved, the Contractor shall promptly submit another firm of the same trade for approval.
- b. The Contractor shall insert appropriate provisions in all subcontracts pertaining to work on this Project requiring the Subcontractors to be bound by all applicable terms of the Contract Documents. The Contractor shall be as fully responsible for the acts and omissions of the Subcontractors, and of persons either directly or indirectly employed by them, as the Contractor is for the acts and omissions of persons directly employed by the Contractor.

#### 10. PERFORMANCE AND PAYMENT BONDS

- a. As directed in the Notice of Award, the Contractor shall file with the District the following bonds, using the bond forms provided with these Contract Documents:
  - 1) A corporate surety bond, in a sum not less than 100 percent of the amount of the Contract, to guarantee the faithful performance of the Contract.
  - 2) A corporate surety bond, in a sum not less than 100 percent of the amount of the Contract, to guarantee the payment of wages for services engaged and of bills

contracted for materials, supplies, and equipment used in the performance of the Contract.

- b. Corporate sureties on these bonds and on bonds accompanying bids must be admitted sureties as defined by law, legally authorized to engage in the business of furnishing surety bonds in the State of California. All sureties and bond forms must be satisfactory to the District. Failure to submit the required bonds within the time specified by the Notice of Award, using the forms provided by the District, may result in cancellation of the award of Contract and forfeiture of the Bid Bond.
- c. The amount of the Contract, as used to determine the amounts of the bonds, shall be the total amount fixed in the Contractor's proposal for the performance of the required work.
- d. During the period covered by the Contract, if any of the sureties upon the bonds shall become insolvent or unable, in the opinion of the District, to pay promptly the amount of such bonds to the extent to which surety might be liable, the Contractor, within thirty (30) days after notice given by the District to the Contractor, shall provide supplemental bonds or otherwise substitute another and sufficient surety approved by the District in place of the surety becoming insolvent or unable to pay. If the Contractor fails within such thirty (30) day period to substitute another and sufficient surety, the Contractor shall, if the District so elects, be deemed to be in default in the performance of its obligations hereunder and upon the bid bond, and the District, in addition to any and all other remedies, may terminate the Contract or bring any proper suit or other proceedings against the Contractor and the sureties or any of them, or may deduct from any monies then due or which thereafter may become due to the Contractor under the Contract, the amount for which the surety, insolvent or unable to pay, shall have been liable on the bonds, and the monies so deducted shall be held by the District as collateral security for the performance of the conditions of the bonds.

## 11. INSURANCE

a. Contractor shall obtain insurance from a company or companies acceptable to District. All required insurance must be written by an admitted company licensed to do business in the State of California at the time the policy is issued. All required insurance shall be equal to or exceed an A VIII rating as listed in Best's Insurance Guide's latest edition. On a case-by-case basis, the District may accept insurance written by a company listed on the State of California Department of Insurance List of Eligible Surplus Lines ("LESLI List") with a rating of A VIII or above as listed in Best's Insurance Guides' latest edition. Required documentation of such insurance shall be furnished to the District within the time stated in the Notice of Award. Contractor shall not commence work nor shall it allow its employees or Subcontractors or anyone to commence work until all insurance required hereunder has been submitted and approved by the District and a notice to proceed has been issued.

b. Contractor shall take out and maintain at all times during the life of this Contract, up to the date of acceptance of the work by the District, the following policies of insurance:

Type of Coverage	Minimum Requirement
Commercial General Liability	
Including Bodily Injury, Personal Property Damage, Advertising Injury, and Medical Payments.	
Each Occurrence	\$1,000,000
General Aggregate	\$2,000,000
Automobile Liability Insurance – Any Auto	
Each Occurrence General Aggregate	\$1,000,000 \$2,000,000
Workers Compensation	Statutory Limits
Employer's Liability	\$1,000,000

- General Liability Insurance: Personal injury and replacement value property damage insurance for all activities of the Contractor and its Subcontractors arising out of or in connection with this Contract, written on a comprehensive general liability form including contractor's protected coverage, blanket contractual, completed operations, vehicle coverage and employer's non-ownership liability coverage, in an amount no less than:
  - a. \$1,000,000.00 combined single limit personal injury and property damage for each occurrence and \$2,000,000.00 annual aggregate.
- 2) <u>Automobile Liability Insurance</u>: Covering bodily injury and property damage in an amount no less than \$1,000,000.00 combined single limit for each occurrence and \$2,000,000.00. Such insurance shall include coverage for owned, hired, and non-owned vehicles and be included on the umbrella/excess policy.
- c. The certificate(s) for the General Liability Policy(ies) and the Automobile Liability Policy specified above must state that the insurance is under an occurrence based, and not claims made, policy(ies) and shall be endorsed with the following specific language:

"The Perris Union High School District is an additional insured for all liability arising out of the operations by or on behalf of the named insured, and this policy protects the additional insured, its officers, agents and employees against liability for bodily injuries, deaths or property damage or destruction arising in any respect directly or indirectly in the performance of the Contract."

- d. The certificate(s) for both the General Liability Policy and the Automobile Liability Policy, shall be endorsed with the following specific language:
  - 1) The inclusion of more than one insured shall not operate to impair the rights of one insured against another insured and the coverages afforded shall apply as though separate policies have been issued to each insured.
  - 2) The insurance provided herein is primary and no insurance held or owned by the District shall be called upon to contribute to a loss.
  - 3) Coverage provided by this policy shall not be reduced or canceled without thirty (30) days written notice given to the Owner by certified mail.
  - 4) This policy does not exclude explosion, collapse, underground excavation hazard, or removal of lateral support.
  - 5) The certificates must state that the insurance is under an occurrence based, and not a claims-made, or "modified occurrence," policy (policies).
- e. Within ten (10) days following issuance of the Notice of Award of the Contract, the following documentation of insurance shall be submitted to District for approval prior to issuance of the Notice to Proceed: Certificates of insurance showing the limits of insurance provided, certified copies of all policies, and signed copies of the specified endorsements for each policy. At the time of making application for an extension of time, the Contractor shall submit evidence that the insurance policies will be in effect during the requested additional period of time.
- f. If the Contractor fails to maintain such insurance, the District may take out such insurance to cover any damages of the above mentioned classes for which the District might be held liable on account of the Contractor's failure to pay such damages, and deduct and retain the amount of the premiums from any sums due the Contractor under the Contract.

# g. Workers' Compensation Insurance:

Within ten (10) calendar days following issuance of the Notice of Award of the Contract, the Contractor shall furnish to the District satisfactory proof that the Contractor and all Subcontractors it intends to employ have procured, for the period covered by the Contract, full Workers' Compensation insurance and employer's liability coverage in the amount of the statutory limit, with an insurance carrier satisfactory to the District for all persons whom the Contractor may employ in carrying out the work contemplated under this Contract in accordance with the Workers' Compensation Insurance and Safety Act, approved May 26, 1913, and all acts amendatory or supplemental thereto (the "Act"). Such insurance shall be maintained in full force and effect during the period covered by

the Contract. In the event the Contractor is self-insured, Contractor shall furnish a Certificate of Permission to Self-Insure, signed by the Department of Industrial Relations Administration of Self-Insurance, Sacramento, California.

- 2) If the Contractor fails to maintain such insurance, the District may take out worker's compensation insurance to cover any compensation which the District might be liable to pay under the provisions of the Act, by reason of any employee of the Contractor being injured or killed, and deduct and retain the amount of the premiums for such insurance from any sums due the Contractor under the Contract, or otherwise recover that amount from the Contractor or the Surety.
- 3) If an injury occurs to any employee of the Contractor for which the employee, or the employee's dependents in the event of the employee's death, is entitled to compensation under the provisions of the Act, or for which compensation is claimed from the District, the District may retain from the sums due the Contractor under this Contract an amount sufficient to cover such compensation, as fixed by the Act, until such compensation is paid, or until it is determined that no compensation is due, and if the District is compelled to pay such compensation, it will deduct and retain from such sums the amount so paid, or otherwise recover this sum from the Contractor or its Surety.
- 4) The policies represented by the certificates shall be endorsed with a Waiver of Subrogation and must contain the provision (and the certificates must so state) that the insurance cannot be canceled until thirty (30) days after written notice of intended cancellation has been given to the District by certified mail.

# 12. CODES AND REGULATIONS

- a. The Contractor shall be knowledgeable regarding and shall comply with applicable portions of California Code of Regulations Title 24, the applicable Building Code, and all other codes, ordinances, regulations or orders of properly constituted authority having jurisdiction over the work of this Project. The Contractor shall examine the Contract Documents for compliance with these codes and regulations and shall promptly notify the Architect of any discrepancies.
- b. All work and materials shall be in full accordance with the latest rules and regulations of the Safety Orders of the Division of Industrial Safety and the applicable State laws and/or regulations. Nothing in the Project plans or Specifications is to be construed to permit work not conforming to the applicable Codes. Buildings and/or all other construction covered by this Contract shall meet all the regulations for access by the physically handicapped as administered by the Division of the State Architect and as may be required by federal or state law.
- c. If the work under this Contract is for the construction of a school building as defined by the Education Code, then the following provisions shall apply to the Contract:

- 1) All work shall be executed in accordance with the current requirements of the Education Code and California Code of Regulations: Title 24 and Title 19. No deviations from the DSA approved plans and Specifications will be permitted except upon a Change Order or Addenda, signed by the District and Architect and approved by the Division of the State Architect and the State Fire Marshal, if applicable.
- 2) The Division of the State Architect shall be notified 48 hours in advance of the first pour of concrete.

## 13. PERMITS AND TAXES

- a. The Contractor shall obtain and pay for all permits, fees and licenses that are required in order to perform the work under this Contract. The District shall pay connection charges and meter costs for new permanent utilities required by these Contract Documents. The Contractor shall notify the District sufficiently in advance to submit requests for service to the appropriate utility companies so as to insure connections or installation of utility services in accordance with the Project schedule.
- b. The Contractor shall pay for all taxes on materials and equipment. The District is exempt from Federal Excise Tax. Contractor shall not pay Federal Excise Tax on any item in this Contract.

# 14. PATENTS AND ROYALTIES

All fees or claims for patents, royalties or licenses on materials, equipment or processes used in the performance of work on this Project shall be included in the amount of the Bid. The Contractor shall indemnify, defend, and hold harmless the District, its Board of Trustees, the Architect, and their officers and employees, from all claims or liability, including costs and expenses, which may arise from the use on this Project of any patented or copyrighted materials, equipment, or processes.

# 15. SAFETY AND FIRE PREVENTION

a. The Contractor, Subcontractors and all of their agents and employees shall fully comply with all of the provisions and requirements of CAL/OSHA, Title 8, California Code of Regulations and all other safety codes applicable to the Project. The Contractor shall take thorough precautions at all times for the protection of persons and property, and shall be liable for all damages to persons or property, either on or off the site, which occur as a result of Contractor's prosecution of the work. The Contractor shall obtain permits for, install and maintain in safe condition barricades, walkways, fences, railings, and whatever other safeguards that may be necessary to protect persons and property from damage as a result of the construction under this Contract.

- b. Contractor is required to ensure Material Safety Data Sheets ("MSDS") are available in a readily accessible place at the work site for any material requiring a MSDS pursuant to the federal "Hazard Communication" standard or employee "right to know" laws. Contractor is also required to ensure proper labeling on materials brought on the job site such that any person working with the material or within the general area of the material is informed of the hazards of the material and follows proper handling and protection procedures. A copy of the MSDS shall also be promptly submitted directly to the District.
- c. Contractor shall not endanger any work by cutting, excavating, or otherwise altering the work and shall not cut or alter the work of any other contractor except with the written consent of the Architect, nor overload any new or existing structures by the placing or storage of materials, equipment, or other items thereon, and, if necessary, shall provide calculations proving the safety in so doing.
- d. If it is necessary to work at night, or where daylight is obscured, the Contractor shall provide and maintain lighting of an adequate level to properly prosecute the work, to permit the thorough inspection of same, and to ensure the safety to workers and others.
- e. Contractor shall take extraordinary care to prevent fires and keep all flammable materials and oily rags in tightly closed metal containers. Contractor shall exercise particular care when welding or cutting, and with regard to the disposition of waste materials, the nature and quantity of which might create or increase a fire hazard.

## 16. HAZARDOUS MATERIALS

Unless otherwise specified, this Contract does not include the removal, handling, or disturbance of any hazardous substances or materials encountered in the new construction or on the Project grounds. If such substances or materials are encountered, work shall cease in that area and the District shall be promptly notified to take appropriate action for removal or otherwise abating the condition in accordance with current regulations applicable to the District.

#### a. General:

- 1) No asbestos, asbestos-containing products or other hazardous materials shall be used in this construction or in any tools, devices, clothing or equipment used to further this construction.
- 2) Asbestos and/or asbestos containing products shall be defined as all items containing but not limited to chrysotile, crocidolite, amosite, anthophyllite, tremolite or actinolite.
- 3) Any or all material containing greater than one tenth of one percent (>.1%) asbestos shall be defined as asbestos-containing material.

- 4) Any disputes involving the question of whether or not material contains asbestos shall be settled by electron microscopy; the cost of any such tests shall be paid by the Contractor.
- 5) All work or materials found to contain asbestos or work or material installed with asbestos containing equipment will be immediately rejected and this work shall be removed by the Contractor at no additional cost to the District.
- 6) In compliance with Education Code § 32244, no lead based paint shall be used on the Project.

## b. Decontamination and Removal of Hazardous Material from Prior Work:

- Decontamination and removal of work found to contain asbestos or work installed with asbestos containing equipment shall be done only under the supervision of a qualified consultant, knowledgeable in the field of asbestos abatement and accredited by the Environmental Protection Agency ("EPA").
- 2) The asbestos removal contractor shall be an EPA-accredited contractor qualified in the removal of asbestos subject to the approval of the District.
- 3) The asbestos consultant shall be chosen and approved by the District which shall have sole discretion and final determination in this matter.
- 4) The work will not be accepted until asbestos contamination is reduced to levels deemed acceptable by the asbestos consultant.

# c. <u>Hold Harmless</u>:

- Interface of work under this Contract with work containing asbestos shall be executed by the Contractor at Contractor's risk and at Contractor's 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, as set forth in the indemnity provisions of this Contract, the Owner, its employees, agents and assigns for all asbestos liability which may be associated with this work and agrees to instruct Contractor's employees and agents with respect to the above-mentioned standards, hazards, risks and liabilities.
- 2) The Contractor shall, prior to commencement of this work, provide a duly signed and notarized affidavit that Contractor has instructed Contractor's employees and agents with respect to the above mentioned standards, hazards, risks and liabilities and the contents and requirements of this portion of the Contract Documents.

## d. Certification:

The Contractor agrees that materials containing asbestos or other hazardous materials as defined in Federal and State law shall not be used in construction.

# 17. TEMPORARY FACILITIES

- a. The Contractor shall obtain permits for, install and maintain in safe condition all scaffolds, hoisting equipment, barricades, walkways, or other temporary structures that may be required to accomplish the work. Such structures shall be adequate for the intended use and capable of safely accepting all loads that may be imposed upon them. They shall be installed and maintained in accordance with all applicable codes and regulations.
- b. The Contractor shall provide and maintain temporary heat from an approved source whenever in the course of the work it may become necessary for curing, drying or warming spaces as may be required for the proper installation of materials or finishes. The Contractor shall provide and maintain any and all facilities that may be required for dewatering in order that work may proceed on the Project. If it is necessary for dewatering to occur continually, the Contractor shall have on hand whatever spare parts or equipment that may be required to avoid interruption of service or work.
- c. The Contractor shall promptly remove all such temporary facilities when they are no longer needed for the work or on completion of the Project. The Contractor shall repair any damage to premises or property which resulted from the construction, use, or removal of temporary facilities and shall restore the premises and property to their original condition.
- d. See the special conditions and/or specifications for requirements concerning temporary sanitary facilities and utilities.

## 18. SIGNS

No signs may be displayed on or about the District's property (except those which may be required by law) without the District's prior written approval of size, content and location. Any signs required by the District will be designated in the special conditions.

## 19. TIME

- a. The Contractor shall commence the work on the date indicated in the Notice to Proceed. Time is of the essence regarding the Contract work, and the Contractor shall prosecute the work diligently and regularly at such a rate of progress as to ensure completion of this Project within, or sooner than, the time specified.
- b. The Contractors and Subcontractors shall investigate and become aware of the amount of time required for the delivery of all equipment and materials required to perform the work under this Contract, and no extension of time shall be granted due to failure to order the

- equipment and materials sufficiently before their incorporation into the work so as to avoid delay to the Project.
- c. The Contractor and Subcontractors shall provide and maintain enough manpower, materials and equipment to ensure a rate of construction progress that will complete the Project within or sooner than the time specified and according to the schedule of work. If, in the District's opinion, the Contractor and/or Subcontractors are not prosecuting the work at a sufficient rate of progress to meet the Project schedule, the District may direct the Contractor to provide additional manpower, materials or equipment, or to work additional hours, holidays or weekends without additional cost to the District until the work is progressing in a manner satisfactory to the District. Failure to prosecute the work in a timely manner according to the Project schedule is considered a breach of Contract and shall be cause for termination of the Contract.

# 20. <u>CONSTRUCTION SCHEDULE</u>

- a. Within fifteen (15) calendar days after the award of the Contract, the Contractor shall prepare and submit to the Architect and District an as-planned construction schedule showing in detail how the Contractor plans to prosecute the work within the time set for Final Completion. The schedule shall include the work of all trades necessary for construction of the Project, and shall be sufficiently complete and comprehensive to enable progress to be monitored on a day-by-day basis. The information for each activity shall include at a minimum the activity description, duration, start date and completion date.
- b. The Contractor shall take care in the preparation of the schedule to ensure that it represents an accurate and efficient plan for accomplishing the work. If the Project is more than one week behind schedule, it must be promptly revised showing how the Contractor plans to complete the work, but in no case shall it show a completion date later than that required by the Contract, unless a time extension has been granted. The current schedule shall be kept posted in the Contractor's project office on site.
- c. The Contractor shall be responsible for the coordination of all work necessary and pertaining to the construction whether actually a part of this Contract or attendant thereto. The Contractor shall notify the District and various utility companies, as far as possible in advance of their required work, in order that work schedules may be developed for all concerned, which will permit the most effective and timely accomplishment of the entire Project.

# 21. <u>DELAYS AND TIME EXTENSIONS</u>

a. The Contractor may be granted a time extension if the Contractor encounters an unavoidable delay of the work due to causes completely beyond the Contractor's control and which the Contractor could not have avoided by the exercise of reasonable care, prudence, foresight and diligence. Causes for which a claim for extension of time may be

made include: acts of the public enemy, acts of another contractor in the performance of another contract with the District, priority of a governmental agency for materials or equipment, fire, flood, violent wind storm, epidemic, quarantine restriction, strike, freight embargo, or weather of an unusually severe nature. The Contractor will not be granted time extensions for weather conditions which are normal for the location of the Project, according to the U. S. Weather Bureau Records.

- b. A request for extension of time and compensation related thereto shall be made in writing to the Architect and District within ten (10) calendar days of the date the delay is encountered, or shall be deemed waived. The request shall include a detailed description of the reasons for the delay and corrective measures by the Contractor. The request shall be accompanied by evidence that the insurance policies required by the Contract shall be in effect during the requested additional period of time. In order for the Architect to consider a request for time extension, the Contractor must prove that the reasons stated for the delay actually caused a delay in portions of the work which will result in completion beyond the date specified in the Contract. The Contractor may also be granted a time extension for a significant change in the scope of work which request for extension of time shall be included in a Contract modification proposal.
- c. No damages or compensation or any kind shall be paid to a Contractor because of delays in the progress of work, whether such delays be avoidable or unavoidable, that are not the responsibility of District. District's liability to Contractor for delays for which District is responsible shall be limited to an extension of time unless such delays were unreasonable under the circumstances involved and were not within the contemplation of the parties when the Contract was awarded. The Contractor shall provide to the District the actual, substantiated costs to Contractor for which the Contractor may claim damages from District. Such costs, if any, shall be directly related to the Project, and shall not include costs that would be borne by the Contractor in the regular course of business, including, but not limited to, office overhead and ongoing insurance costs. Delay damages shall not include Contractor or Subcontractor markup for overhead and profit, but only actual, documented, and direct actual costs. The District shall not be liable for any damages which the Contractor could have avoided by any reasonable means including, but not limited to, the more judicious handling of forces or equipment.
- d. The granting of an extension of time because of unavoidable delays shall in no way operate as a waiver on the part of the District of the right to collect liquidated damages for other delays or of any other rights to which the District is entitled.

# 22. LIQUIDATED DAMAGES

a. The parties understand and agree that the goodwill, educational process, and other business of District will be damaged if the Project is not completed within the time limits required. The parties have further agreed that the exact amount of damages for failure to complete the Work within the time specified is, in some cases, extremely difficult, impractical, or impossible to determine. As to those damages that are difficult,

impractical, or impossible to determine, should the Contractor fail to achieve Final Completion of this Contract within the time fixed for Final Completion, together with extensions granted by the District for unavoidable delays, Contractor shall become liable to the District in the amount specified in the Contract per calendar day for each day the Contract remains incomplete beyond the time for Final Completion, as liquidated damages and not as a penalty. Contractor shall not be charged with liquidated damages when the delay in completion of the work beyond the time for Final Completion is due to acts of the District.

- b. In addition to any liquidated damages which may be assessed, if Contractor fails to achieve Final Completion of this Contract within the time fixed for Final Completion, together with extensions granted by the District for unavoidable delays, and if as a result District finds it necessary to incur any costs and/or expenses, or if District receives any claims by other contractors, subcontractors, or third parties claiming time or other compensation by reason of Contractor's failure to complete work on time, Contractor shall pay all those costs and expenses incurred by District. These costs and expenses may include but are not limited to such items as rental payments, inspection fees, and additional architectural fees, whether related to the acquisition of facilities or caused by the delay in completion.
- c. Any money due or to become due the Contractor may be retained to cover liquidated and other delay damages. Should such money not be sufficient to cover those damages, the District shall have the right to recover the balance from the Contractor or Contractor's sureties.
- d Should the District authorize suspension of the work for any cause, the time work is suspended will be added to the time for completion. Suspension of the work by the District shall not be a waiver of the right to claim liquidated or other delay damages as set forth in this section.

# 23. <u>DISTRICT'S RIGHT TO STOP WORK; TERMINATION OR SUSPENSION OF THE</u> CONTRACT

# a. District's Right to Stop Work:

In addition to or as an alternative to any and all other remedies available to the District, if the Contractor fails to correct work which is not performed in accordance with the Contract Documents, or if the Contractor persistently fails to perform the work in accordance with the Contract Documents, the District may by written order direct the Contractor to stop the work, or any portion thereof, until the cause for such order has been eliminated to the satisfaction of the District. However, the right of the District to stop the work shall not give rise to a duty on the part of the District to exercise this right for the benefit of the Contractor or any other person or entity, and the failure of the District to do so shall not be raised as a defense to the Contractor's failure to perform the work in accordance with the Contract Documents.

# b. Termination for Cause:

- 1) If the Contractor refuses or fails to furnish sufficient materials, work force, equipment, and appurtenances to properly prosecute the work in a timely manner, or if Contractor refuses or fails to comply with any provisions of the Contract Documents, or if Contractor should file a bankruptcy petition or make a general assignment for the benefit of Contractor's creditors or if a receiver should be appointed on account of Contractor's insolvency, then the District may give the Contractor and Contractor's Surety written notice of intention to terminate the Contract. Unless within seven (7) calendar days after the serving of such notice upon the Contractor and Contractor's Surety such violation shall cease and arrangements for correction of such conditions shall be made satisfactory to the District, the Contract shall cease and terminate. In the event of such termination, the District shall immediately serve written notice thereof upon the Contractor and Contractor's Surety.
- In the event of termination for cause, in addition to all remedies available to the District, the Contractor's Surety shall have the right to take over and perform the Contract; provided, however, that if the Surety does not commence performance within five (5) calendar days from the date of the issuance of such notice of termination, the District may take over the work and prosecute the same to completion by letting another Contract, or by any other method that the District deems advisable. The Contractor and Contractor's Surety shall be liable for any excess cost incurred by the District thereby, and in any such event the District may take possession of such materials, equipment, and other property belonging to the Contractor as may be on the site and use same in completing the work.

## c. Termination or Suspension for Convenience:

The District reserves the right, in its sole discretion, to terminate or suspend all or part of the Contract for convenience following three (3) days written notice to the Contractor. In the event of termination or suspension for convenience, Contractor shall have no claims against the District, except:

- 1) The actual cost of labor, materials and services provided pursuant to the Contract, and which have not yet been paid for, as documented by timesheets, invoices, receipts and the like; and
- 2) Five percent (5%) of the total cost of the work performed as of the date of notice of termination or suspension or five percent (5%) of the value of the work yet to be completed, whichever is less. The parties agree that this amount shall constitute full and fair compensation for all Contractor's lost profits and other damages resulting from the termination or suspension for convenience.

# 24. ASSIGNMENT OF CONTRACT

The Contractor may not assign or delegate all or any portion of this Contract without the written consent of the District and no such consent shall be given which would relieve the Contractor or its Surety of their responsibilities under the Contract. The Contractor may assign, without liability to the District, monies due the Contractor under the Contract to banks, trust companies or other financial institutions provided written notice thereof is promptly delivered to the District. Assignment of monies earned by the Contractor shall be subject to the same retention as other payments made to Contractor, and shall also be subject to setoffs and back charges as provided by this Contract.

# 25. COORDINATION WITH OTHER CONTRACTS

- a. The District reserves the right to do other work or award other contracts in connection with this Project. By entering into this Contract, Contractor acknowledges that there may be other contractors on or adjacent to the Project site whose work must be coordinated with that of its own. Contractor expressly warrants and agrees that it will cooperate with other contractors and will do nothing to delay, hinder, or interfere with the work of other contractors, or that of the District, its Architect and Construction Manager. Contractor also expressly agrees that in the event its work is hindered, delayed, interfered with, or otherwise affected by a separate contractor, its sole remedy will be a direct action against the separate contractor. To the extent allowed by law, the Contractor expressly waives any remedy against the District, its Architect and Construction Manager on account of delay, hindrance, interference or other such events caused by a separate contractor.
- b. If any part of Contractor's work depends upon the work of a separate contractor, Contractor shall inspect such other work and promptly report in writing to the District and Architect any defects in such other work that render it unsuitable to receive the work of Contractor. Failure of the Contractor to so inspect and report shall constitute an acceptance of the other contractor's work, except as to defects which the Contractor could not have detected through the reasonable inspection of the other contractor's work prior to the execution of Contractor's work.
- c. If Contractor is aware of a current or potential conflict between Contractor's work and the work of another contractor on the site, and is unable to informally resolve the conflict directly with the other contractor, Contractor shall promptly provide written notice to the District, with a copy to the Architect and the other contractor, specifying the nature of the conflict, the date upon which the conflict arose, and the steps taken to attempt to resolve the conflict. The District may issue written instructions to address the conflict.
- d. If, through Contractor's negligence, any other contractor or subcontractor shall suffer loss or damage to the work, Contractor shall make a reasonable effort to settle with such other contractor and subcontractor by agreement or arbitration. If such other contractor or subcontractor shall assert any claim against the District or Architect, on account of any damage alleged to have been so sustained, the District or Architect shall notify the

Contractor, who shall defend such proceedings at Contractor's own expense and save harmless and indemnify the District and the Architect from any such claim.

# 26. SUBMITTALS: SHOP DRAWINGS, CUTS AND SAMPLES

- a. Five (5) copies of shop drawings, brochures and cuts and samples in quantities specified by the Architect shall be submitted to the Architect for all items for which they are required by the plans and Specifications. Prior to transmittal, the Contractor shall examine all submittals for accuracy and completeness in order to verify their suitability for the work and compliance with the Contract Documents and shall sign and date each submittal. Submittals shall be made sufficiently before the items are required for the work so as to cause no delay and shall be in accordance with the Project construction schedule.
- b. In addition to information furnished as common practice, submittals shall contain the Project name and location, Contractor's name and address, Subcontractor's or supplier's name and address, date of submittal and any revisions, and reference to appropriate specification section, and/or drawing and detail numbers. The Contractor and/or the Subcontractors shall verify in the field all dimensions and relationships to adjacent work necessary to ensure the proper fit of the items submitted. If necessary, the Contractor shall make any corrections required and resubmit with all due haste in the same number as initially required.
- c. Review of submittals, shop drawings, cuts or samples by the District or Architect shall not relieve the Contractor from complying with the requirements of the Contract Documents.
- d. Any materials or equipment installed without approval shall be at the Contractor's own risk, and Contractor may be required to remove any such materials or equipment and install the specified items at Contractor's own cost, including repairs to adjacent work.

## 27. PAYMENTS

#### a. Cost Breakdown:

Prior to submitting Contractor's first request for payment, the Contractor shall prepare and submit to the Architect and District a cost breakdown (schedule of values) showing the major work items for each trade or operation required in construction of the Project. The work items shall be sufficiently detailed to enable the Architect to accurately evaluate the completion percentages requested by the Contractor. The cost for each work item shall include overhead and profit. The total of all work item costs shall equal the amount of the Contract.

## b. Scope of Payment:

Payment to the Contractor at the unit price or other price fixed in the Contract for performing the work required under any item or at the lump sum price fixed in the Contract for performing all the work required under the Contract shall be full compensation for furnishing all labor, materials, equipment and tools necessary to the work, and for performing and completing, in accordance with the Specifications, all work required under the item or under the Contract, and for all expense incurred by the Contractor for any purpose in connection with the performance and completion of the work.

# c. Progress Payments:

The Contractor will, on or about the last day of each month, make an estimate of the value of the work completed by Contractor in the performance of the Contract. These estimates shall be subject to the review and approval of the Architect. The first such estimate will be of the value of the work completed after the Contractor commenced the performance of the Contract, and every subsequent estimate, except the final estimate, will be of the value of the work completed since the immediately preceding estimate. Such estimates will be based on labor, materials and equipment incorporated into the work, and items of materials and equipment delivered to the Project. The Contractor shall be responsible for the security and protection of such materials and equipment delivered to the Project and not incorporated in the work. Within thirty (30) calendar days after the approval of each estimate for progress payment, the District will pay to the Contractor an amount equal to ninety five (95) percent of the approved estimate, unless a different retention percentage is stated in the Notice to Bidders, in which case that percentage applies. Payments may at any time be withheld if in the judgment of the District the work is not proceeding in accordance with the Contract Documents, the Contractor is not complying with the requirements of the Contract, stop notices have been timely filed, the estimate contains an error, or the District has incurred costs or requests reasonable financial assurances regarding defective work by the Contractor.

## d. Final Payment:

Within thirty (30) days after all required work is fully completed in accordance with the Contract Documents, the Contractor shall submit a final invoice for the total value of the work completed in accordance with the Contract, which shall be subject to review and approval by the District. As required by law, District shall pay Contractor the unpaid balance of the Contract price of the work, or the whole Contract price of the work if no progress payment has been made, determined in accordance with the terms of the Contract, less such sums as may be lawfully retained under any provision of the Contract, including, but not limited to, amounts retained as liquidated damages, for stop notices, for third-party claims for which the Contractor is required to indemnify the District, for defective work and costs incurred by the District in connection therewith, or for other such claims and damages attributable to the Contractor ("Final Payment"). Prior progress estimates and payments are subject to correction in the Final Payment. Tender of the Final Payment shall constitute denial by the District of any unresolved claim. Contractor's acceptance of the Final Payment shall operate as a full and final release to the District and its agents from any and all unasserted claims Contractor has, or may have, related to this

Contract. Pursuant to California Public Contract Code §7107, if there is any dispute between the District and the Contractor at the time that disbursement of the Final Payment is due, the District may withhold from disbursement of the Final Payment an amount not to exceed one hundred fifty percent (150%) of the amount in dispute.

## e. Payments Do Not Imply Acceptance of Work:

The granting of any progress payment or payments by the District or the receipt thereof by the Contractor shall not constitute acceptance of the work or of any portion thereof, and shall in no way lessen the liability of the Contractor to replace unsatisfactory work or material, whether or not the unsatisfactory character of such work or material was apparent or detected at the time such payment was made.

# f. Retention of Sums Charged Against Contractor:

It is mutually understood and agreed that when under any provision of this Contract the District shall charge any sums of money against the Contractor, the amount of such charge shall be deducted and retained by the District from the amount of the next succeeding progress estimate, or from any other monies due or that may become due the Contractor on account of the Contract. If on completion or termination of the Contract such monies due the Contractor are found insufficient to cover the District's charges against the Contractor, the District shall have the right to recover the balance from the Contractor or the Contractor's Sureties.

## g. Release:

The Contractor and each assignee under an assignment in effect at the time of Final Payment shall, if required by the District, execute and deliver at the time of Final Payment and as a condition precedent to Final Payment, a release in form and substance satisfactory to and containing such exemptions as may be found appropriate by the District, discharging the District, its officers, agents and employees of and from liabilities, obligations and claims arising under this Contract.

## h. Payment to Subcontractors and Suppliers:

The Contractor shall pay each Subcontractor and supplier promptly on receipt of each progress payment from the District for the materials, labor and equipment delivered to the site or incorporated in the work by each Subcontractor during the period for which the progress payment is made, less any retention as provided above.

# i. Stop Notice Costs:

The District reserves the right to charge the Contractor or Surety, or to withhold from release of retention, all costs incurred by the District, including attorney's fees, for processing and defending stop notice claims.

# 28. MODIFICATIONS OF CONTRACT

# a. <u>Changes in the Work:</u>

- The District, before the date of acceptance of the work, may, without notice to the Sureties, order changes in the work ("Modifications"), may order extra materials and extra work in connection with the performance of the Contract, and the Contractor shall promptly comply with such orders. All Modifications must be approved by DSA and the State Fire Marshall, if applicable, as required by law.
- If changes ordered in design, workmanship or materials are of such a nature as to increase or decrease the cost of any part of the work, the price fixed in the Contract shall be increased or decreased by such amount as represents the reasonable and proper allowance for the increase or decrease in the cost of the work in accordance with the provisions of this Article, and any other applicable terms of the Contract, including, but not limited to, the Contractor's schedule of values and the price for allowances, if any. Except as provided by law, the total cost of all Modifications shall not exceed ten (10) percent of the original Contract price.
- In the case of a disputed work item, the District may direct the Contractor to perform the disputed work at no additional cost to the District on the grounds that the work is adequately indicated in the Contract Documents, and therefore already included in the Contract price. If the Contractor maintains that the disputed work represents a modification to the Contract, Contractor may submit a claim in accordance with Article 50, Resolution of Construction Claims. Notwithstanding any dispute regarding the requirements of the Contract Documents, Contractor shall promptly and fully comply with the District's directive. Contractor's failure to do so shall be deemed a material breach of this Contract, and in addition to all other remedies, District may, at its sole discretion, hire another contractor and/or use its own forces to complete the disputed work at Contractor's sole expense, and may deduct the cost of such work from the Contract price.

# b. Cost Breakdown:

When the Modification is proposed, the Contractor shall furnish a complete breakdown of actual costs of both credits and extras, itemizing materials, labor, taxes, overhead and profit. Subcontract work shall be so indicated. All costs must be fully documented. The following limitations shall apply:

- 1) Limitations Where Contract Price Changes are Involved:
  - (a) Overhead and Profit for the Contractor. The Contractor's overhead and profit on the cost of subcontracts shall be a sum not exceeding ten percent (10%) of such costs. The Contractor's overhead and profit on the costs of

work performed by the Contractor shall be a sum not exceeding fifteen percent (15%) of such costs. Overhead and profit shall not be applied to the cost of taxes and insurance by Contractor or Subcontractors or to credits. No processing or similar fees may be charged by the Contractor in connection with the Modification. "Overhead and profit" shall include all plant, equipment rental and repair, project management, field coordination, job site project supervision and indirect labor and materials.

- (b) <u>Bond Premiums</u>. The actual rate of bond premiums as paid on the total cost (including taxes) will be allowed, but with no markup for profit and overhead.
- (c) <u>Taxes</u>. State and city sales taxes should be indicated. Federal excise tax shall not be included. (District will issue an exemption on request.)

# 2) Change Order Certification:

All change orders and requests for proposed change orders shall be deemed to include the following certification by the Contractor:

"The undersigned Contractor approves the foregoing as to the changes in work, if any, and as to the Contract price specified for each item and as to the extension of time allowed, if any, for completion of the Project as stated herein, and agrees to furnish all labor, materials, and service and to perform all work necessary to complete any additional work specified for the consideration stated herein. Submission of claims which have no basis in fact or which Contractor knows are false are made at the sole risk of the Contractor and may be a violation of the False Claims Act, as set forth in Government Code §§12650 *et seq.* It is understood that the changes to the Contract Documents set forth herein shall only be effective upon approval by the Board of Trustees of the District.

"It is expressly understood that the value of the extra work or changes 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 herein are deemed waived."

## c. Unit Prices, Schedule of Values, or Allowances:

Where Unit Prices, a Schedule of Values, and/or Allowances are required by the Contract Documents, that pricing shall govern in computing any additions to or deductions from the Contract price on account of any added or omitted work. Unit Prices listed in the original bid include all costs and no addition of any description will be allowed.

## d. Time and Materials:

If it is impractical, because of the nature of the work, or for any other reason, to fix an increase in price in advance, the Change Order may fix a maximum price which shall not under any circumstances be exceeded, and subject to such limitation, such alteration, modification or extra shall be paid for at the actual necessary cost as determined by the sum of the following items (1) to (5) inclusive:

- 1) Labor, including premium on compensation insurance and charge for Social Security taxes, and other taxes pertaining to labor.
- 2) Material, including sales taxes and other taxes pertaining to materials.
- 3) Plant and equipment rental, to be agreed upon in writing before the work is begun. No charge for the cost of repairs to plant or equipment will be allowed.
- 4) Overhead and profit computed at fifteen percent (15%) of the total of Items (1) to (3) inclusive.
- The proportionate cost of premiums on bonds computed at one and one-half percent (1-1/2%) of the total of items (1) to (4) inclusive.

If the Time and Materials work is done by a Subcontractor, the amount shall be determined as set forth above under items (1) to (5) inclusive. The Contractor's overhead and profit on the costs of subcontracts (exclusive of taxes and insurance) shall not exceed ten percent (10%) of such costs.

The District reserves the right to furnish such materials as it may deem expedient, and no allowance will be made for profit thereon. The above-described methods of determining the payment for work and materials shall not apply to the performance of any work or the furnishing of any material which, in the judgment of the District, may properly be classified under items for which prices are established in the Contract.

# e. Oral Modifications:

No oral statements of any person shall in any manner or degree modify or otherwise affect the terms of the Contract.

## 29. INDEMNITY

Contractor shall defend with counsel acceptable to the District, indemnify and hold harmless to the full extent permitted by law, the District and its Board of Trustees, officers, agents, Architect, construction manager, employees and volunteers from and against any and all liability, loss, damage, claims, expenses, fines, judgments and costs (including, without limitation, attorney's fees and costs and fees of litigation) (collectively, "Liability") of every nature arising out of or in

connection with Contractor's performance of the Project or its failure to comply with any of its obligations contained in these Contract Documents, except such Liability caused by the active negligence, sole negligence or willful misconduct of the District. Such indemnification shall extend to all claims, demands, or liabilities occurring after completion of the project as well as during the progress of the work. Pursuant to Public Contract Code § 9201, District shall timely notify Contractor of receipt of any third-party claim relating to this Project.

# 30. WARRANTY OF TITLE

Contractor warrants that title to all work, materials or equipment included in a request for payment shall pass and transfer to the District whether or not they are installed or incorporated in the Project, free from any claims, liens or encumbrances, when such payment is made to the Contractor. Contractor further warrants that no such work, materials or equipment have been purchased for work under the Contract subject to an agreement by which an interest therein or an encumbrance thereon is retained by the seller or supplier.

# 31. USE OF COMPLETED PARTS OF THE WORK BEFORE ACCEPTANCE

Whenever the work or any part thereof is in a condition suitable for use, and the best interest of the District requires such use, as determined by the District, the District may take possession of, connect to, open for public use, or use the work or a part thereof. When so used, maintenance and repairs due to ordinary wear and tear or vandalism will be made at District's expense. The use by the District of the work or part thereof as contemplated in this section shall in no case be construed as constituting acceptance of the work or any part thereof, including, but not limited to, the right to assess liquidated damages. Such use shall neither relieve the Contractor of any of Contractor's responsibilities under the Contract nor act as a waiver by the District of any of the conditions thereof. Contractor shall continue to maintain all insurance, including Builder's Risk insurance, on the entire Project, and diligently pursue full completion of the work.

# 32. GUARANTEE AND WARRANTY

a. By signing this Contract, Contractor agrees to the following guarantee and warranty:

## **Guarantee & Warranty**

Contractor hereby guarantees and warrants its work on the Project for a period of two (2) years from the date of the filing of the Notice of Completion as follows.

Contractor shall promptly repair or replace to the satisfaction of the District any or all work that appears defective in workmanship, equipment and/or materials for whatever reason, ordinary wear and tear and unusual abuse or neglect excepted, together with any other work which may be damaged or displaced in so doing.

Contractor agrees to promptly correct and remedy any failure by the Contractor to conform its work, activities and services to the requirements of the Contract Documents.

In the event of the Contractor's failure to comply with the above-mentioned obligations within the ten (10) calendar days of notice, or sooner if required by an emergency, Contractor hereby authorizes the District to have the defects or deficiencies repaired, remedied, corrected and made good at Contractor's expense, and Contractor shall pay the costs and charges therefore upon demand. The Surety agrees to be responsible for these costs and charges as well.

This guarantee and warranty does not limit any other applicable guarantee or warranty that may be longer.

## 33. PROTECTION OF WORK AND PROPERTY

- a. The Contractor shall be responsible for each operation and all work on the Project, both permanent and temporary. The Contractor shall protect the work and materials from damage due to negligence, the action of the elements, the carelessness of third parties, vandalism, or any other cause whatsoever, until the final completion and acceptance of the Project. Should improper work by the Contractor be covered by another contractor and damage or defects result, the whole work affected shall be made good by the Contractor to the satisfaction of the Architect and District without expense to the District. Contractor shall take reasonable care to avoid damage to existing facilities or utilities, whether on the Project or adjacent to it, and Contractor shall be liable for any damage thereto or interruption of service due to Contractor's operations. If the Contractor encounters any facilities or utilities not shown on the drawings or not reasonably inferable therefrom, Contractor shall promptly notify the Architect about them, and shall do no further work which may cause damage to same. If it is determined that some action needs to be taken regarding facilities not shown, the Contractor will be given directives on what action to take, and any additional cost to the Contractor incurred thereby will be handled by Change Order.
- b. The property limits of the area of the Project are indicated on the drawings. Except for work specifically shown or noted, Contractor shall confine Contractor's operations within the indicated property limits. The Contractor shall provide, install, and maintain all shoring, bracing and underpinning necessary to support adjacent property, streets, buildings and structures, that may be affected by building operations for this work; shall serve or cause to be served all legal notices to adjoining property owners that may be necessary for their protection; and shall protect from damage all adjacent buildings, fences, landscaping, and repair or replace any such property damaged in the course of work under the Contract.

# 34. <u>USE OF ROADWAYS AND WALKWAYS</u>

The Contractor shall not unnecessarily interfere with use of any roadway, walkway or other facility for vehicular or pedestrian traffic by any party entitled to use it. Wherever such interference becomes necessary for the proper and convenient performance of the work and no satisfactory detour route exists, the Contractor shall, before beginning the interference, provide a satisfactory detour, temporary bridge, or other proper facility for traffic to pass around or over the interference and shall maintain it in satisfactory condition as long as the interference continues, all without extra payment unless otherwise expressly stipulated in the Contract Documents.

# 35. MATERIALS

- a. Unless explicitly stated otherwise, all specified equipment and material comprising the work of this Contract, as being provided or furnished or installed, shall imply the inclusion of all components, hardware and accessories, required for complete installation and satisfactory operation as intended by the manufacturer. Wherever the method of installation of any material is not explicitly specified, the installation shall be as recommended by manufacturer.
- b. Wherever in the Contract Documents it is provided that the Contractor shall furnish materials or equipment for which no detailed specifications are set forth, such materials or equipment shall be new and of the best grade for the purpose for which they will be used when incorporated in the work. Materials specified by reference to a number or symbol of a specific standard, such as A.S.M., Federal Specification, State Standard, Trade Association, or similar standards, shall comply with requirements in the latest revision thereof and any amendment or supplement in effect on the date of the notice to bidders.
- c. None of the materials to be provided furnished or installed on this project shall contain asbestos or any other "hazardous substance" as that term is defined by federal or state law.

#### 36. SUBSTITUTIONS

- a. Wherever in the drawings or Specifications a material or product is called for by trade or brand names or manufacturer and model number, alternative items of equal quality and purpose may be proposed for use by the Contractor, as specified in the Instructions to Bidders. The burden of proof of equality is on the Contractor, and Contractor shall furnish all information and supplies necessary for the Architect and District to make a thorough evaluation of the proposed substitution. The decision about the equality of the proposed substitution is final, and if the proposed substitution is not approved, the Contractor shall install the item called for. Proposed substitutions and any changes in adjacent work caused by them shall be made by the Contractor at no additional cost to the District.
- b. Proposed substitutions shall be submitted sufficiently before actual need to allow time for thorough evaluation. Substitutions shall not be proposed for the reason that submittals

- were not made early enough to avoid delay. The review of substitutions shall not relieve the Contractor from complying with the requirements of the drawings and Specifications.
- c. In the event Contractor makes substitutions in materials, equipment, or designs, with or without the District's approval, other than those authorized herein, the Contractor shall then assume full responsibility for the effects of such substitutions on the entire Project, including the design, and shall reimburse the District for any charges resulting from such substitutions, including any charges for modifications in the work of other trades, and including any charges for additional design and review, plus reasonable and customary mark-ups.

## 37. TESTING

- a. Materials, equipment, or other work requiring tests may be specified in the Contract Documents, and they shall be adequately identified and delivered to the site in ample time before intended use to allow for testing. If such materials, equipment or other work should be covered without required testing and approval, they shall be uncovered at the Contractor's expense, including any repairs or replacement resulting therefrom. The Contractor shall notify the District and Architect when and where such materials, equipment or other work are ready for testing, and Contractor shall bear the cost of making them available for testing. The Contractor shall notify the District and Architect sufficiently before the need for testing so as to cause no delay in the work and, in any case, at least forty-eight (48) hours prior to the need for testing.
- b. The cost of initial tests called for will be paid by the District and will be performed by independent testing consultants retained by the District. All other tests and inspections specified or otherwise required to substantiate compliance with specified requirements for quality of material or performance of operation shall be paid for by the Contractor. If retesting or additional testing is necessary because of substandard initial test results, the costs thereof shall be paid by the Contractor, including any repairs or replacement resulting therefrom.

# 38. INSPECTION

a. All materials, equipment and workmanship used in the work of the Project shall be subject to inspection or testing at all times and locations during construction and/or manufacture. The District's and Architect's authorized representatives and representatives of other agencies having authority over the work shall have access to the work for the above purposes at all reasonable times and locations. Any material or work found to be unsatisfactory or not according to the Contract Documents shall be replaced with the correct material or work and the defective items promptly removed, all at the Contractor's expense, when directed to do so by any of the above-named persons having authority over the work. The cost of review time and analysis by the Architect or other District consultants necessitated by incomplete or defective work by the Contractor shall be charged to the Contractor.

- b. Inspection and testing by the District or its representatives shall not relieve the Contractor from complying with the requirements of the Contract Documents. The Contractor is responsible for its own quality control.
- c. Whenever required by the District or Architect, the Contractor shall furnish all tools, labor and materials necessary to make an examination of work in place by uncovering the same. Should such work be found unsatisfactory, the cost of examination and reconstruction shall be paid by the Contractor. Should such work be found satisfactory, the cost of examination and reconstruction of the work shall be paid by Change Order unless the Contractor improperly covered the work before it could be inspected or tested. If the Contractor considers it necessary or desirable to work on Saturday, Sunday or a holiday, Contractor shall seek written approval from the District at least forty-eight (48) hours before the commencement of such work.

# 39. CLEANUP

- a. The Contractor shall maintain the premises and area of the work in a neat and clean condition. No burning of rubbish on site shall be allowed. The Contractor shall control dust on the site by sprinkling at whatever intervals are necessary to keep it laid down and shall take measures to prevent dust and debris from being accidentally transported outside the area of the work.
- b. Final cleaning, such as sweeping, dusting, vacuuming, dry and wet mopping, polishing, sealing, waxing and other finish operations normally required on newly installed work shall be taken to indicate the finished conditions of the various new and existing surfaces at the time of acceptance. Prior to the time of acceptance, all marks, stains, fingerprints, dust, dirt, splattered paint and blemishes resulting from the various operations shall be removed throughout the Project. Stair treads and risers shall be wet-mopped. Glass shall be left clean and polished both inside and outside. Plumbing fixtures and light fixtures shall be washed clean. Hardware and other unpainted metals shall be cleaned and all building papers and other temporary protections shall be removed throughout the building, or portion of the building where Contractor was involved, all to the satisfaction of the Architect and District. The exterior of the buildings, playfields, exterior improvements, and planting spaces and other work areas shall be similarly clean and in good order.

# 40. CONSTRUCTION WASTE MANAGEMENT REQUIREMENTS

#### a. Scope:

This Article includes requirements for the diversion by the Contractor of construction and demolition debris from landfills. The Contractor shall develop and implement a Waste Management Plan as specified herein. The Contractor shall take a pro-active, responsible role in the management of construction and demolition waste and require all subcontractors, vendors, and suppliers to

participate in the effort.

- 2) The District has established that this Project shall generate the least amount of waste practicable and that processes shall be utilized that ensure the generation of as little waste as possible due to over-packaging, error, poor planning, breakage, mishandling, contamination or other factors.
- 3) As much of the waste materials as economically feasible shall be reused, salvaged or recycled. Waste disposal in landfills shall be minimized.
- 4) The Contractor is encouraged to use waste hauling companies that separate recyclable materials. The Contractor shall work with its waste haulers in providing other recycling methods as appropriate.
- 5) The Contractor is responsible for implementation of any special programs involving rebates or similar incentives related to the recycling of waste. Revenues or other savings obtained for salvage or recycling accrue to the Contractor.

## b. References:

- 1) "Builders' Guide to Reuse and Recycling, A Directory for Construction and Demolition Materials."
- 2) "Construction Site Recycling, a Guide for Building Contractors." For a copy of the guide call 1-888-442-2666 or go to <a href="https://www.recycleworks.org">www.recycleworks.org</a>.
- 3) "Where to Recycle Construction and Demolition Debris." For a copy of the guide call 1-888-442-2666 or go to <a href="https://www.recycleworks.org">www.recycleworks.org</a>.

#### c. Definitions:

- 1) General: Construction and demolition waste includes products of demolition or removal, excess or unusable construction materials, packaging materials for construction products, and other materials generated during the construction process but not incorporated into the work.
- 2) "Divert" means to use material for any lawful purpose other than disposal in a landfill or transfer facility for disposal
- 3) "Recycling Service" means an off-site service that provides processing of material and diversion from a landfill.
- 4) "Hauler" means the entity that transports construction and demolition debris to either a landfill or a recycling service.

# d. <u>Compliance with regulatory requirements:</u>

- 1) The Contractor shall perform all handling, storage, transportation and disposal of construction debris in compliance with all applicable Federal, State, regional, and local statutes, laws, regulations, rules, ordinance, codes and standards.
- 2) Nothing stated on the drawings, in this Article 40 or in any other provision of the Contract Documents shall be construed as allowing work that is not in strict compliance with all applicable Federal, State, regional, and local statutes, laws, regulations, rules, ordinances, codes and standards.

## e. Performance Requirement:

1) The Contractor shall divert a minimum of fifty percent (50%) of the total Project construction and demolition waste from landfills.

# f. Quality Control:

#### 1) General:

i) The Contractor shall not permit materials designated for diversion to become contaminated or to contaminate the site or surrounding areas.

# 2) Training and Coordination:

- i) The Contractor shall designate an on-site party [or parties] who will be responsible for instructing workers and subcontractors, and overseeing and documenting the results of the Waste Management Plan for the Project.
- ii) The Contractor shall furnish copies of the Waste Management Plan to all on-site supervisors, each subcontractor, and the District's representative.
- iii) The Contractor shall include construction waste management as an item on the agenda of all progress meetings.

# 3) The Waste Management Plan:

- i) The Contractor shall prepare a Waste Management Plan for diverting the specified percentage of construction debris from landfills, including written and graphic information indicating how the waste will be diverted.
- ii) Include in the plan both on-site recycling of construction debris and

off-site diversion from landfills.

- iii) Identify the means and methods for collecting and separating each type of debris deemed reusable or recyclable.
- iv) List the off-site recycling service and hauler of each designated debris item who has agreed to accept and divert that item from the landfill in the proposed quantities anticipated. List the service and hauler company name, address, telephone number, and persons contacted.
- v) List the name of individuals on the Contractor's staff responsible for waste prevention and management.
- vi) List the actions that will be taken to reduce solid waste generation, including coordination with subcontractors to ensure awareness and participation.
- vii) Describe the specific approaches to be used in recycling/reuse of the various materials generated, including the areas on site and equipment to be used for processing, sorting, and temporary storage of wastes.
- viii) Characterize the waste to be generated, including estimated types and quantities. Name the landfills and/or incinerator to be used.
- ix) List the specific waste materials that will be salvaged for resale, salvaged and reused on the Project, salvaged and stored for reuse on a future project, or recycled. Recycling facilities that will be used shall be identified by name, location, and phone number.
- x) Identify the materials that cannot be recycled or reused with an explanation or justification, to be approved by the Architect.

The Contractor shall submit the Plan to the Architect within 10 calendar days after receipt of the Notice to Proceed, or prior to any waste removal, whichever occurs first. The Contractor shall promptly revise and resubmit the Plan as required by the Architect. Review of the Contractor's Waste Management Plan will not relieve the Contractor of responsibility for compliance with applicable environmental regulations or meeting Project diversion requirements.

# g. <u>Plan Implementation</u>

- 1) The Contractor shall implement the approved Waste Management Plan.
- 2) The Contractor shall maintain a log of each load and of each category of waste that is diverted from the landfill. The Contractor shall separately log the debris

sent to a Class III landfill and materials sent to recycling facilities.

- 3) The Contractor shall include in the log the type of load, load weight, name of the hauling service, recycling service or landfill, and the date accepted by the recycling service or by the landfill.
- 4) The Contractor shall retain and make available all weight tickets and copies of receipts and invoices relating to the implementation of the Plan.
- 5) The District reserves the right to audit the log at any time.

# h. <u>Material Handling</u>

- 1) Designate a specific area or areas on site to facilitate the separation of materials for potential reuse, salvage, recycling, and return. Clearly mark bins for each category of waste.
- 2) Keep waste bins and pile areas neat and clean. Do not contaminate non-recyclable waste with materials designated for reuse or recycling.

# i. <u>Contractor's Responsibilities</u>

- 1) Provide on-site instruction of the appropriate separation, handling, recycling, salvage, reuse, and return methods to be used by all parties at the appropriate stages of the Project.
- Separate, store, protect, and handle at the site identified recyclable and salvageable waste products in a manner that maximizes recyclability and salvagability of identified materials. Provide the necessary containers, bins and storage areas to facilitate effective waste management. Provide barriers and enclosures around recyclable material storage areas which are non-hazardous and recyclable or reusable and which shall be located away from construction traffic. Provide adequate space for pick-up and delivery. Use cleaning materials that are non-hazardous and biodegradable.

## 41. INSTRUCTIONS AND MANUALS

Three copies of the maintenance instructions, application/installation instructions and service manuals called for in the Specifications shall be provided by the Contractor. These shall be complete as to drawings, details, parts lists, performance data and other information that may be required for the District to easily maintain and service the materials and equipment installed under this Contract. All manufacturer's application/installation instructions shall be given to the Architect at least ten (10) days prior to first material application or installation of the item. The maintenance instructions and manuals, along with any specified guarantees, shall be delivered to the Architect for review prior to submitting to District, and the Contractor or appropriate

Subcontractors shall instruct District's personnel in the operation and maintenance of the equipment prior to final acceptance of the Project.

## 42. AS-BUILT DRAWINGS

The Contractor and all Subcontractors shall maintain on the work site a separate complete set of contract drawings which will be used solely for the purpose of recording changes made in any portion of the work during the course of construction, regardless of the reason for the change. As changes occur, there will be included or marked on this record set on a daily basis if necessary to keep them up to date at all times. Actual locations to scale shall be identified on the drawings for all runs of mechanical and electrical work, including all site utilities installed underground, in walls, floors, and furred spaces, or otherwise concealed. Deviations from the drawings shall be shown in detail. All main runs, whether piping, conduit, duct work, drain lines, etc., shall be located in addition by dimension and elevation. Progress payments may be delayed or withheld until such time as the record set is brought up to date to the satisfaction of the Architect. The Contractor shall verify that all changes in the work are included in the "AS-BUILT" drawings and deliver the complete set thereof to the Architect for review and approval within thirty (30) calendar days after District's notice of completion. District's acceptance and approval of the "AS-BUILT" drawings are a necessary condition precedent to the release of the final retention.

# 43. <u>SUBSTITUTION OF SECURITIES</u>

- a. Pursuant to Public Contract Code §22300, Contractor may request in writing that it be allowed at its own expense to substitute securities for moneys withheld by District to ensure performance under this Contract. Only securities listed in Government Code §16430 and bank or savings and loan certificates of deposit, interest-bearing demand deposit accounts, standby letters of credit, or any other security mutually agreed to by Contractor and District shall qualify under this Article. Securities equivalent to the amount withheld shall be deposited with the District or with a state or federally chartered bank in California as the escrow agent. Upon satisfactory completion of the Contract and on written authorization by the District, the securities shall be returned to Contractor. Contractor shall be the beneficial owner of the securities and shall receive any interest thereon. The Contractor may alternatively request District to make payment of retentions earned directly to the escrow agent at the expense of the Contractor.
- b. At the expense of the Contractor, the Contractor may direct the investment of the payments into securities and the Contractor shall receive the interest earned on the investments upon the same terms provided for above for securities deposited by Contractor. Upon satisfactory completion of the Contract, Contractor shall receive from the escrow agent all securities, interest, and payments received by the escrow agent from the District. The Contractor shall pay to each Subcontractor, not later than 20 days of receipt of payment, the respective amount of interest earned, net of costs attributed to retention withheld from each Subcontractor, on the amount of retention.

c. Any escrow agreement entered into pursuant to this Article shall comply with Public Contract Code § 22300 and shall be subject to approval by District's counsel.

# 44. NO DISCRIMINATION

It is the policy of the District that, in connection with all work performed under this public works contract, there shall be no discrimination against any prospective or active employee or any other person engaged in the work because of actual or perceived race, color, ancestry, national origin, ethnic group identification, religion, sex, gender, sexual orientation, age, physical or mental disability, or marital status. The Contractor agrees to comply with applicable Federal and California laws including, but not limited to, the California Fair Employment Practice Act, beginning with Government Code § 12900, Government Code § 11135, and Labor Code §§ 1735, 1777.5, 1777.6 and 3077.5. In addition, the Contractor agrees to require like compliance by all Subcontractors and suppliers.

# 45. LABOR STANDARDS

# a. Work Hours:

In accordance with Labor Code § 1810, eight (8) hours of labor shall constitute a legal day's work under this Contract. Contractor and any Subcontractor shall pay workers overtime pay as required by Labor Code § 1815. The Contractor shall pay each worker, laborer, mechanic or persons performing work under this Contract at a rate not less than the prevailing wage for each craft or classification covering the work actually performed.

## b. <u>Penalty</u>:

Contractor shall forfeit to District as a penalty the sum of twenty-five dollars (\$25.00) for each worker employed in the execution of this Contract by Contractor or any Subcontractor for each calendar day during which the worker is required or permitted to work more than eight (8) hours in any one (1) calendar day or more than forty (40) hours per calendar week in violation of Article 3, Division 2, Part 7, Chapter 1 of the California Labor Code.

# c. Employment of Apprentices:

Contractor shall comply with Labor Code §§ 1773.3, 1777.5 and 1777.6, and 3077 et. seq., each of which is incorporated by reference into this Contract. These sections require that contractors and subcontractors employ apprentices in apprenticeable occupations in a ratio of not less than one (1) hour of apprentice work for every five (5) hours of labor performed by a journeyman, unless an exception is granted and that Contractors and Subcontractors shall not discriminate against otherwise qualified employees as apprentices on any public works solely on the ground of actual or perceived race, religion, color, national origin, ethnic group identification, sex, gender, sexual orientation, age, or physical or mental disability. Only apprentices who are in training under written

apprenticeship occupations shall be employed. The responsibility for compliance with these provisions for all apprenticeable occupations rests with Contractor.

d. The Contractor shall be knowledgeable of and comply with Labor Code §§ 1727, 1773.5, 1775, 1777.5, 1810, 1813, 1860, including all amendments thereto; each of these sections is incorporated by reference into this Contract.

# 46. GENERAL RATE OF PER DIEM WAGES

## a. On File:

As required by Labor Code § 1773.2, the District has available copies of the general prevailing rate of per diem wages for workers employed on public work as determined by the Director of the Department of Industrial Relations, which shall be available to any interested party on request. Contractor shall post a copy of the document at each job site.

# b. <u>Prevailing Wage Rate</u>:

The Contractor and each Subcontractor shall pay each worker performing work under this Contract at a rate not less than the prevailing wage as defined in Labor Code § 1771 and 1774 and 8 CCR § 16000(a).

# c. <u>Penalty</u>:

In accordance with Labor Code § 1775, the Contractor shall forfeit to the District as penalty, the sum of not more than two hundred dollars (\$200) for each calendar day, or portion thereof, for each worker paid less than the prevailing wage rates, as determined by the Director of the California Department of Industrial Relations, for any work done under this Contract by Contractor or by any Subcontractor. Contractor shall also pay each worker the difference between the stipulated prevailing wages rates and the amount actually paid to such worker.

# 47. RECORD KEEPING

a. The Contractor agrees to comply with Labor Code §§ 1776 and 1812. The Contractor and each Subcontractor shall keep or cause to be kept an accurate record showing the names, addresses, social security numbers, work classifications, straight time and overtime hours worked each day and week of all workers employed by Contractor in connection with the execution of this Contract or any subcontract thereunder and showing the actual per diem wages paid to each of such workers. These records shall be certified; shall be submitted electronically at least monthly to the Chief of the Division of Labor Standards Enforcement of the Department of Industrial Relations; and shall be open at all reasonable hours to the inspection of the District awarding the Contract, its officers and agents, and to the Chief of the Division of Labor Standards Enforcement of the Department of Industrial Relations, and his or her other deputies and agents.

- b. In addition, copies of the above records shall be available as follows:
  - 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 the District, the Division of Labor Standards Enforcement, and the Division of Apprenticeship Standards of the Department of Industrial Relations:
  - A certified copy of all payroll records shall be made available upon request by the public for inspection or copies thereof made; provided, however, that a request by the public shall be made through either the District, the Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement. If the requested payroll records have not been previously provided, the requesting party shall, prior to being provided the records, reimburse the costs of the Contractor, Subcontractors, and the entity through which the request was made. The public shall not be given access to the records at the principal office of the Contractor.
- c. The Contractor shall file a certified copy of the records with the entity requesting the records within ten days after receipt of a written request. Any copy of records made available for inspection as copies and furnished upon request to the public or any public agency by the District, shall be marked or obliterated in such a manner as to prevent disclosure of an individual's name, address, and social security number. The name and address of the Contractor awarded the Contract or performing the Contract shall not be marked or obliterated.
- d. The Contractor shall inform the District of the location of the records, including the street address, city and county, and shall, within five working days, provide a notice of a change of location and address.
- e. In the event of noncompliance with the requirements of this section, the Contractor shall have ten days in which to comply subsequent to receipt of written notice specifying in what respects the Contractor must comply with this section. Should noncompliance still be evident after the ten day period, the Contractor shall, as a penalty to the District, forfeit one hundred dollars (\$100) 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.
- f. Responsibility for compliance with this provision shall be with the Contractor.

## 48. PROJECT COMPLETION

- a. When all of the work to be performed under this Contract has been fully completed, the Contractor shall notify the Architect and District, in writing, setting a date for inspection. The Contractor and Subcontractor representatives shall attend the inspection. As a result of this inspection, the Architect will prepare a list of items ("punch list") that are incomplete or not installed according to the Contract Documents. Failure to include items on this list does not relieve the Contractor from fulfilling all requirements of the Contract Documents.
- b. The Architect will promptly deliver the punch list to the Contractor and it will include a period of time by which the Contractor shall complete all items listed thereon. On completion of all items on the punch list, verified by a final inspection, and all other Contract requirements, so that Final Completion has been achieved to the District's satisfaction, the District will file a Notice of Completion with the County Recorder. Payment of retention from the Contract, less any sums withheld pursuant to the terms of this Contract or applicable law, shall not be made sooner than thirty-five (35) calendar days after the date of filing of Notice of Completion.
- c. District reserves the right to occupy buildings and/or portions of the site at any time before Completion, and occupancy shall not constitute final acceptance of any part of the Work covered by the Contract Documents, nor shall such occupancy extend the date specified for completion of the Work. Beneficial occupancy of building(s) does not commence any warranty period or entitle Contractor to any additional compensation due to such occupancy, or affect in any way or amount Contractor's obligation to pay liquidated damages for failure to complete the Project on time.

# 49. TRENCHING OR OTHER EXCAVATIONS

a. Excavations or Trenches Deeper than Four Feet:

If the Project involves digging trenches or other excavations that extend deeper than four feet, the following provisions shall be a part of this Contract:

- 1) The Contractor shall promptly, and before the following conditions are disturbed, provide written notice to the District if the Contractor finds any of the following conditions:
  - (a) Material that the Contractor believes may be a hazardous waste, as defined in §25117 of the Health and Safety Code, which is required to be removed to a Class I, Class II, or Class III disposal site in accordance with the provisions of existing law.
  - (b) Subsurface or latent physical conditions at the site which are different from those indicated or expected.

- (c) Unknown physical conditions at the site of any unusual nature or which are materially different from those ordinarily encountered and generally recognized as inherent in work which the Contractor generally performs.
- In the event that the Contractor notifies the District that Contractor has found any of the conditions specified in subparagraphs (a), (b) or (c), above, the District shall promptly investigate the condition(s). If the District finds that the conditions are materially different or that a hazardous waste is present at the site which will affect the Contractor's cost of, or the time required for, performance of the Contract, the District shall issue a change order in accordance with the procedures set forth in this Contract.
- In the event that a dispute arises between the District and the Contractor regarding any of the matters specified in Paragraph (2), above, the Contractor shall proceed with all work to be performed under the Contract and the Contractor shall not be excused from completing the Project as provided in the Contract. In performing the work pursuant to this Paragraph, the Contractor retains all rights provided by Article 50 which pertains to the resolution of disputes between the contracting parties.

# b. <u>Regional Notification Center</u>:

The Contractor, except in an emergency, shall contact the appropriate regional notification center at least two (2) days prior to commencing any excavation if the excavation will be conducted in an area that is known, or reasonably should be known, to contain subsurface installations other than the underground facilities owned or operated by the District, and obtain an inquiry identification number from that notification center. No excavation shall be commenced and/or carried out by the Contractor unless an inquiry identification number has been assigned to the Contractor or any Subcontractor and the Contractor has given the District the identification number. Any damages or delays arising from Contractor's failure to make appropriate notification shall be at the sole risk and expense of the Contractor and shall not be considered for an extension of the Contract time.

# c. <u>Existing Utility Lines</u>:

1) Pursuant to Government Code §4215, the District assumes the responsibility for removal, relocation, and protection of main or trunk utility lines and facilities located on the construction site at the time of commencement of construction under this Contract with respect to any such utility facilities that are not identified in the plans and Specifications. Contractor shall not be assessed liquidated damages for delay in completion of the Project caused by the failure of the District or the owner of a utility to provide for removal or relocation of such utility facilities.

- 2) Locations of existing utilities provided by the District shall not be considered exact, but approximate within reasonable margin and shall not relieve Contractor of responsibilities to exercise reasonable care nor costs of repair due to Contractor's failure to do so. The District shall compensate Contractor for the costs of locating and repairing damage not due to the failure of Contractor to exercise reasonable care, and removing or relocating such utility facilities not indicated in the plans and Specifications with reasonable accuracy.
- No provision herein shall be construed to preclude assessment against Contractor for any other delays in completion of the Project. Nothing in this section shall be deemed to require the District to indicate the presence of existing service laterals, appurtenances, or other utility lines, with the exception of main or trunklines, whenever the presence of such utilities on the site of the construction Project can be inferred from the presence of other visible facilities, such as buildings, meter and junction boxes, on or adjacent to the site of the construction.
- 4) If Contractor, while performing work under this Contract, discovers utility facilities not identified by the District in the Project plans and Specifications, Contractor shall immediately notify the District and the utility in writing. The cost of repair for damage to above-mentioned visible facilities without prior written notification to the District shall be borne by the Contractor.

# d. <u>Prompt Notification</u>:

Contractor understands, acknowledges and agrees that the purpose for prompt notification to the District pursuant to these provisions is to allow the District to investigate the condition(s) so that the District shall have the opportunity to decide how the District desires to proceed as a result of the conditions. Accordingly, failure of Contractor to promptly notify the District in writing, pursuant to these provisions, shall constitute Contractor's waiver of any claim for damages incurred as a result of the conditions.

# e. <u>Trenches Five Feet and Deeper</u>:

Pursuant to Labor Code §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, promptly submit to the District and/or a registered civil or structural engineer employed by the District or Architect, a detailed plan showing the design of shoring for protection from the hazard of caving ground during the excavation of such trench or trenches.

## 50. RESOLUTION OF CONSTRUCTION CLAIMS

a. Notwithstanding any other language in the Contract Documents, claims between the District and the Contractor shall first be resolved using the procedures set forth at Public Contract Code § 9204. "Claims" are defined for this Article, pursuant to Public Contract

Code § 9204, as a separate demand by the Contractor for one of the following: a time extension for relief from penalties for delay; payment of money or damages arising from work done; or payment of an amount disputed by the District.

- b. Upon receiving a claim sent by registered or certified mail, the District must review and provide a written response within forty-five (45) days that identifies the disputed and undisputed portions of the claim. The forty-five (45) day period to respond may be extended by mutual agreement. The claim is deemed rejected in its entirety if the District does not issue a response. Any payment due on an undisputed portion of the claim must be processed within sixty (60) days after the District's response. If a claimant disputes the District's response or lack thereof, the claimant may demand to meet and confer for settlement of the issues in dispute. Any portion of a claim that remains in dispute after a meet and confer conference will be subject to nonbinding mediation process, as described in Public Contract Code § 9204. Undisputed and unpaid claims accrue interest at 7% per annum. A subcontractor or lower tier subcontractor may make a claim to the District through the Contractor, as specified in Public Contract Code § 9204. However, the procedures in this section shall not supersede the requirements of the Contract Documents with respect to the Contractor's notification to the District of such claim or extend the time for the giving of such notice as provided in the Contract Documents.
- c. Public work claims of \$375,000 or less between the Contractor and the District are subject to the provisions of Article 1.5 (commencing with § 20104) of Chapter 1 of Part 2 of the Public Contract Code ("Article 1.5 claim"). For purposes of this Article, "public work" has the same meaning as set forth in Civil Code §§ 3100 and 3106.
- d. All claims shall be submitted on or before the date of the Final Payment and shall include all documents necessary to substantiate the claim. District shall respond in writing within 45 days of receipt of claim if the claim is less than or equal to \$50,000 ("\$50,000 claim") or within 60 days if the claim is over \$50,000 but less than or equal to \$375,000 ("50,000 \$375,000 claim"). In either case, District may request in writing within 30 days of receipt of claim any additional documentation supporting the claim or relating to any defenses to the claim which the District may have against the Contractor. Any additional information shall be requested and provided upon mutual agreement of the District and the Contractor. District's written response to the claim shall be submitted to Contractor within 15 days after receipt of the further documentation for \$50,000 claims or within 30 days after receipt of the further documentation for \$50,000 claims or within a period of time no greater than that taken by the Contractor in producing the additional information, whichever is greater.
- e. Within 15 days of receipt of the District's response, if Contractor disputes the District's written response, or within 15 days of the District's failure to respond within the time prescribed, the Contractor shall provide written notification to District demanding an informal conference to meet and confer to be scheduled by District within 30 days. Following the meet and confer conference, if any claim or portion remains in dispute, the Contractor may file a claim as provided in Government Code § 900 et seq. For purposes

of those provisions, the period of time within which a claim must be filed is tolled from the time the claimant submits a written claim pursuant to this section until the time that claim is denied as a result of the conference process, including any period of time utilized by the meet and confer process.

- f. Pursuant to Public Contract Code § 20104.2(f), this section does not apply to tort claims and does not change the period for filing claims or actions specified by Government Code § 900 et seq.
- g. If a civil action is filed, within 60 days, but no earlier than 30 days, following the filing of responsive pleadings, the court shall submit the matter to nonbinding mediation unless waived by mutual stipulation of both parties. The mediation process shall provide that both parties select a disinterested third person mediator within 15 days, shall be commenced within 30 days of the submittal, and shall be concluded within 15 days of the commencement of the mediation unless time is extended upon a good cause showing to the court or by stipulation of the parties. If the parties fail to select a mediator within the 15-day period, any party may petition the court to appoint the mediator.
- h. If the matter remains in dispute, the case shall be submitted to judicial arbitration as set forth in Public Contract Code § 20104.4(b)(1) (b)(3).
- i. For any claim in excess of \$375,000, the Contractor and the District shall follow the same process as for an Article 1.5 claim. The District will forward a response within 60 days of submittal of any such claim. Judicial arbitration is not required for claims in excess of \$375,000.
- j. In addition, for all unresolved claims that the Contractor wishes to pursue, the Contractor shall file a timely claim pursuant to the Government Claims Act and shall otherwise comply with the procedures set forth in that Act prior to commencing any litigation against the District. The accrual date for any such claim is the date the dispute or controversy first arose regarding the issues raised in the claim.
- k. "The date of Final Payment," as used in this Article 50, means the date the public entity is required to release retention proceeds in accordance with Public Contract Code § 7107 regardless of whether any payment is made to the Contractor at that time.
- 1. The claims required by this Article are jurisdictional and conditions precedent to the commencement of any further legal proceedings. Strict compliance with all filing deadlines is mandatory.

#### 51. DISABLED VETERANS PARTICIPATION GOALS

In accordance with Education Code § 17076.11, this District has a participation goal for disabled veteran business enterprises ("DVBE") of at least 3 percent (3%) per year of the overall dollar amount of funds allocated to the District by the State Allocation Board pursuant to the Leroy F.

Greene School Facilities Act of 1998 (the "Act") for construction or modernization and expended each year by the District. If the Project is funded in whole, or in part, by funds allocated to the District pursuant to the Act, prior to, and as a condition precedent for final payment under any contract for such project, the Contractor shall provide appropriate documentation to the District identifying the amount paid to DBVE in conjunction with the Contract, so that the District can assess its success at meeting this goal.

#### 52. RETENTION OF DVBE RECORDS

The Contractor agrees that, for all contracts subject to DVBE participation goals, the State and the District have the right to review, obtain and copy all records pertaining to performance of the contract in accordance with DVBE requirements. The Contractor agrees to provide the State or the District with any relevant information requested and shall permit the State or District access to its premises upon reasonable notice for purposes of interviewing employees and inspecting records. The Contractor agrees to maintain such records for a period of three years after final payment under the Contract.

#### 53. <u>FINGERPRINTING</u>

District Determination of Fingerprinting Requirement Application

The District has considered the totality of the circumstances concerning the Project and has determined that the Contractor and Contractor's employees (which includes Subcontractor employees):

\_\_X\_\_ are subject to the requirements of Education Code § 45125.2 and Paragraph (a) below, is applicable.

\_\_\_\_\_ are not subject to the requirements of Education Code § 45125.2, and Paragraph (b) below, is applicable.

a. Contracts for Construction, Reconstruction, Rehabilitation or Repair of a School Facility Involving More than Limited Contact with Students (§ 45125.2)

By execution of the Contract, the Contractor acknowledges that Contractor is entering into a contract for the construction, reconstruction, rehabilitation, or repair of a school facility where the Contractor and/or Contractor's employees will have more than limited contact with students and the services to be provided do not constitute an emergency or exceptional situation. In accordance with Education Code § 45125.2 the Contractor shall, at Contractor's own expense, (1) install a physical barrier to limit contact with students by Contractor and/or Contractor's employees, and/or (2) provide for the continuous supervision and monitoring of the Contractor and/or Contractor's employees by an employee of the Contractor who has received fingerprint clearance from the California Department of Justice, and/or (3) provide for the surveillance of the Contractor and Contractor's employees by a District employee.

b. Contracts for Construction, Reconstruction, Rehabilitation or Repair of a School Facility Involving Only Limited Contact With Students (§ 45125.2)

By execution of the Contract, the Contractor acknowledges that Contractor is entering into a contract for the construction, reconstruction, rehabilitation or repair of a school facility involving only limited contact with students. Accordingly, the parties agree that the following conditions apply to any work performed by the Contractor and Contractor's employees on a school site: (1) Contractor and Contractor's employees shall check in with the school office each day immediately upon arriving at the school site; (2) Contractor and Contractor's employees shall inform school office staff of their proposed activities and location at the school site; (3) Once at such location, Contractor and Contractor's employees shall not use student restroom facilities; and (5) If Contractor and/or Contractor's employees find themselves alone with a student, Contractor and Contractor's employees shall immediately contact the school office and request that a member of the school staff be assigned to the work location.

#### 54. <u>LABOR COMPLIANCE MONITORING</u>

The project is subject to compliance monitoring and enforcement by the California Department of Industrial Relations. In accordance with Labor Code § 1771.1, all bidders, contractors and subcontractors working at the site shall be duly registered with the Department of Industrial Relations at time of bid opening and at all relevant times. Proof of registration shall be provided as to all such contractors prior to the commencement of any work. Contractor shall coordinate with the Architect to ensure the Department of Industrial Relations is advised of the award of the construction contract in a timely manner by filing form PWC-100 with the Department of Industrial Relations after award of the contract.

#### 55. DRUG-FREE WORKPLACE CERTIFICATION

Contractor certifies all of the following:

- 1) Contractor is aware of the provisions and requirements of California Government Code §§ 8350 et seq., the Drug Free Workplace Act of 1990.
- 2) Contractor is authorized to certify, and does certify, that a drug free workplace will be provided by doing all of the following:
  - a) Publishing a statement notifying all employees that the unlawful manufacture, distribution, dispensation, possession or use of a controlled substance is prohibited in Contractor's workplace and specifying actions which will be taken against employees for a violation of the prohibition;
  - b) Establishing a drug-free awareness program to inform employees about all of the following:

- (i) The dangers of drug abuse in the workplace;
- (ii) Contractor's policy of maintaining a drug-free workplace;
- (iii) The availability of drug counseling, rehabilitation and employee-assistance programs; and
- (iv) The penalties that may be imposed upon employees for drug abuse violations;
- c) Requiring that each employee engaged in the performance of Work on the Project be given a copy of the statement required by subdivision (a), above, and that as a condition of employment by Contractor in connection with the Work on the Project, the employee agrees to abide by the terms of the statement.
- 3) Contractor understands that if the District determines that Contractor has either: (a) made a false certification herein, or (b) violated this certification by failing to carry out and to implement the requirements of Government Code §§ 8350 et seq., the Contract is subject to termination, suspension of payments, or both. Contractor further understands that, should Contractor violate the terms of the Drug-Free Workplace Act of 1990, Contractor may be subject to debarment in accordance with the provisions of Government Code §§ 8350, et seq.

#### 56. PROVISIONS REQUIRED BY LAW DEEMED INSERTED

Every provision of law and clause required by law to be inserted in this Contract shall be deemed to be inserted, and this Contract shall be read and enforced as though it were included, and if through mistake or otherwise any provision is not inserted or is not correctly inserted, upon application of either party the Contract shall be amended to make the insertion or correction. All references to statutes and regulations shall include all amendments, replacements, and enactments on the subject which are in effect as of the date of this Contract.

#### 57. GENERAL PROVISIONS

#### a. Assignment and Successors:

Neither party may transfer or assign its rights or obligations under the Contract Documents, in part or in whole, without the other party's prior written consent. The Contract Documents are binding on the heirs, successors, and permitted assigns of the parties hereto.

#### b. <u>Third Party Beneficiaries:</u>

There are no intended third party beneficiaries to the Contract.

#### c. Choice of Law and Venue:

The Contract Documents shall be governed by California law, and venue shall be in the Superior Court of the county in which the project is located, and no other place.

#### d. Severability:

If any provision of the Contract Documents is determined to be illegal, invalid, or unenforceable, in part of in whole, the remaining provisions, or portions of the Contract Documents shall remain in full force and effect.

#### e. <u>Entire Agreement</u>

The Contract Documents constitute the final, complete, and exclusive statement of the terms of the agreement between the parties regarding the subject matter of the Contract Documents and supersedes all prior written or oral understandings or agreements of the parties.

#### f. Waiver:

No waiver of a breach, failure of any condition, or any right or remedy contained in or granted by the provisions of the Contract Documents shall be effective unless it is in writing and signed by the party waiving the breach, failure, right, or remedy. No waiver of any breach, failure, right, or remedy shall be deemed a waiver of any other breach, failure, right, or remedy, whether or not similar, nor shall any waiver constitute a continuing waiver unless the writing so specifies.

#### g. <u>Headings</u>

The headings in the Contract Documents are included for convenience only and shall neither affect the construction or interpretation of any provision in the Contract Documents nor affect any of the rights or obligations of the parties to the Contract.

-- END GENERAL CONDITIONS--

#### 7. SPECIAL CONDITIONS

A. **Time of Performance**. The Contractor shall mobilize and commence work on the Project on the date specified in the Agreement. The Contractor shall complete the project within the period specified in the Agreement and in accordance with the schedule for the Project developed for the District. Contractor acknowledges and agrees that the construction duration stipulated herein is adequate and reasonable for the size and scope of the Project.

Work under this Contract shall be scheduled and coordinated in compliance with the following:

- 1. The anticipated date of the award of the Contract is April 15, 2020.
- 2. Contract submittals are due on April 25, 2020.
- 3. Contractor shall complete work under this Contract as identified in the Specifications.
- 4. The Contractor acknowledges that it fully understands the Project work to be performed has been scheduled by the District for a specific time period. In addition the Contractor acknowledges that it fully understands that scheduling has been established for this Project in order to promote the best usage of school facilities and to timely provide an appropriate learning environment for students to the fullest extent possible. With these understandings in mind, pursuant to the General Conditions regarding the District's Right to Terminate Contract, it is acknowledged and understood by the Contractor that it is a substantial violation of the Contract for the Contractor to fail to provide all submittals in the time specified and identified. Furthermore, it is acknowledged and understood by the Contractor that it is a substantial violation of the Contract for the Contractor to fail to provide a full work crew or properly skilled workers with proper and sufficient materials and equipment from the first day of Project work scheduled.

If the site will not be available after the scheduled start date, Contractor shall utilize this time period for administrative tasks and initial mobilization and shall coordinate such activities with District.

- B. **Future Work:** All future work awarded from this bid shall be coordinated with the District's Director of Buildings & Grounds or his or her designee and the Contractor. No work shall be started until scheduling has been agreed upon by all parties.
- C. **Liquidated Damages Contract Submittals**: If the executed Contract and required bonds and certificates of insurance are not received by the District prior to the scheduled start date, the agreed liquidated damages established in the General Conditions is Five Hundred Dollars (\$500.00) per day for each calendar date the start date is delayed.

**Liquidated Damages** – **Time of Completion:** If work under this Contract is not ready for the intended use within the specified time period, the agreed liquidated damages established in the General Conditions is Five Hundred Dollars (\$500.00) per day for each calendar date completion is delayed.

- D. **Certification Requirements:** The Contractor or subcontractor must be certified by the factory or manufacturer to install any equipment or other products that may require a certification. Such certifications must be obtained prior to submittal of the bid.
- E. **Time of Work Restrictions**: The worksite will be available Monday through Saturday, from 7 AM to 5 PM. This schedule is subject to change as the needs of the District require, and would be scheduled with the District's Director of Buildings & Grounds or his or her designee.

#### F. **Project Schedule:**

Anticipated Start Date: June 8, 2020

Completion Date: July 31, 2020

#### 8. SPECIFICATIONS

Pinacate Middle School Shade Structure Project (Please see additional PDF File)

Project Manual: Pinacate Middle School Shade Structure Project- Perris Union High School District (Please see additional PDF File)

#### SUBSTITUTION REQUEST FORM

Pursuant to Public Contract Code Section 3400, bidder hereby requests substitution of the following articles, devices, equipment, products, materials, fixtures, patented processes, forms, methods, or types of construction:

Specified Items	Requested Substituted Items	Speci In the Reque Denie		District Decisi substit Reque	on on ution st
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

<sup>&</sup>lt;sup>1</sup> Bidder must state whether bidder will provide the Specified Item in the event that District denies the request for substitution. If bidder states that bidder will not provide the Specified Item in the event their request for substitution is denied, bidder's bid may be considered nonresponsive. 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 such Specified Item(s) and if bidder fails to execute the Agreement with the Specified Item(s), bidder's bond may be forfeited.

#### 9. PROJECT FORMS

#### NOTICE OF INTENT TO AWARD

To:
Project Description: Pinacate Middle School Shade Structure Project
The District has considered the bid submitted by you for the above described work in response to its Notice to Bidders for the Project.
You are hereby notified that the District intends to accept your bid in the amount of: (\$).
You are requested to execute the Contract and furnish the required Performance Bond and Payment Bond using the bond forms provided in the Contract Documents and the required certificates of insurance within ten (10) business days from the date of issuance of this Notice.
If you fail to execute the Contract and to furnish the bonds and insurance within ten (10) business days from the date of issuance of this Notice, the District may consider all your rights arising out of its acceptance of your bid as abandoned and your Bid Bond forfeited. The District will be entitled to such other rights as may be granted by law.
You are required to return an acknowledged copy of this Notice of Award to the District.
Dated: April 15, 2020.
ByAuthorized District Signature
Receipt of this above Notice of Intent to Award is hereby acknowledged by:
, this is the
day of, 2020.
Ву

Title \_\_\_\_\_

#### NOTICE TO PROCEED

To:	Date:	
PROJECT: Pinacate Middle School Shade	Structure Project .	
You are hereby notified to commence wor June 8, 2020, and you shall complete the wo	ck in accordance with the Contract datedork on July 31, 2020.	, 2020, or
By:	Authorized District Signature	-

#### CONTRACTOR'S CERTIFICATE REGARDING DRUG-FREE WORKPLACE

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:

- a) Publishing a statement, notifying employees that the unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance is prohibited in the person's or organization's workplace, and specifying actions which will be taken against employees for violations of the prohibition;
- b) Establishing a drug-free awareness program to inform employees about all of the following:
- 1) The dangers of drug abuse in the workplace;
- 2) The person's or organization's policy of maintaining a drug-free workplace;
- 3) The availability of drug counseling, rehabilitation and employee-assistance programs; and
- 4) The penalties that may be imposed upon employees for drug abuse violations;
- c) Requiring that each employee engaged in the performance of the contract 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 contact 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 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. 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, at any time, on 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	

## CONTRACTOR'S CERTIFICATE REGARDING PARTICIPATION OF DISABLED VETERAN BUSINESS ENTERPRISES

In accordance with Education Code Section 17076.11, the District has a participation goal for Disabled Veteran Business Enterprises of at least three percent (3%) per year of the overall dollar amount of funds allocated by the District by the State Allocation Board pursuant to the Leroy F. Greene School Facilities Act of 1998 for construction or modernization of school buildings and expended each year by the District. If the Project is funded in whole, or in part, by funds allocated to the District pursuant to the Act, at the time of execution of the contract, the Contractor will provide a statement to the District of anticipated participation of Disabled Veteran Business Enterprises in the contract. Prior to, and as a condition precedent for final payment under the contract, the Contractor will provide appropriate documentation to the District identifying the amount paid to Disabled Veteran Business Enterprises pursuant to the contract, so that the District can assess its success at meeting this goal.

I certify that I have read the above and will comply with the anticipated participation of Disabled

Veteran Business Enterprises in this contract.

Signature

Typed or Printed Name

Title

Company

Email

#### RECYCLED CONTENT CERTIFICATION

and submitted it to th	e District on behalf of	ne person who executed the bid for Bid # ("Project"),
		_("Contractor").
under penalty of perj or supplies offered of product meets the re recycled content shall	ury the minimum (if roor products used in the quired recycled products.)	in 10308.5, all contractors are required to certify in writing not exact) percentage of recycled content in materials, goods, the performance of their contract, regardless of whether the lect percentage as defined in Sections 12161 and 12200. The presumer material and secondary material as defined in Public shall apply.
percentages of Posto	consumer Material and	er the laws of the State of California that the following d Secondary Material is in the materials, goods or supplies mance of the Contract for the Project:
% Postconsum	ner Material	% Secondary Material.
Executed on this	day of	, 20 at
	Name of Con	tractor (Print or Type)
	Ву	G:
		Signature
		Print Name

#### ASBESTOS-FREE MATERIALS CERTIFICATION

The undersigned declares that he or she is the person who executed the bid for Bid # ("Project"), and submitted it to the District on behalf of
("Contractor").
To the best of my knowledge, information and belief, in completing the Contractor's Work for the Project, no material furnished, installed or incorporated into the Project will contain, or in itself be composed of, any materials listed by the federal or state EPA or federal or state health agencies as a hazardous material.
Any disputes involving the question of whether or not material installed with asbestos-containing equipment is settled by electron microscopy; the cost of any such tests shall be paid by the Contractor.
All work or materials installed by the Contractor which is found to contain asbestos, or work or material installed with asbestos-containing equipment, will be immediately rejected and this work shall be removed and replaced by the Contractor 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 Construction Manager/Architect or the District who shall have sole discretion and final determination in this matter.
The work will be not accepted until asbestos contamination is reduced to levels deemed acceptable by the Asbestos Consultant.
I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.
Executed on this day of
Name of Contractor (Print or Type)
By
Signature
Print Name Title

#### IRAN CONTRACTING ACT CERTIFICATION

As required by California Public Contract Code Section 2204, the Bidder certifies subject to penalty for perjury that the option checked below relating to the Bidder's status in regard to the Iran Contracting Act of 2010 (Public Contract Code Section 2200 *et seq.*) is true and correct:

	The E	Bidder is not:						
	(i)	activities in	n the current Iran prepared with subdivision	by the Cal	lifornia De	partment o	f General	Services in
	(ii)	\$20,000,000 persons and California D Public Contr	or more to any entities engage epartment of C ract Code Sectavide goods or se	y other pers ging in involution Seneral Ser tion 2203, i	son or entivestment a rvices in actification from the state of the sta	ty identified ctivities in ecordance we son or entity	d on the cu Iran preposith subdiven y uses or	arrent list of ared by the vision (b) of
	Act o	District has exe of 2010 after n e to obtain the	naking a publi	c finding t	hat, absen	t the exemp	ption, Age	ency will be
		amount of the 0,000.	Contract paya	ble to the	Contractor	for the Pro	oject does	not exceed
I certify (or dotrue and corre		under penalty o	of perjury under	r the laws o	of the State	of Californ	ia that the	foregoing is
			Signature					Date
			Name					Title
			Name of Fir	m				

#### FINGERPRINTING/CRIMINAL BACKGROUND INVESTIGATION CERTIFICATION

The undersigned does hereby certify to the governing board of the District that (1) he/she is a representative of the Contractor, (2) he/she is familiar with the facts herein certified, (3) he/she is authorized and qualified to execute this certificate on behalf of Contractor; and (4) that the following is true and correct:

1. <b>Education Code.</b> all that apply):	Contractor has taken at least one of the following actions with respect to the Project (check
with respect to with District p Department of that term is de employees and	r has complied with the fingerprinting requirements of Education Code section 45125.1 could Contractor's employees and all of its subcontractors' employees who may have contact pupils in the course of providing services pursuant to the Contract, and the California f Justice has determined that none of those employees has been convicted of a felony, as fined in Education Code section 45122.1. A complete and accurate list of Contractor's dof all of its subcontractors' employees who may come in contact with District pupils arse and scope of the Contract is attached hereto; and/or
commencemen	ducation Code section 45125.2, Contractor has installed or will install, prior to nt of work, a physical barrier at the Project site, that will limit contact between mployees and District pupils at all times; and/or
continual supe Department of	ducation Code section 45125.2, Contractor certifies that all employees will be under the ervision of, and monitored by, an employee of the Contractor who the California f Justice has ascertained has not been convicted of a violent or serious felony. The name employee who will be supervising Contractor's employees and its subcontractors'
Name:	Title:
	on the Contract is at an unoccupied school site and no employee and/or subcontractor or of any tier of Contract shall come in contact with the District pupils.
that will be on the	<b>Sex Offenders).</b> I have verified and will continue to verify that the employees of Contractor Project site and the employees of the Subcontractor(s) that will be on the Project site are ornia's "Megan's Law" Website ( <a href="http://www.meganslaw.ca.gov/">http://www.meganslaw.ca.gov/</a> ).
employees of subcor	sibility for background clearance extends to all of its employees, subcontractors, and ntractors coming into contact with District pupils regardless of whether they are designated ng as independent contractors of the Contractor.
On behalf of Contrac	ctor:
Title	Signature
Name	

#### 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.

#### ESCROW AGREEMENT FOR SECURITY DEPOSITS IN LIEU OF RETENTION

District, hereinafter called "OWNER", and, hereinafter called "CONTRACTOR", and, hereinafter called "Escrow Agent."
For the consideration hereinafter set forth, the OWNER, 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 OWNER in the amount (\$) pursuant to the Construction Contract entered into between the OWNER and CONTRACTOR for
Project in the amount of
(\$
(2) The OWNER 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 OWNER 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 OWNER 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 OWNER. These expenses and payment terms shall be determined by the OWNER, 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 OWNER.
- 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 OWNER to the Escrow Agent that OWNER consents to the withdrawal of the amount sought to be withdrawn by CONTRACTOR.

- (7) The OWNER 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 OWNER of the default, the Escrow Agent shall immediately convert the securities to cash and shall distribute the cash as instructed by the OWNER.
- (8) Upon receipt of written notification from the OWNER 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 OWNER and the CONTRACTOR pursuant to sections (5) to (8), inclusive, of this agreement and the OWNER 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 OWNER and on behalf of CONTRACTOR in connection with the foregoing, and exemplars of their respective signatures are as follows:

On behalf of Owner:	On behalf of Agent:
Title	Title
Name	Name
Signature	Signature
Address	Address

[contractor signatures continue on the following page]

On behalf of Contractor:	
Title	
Name	
Signature	
Address	
At the time the Escrow Account is opened Agent a fully executed counterpart of this	I, the OWNER and CONTRACTOR shall deliver to the Escrow Agreement.
IN WITNESS WHEREOF, the parties have set forth above.	we executed this Agreement by their proper officers on the date
OWNER	CONTRACTOR
Title	Title
Name	Name
Signature	Signature
628-5/4468687.1	

628-5/4495714.1

# PROJECT MANUAL

PINACATE MIDDLE SCHOOL SHADE STRUCTURE A04-119066

PERRIS UNION HIGH SCHOOL DISTRICT



## State of California • Gavin Newsom, Governor California Government Operations Agency

#### DEPARTMENT OF GENERAL SERVICES

Division of the State Architect -

Project:
Total Scope of Project:
Increment #:
Application #:
File #:
Drawings and specifications for the subject project have been examined and stamped by the Division of the State Architect (DSA) for identification on This letter constitutes the "written approval of the plans as to the safety of design and construction" required before letting any contract for construction, and applies to the work shown on these drawings and specifications. The date of this letter is the DSA approval date.
Approval is limited to the particular location shown on the drawings and is conditioned on construction starting within one was from the stamped date. The inspector must be approved and the contract information, including the construction starting of

Approval is limited to the particular location shown on the drawings and is conditioned on construction starting within one year from the stamped date. The inspector must be approved and the contract information, including the construction start date, must be given to DSA prior to start of construction.

DSA does not review drawings and specifications for compliance with Parts 3 (California Electrical Code), 4 (California Mechanical Code), and 5 (California Plumbing Code) of Title 24. It is the responsibility of the professional consultants named on the application to verify this compliance.

Please refer only to the boxes checked below which indicate applicable conditions specific to this project.

Buildings constructed in accordance with approved drawings and specifications will meet minimum required standard given in Title 24, California Code of Regulations, for structural safety.

Buildings or site improvements constructed in accordance with approved drawings and specifications will meet minimum required standard given in Title 24, California Code of Regulations, for fire and life safety.

This constitutes the written approval certifying that the drawings and specifications are in compliance with state regulations for the accommodation of the disabled which are required before letting any contract for construction. (See Section 4454, Government Code.)

Due to the nature of the building(s), certain precautions considered necessary to assure long service have not been required. In the condition as built, the building(s) will meet minimum required standards for structural, and fire and life safety. The owner must observe and correct deterioration in the building in order to maintain it in a safe condition.

Your attention is drawn to the fact that this application was submitted under the provisions of Sections 39140/81130 of the Education Code which permit repairs or replacement of a fire damaged building to be made in accordance with the drawings and specifications previously approved by this office. The drawings and specifications approved for the reconstruction of this building conform to the drawings and specifications approved under application #
Due to the nature of the poles, certain precautions considered necessary to assure long service have not been insisted upon. In their condition as built, they will meet minimum required safety standards; however, your attention is directed to the comparatively short life of wood poles. It will be the responsibility of the owner to maintain them in a safe condition.
Bleachers or grandstands constructed in accordance with approved drawings and specifications will meet minimum required standards for structural, and fire and life safety. The owner should provide for and require periodic safety inspections throughout the period of use to ensure framing and other parts have not been damaged or removed. On bleachers or grandstands having bolts, locking or safety devices, the owner should require that all such components be properly tightened or locked prior to each use.
The building(s) was designed to support a snow load of pounds per square foot of roof area. Snow removal must be considered if the amount of snow exceeds that for which the building(s) was designed.
Deferred Approval(s) Items:
This project has been classified as . An Inspector who is certified by DSA to inspect this class of project must be approved by DSA prior to start of construction.
Please refer to the above application number in all correspondence, reports, etc., in connection with this project.
Sincerely,
for Ida A. Clair, AIA Acting State Architect
cc:

Application #:

Architect

File #:

## PERRIS UNION HIGH SCHOOL DISTRICT

DIVISION OF THE STATE ARCHITECTS PROJECT NO.:04-119066 OFFICE OF PUBLIC SCHOOLS PROJECT TRACKING NO: 67207-76 ARCHITECTS PROJECT NUMBER: PUHSD 19.06

## **PROJECT NAME**

PERRIS UNION HIGH SCHOOL DISTRICT

155 EAST 4TH STREET **PERRIS, CA 92570** (T) 951.943.6369

SUPERINTENDENT

**GRANT BENNET** 

**BOARD OF TRUSTEES** 

ANTHONY T. STAFFORD, SR., PRESIDENT

DR. JOSE LUIS ARAUX, VICE PRESIDENT

EDWARD D. GARCIA, JR., CLERK

DR. RANDALL FREEMAN, MEMBER

DAVID G. NELISSEN, MEMBER

OWNER/BOARD OF TRUSTEES

SHADE STRUCTURE

DAVE BANG ASSOCIATES, INC. OF **CALIFORNIA** 

1885 NORTH MAIN STREET, ORANGE, CA 92865 (T) 800.669.2585, brittany@davebang.com

## PJHM ARCHITECTS, INC.

IN ORANGE COUNTY 24461 RIDGE ROUTE DRIVE #110, LAGUNA HILLS, CA 92653 949.496.6191, tomk@pjhm.com

IN SAN DIEGO COUNTY 804 PIER VIEW WAY #103, OCEANSIDE, CA 92054 760.730.5527

SLR ENGINEERING, INC.

TK1SC COLLABORATIVE

(T) 951.683.8088, steve@slr-ce.com

(T) 949.751.5800, bvoller@tk1sc.com

**ELECTRICAL ENGINEERING** 

6840 INDIANA AVE. SUITE 130, RIVERSIDE, CA 92506

15231 LAGUNA CANYON ROAD #100, IRVINE, CA 92618

**ARCHITECT** 

**CIVIL ENGINEERING** 

IN LOS ANGELES COUNTY 837 TRACTION AVENUE #410, LOS ANGELES, CA 90013

GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES

THE ARCHITECT OR ENGINEER MAY FIND DEFECTS IN THE WORK, AND IF THEY DO, THEY WILL NOTIFY THE CONTRACTOR SO THE ERROR MAY BE CORRECTED. UNDER NO CIRCUMSTANCES IS IT EVER THE INTENT FOR THE ARCHITECT OR ENGINEER TO BECOME A GUARANTOR OF THE CONTRACTOR'S PERFORMANCE BY THESE ACTIVITIES. THE FACT THAT A CONTRACTOR'S ERROR GOES UNDETECTED DURING THE VISIT TO THE SITE DOES NOT MAKE THE ARCHITECT OR ENGINEER NEGLIGENT: THE CONTRACTOR IS NEVER RELIEVED OF THE RESPONSIBILITY FOR THE DISCOVERY OF HIS OWN ERRORS AND THE CORRECTION OF THEM, NOR

OF THE RESPONSIBILITY OF PROPERLY PERFORMING THE WORK.

ALL WORK SHOULD CONFORM TO 2019 TITLE 24, CALIFORNIA CODE

CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL

BE MADE BY ADDENDA OR CONSTRUCTION CHANGE DOCUMENT

(CCD) APPROVED BY DSA, AS REQUIRED BY SECTION 4-338, PART 1

A "DSA CERTIFIED" PROJECT INSPECTOR EMPLOYED BY THE DISTRICT

(OWNER) AND APPROVED BY DSA SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR ARE

A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE

INSPECTIONS FOR THE PROJECT. TESTING LAB MUST HAVE DSA

DISTRICT (OWNER) SHALL CONDUCT ALL THE REQUIRED TESTS AND

LABORATORY EVALUATION AND ACCEPTANCE PROGRAM ACCEPTANCE.

CLASS PROJECT INSPECTOR IS REQUIRED FOR THE PROJECT

DEFINED IN SECTION 4-342, PART 1, TITLE 24, CCR. A DSA-CERTIFIED

OF REGULATIONS (C.C.R.)

TITLE 24, CCR.

THE ARCHITECT OR ENGINEER WILL MAKE VISITS TO THE JOB SITE TO OBSERVE THE PROGRESS OF THE WORK AND TO OBSERVE WHETHER OR NOT IT IS, IN GENERAL, BEING PERFORMED IN ACCORDANCE WITH THEIR PLANS AND SPECIFICATIONS. THIS DOES NOT IN ANY WAY MEAN THAT THE ARCHITECT OR ENGINEER IS A GUARANTOR OF THE CONTRACTOR'S WORK: RESPONSIBILITY FOR SAFETY IN, ON OR ABOUT THE JOB SITE: IN CONTROL OF THE SAFETY OR ADEQUACY OF ANY EQUIPMENT, BUILDING COMPONENT, SCAFFOLDING, FORMS, OR OTHER WORK AIDS: OR SUPERINTENDING THE WORK.

FOR ALL WALL MOUNTED AND SEMI-RECESSED MOUNTED EQUIPMENT, ACCESSORIES CABINETS, HANDRAILS, MARKER BOARDS, MECHANICAL EQUIPMENT, ELECTRICAL EQUIPMENT AND ETC. PROVIDE AND INSTALL BACKING IN ACCORDANCE TO STRUCTURAL DETAILS.

FIRE SAFETY DURING DEMOLITION & CONSTRUCTION SHALL COMPLY WITH CBC CHAPTER 33 AND CFC CHAPTER 33.

9a. NOT FOR STORAGE OR USE OF FLAMMABLE, COMBUSTIBLE, OR HAZARDOUS MATERIALS.

DO NOT SCALE DRAWINGS. WORK TO THE DIMENSIONS INDICATED ON THE DRAWINGS. CONTRACTOR SHALL VERIFY THE DIMENSIONS AT THE JOB SITE AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES FOR PROMPT CLARIFICATION.

11. THE EXISTENCE AND LOCATION OF EXISTING UNDERGROUND UTILITIES OR STRUCTURES INDICATED OR NOT ON THE DRAWING ARE OBTAINED BY SEARCH OF AVAILABLE RECORDS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY EXACT LOCATIONS OF THE UTILITIES WITH SCHOOL DISTRICT MAINTENANCE AND OPERATION PERSONNEL. THE CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES AND OTHER STRUCTURES. ANY DAMAGE SHALL BE PROMPTLY RESTORED TO THE SCHOOL DISTRICT'S SATISFACTION.

12. PROVIDE CONSTRUCTION BARRICADES AS REQUIRED TO PROTECT PUBLIC'S HEALTH AND SAFETY INCLUDING WORK UNDER CONSTRUCTION TO THE REQUIREMENTS OF THE SCHOOL DISTRICT COVER OPEN TRENCHES WITH SOLID MATERIAL.

13. THE CONTRACTOR SHALL PROTECT ADJACENT PROPERTY AND STRUCTURES. ANY DAMAGE SHALL BE PROMPTLY RESTORED TO THE SATISFACTION OF THE OWNER/ARCHITECT, AT CONTRACTOR'S EXPENSE.

14. BIDDERS ARE REQUIRED TO LOOK AT ALL **DRAWINGS** AND **SPECIFICATIONS**, NOT JUST THOSE SHEETS OR SECTIONS RESPECTIVE

15. UNLESS SPECIFIED ON STRUCTURAL OR ARCHITECTURAL DRAWINGS. ANY ALTERATIONS OR MODIFICATIONS TO A STRUCTURAL ELEMENT BY CUTTING, DRILLING, BORING, BRACING, WELDING, ETC. SHALL HAVE WRITTEN APPROVAL BY STRUCTURAL ENGINEER OF RECORD PRIOR TO START OF WORK.

16. ALL DETAILS CONTAINED IN THESE CONSTRUCTION DOCUMENTS ARE PART OF THE CONSTRUCTION SCOPE REGARDLESS OF THEM BEING REFERENCED IN THE SET.

**GENERAL NOTES** 

CALIFORNIA ADMINISTRATIVE CODE CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 1

CALIFORNIA BUILDING CODE, CALIFORNIA CODE OF REGULATIONS. TITLE 24, PART 2 BASED ON 2018 INTERNATIONAL BUILDING CODE VOLUMES 1-2 AND 2019 CALIFORNIA AMENDMENTS

CALIFORNIA ELECTRICAL CODE CALIFORNIA CODE OF REGULATIONS. TITLE 24, PART 3 BASED ON 2017 NATIONAL ELECTRICAL CODE AND 2019 CALIFORNIA AMENDMENTS

CALIFORNIA MECHANICAL CODE. CALIFORNIA CODE OF REGULATIONS. BASED ON 2018 IAPMO UNIFORM MECHANICAL CODE AND 2019 CALIFORNIA AMENDMENTS

CALIFORNIA PLUMBING CODE, CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 5 BASED ON 2018 IAPMO UNIFORM PLUMBING CODE AND 2019 CALIFORNIA AMENDMENTS

CALIFORNIA ENERGY CODE CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 6

CALIFORNIA FIRE CODE

CALIFORNIA CODE OF REGULATIONS TITLE 24, PART 9 BASED ON 2018 INTERNATIONAL FIRE CODE AND 2019 CALIFORNIA AMENDMENTS CALIFORNIA GREEN BUILDING STANDARDS CODE

CALIFORNIA CODE OF REGULATIONS TITLE 24, PART 11

CALIFORNIA REFERENCED STANDARDS CODE

CALIFORNIA CODE OF REGULATIONS TITLE 24, PART 12 TITLE 19, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS

ASME A17.1/CSA B44-16 SAFETY CODE FOR ELEVATORS AND **ESCALATORS** NFPA 13 - STANDARDS FOR THE INSTALLATION OF SPRINKLER

SYSTEMS, CALIFORNIA AMENDED NFPA 14 - STANDARDS FOR THE INSTALLATION OF STANDPIPE AND HOSE SYSTEMS

NFPA 17 - STANDARD FOR DRY CHEMICAL EXTINGUISHING NFPA 17A - STANDARD FOR WET CHEMICAL EXTINGUISHING

NFPA 20 - STANDARD FOR THE INSTALLATION OF STATIONARY PUMPS FOR FIRE PROTECTION NFPA 24 - STANDARD FOR THE INSTALLATION OF PRIVATE FIRE

SERVICE MAINS AND THEIR APPURTENANCES

NFPA 72 - NATIONAL FIRE ALARM AND SIGNALING CODE. CALIFORNIA AMENDED NFPA 80 - STANDARD FOR FIRE DOORS AND OTHER OPENING

**PROTECTIVES** NFPA 221 - STANDARD FOR HIGH CHALLENGE FIRE WALLS, FIRE WALLS, AND FIRE BARRIER WALLS NFPA 2001 - STANDARD ON CLEAN AGENT FIRE EXTINGUISHING

SYSTEMS, INCLUDING ACCESSORIES UL300 - STANDARD FOR FIRE TESTING OF FIRE EXTINGUISHING SYSTEMS FOR PROTECTION OF COMMERCIAL COOKING **EQUIPMENT** 

UL 464 - AUDIBLE SIGNALING DEVICES FOR FIRE ALARM AND SIGNALING SYSTEMS, INCLUDING ACCESSORIES STANDARD FOR HEAT DETECTORS FOR FIRE PROTECTIVE

SIGNALING SYSTEMS UL 1971 - STANDARD FOR SIGNALING DEVICES FOR THE HEARING **IMPAIRED** 

TELESCOPING SEATING, AND GRANDSTANDS FOR A COMPLETE LIST OF APPLICABLE NFPA STANDARDS, REFER TO 2019

C.B.C. (SFM) CHAPTER 35 AND CALIFORNIA FIRE CODE, CHAPTER 80

ICC 300 - STANDARD FOR BLEACHERS, FOLDING AND

SEE CALIFORNIA BUILDING CODE, CHAPTER 35 FOR STATE OF CALIFORNIA AMENDMENTS TO THE NFPA STANDARDS

PARTIAL LIST OF APPLICABLE STANDARDS SCHEDULE OF DRAWINGS

## **VICINITY MAP**

PROJECT SITE

PERRIS, CALIFORNIA, 92570

THIS CONSTRUCTION DOCUMENT PACKAGE INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING SCOPE:

**GENERAL ALTERATION TO:** 

- (E)ŠITE WORK, UTILITIES

- (E) 30'x54' SHADE STRUCTURE (A#04-111450) WITH (N)30'x54' SHADE STRUCTURE (PC#02-115731)

## **BRIEF PROJECT SCOPE**

SITE DEMOLITION AND GRADING PLAN

<u>ARCHITECTURAL</u> SITE PLAN - LOCAL FIRE AUTHORITY ACCESS

**BUILDING ANALYSIS** SITE PLAN

SITE PLAN - ENLARGED

ELECTRICAL

SYMBOLS LIST ELECTRICAL SITE PLAN E-2.1 **ENLARGED LIGHTING PLAN** PANEL SCHEDULES LIGHTING FIXTURE SCHEDULE TITLE 24

**DETAILS ELECTRICAL SPECIFICATIONS ELECTRICAL SPECIFICATIONS** 

## STATEMENT OF GENERAL CONFORMANCE

FOR ARCHITECTS/ENGINEERS WHO UTILIZE PLANS, INCLUDING BUT NOT LIMITED TO SHOP DRAWINGS, PREPARED BY OTHER LICENSED DESIGN PROFESSIONALS AND/OR CONSULTANTS (Application No. 04-File No. 33-H8)

THE DRAWINGS OR SHEETS LISTED BELOW

PC SHADE STRUCTURE

AMERICANA SHELTERS DESIGN NOTES, EXAMPLE FORM DSA 103 30' MERAMEC SHELTER DESIGN NOTES, EXAMPLE FORM DSA 103 30' MERAMEC SHELTER PLANS, SECTIONS AND DETAILS

HAVE BEEN PREPARED BY OTHER DESIGN PROFESSIONALS OR CONSULTANTS WHO ARE LICENSED AND/OR AUTHORIZED TO PREPARE SUCH DRAWINGS IN THIS STATE. IT HAS BEEN EXAMINED BY ME FOR:

1) DESIGN INTENT AND APPEARS TO MEET THE APPROPRIATE REQUIREMENTS OF TITLE 24, CALIFORNIA CODE OF REGULATIONS AND THE PROJECT SPECIFICATIONS PREPARED BY ME, AND

2) COORDINATION WITH MY PLANS AND SPECIFICATIONS AND IS ACCEPTABLE FOR INCORPORATION INTO THE CONSTRUCTION OF THIS PROJECT

THE STATEMENT OF GENERAL CONFORMANCE "shall not be construed as relieving me of my rights, duties, and responsibilities under Sections 17302 and 81138 of the Education Code and Sections 4-336, 4-341 and 4-344" of Title 24, Part 1. (Title 24, Part 1, Section 4-317 [b])

ALL DRAWINGS OR SHEETS LISTED ABOVE imes is/are in general conformance with the project design intent & × HAVE BEEN COORDINATED WITH THE PROJECT PLANS AND SPECIFICATIONS. 01/29/2020

ARCHITECT OR ENGINEER DESIGNATED TO BE IN GENERAL RESPONSIBLE

DATE JAN 3 0 2020 ACS: S. CYCE FLS: N. An SS: c.christakos

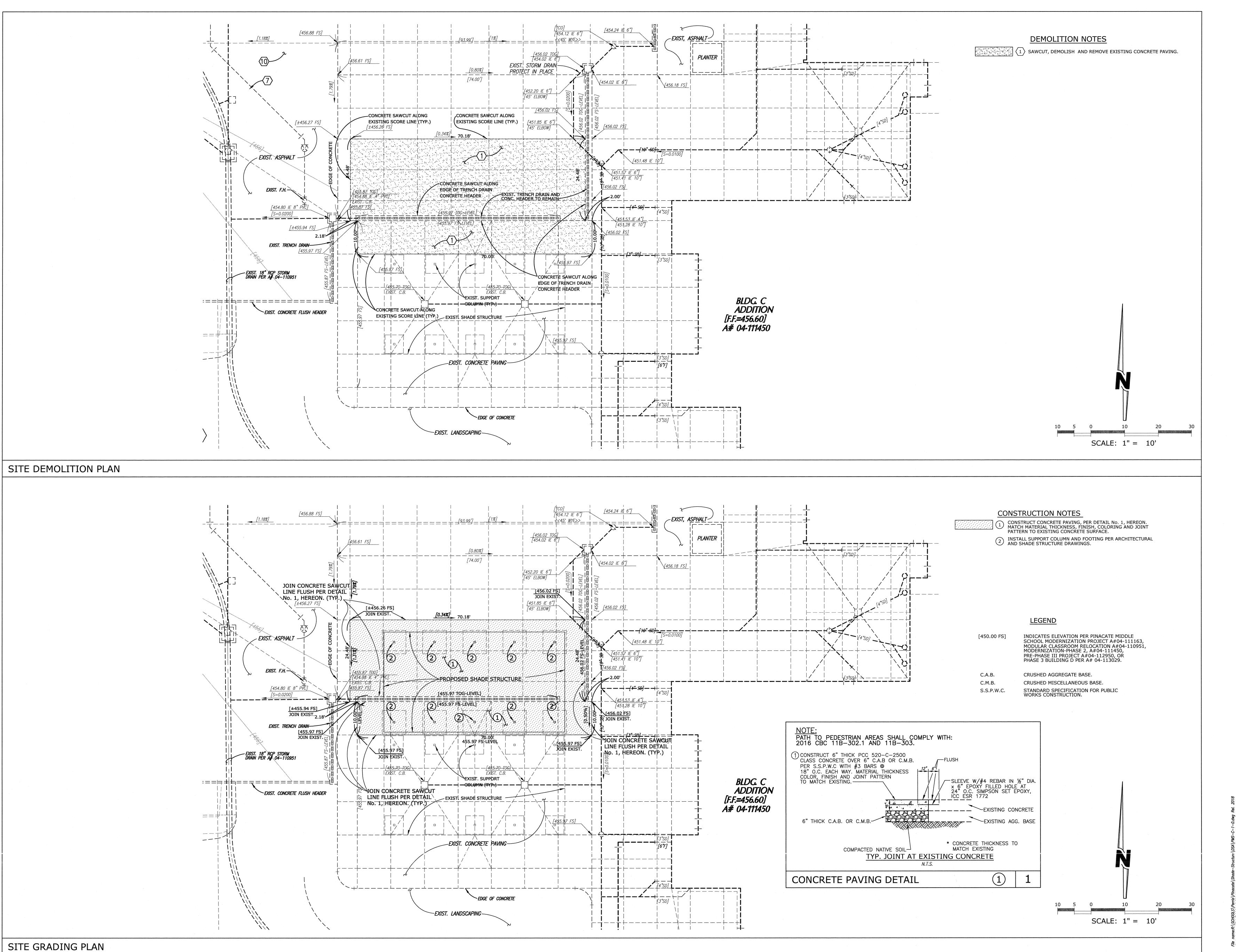
DIV. OF THE STATE ARCHITECT

ACS 52 FLSNAMSSCSC

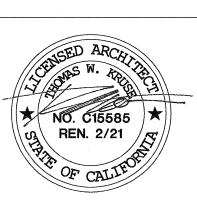
04 119 066

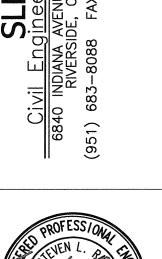
OWNER'S CONSULTANTS

ARCHITECTS CONSULTANTS



DIV. OF THE STATE ARCHITECT 04 119 066







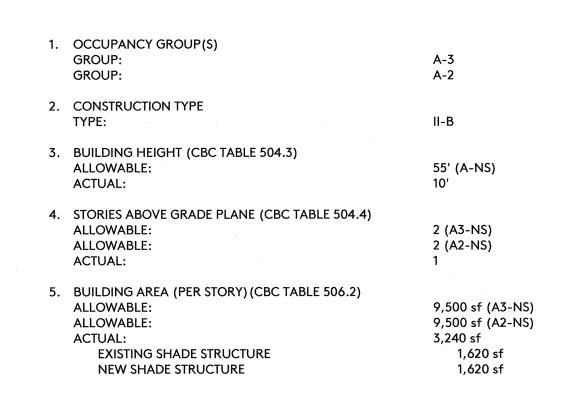
SITE DEMOLITION GRADING PLAN

C-1.0

To facilitate the Division of the State Architect's (DSA) fire and life safety plan review of project site conditions,

PR	DJECT INFORMATION			
Sch	ool District/Owner: PERRIS UNION HIGH SCHOOL DISTRICT			
Pro	ject Name/School: PINACATE MIDDLE SCHOOL			
Pro	ect Address: 1990 SOUTH A STREET, PERRIS CA 92570			
FIR	E & LIFE SAFETY INFORMATION			
1.	Has a fire hydrant flow test been performed within the past 12 months?  (If yes, provide a copy of the test data.)	Yes 🛭		No □
2.	Was the fire hydrant water flow test performed as part of this LFA review?	Yes ⊠		No 🗆
3.	Is the project located within a designated fire hazard severity zone (FHSZ) as established by Cal-Fire?  (If yes, indicate FHSZ classification below.)	Yes 🛚		No ⊠
	Refer to the following website for FHSZ locations: http://eqis.fire.ca.gov/FHSZ/	Moderate 🗆	High □	Very High [
	Wildland Interface Area (WIFA) (If any designations are checked, project	desian must m	eet the	WIFA

DGS DSA 810 (rev 10/22/18) DIVISION OF THE STATE ARCHITECT DEPARTMENT OF GENERAL SERVICES



6. SPRINKLER SYSTEM:

(E) FIRE LANE PER A#04-113029

(E)BUILDING 'C' AREAS

/100, 300, 400, 500*/*/

//A#04-111450<sup>/</sup>/ /B, E, S-2, I-4 TYPE V-B/

(E)TRASH

**ENCLOSURE** 

CONSTRUCTION TYPE: V-B

MINIMUM # OF HYDRANTS: 1

AUTOMATIC FIRE SPRINKLERS: YES

REQUIRED FIRE FLOW: 1,500 GPM @ 20PSI

AVG. SPACING BETWEEN HYDRANTS: 500' AVG. SPACING FROM STREET TO HYDRANT: 250'

REQUIRED FLOW DURATION: 2 HOURS

MINIMUM REQUIRED FIRE FLOW AND FLOW DURATION FOR BUILDINGS

GREATEST FIRE AREA: 36,767 SF (BUILDING 'C' AREAS 100, 300, 400, 500)

NO PARKING IN

**AREAS MARKED AS** 

FIRE LANI

VIOLATING VEHICLES

WILL BE CITED

OR TOWED AT **OWNERS EXPENSE** 

LAW AGENCY NAME & PHONE #

CVC 22658(a) CVC 22500.1

(E)BUILDING 'C' AREA 200//

/A-1, B, E, S-2 TYPE V-B

**FLOW TEST RECORD** 

TEST DATE: JAN. 21, 2020

TESTED FF (GPM): 2031

PAINT REGION

PAINT REGION

STATIC PRESSURE (PSI): 60

RESIDUAL PRESSURE (PSI): 48

**DURATION TESTED AT: 2 HOURS** 

(E) FIRE LANE PER A#04-113029

3/4" = 1'-0"

(E) FIRE LANE PER A#04-113029

MOUNTAIN AVE.

PAINT REGION

PAINT REGION

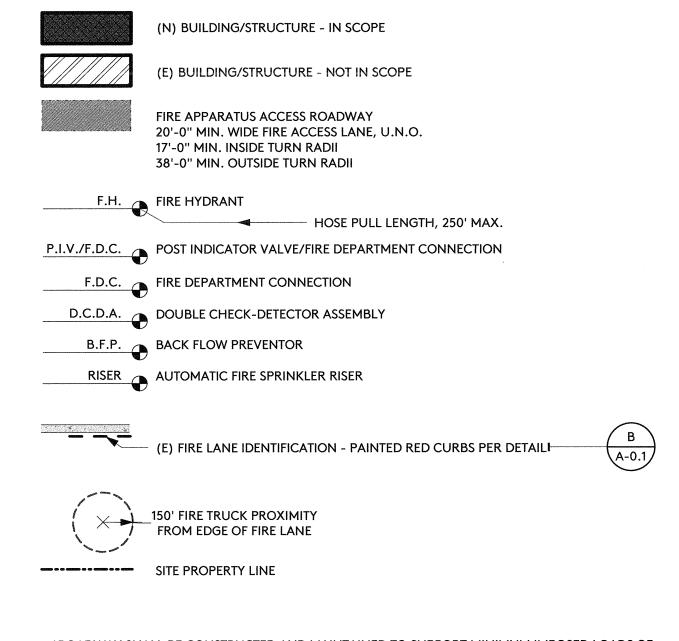
STANDARD CURB

**CURB PROFILES** 

1. CURBS ALONG ACCESS LANES SHALL BE PAINTED OSHA SAFETY RED

SHALL BE SPACED 30'-0" ON CENTER OR PORTION THEREOF

2. "FIRE LANE NO PARKING" SHALL BE PAINTED ON TOP OF CURB IN WHITE LETTERING 3" HIGH AND



BLDG. DATA - (N) SHADE STRUCTURE

\*ROADWAY SHALL BE CONSTRUCTED AND MAINTAINED TO SUPPORT MINIMUM IMPOSED LOADS OF:

INSPECTION REQUIREMENTS

1. PERRIS SITE INSPECTIONS ARE REQUIRED FOR THIS PROJECT. PLEASE SCHEDULE ALL FIELD INSPECTIONS AT LEAST 48 HOURS IN ADVANCE. INSPECTIONS CANCELED AFTER 1 P.M. ON THE DAY BEFORE THE SCHEDULED DATE WILL BE SUBJECT TO A RE-INSPECTION FEE. CALL (951) 443-1029 TO SCHEDULE AN

2. A LUMBER DROP INSPECTION SHALL BE PERFORMED PRIOR TO BRINGING COMBUSTIBLE MATERIALS (OR COMBUSTIBLE FIXTURES AND FINISHES FOR STRUCTURES OF NON-COMBUSTIBLE CONSTRUCTION). ALL-WEATHER ACCESS ROADS CAPABLE OF SUPPORTING 68,000 LBS., TOPPED WITH ASPHALT, CONCRETE, OR EQUIVALENT SHALL BE IN PLACE AND HYDRANTS OPERATIONAL AT TIME OF LUMBER DROP

3. FOR PROJECTS WITH FUEL MODIFICATION, A VEGETATION CLEARANCE INSPECTION IS REQUIRED PRIOR TO A LUMBER DROP INSPECTION. USE THE FUEL MODIFICATION PLAN SERVICE REQUEST NUMBER TO SCHEDULE THE VEGETATION CLEARANCE INSPECTION.

4. PHASED INSTALLATION OF FIRE ACCESS ROADS REQUIRES ADDITIONAL INSPECTIONS NOT COVERED BY THE FEES PAID AT PLAN SUBMITTAL. CONTACT (951) 443-1029 TO ARRANGE FOR ADDITIONAL INSPECTIONS THAT MAY BE NEEDED AND ANY FEES THAT MAY BE DUE.

5. AN ORIGINAL APPROVED, SIGNED, WET-STAMPED PERRIS FIRE ACCESS & WATER PLAN SHALL BE AVAILABLE ON-SITE AT TIME OF INSPECTION. 6. ACCESS ROADS AND HYDRANTS SHALL BE MAINTAINED AND REMAIN CLEAR OF OBSTRUCTIONS AT ALL

CLEARLY IDENTIFIED AT ALL TIMES. OBSTRUCTION OF FIRE LANES AND HYDRANTS MAY RESULT IN CANCELLATION OR SUSPENSION OF INSPECTIONS. 7. TEMPORARY FUEL TANKS OF 60 OR MORE GALLONS SHALL BE REVIEWED, INSPECTED, AND PERMITTED

TIMES DURING AND AFTER CONSTRUCTION. AREAS WHERE PARKING IS NOT PERMITTED SHALL BE

BY THE OFFICE OF THE FIRE MARSHAL, CITY OF PERRIS PRIOR TO USE. 8. THE PROJECT ADDRESS SHALL BE CLEARLY POSTED AND VISIBLE FROM THE PUBLIC ROAD DURING CONSTRUCTION.

9. ALL GATES IN CONSTRUCTION FENCING SHALL BE EQUIPPED WITH EITHER A KNOX OR BREAKAWAY 10. BUILDINGS OF FOUR OR MORE STORIES SHALL BE PROVIDED WITH STAIRS AND A STANDPIPE BEFORE

11. FIRE LANE WIDTHS SHALL BE MEASURED FROM TOP FACE OF THE CURB TO TOP FACE OF THE CURB FOR FIRE LANES WITH STANDARD CURBS AND GUTTERS AND FROM FLOW-LINE TO FLOW-LINE FOR FIRE LANES WITH MODIFIED CURB DESIGNS (E.G., ROLLED, RAMPED, ETC). THE DEVELOPER IS RESPONSIBLE TO VERIFY THAT ALL APPROVED PUBLIC WORKS OR GRADING DEPARTMENT STREET IMPROVEMENT PLANS OR PRECISE GRADING PLANS CONFORM TO THE MINIMUM STREET WIDTH MEASUREMENTS PER THE APPROVED PERRIS FIRE DEPARTMENT ACCESS & WATER PLAN AND STANDARDS IDENTIFIED IN PERRIS FIRE DEPARTMENT ACCESS & WATER GUIDELINE FOR ALL PORTIONS OF THE FIRE ACCESS ROADS 12. PERMANENT, TEMPORARY, AND PHASED EMERGENCY ACCESS ROADS SHALL BE DESIGNED AND

MAINTAINED TO SUPPORT AN IMPOSED LOAD OF 68,000 LBS. AND SURFACED TO PROVIDE ALL-WEATHER DRIVING CAPABILITIES. 13. FIRE LANE SIGNS AND RED CURBS SHALL MEET THE SPECIFICATIONS SHOWN IN PERRIS FIRE DEPARTMENT ACCESS & WATER GUIDELINE AND SHALL BE INSTALLED AS DESCRIBED THEREIN. ADDITIONAL FIRE LANE MARKINGS MAY BE REQUIRED AT THE TIME OF INSPECTION DEPENDING ON

14. ALL FIRE HYDRANTS SHALL HAVE A "BLUE REFLECTIVE PAVEMENT MARKER" INDICATING THEIR

LOCATION PER THE PERRIS STANDARD. ON PRIVATE PROPERTY MARKERS ARE TO BE MAINTAINED IN GOOD CONDITION BY THE PROPERTY OWNER. 15. ADDRESS NUMBERS SHALL BE LOCATED AND BE OF A COLOR AND SIZE SO AS TO BE PLAINLY VISIBLE AND LEGIBLE FROM THE ROADWAY FROM WHICH THE BUILDING IS ADDRESSED IN ACCORDANCE WITH

PERRIS FIRE DEPARTMENT ACCESS & WATER GUIDELINE. 16. ACCESS GATES SHALL BE APPROVED PRIOR TO INSTALLATION AND SHALL BE IN COMPLIANCE WITH CHAPTER 5 OF THE CFC AND PERRIS FIRE DEPARTMENT ACCESS & WATER GUIDELINE.

17. APPROVED ACCESS WALKWAYS SHALL BE PROVIDED TO ALL REQUIRED OPENINGS AND ALL RESCUE 18. VEGETATION SHALL BE SELECTED AND MAINTAINED IN SUCH A MANNER AS TO ALLOW IMMEDIATE ACCESS TO ALL HYDRANTS, VALVES, FIRE DEPARTMENT CONNECTIONS, PULL STATIONS, EXTINGUISHERS, SPRINKLER RISERS, ALARM CONTROL PANELS, RESCUE WINDOWS, AND OTHER

DEVICES OR AREAS USED FOR FIREFIGHTING PURPOSES. VEGETATION OR BUILDING FEATURES SHALL NOT OBSTRUCT ADDRESS NUMBERS OR INHIBIT THE FUNCTIONING OF ALARM BELLS, HORNS, OR 19. DUMPSTERS AND TRASH CONTAINERS LARGER THAN 1.5 CUBIC YARDS SHALL NOT BE STORED IN BUILDINGS OR PLACED WITHIN 5 FEET OF COMBUSTIBLE WALLS, OPENINGS OR COMBUSTIBLE ROOF

EAVE LINES UNLESS PROTECTED BY AN APPROVED SPRINKLER SYSTEM. 20. ANY FUTURE MODIFICATION TO THE APPROVED FIRE DEPARTMENT ACCESS & WATER PLAN OR APPROVED SITE PLAN, INCLUDING BUT NOT LIMITED TO ROAD WIDTH, GRADE, SPEED HUMPS, TURNING RADII, GATES OR OTHER OBSTRUCTIONS, SHALL REQUIRE REVIEW, INSPECTION, AND APPROVAL BY THE OFFICE OF THE FIRE MARSHAL, CITY OF PERRIS.

21. APPROVAL OF THIS PLAN SHALL NOT BE CONSTRUED AS APPROVAL OF ANY INFORMATION OR PROJECT CONDITIONS OTHER THAN THOSE ITEMS AND REQUIREMENTS IDENTIFIED IN PERRIS FIRE DEPARTMENT ACCESS & WATER GUIDELINE AND RELATED PORTIONS OF THE CFC AND CBC. THIS PROJECT MAY BE SUBJECT TO ADDITIONAL REQUIREMENTS NOT STATED HEREIN UPON EXAMINATION OF ACTUAL SITE AND PROJECT CONDITIONS OR DISCLOSURE OF ADDITIONAL INFORMATION.

FACE OF GATE PER A#04-111163

AUTHORITY APPROVED KNOX BOX/PADLOCK AND 'NO PARKING' SIGN MOUNTED TO EACH

8. (E) FIRE LANE ENTRANCE SIGN PER A#04-111450

SYMBOLS

6. (E) 28'-0" WIDE MANUALLY OPERATED VEHICLE ACCESS GATE WITH RIVERSIDE COUNTY FIRE

1. (E) FIRE LANE ENTRANCE SIGN PER A#04-111163 2. (E) TOW-AWAY SIGN PER A#04-113029 3. (E) 20'-0" WIDE MANUALLY OPERATED VEHICLE ACCESS GATE WITH RIVERSIDE COUNTY FIRE AUTHORITY APPROVED KNOX BOX/PADLOCK AND 'NO PARKING' SIGN MOUNTED TO EACH 4. (E) LOCATION OF PREMISES IDENTIFICATION (SCHOOL ADDRESS) 5. (E) PASSENGER ELEVATOR PER A#04-113029, CAB SIZE: 6'-8"x4'-3"

FACE OF GATE PER A#04-111450 7. (E) TRAFFIC RATED TRENCH DRAIN PER A#04-113029

**GENERAL NOTES** 

DSA - 810

**MDSA** 

FIRE & LIFE SAFETY SITE CONDITIONS SUBMITTAL Division of the State Architect (DSA) documents referenced within this publication are available on the DSA Forms or DSA Publications webpages.

DSA requires the design professional to provide the following information at time of project submittal for projects consisting of construction of a new campus, construction of new building(s), additions to existing buildings, and for site alternate design means for fire department emergency vehicle access, and fire suppression water supply. Information associated with compliance items 1 through 3 below is to be provided for all project types indicated above. Information associated with items 4 through 7 is to be completed when an alternate means is utilized. Acknowledgement by the school district and signature from the Local Fire Authority (LFA) is only required when an alternate design means is being requested.

Page 1 of the completed form must be imaged onto the fire access site plan. When an alternate design/means is proposed, completed pages 1 and 2 are to be imaged on the fire access site plan. For additional information refer to the instructions at the end of this form and DSA Policy PL 09-01: Fire Flow for

PR	OJECT INFORMATION		en e	ka Tanan da kacamatan da kabupatan da kabupatan da kabupatan da kabupatan da kabupatan da kabupatan da kabupatan Banan da kabupatan
Sch	nool District/Owner: PERRIS UNION HIGH SCHOOL DISTRICT			
Pro	ject Name/School: PINACATE MIDDLE SCHOOL			
Pro	ect Address: 1990 SOUTH A STREET, PERRIS CA 92570			
FIR	E & LIFE SAFETY INFORMATION			
1.	Has a fire hydrant flow test been performed within the past 12 months?  (If yes, provide a copy of the test data.)	Yes 🛭		No 🗆
2.	Was the fire hydrant water flow test performed as part of this LFA review?	Yes ⊠		No 🗆
3.	Is the project located within a designated fire hazard severity zone (FHSZ) as established by Cal-Fire? (If yes, indicate FHSZ classification below.)	Yes 🛚		No 🔯
	Refer to the following website for FHSZ locations: http://eqis.fire.ca.gov/FHSZ/	Moderate ☐	High □	Very High □
	Wildland Interface Area (WIFA) (If any designations are checked, project requirements of CBC Chapter 7A.)	design must m	eet the	WIFA 🗆

Page 1 of 4 STATE OF CALIFORNIA

SITE PLAN KEYNOTES

VICINITY MAP

(N)SHADE STRUCTURE

PC#02-115731

A-3, TYPE II-B

(E)SHADE STRUCTURE A#04-111450

A-2, TYPE II-B

ARCHITECTURAL SITE PLAN

PROJECT SITE

**PERRIS** 

MOUNTAIN AVE

PERRIS, CALIFORNIA, 92570

1990 SOUTH 'A' STREET

ELLIS AVE

(E) SITE SIGNAGE - FIRE LANE ENTRY A 1 1/2" = 1'-0"

1" = 50'-0"

■ 1/2" RADIUS CORNER, TYP.

1-3/8" BOLD RED LETTERING

ON RED BACKGROUND

I" RED LETTERING

MIN. 0.080 ENGINEERING GRADE REFLECTIVE

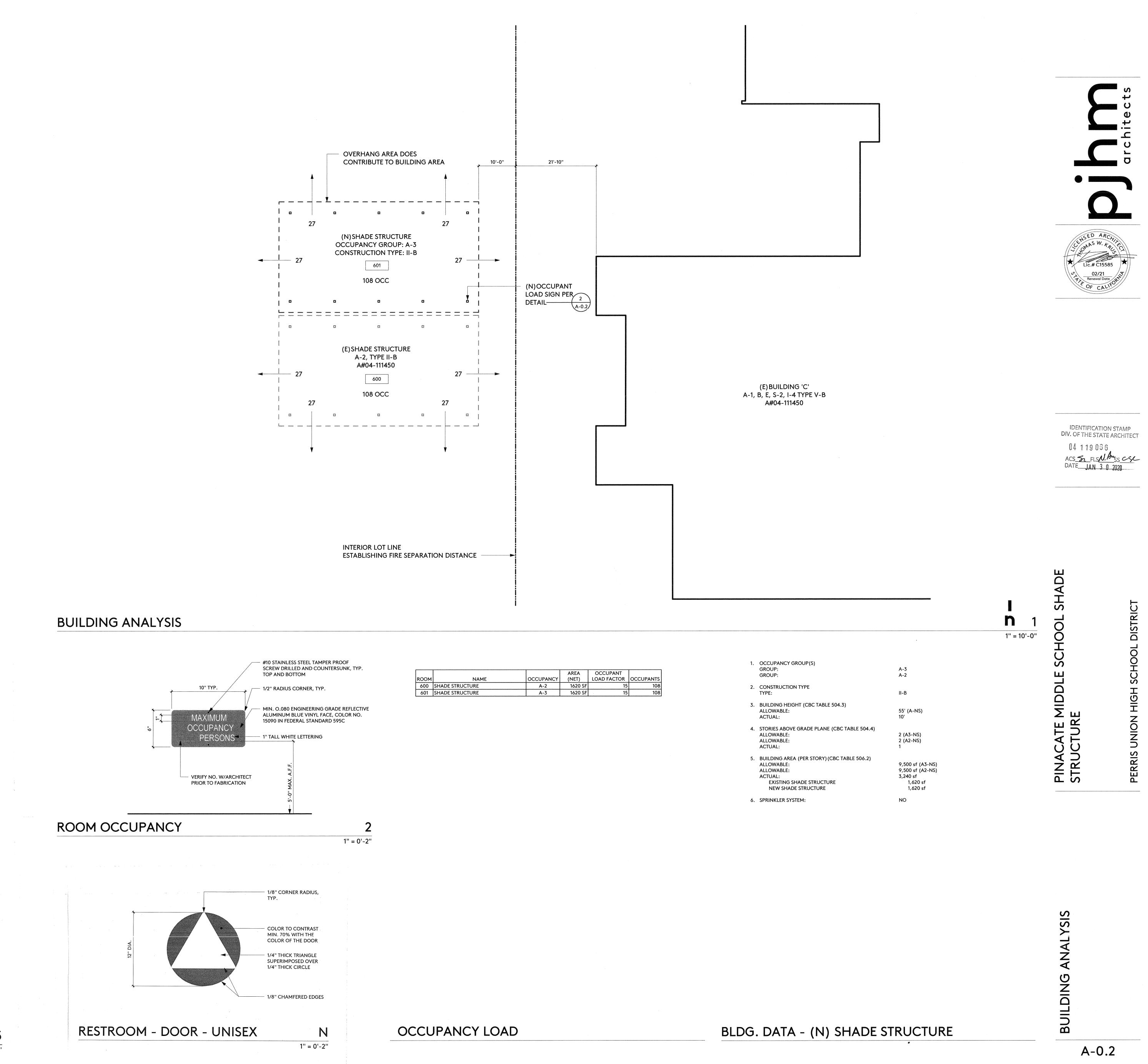
2-3/4" BOLD WHITE REFLECTIVE LETTERING

ON WHITE REFLECTIVE BACKGROUND

- 1-3/8" BOLD RED LETTERING ON WHITE REFLECTIVE BACKGROUND

ON WHITE REFLECTIVE BACKGROUND

A-0.1



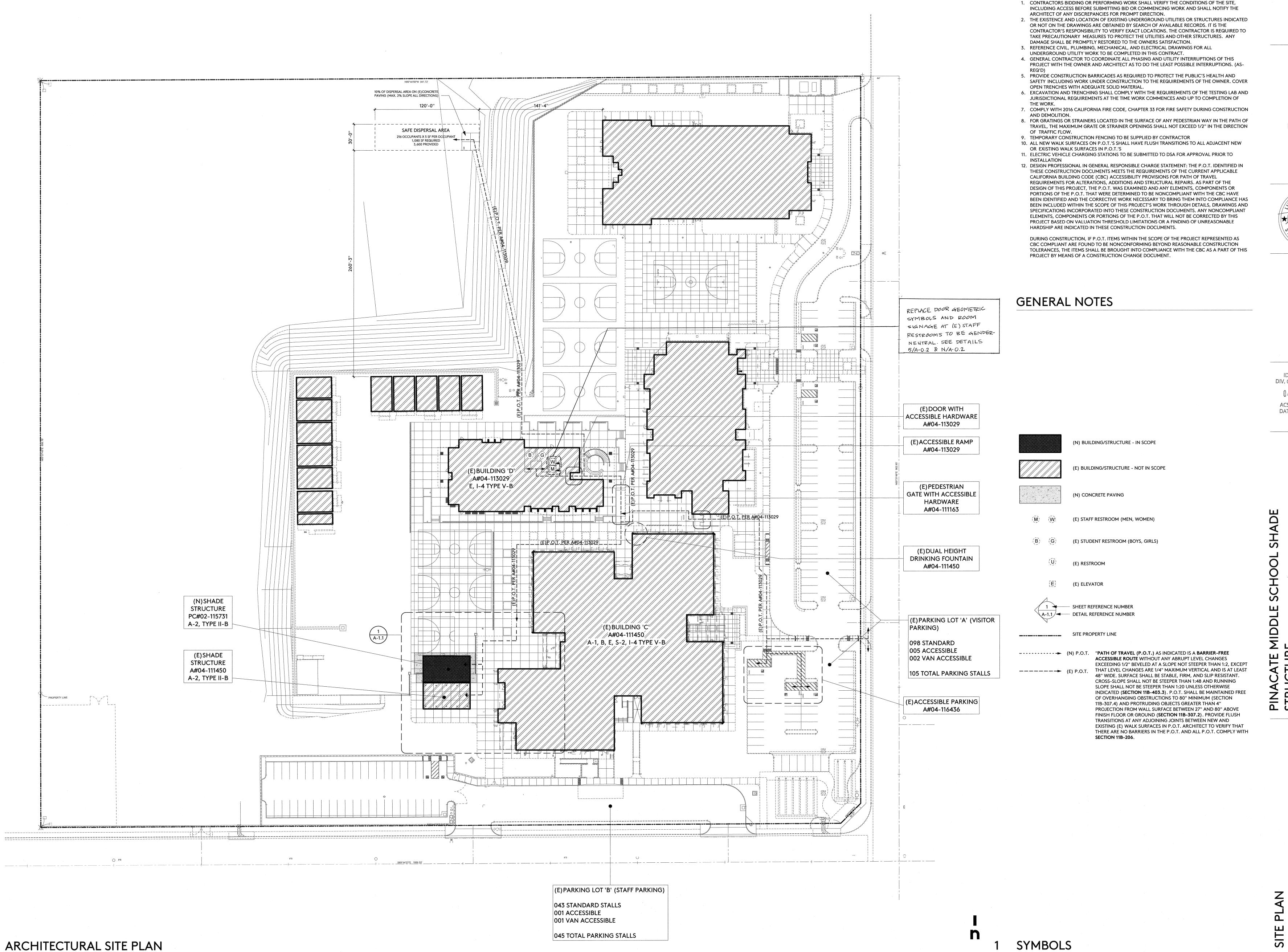
**MOUNTING LOCATION -**RESTROOM DOOR TEXT TO READ "STAFF TOILET" & SHALL
BE 5/8"-2" HEIGHT

EQ 9" MIN.

MOUNTING HEIGHTS

1/2" = 1'-0"

1" = 0'-2"





**IDENTIFICATION STAMP** DIV. OF THE STATE ARCHITECT 04 119 066

1" = 40'-0"

1. CONTRACTORS BIDDING OR PERFORMING WORK SHALL VERIFY THE CONDITIONS OF THE SITE, INCLUDING ACCESS BEFORE SUBMITTING BID OR COMMENCING WORK AND SHALL NOTIFY THE

ARCHITECT OF ANY DISCREPANCIES FOR PROMPT DIRECTION. 2. THE EXISTENCE AND LOCATION OF EXISTING UNDERGROUND UTILITIES OR STRUCTURES INDICATED OR NOT ON THE DRAWINGS ARE OBTAINED BY SEARCH OF AVAILABLE RECORDS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY EXACT LOCATIONS. THE CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES AND OTHER STRUCTURES. ANY DAMAGE SHALL BE PROMPTLY RESTORED TO THE OWNERS SATISFACTION.

3. REFERENCE CIVIL, PLUMBING, MECHANICAL, AND ELECTRICAL DRAWINGS FOR ALL UNDERGROUND UTILITY WORK TO BE COMPLETED IN THIS CONTRACT.

4. GENERAL CONTRACTOR TO COORDINATE ALL PHASING AND UTILITY INTERRUPTIONS OF THIS PROJECT WITH THE OWNER AND ARCHITECT AS TO DO THE LEAST POSSIBLE INTERRUPTIONS. (AS-5. PROVIDE CONSTRUCTION BARRICADES AS REQUIRED TO PROTECT THE PUBLIC'S HEALTH AND

SAFETY INCLUDING WORK UNDER CONSTRUCTION TO THE REQUIREMENTS OF THE OWNER. COVER OPEN TRENCHES WITH ADEQUATE SOLID MATERIAL. 6. EXCAVATION AND TRENCHING SHALL COMPLY WITH THE REQUIREMENTS OF THE TESTING LAB AND

JURISDICTIONAL REQUIREMENTS AT THE TIME WORK COMMENCES AND UP TO COMPLETION OF 7. COMPLY WITH 2016 CALIFORNIA FIRE CODE, CHAPTER 33 FOR FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION.

8. FOR GRATINGS OR STRAINERS LOCATED IN THE SURFACE OF ANY PEDESTRIAN WAY IN THE PATH OF TRAVEL, THE MAXIMUM GRATE OR STRAINER OPENINGS SHALL NOT EXCEED 1/2" IN THE DIRECTION OF TRAFFIC FLOW.

9. TEMPORARY CONSTRUCTION FENCING TO BE SUPPLIED BY CONTRACTOR 10. ALL NEW WALK SURFACES ON P.O.T.'S SHALL HAVE FLUSH TRANSITIONS TO ALL ADJACENT NEW OR EXISTING WALK SURFACES IN P.O.T.'S 11. ELECTRIC VEHICLE CHARGING STATIONS TO BE SUBMITTED TO DSA FOR APPROVAL PRIOR TO

12. DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE STATEMENT: THE P.O.T. IDENTIFIED IN THESE CONSTRUCTION DOCUMENTS MEETS THE REQUIREMENTS OF THE CURRENT APPLICABLE CALIFORNIA BUILDING CODE (CBC) ACCESSIBILITY PROVISIONS FOR PATH OF TRAVEL REQUIREMENTS FOR ALTERATIONS, ADDITIONS AND STRUCTURAL REPAIRS. AS PART OF THE DESIGN OF THIS PROJECT, THE P.O.T. WAS EXAMINED AND ANY ELEMENTS, COMPONENTS OR PORTIONS OF THE P.O.T. THAT WERE DETERMINED TO BE NONCOMPLIANT WITH THE CBC HAVE BEEN IDENTIFIED AND THE CORRECTIVE WORK NECESSARY TO BRING THEM INTO COMPLIANCE HAS BEEN INCLUDED WITHIN THE SCOPE OF THIS PROJECT'S WORK THROUGH DETAILS, DRAWINGS AND SPECIFICATIONS INCORPORATED INTO THESE CONSTRUCTION DOCUMENTS. ANY NONCOMPLIANT ELEMENTS, COMPONENTS OR PORTIONS OF THE P.O.T. THAT WILL NOT BE CORRECTED BY THIS PROJECT BASED ON VALUATION THRESHOLD LIMITATIONS OR A FINDING OF UNREASONABLE

HARDSHIP ARE INDICATED IN THESE CONSTRUCTION DOCUMENTS.

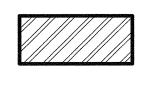
DURING CONSTRUCTION, IF P.O.T. ITEMS WITHIN THE SCOPE OF THE PROJECT REPRESENTED AS CBC COMPLIANT ARE FOUND TO BE NONCONFORMING BEYOND REASONABLE CONSTRUCTION TOLERANCES, THE ITEMS SHALL BE BROUGHT INTO COMPLIANCE WITH THE CBC AS A PART OF THIS PROJECT BY MEANS OF A CONSTRUCTION CHANGE DOCUMENT.





### **GENERAL NOTES**

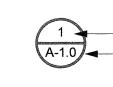
(N) BUILDING/STRUCTURE - IN SCOPE



(E) BUILDING/STRUCTURE - NOT IN SCOPE



(N) CONCRETE PAVING



SHEET REFERENCE NUMBER

- DETAIL REFERENCE NUMBER

INTERIOR LOT LINE

(N) P.O.T. "PATH OF TRAVEL (P.O.T.) AS INDICATED IS A BARRIER-FREE ACCESSIBLE ROUTE WITHOUT ANY ABRUPT LEVEL CHANGES EXCEEDING 1/2" BEVELED AT A SLOPE NOT STEEPER THAN 1:2, (E) P.O.T. EXCEPT THAT LEVEL CHANGES ARE 1/4" MAXIMUM VERTICAL AND IS AT LEAST 48" WIDE. SURFACE SHALL BE STABLE, FIRM, AND

SLIP RESISTANT. CROSS-SLOPE SHALL NOT BE STEEPER THAN 1:48 AND RUNNING SLOPE SHALL NOT BE STEEPER THAN 1:20 UNLESS OTHERWISE INDICATED (SECTION 11B-403.3). P.O.T. SHALL BE MAINTAINED FREE OF OVERHANGING OBSTRUCTIONS TO 80" MINIMUM (SECTION 11B-307.4) AND PROTRUDING OBJECTS 27" AND 80" ABOVE FINISH FLOOR OR GROUND (**SECTION** 11B-307.2). PROVIDE FLUSH TRANSITIONS AT ANY ADJOINING JOINTS BETWEEN NEW AND EXISTING (E) WALK SURFACES IN P.O.T. ARCHITECT TO VERIFY THAT THERE ARE NO BARRIERS IN THE P.O.T. AND ALL P.O.T. COMPLY WITH SECTION 11B-206.

04 119 066

DIV. OF THE STATE ARCHITECT

1" = 10'-0" (N) BASE COURSE PER CIVIL (N) CONCRETE PAVING PER CIVIL 1/4" RADIUS TOOL EDGE FIELD-MOLDED CONCRETE PAVING JOINT SEALANT OVER CONCRETE CONSTRUCTION JOINT FILLER (E) CONCRETE PAVING - #3 REBAR AT 18" O.C. CONSTRUCTION JOINTS AT 20'-0" O.C. MAX., ALIGN WITH EXISTING ADJACENT

CONSTRUCTION JOINTS AT 20'-0" O.C. MAX., ALIGN WITH EXISTING ADJACENT CONSTRUCTON JOINT - CONCRETE

- #3 REBAR AT 18" O.C.

1'-0" MIN.

(N)BASE COURSE PER CIVIL

1/4" RADIUS TOOL EDGE

(N)CONCRETE PAVING PER CIVIL

FIELD-MOLDED CONCRETE PAVING

JOINT SEALANT OVER CONCRETE

CONSTRUCTION JOINT FILLER

CONSTRUCTION JOINT - CONCRETE

ARCHITECTURAL SITE PLAN

(N)CONCRETE PAVING PER CIVIL BASE COURSE PER CIVIL REINFORCEMENT PER CIVIL, TYP. CONTROL JOINTS AT 10'-0" O.C. MAX., ALIGN WITH EXISTING ADJACENT

CONTROL JOINT - CONCRETE

1 1/2" = 1'-0"

1 1/2" = 1'-0"

1 1/2" = 1'-0"

A-1.1

LIGHTING SYMBOLS

SITE LIGHTING FIXTURE SYMBOLS DEPICTED WITH CAPITAL LETTER(S) ADJACENT TO RESPECTIVE SYMBOL(S) INDICATE(S) LIGHT FIXTURE MOUNTING BASE DETAIL(S). SEE LIGHTING FIXTURE SCHEDULE FOR FIXTURE SYMBOL INFORMATION. LIGHTING FIXTURE CALL OUT, NUMBER(S) AND/OR UPPER CASE LETTER(S) (i.e. "1") INDICATES FIXTURE TYPE (REFER TO LIGHTING FIXTURE SCHEDULE). LOWER CASE LETTER (i.e. "a") ADJACENT TO FIXTURE TYPE INDICATES BALLAST

OPTION (SEE GENERAL LIGHTING FIXTURE SCHEDULE NOTES). INDICATES FINAL CONNECTION TO A LIGHTING FIXTURE, NUMBER OF CONDUCTORS AS REQUIRED.

BRANCH CIRCUIT SYMBOLS

/-A-1,3,5 HOME RUN TO PANEL. LETTER DESIGNATES PANEL, NUMBERS INDICATE CIRCUITS. HASH MARKS INDICATE NUMBER OF CONDUCTORS <del>- / //// - // / IN</del> IN CONDUIT RUN, #12 AWG MINIMUM UNLESS OTHERWISE NOTED. \_A-1&3&5 HOME RUN TO PANEL. LETTER DESIGNATES PANEL, NUMBERS INDICATE CIRCUITS WITH SEPARATE NEUTRALS. "&" INDICATES SEPARATE NEUTRALS. -A-1+3+5 HOME RUN TO PANEL. LETTER DESIGNATES PANEL, NUMBERS INDICATE CIRCUITS. "+" INDICATES SEPARATE #10 NEUTRAL - # HI HI H - THROUGHOUT BRANCH CIRCUIT. HASH MARK " | " INDICATES AN ISOLATED GROUND CONDUCTOR.

> CONDUIT OR BRANCH CIRCUIT CONCEALED BELOW GRADE, 3/4" CONDUIT MINIMUM WITH (2) 12 AWG CONDUCTORS MINIMUM AND A CODE SIZED EQUIPMENT GROUND. SURFACE-MOUNTED CONDUIT OR BRANCH CIRCUIT UNLESS OTHERWISE NOTED. 1/2" CONDUIT MINIMUM, (2) #12 AWG CONDUCTORS

CONCEALED CONDUIT OR BRANCH CIRCUIT UNLESS OTHERWISE NOTED. 1/2" CONDUIT MINIMUM, (2) #12 AWG CONDUCTORS

TANDEM WIRING CONNECTION.

——————— CONDUIT STUB OUT, CAP, MARK AND RECORD ON AS—BUILT DRAWINGS

——— CONDUIT CONTINUATION. FLEXIBLE CONNECTION AS REQUIRED. NUMBER OF CONDUCTORS AS REQUIRED. VERIFY CONNECTION REQUIREMENTS WITH MANUFACTURER PRIOR TO ROUGH-IN.

CONDUIT/ BRANCH CIRCUIT/FEEDER CONTINUATION DOWN WALL TO FLOOR BELOW

CONDUIT/ BRANCH CIRCUIT/FEEDER CONTINUATION UP WALL TO FLOOR ABOVE

MEP EQUIPMENT ANCHORAGE NOTE:

ALL MECHANICAL, ELECTRICAL AND PLUMBING COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. WHERE NO DETAIL IS INDICATED, THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2016 CBC, SECTIONS 1616A.1.18 THROUGH 1616A.1.26 AND ASCE 7-10, CHAPTERS 13, 26 AND 30.

A. ALL PERMANENT EQUIPMENT AND COMPONENTS.

B. TEMPORARY OR MOVABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (EG. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER.

C. MOVABLE EQUIPMENT WHICH IS STATIONED IN ONE PLACE FOR MORE THAN 8 HOURS AND HEAVIER THAN 400 POUNDS ARE REQUIRED TO BE ANCHORED WITH TEMPORARY ATTACHMENTS.

THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT THE ATTACHMENT NEED NOT BE DETAILED ON THE PLANS. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT.

A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.

B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

FOR THOSE ELEMENTS THAT DO NOT REQUIRE DETAILS ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND THE DSA STRUCTURAL ENGINEER. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH THE ABOVE REQUIREMENTS.

PIPING, DUCTWORK AND ELECTRICAL

**DISTRIBUTION SYSTEM BRACING NOTE:** PIPING, DUCTWORK AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-10 SECTION 13.3 AS DEFINED IN ASCE 7-10 SECTION 13.6.5.6, 13.6.7, 13.6.8 AND 2019 CBC, SECTIONS 1616A.1.23, 1616A.1.24, 1616A.1.25 AND 1616A.1.26.

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PREAPPROVED INSTALLATION GUIDE (E.G. SMACNA OR OSHPD OPM), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E):

MP□ MD□ PP□ E☒ OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.

MP MD PP E OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD

PRE-APPROVAL (OPM#) #\_\_\_\_ MP MD PP OPTION 3: SHALL COMPLY WITH THE SMACNA SEISMIC RESTRAINT MANUAL, OSHPD EDITION (2009), INCLUDING ANY ADDENDA.

FASTENERS AND OTHER ATTACHMENTS NOT SPECIFICALLY IDENTIFIED IN THE SMACNA SEISMIC RESTRAINT MANUAL, OSHPD EDITION, ARE DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS. THE DETAILS SHALL ACCOUNT FOR THE APPLICABLE SEISMIC HAZARD LEVEL \_\_\_\_\_ AND CONNECTION LEVEL \_\_\_\_\_ FOR THE PROJECT AND CONDITIONS.

REQUIRED SPECIFICATION DEVIATIONS THE FOLLOWING ITEM(S) ARE REQUIRED DEVIATIONS FROM THE DRAWINGS AND SPECIFICATIONS AND SHOULD BE INCLUDED AS PART OF THE BASE BID. THESE DEVIATIONS ARE AT THE DIRECTION OF THE OWNER:

ALLOWED SPECIFICATION DEVIATIONS THE FOLLOWING ITEM(S) ARE ALLOWED DEVIATIONS FROM THE DRAWINGS AND SPECIFICATIONS. THÈSÉ DEVIATIONS ARE AT THE DIRECTION OF THE OWNER:

**ABBREVIATIONS** 

A.F.F.

A.F.G.

AWG

A.F.C. or AFC

AS/AF

BDF

CEC

CIRC., CKT.

CSFD

CLCB

E-0-L

FA or F.A.

4" SQUARE BY 2-1/8" DEEP BOX

AMERICAN WITH DISABILITIES ACT

AMPERES INTERRUPTING CAPACITY

AUTHORITY HAVING JURISDICTION

AUTOMATIC TRANSFER SWITCH

BUILDING DISTRIBUTION FRAME

CALIFORNIA BUILDING CODE

CALIFORNIA ELECTRICAL CODE

COMBINATION SMOKE FIRE DAMPER

CONDUIT ONLY, COMPLETE WITH

CONTROL POWER TRANSFORMER

DISTRIBUTED ANTENNA SYSTEM DIAMETER

CURRENT LIMITING FUSE CURRENT TRANSFORMER

ELECTRICAL CONTRACTOR

ELECTRIC WATER COOLER

EMERGENCY POWER OFF

ELECTRICAL METALLIC TUBING

EXISTING DEVICE TO REMAIN

CURRENT LIMITING CIRCUIT BREAKER

EXISTING DEVICE TO BE DEMOLISHED

DIMMING PANEL CONTROL STATION

ELECTRICAL NON-METALLIC TUBING

END-OF-LINE CIRCUIT TERMINATOR

EXISTING DEVICE TO BE RELOCATED

ENERGY MANAGEMENT CONTROL SYSTEM

ABOVE FINISH FLOOR

ABOVE FINISH GRADE

(SYMMETRICAL)

AVERAGE

BUILDING

CONDUIT

PULLSTRING

CONNECTED

DISCONNECT

DISTRIBUTION

EXHAUST FAN

EXPLOSION PROOF

FULL LOAD AMPS

EGC or EG or E/G EQUIPMENT GROUND (GREEN)

FIRE ALARM

GROUND

AMERICAN WIRE GAUGE

AVAILABLE FAULT CURRENT AMP FRAME, AMP TRIP

AMP SWITCH, AMP FUSE

BONDING JUMPER

CIRCUIT BREAKER

GROUND FAULT CIRCUIT INTERRUPTER

GROUND FAULT PROTECTION

HEATING AIR CONDITIONING

HEATING, VENTILATING AND AIR

HEIGHT, WIDTH, DEPTH, LENGTH

INTERNATIONAL BUILDING CODE

THOUSAND CIRCULAR MILS

LONG CONTINUOUS LOAD

LOW PRESSURE SODIUM

MAIN BONDING JUMPER MAIN DISTRIBUTION FRAME

MAIN CIRCUIT BREAKER MAIN LUGS ONLY

MINIMUM CIRCUIT AMPS

MOTOR CONTROL CENTER

THOUSAND CIRCULAR MILS

MOTOR CIRCUIT PROTECTOR

NON AUTOMATIC DISCONNECT

NATIONAL ELECTRICAL CODE

MANUFACTURER'S ASSOCIATION

ANNOTATIONS

NUMBER.

REVISION REFERENCE.

NATIONAL ELECTRICAL

NORMALLY CLOSED

MECHANICAL CONTRACTOR

INTEGRATED DIMMING CONTROL PANEL

MAXIMUM OVERCURRENT PROTECTION

INTERMEDIATE DISTRIBUTION FRAME

HIGH INTENSITY DISCHARGE

HIGH PRESSURE SODIUM

GE or GEC GROUNDING ELECTRODE CONDUCTOR

REFRIGERATION

CONDITIONING

HORSEPOWER

JUNCTION BOX

KILOWATT

LIGHTING

MAXIMUM

KW

LCL

MAX.

MCP

MFR.

MTD

DEGREE KELVIN

KILOWATT HOUR

LINEAR FEET

METER MAIN

MINIMUM

MOUNTED

**MICROWAVE** 

MERCURY VAPOR

METAL HALIDE

MANUFACTURER

KILOVOLT AMPERES

ISOLATED GROUND

HAND-OFF-AUTO

NORMALLY OPENED

NOT IN CONTRACT

OWNER FURNISHED,

CONTRACTOR INSTALLED

PLUMBING CONTRACTOR

POLY VINYL CHLORIDE

OVER 600 VOLTS

PUBLIC ADDRESS

POWER DISTRIBUTION UNIT

POTENTIAL TRANSFORMER

RIGID GALVANIZED STEEL

ROOT MEAN SQUARE SHORT CIRCUIT CURRENT

SMOKE FIRE DAMPER

TELEPHONE AND DATA

DENOTES RELOCATED DEVICE

FURNISH, INSTALL AND CONNECT

SHORT CIRCUIT CURRENT RATING

STRUCTURED CABLING SYSTEM

SHEET METAL AND AIR COND.

SYSTEM BONDING JUMPER

TRANSIENT VOLTAGE SURGE

CONTRACTOR'S NAT'L ASSOC.

SUPPLY SIDE BONDING JUMPER

GROUND

PERCENT IMPEDANCE

NON-FUSED

NUMBER

PHOTOCELL

LOCATION.

SECONDARY 600 VOLTS AND LESS

TIMECLOCK

TELEVISION.

TYPICAL

SUPPRESSION

U.G.P.S. UNDERGROUND PULL SECTION

U.P.S. or UPS UNINTERRUPTABLE POWER SYSTEM

VARIABLE AIR VOLUME

U.O.N. UNLESS OTHERWISE NOTED

**VOLT AMPERES** 

VOLTAGE DROP

WEATHERPROOF

TRANSFORMER

RECEPTACLE

REFRIGERATOR

NOT TO SCALE

N.T.S.

NO. or #

OFCI

P.C.

PRIMARY

PROVIDE

PA

(R)

REF

SCCR

SCS

SMACNA

SSBJ

SBJ

TEL/DATA

T.V.S.S.

TYP

VAV

XFMR

A PANEL CALLOUT, "A" INDICATES PANELBOARD OR EQUIPMENT DESIGNATION.

LOCATION AND ELECTRICAL REQUIREMENTS.

WYE CONFIGURATION igtriangle DELTA CONFIGURATION

MECHANICAL EQUIPMENT CALLOUT, "AC" INDICATES UNIT TYPE AND "2"

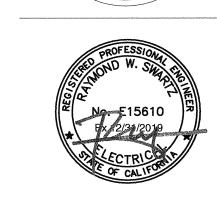
INDICATES UNIT NUMBER. REFER TO MECHANICAL DRAWINGS FOR EXACT

DETAIL CALLOUT, "3" INDICATES DETAIL NUMBER "E-1" INDICATES SHEET

PLAN NOTE REFERENCE, REFER TO NOTES ON SHEET, OR AS DIRECTED.

PH. or ø PHASE

DEDUCTIVE/ADDITIVE ALTERNATE PRICING IN ADDITION TO ANY DEDUCTIVE OR ADDITIVE LINE ITEM PRICING CALLED FOR ON THE DRAWING OR IN THE SPECIFICATIONS, CONTRACTOR SHALL PROVIDE SEPARATE LINE ITEM DEDUCTIVE/ADDITIVE ALTERNATE PRICING FOR EACH OF THE FOLLOWING ITEM(S):



tk sc 11870 Pierce Street, Suite 160 Riverside, California 92505 951.299.4160 www.tk1sc.com Nikolas Bruno - Electrical tk1sc Job #: 2020-0038

**IDENTIFICATION STAMP** DIV. OF THE STATE ARCHITECT

ACS 5- FLSN/AZS CSC DATEJAN 3 0 2020

PLANTING/HARDSCAPE AREAS. 9. UNLESS SPECIFICALLY SHOWN AS (E), (R), (ER), (D), EXISTING OR NON-BOLD, ALL ELECTRICAL DEVICES SHOWN ARE NEW.

WEATHERPROOF (NEMA #3R).

1" = 40'-0"

SITE PLAN GENERAL NOTES: 1. CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN EXCAVATING AND TRENCHING ON THIS SITE TO AVOID EXISTING DUCTS, PIPING OR CONDUITS, ETC., AND TO PREVENT HAZARDS TO PERSONNEL AND/OR DAMAGE TO EXISTING UNDERGROUND UTILITIES OR STRUCTURES WHETHER OR NOT SHOWN AND INSTALLED BY ANY OTHER CONTRACTS. THE ENGINEER IS NOT RESPONSIBLE FOR THE LOCATION OF UNDERGROUND UTILITIES OR STRUCTURES WHETHER OR NOT SHOWN OR DETAILED AND INSTALLED BY ANY OTHER CONTRACTS. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER SHOULD SUCH UNIDENTIFIED CONDITIONS BE DISCOVERED. THESE DRAWINGS AND SPECIFICATIONS DO NOT INCLUDE THE NECESSARY ELEMENTS FOR CONSTRUCTION SAFETY. CALL UNDERGROUND SERVICE ALERT (USA) AT 1 (800) 422-4133 OR APPLICABLE STATE AND LOCAL DIG SAFE OR UNDERGROUND ALERT HOTLINES PRIOR TO CONSTRUCTION START. 3. MINIMUM CONDUIT SIZE SHALL BE 3/4" - U.O.N. 4. MINIMUM CONDUCTOR SIZE SHALL BE #10 AWG. - U.O.N. 5. ALL SITE BRANCH CIRCUITS SHALL INCLUDE AN EQUIPMENT GROUND CONDUCTOR THAT, AT MINIMUM, MATCHES THE SIZE OF THE ASSOCIATED BRANCH CIRCUIT CONDUCTOR. WHERE MULTIPLE BRANCH CIRCUITS ARE ROUTED/GROUPED TOGETHER, THE EQUIPMENT GROUNDING CONDUCTOR SHALL MATCH THE SIZE OF THE LARGEST BRANCH CIRCUIT CONDUCTOR 6. ALL ELECTRICAL EQUIPMENT MOUNTED OUTDOORS SHALL BE 7. ALL CONDUIT ONLY SHALL BE PROVIDED WITH A NYLON PULL STRING. 8. SEE ARCHITECTURAL/LANDSCAPE ARCHITECTURAL PLANS FOR EXACT LOCATIONS OF FIXTURES, PULLBOXES, MANHOLES, OTHER ELECTRICAL DEVICES, ETC. COORDINATE ALL UNDERGROUND STRUCTURES AND CONDUIT ROUTING WITH LANDSCAPE ARCHITECT PRIOR TO ROUGH-IN TO ENSURE THAT SUCH ITEMS ARE NOT PLACED IN CRITICAL LANDSCAPE

216 OCCUPANTS X 5 SF PER OCCUPANT 1,080 SF REQUIRED 3,600 PROVIDED 10% OF DISPERSAL AREA ON (E)CONCRETE PAVING (MAX. 2% SLOPE ALL DIRECTIONS) (E) P.O.T. PER A#04-113029 103 (N)SHADE STRUCTURE PC#02-115731 A-2, TYPE II-B (E)BUILDING 'C' A#04-111450 A-1, B, E, S-2, I-4 TYPE V-B (E)SHADE STRUCTURE A#04-111450 A-2, TYPE II-B PROPERTY LINE 

MOUNTAIN AVE.

THE FIXTURE AND THE ENCLOSURE.

TO ALLOW CODE AND MANUFACTURER-REQUIRED CLEARANCES BETWEEN

CONTRACTOR WILL NEED TO PROVIDE THE FOLLOWING ITEMS: a. ALL BRANCH CIRCUITS SHALL BE EMT. b. ALL BRANCH CIRCUITS SHALL BE ROUTED ORTHOGONALLY, NEATLY TRAINED, IN PARALLEL TO STRUCTURES OR DUCTWORK. THE TERM "TRAINED" MEANS ALL PARALLEL CONDUITS SHALL MAINTAIN THE SAME SPATIAL RELATIONSHIP WITH EACH OTHER FOR ENTIRE RUN TO INCLUDE RADIUS BENDS AND SWEEPS. c. VISUALLY OBJECTIONABLE BRANCH CIRCUITS WILL BE REROUTED AT THE REQUEST OF THE ARCHITECT AT NO ADDITIONAL COST.

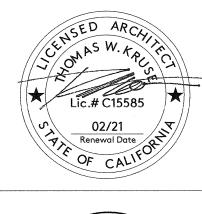
9. ALL LED REMOTE INDICATORS FOR DUCT DETECTORS AND FIRE/SMOKE DAMPERS REQUIRED BY THE LOCAL AHJ SHALL BE LOCATED IN CEILINGS

10. PROVIDE ADDITIONAL J-BOX NEAR PANEL FOR MULTIPLE HOMERUN CIRCUITRY.

11. UNLESS SPECIFICALLY SHOWN AS (E), (R), (ER), (D), EXISTING OR NON-BOLD, ALL ELECTRICAL DEVICES SHOWN ARE NEW.

12. REFER TO GENERAL POWER PLAN NOTES AND COMMUNICATIONS PATHWAYS GENERAL NOTE FOR ADDITIONAL REQUIREMENTS WHEN POWER AND/OR DATA DEVICES ARE SHOWN ON THIS PLAN.

CONNECT NEW LIGHTING TO EXISTING CIRCUIT AS INDICATED ON PLANS. LIGHTING WILL BE CONTROLLED BY EXISTING PHOTOCELL AND TIME CLOCK. 2 INTERCEPT EXISTING CIRCUIT FROM EXISTING SHADE STRUCTURE AND EXTEND.







IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT ACS ST FLSN. Auss CSC DATE JAN 3 0 2020

## **LIGHTING PLAN GENERAL NOTES:**

- 1. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION AND ELEVATION OF ALL LIGHTING FIXTURES AND ALL DEVICES. ALL WALL-MOUNTED DEVICE HEIGHTS SHALL BE VERIFIED WITH THE ARCHITECT PRIOR TO ROUGH-IN.
- 2. VERIFY EXACT CEILING CONSTRUCTION WITH ARCHITECTURAL REFLECTED CEILING PLAN AND SPECS. PROVIDE LIGHTING FIXTURES WITH ALL NECESSARY MOUNTING HARDWARE.
- 3. ALL RECESSED FIXTURES SHALL BE PROVIDED WITH ALL STRUCTURAL SUPPORTS AS REQUIRED BY THE IBC, OR CBC WHERE ADOPTED, IN ADDITION TO ANY LOCAL CODES.
- 4. ALL PERIMETER AND COVE LIGHTING SHALL EXTEND THE FULL LENGTH OF THE WALLS OR COVE. CONTRACTOR TO FIELD MEASURE COVE LENGTH AND ORDER QUANTITY OF FIXTURES AS REQUIRED.
- 5. ALL LINE VOLTAGE DIMMING BRANCH CIRCUITS SHALL BE PROVIDED WITH A DEDICATED NEUTRAL CONDUCTOR FOR EACH ZONE/CHANNEL. 6. RECESSED FIXTURES LOCATED IN A FIRE-RATED CEILING OR WALL SHALL BE PROVIDED WITH A 5-SIDED, RATED ENCLOSURE SO CONSTRUCTED AS
- 7. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXIT SIGN CHEVRONS AND NUMBER OF FACES PER EXIT SIGN. ANY DISCREPANCIES BETWEEN EXIT SIGNS SHOWN ON THE ELECTRICAL AND ARCHITECTURAL PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO ORDERING EXIT SIGNS.
- 8. WHEN EXPOSED CEILINGS OR OPEN GRID CONDITIONS OCCUR, THE
- IN COORDINATION WITH ARCHITECT PRIOR TO ANY ROUGH-IN.

1/4" = 1'-0"

(N) SHADE STRUCTURE

(E) SHADE STRUCTURE

/--- (E)L4D−15

"C" PROVIDE SHUNT TRIP DEVICE. "D" PROVIDE GFCI TYPE DEVICE.

COOPER BUSSMANN.

"E" PROVIDE A RED CIRCUIT BREAKER.

"F" PROVIDE A NEW BREAKER TO MATCH THE EXISTING IN PANEL.

"G" EXISTING BREAKER WITH NEW LOAD.

"H" PROVIDE AFCI TYPE DEVICE COMPLYING WITH NEC, OR CEC WHERE ADOPTED, 210.12(A) & (B).

13. COORDINATE WITH APPLICABLE TRADE TO INSURE RECESSED MOUNTED

PANELBOARDS WILL SEAT FLUSH IN THE WALLS PROVIDED. PANEL

TRIMS SHALL HAVE CONCEALED DOORS AND FASTENERS WITH FLUSH TYPE COMBINATION LOCK AND CATCH, TWO MILLED TYPE KEYS

SUPPLIED WITH EACH PANEL. ALL LOCKS SHALL BE KEYED ALIKE

WITH A TYPED IDENTIFICATION CARD OF ALL CIRCUIT AND PANEL

14. UPON PROJECT COMPLETION, CONTRACTOR SHALL INSTALL TYPED

IDENTIFY EACH CIRCUIT TO ITS CLEAR, EVIDENT, AND SPECIFIC PURPOSE OR USE. EACH CIRCUIT IDENTITY SHALL INCLUDE

OF AS-BUILT PANEL SCHEDULES SHALL BE PLACED IN PANEL

15. PANELBOARDS SHALL BE MANUFACTURED BY G.E., CUTLER—HAMMER, SIEMENS, OR SQUARE "D". FUSED PANEL BOARDS SHALL BE BY

SPECIFICATION SUBMITTAL REQUIREMENTS FOR EACH PANEL DEPICTING

DIRECTORIES. E.C. TO INCLUDE ALL COSTS REQUIRED FOR LARGER-THAN-STANDARD CUSTOM PANEL DIRECTORY HOLDERS TO

ACCOMMODATE COPIES OF AS-BUILT PANEL SCHEDULES.

16. PROVIDE SHOP DRAWING SUBMITTAL PER THE ELECTRICAL

CONFORMANCE WITH THE ABOVE NOTES AND SCHEDULES.

SPECIFIC PANEL SCHEDULE NOTES:

SUFFICIENT DETAIL TO ALLOW EACH CIRCUIT TO BE DISTINGUISHED

FROM ALL OTHERS PER NEC, OR CEC WHERE ADOPTED, ART 408.1

AS-BUILT PANEL DIRECTORIES IN EACH PANEL WITHIN THE

NUMBERS FOR BRANCH CIRCUIT PANELBOARDS.

AND EACH DOOR SHALL HAVE A PLASTIC COVERED DIRECTORY FRAME

MFGR-PROVIDED DIRECTORY HOLDER. THE DIRECTORY SHALL CLEARLY

AND 408.4. HANDWRITTEN DIRECTORIES ARE UNACCEPTABLE. COPIES

PANEL SCHEDULE INDEX				
-		L4D		
-				
-	-			

MOUNTING DOUBLE LUG <u>M.L.O.</u> 225A BUS 200% NEUTRAL NO NEMA 3R PHASE A.I.C. WIRE FEED THRU <u>SERIES</u> C B M R K C L TOIEIKI G N T C S R R V P C C LOCATION LOCATION R R S C T N G | C | C | P | V | (E) MULTI-PURP LTG 3240 (E) MULTI-PURP LTG 4 20/1 (E) SPARE (E) MULTI-PURP LTG 6 20/1 (E) SPARE 8 20/1 (E) SPEED LINES 1920 (E) SPARE (E) KITCHEN 10 20/1 (E) SPARE (E) SPARE (E) PLATFORWSTORAGE (E) SPARE (E) SPARE (E) SPARE G (E) SHADE STRUCT LTG (E) SPARE (E) SPARE (E) SPARE (E) SPACE (E) SPARE (E) SPACE (E) PKG LOT LOTG (E) SPACE (E) PKG LOT LTG 1380 (E) EF-1 (E) SPARE (E) SPARE (E) SPACE (E) MA-1 (E) SPACE (E) SPACE (E) AC-31 (E) AC-29A C= 13820 VA PHASE C LCL= 1371 VA PHASE A LCL= 1635 VA PHASE B LCL= 1535 VA PHASE B W/LCL= 16008 VA PHASE C W/LCL= 15191 VA PHASE A W/LCL= 16510 VA TOTAL VA= 43168 TOTAL LCL= 4541 TOTAL VA W/LCL= 47709 AMPS= 57 HIGH PHASE AMPS= 60

(E) PANEL L4D

GENERAL PANEL SCHEDULE NOTES:

1. WHERE PANEL IS INDICATED TO INCLUDE FEED THRU LUGS, PROVIDE FEED THROUGH LUGS AT THE OPPOSITE END OF THE PANELBOARD FROM THE PANELBOARD MAIN LUGS.

2. WHERE PANEL IS INDICATED TO INCLUDE DOUBLE LUGS, PROVIDE A DOUBLE LUG KIT AT THE SAME END OF THE PANELBOARD AS THE PANELBOARD MAIN LUGS.

WHERE PANEL IS INDICATED TO INCLUDE 200% NEUTRAL, PROVIDE PANELBOARDS UL LISTED AS HAVING NEUTRAL BUSSES RATED TO CARRY 200 PERCENT OF THE CURRENT CARRYING CAPACITY OF THE PHASE BUSSING. OTHERWISE, NEUTRAL BUSSING TO BE FULL SIZE AND RECTANGULAR.

4. WHERE PANEL IS INDICATED TO INCLUDE AN I/G BUS, PROVIDE PANELBOARDS WITH AN ISOLATED GROUND BUS, DRILLED AND TAPPED FOR NUMBER OF ISOLATED GROUND CONDUCTORS SHOWN, AS WELL AS FOR ALL SPARES AND SPACES SHOWN ON THE PANELBOARD.

5. WHERE PANEL CIRCUIT BREAKER RATING IS SHOWN AS SERIES RATED, PROVIDE CIRCUIT BREAKERS IN PANELBOARD WHICH ARE SERIES RATED WITH THE UPSTREAM SYSTEM FOR THE AVAILABLE FAULT CURRENT. THE PANELBOARD SHALL BE MARKED WITH THE SERIES CONNECTED RATINGS, AS WELL AS ALL MARKING AS REQUIRED BY THE NEC, OR CEC WHERE ADOPTED, 240-83(C).

6. WHERE PANEL IS INDICATED AS RECESSED OR FLUSH MOUNTED, PROVIDE SPARE CONDUITS STUBBED UP INTO THE ACCESSIBLE CEILING SPACE. PROVIDE ONE (1) 3/4" CONDUIT ONLY FOR EACH THREE (3) SPARES OR SPACES, MINIMUM OF TWO (2). EACH CONDUIT SHALL BE TAGGED, CAPPED AND MARKED FOR FUTURE

7. ALL BUSSING SHALL BE TIN PLATED ALUMINUM.

8. ALL CIRCUIT BREAKERS USED AS SWITCHES SHALL BE UL LISTED AND LABELED "SWD" FOR SWITCHING DUTY.

9. PROVIDE BREAKER INTERLOCK WITH ADJACENT BREAKER(S) FOR ANY MULTI-WIRE BRANCH CIRCUIT. BREAKER INTERLOCK GROUPING SHALL BE BY BRANCH CIRCUIT GROUP (i.e. MULTIPLE CIRCUITS SHARING A COMMON NEUTRAL (NEC, OR CEC WHERE ADOPTED, 210.4(B),) COMMON YOKE (NEC, OR CEC WHERE ADOPTED, 210.7(B), OR FURNITURE SYSTEM NEC OR CEC WHERE ADOPTED, 605.6 AND 605.7). WHERE AN EXISTING PANEL IS BEING ALTERED OR MODIFIED IN ANY WAY, CONTRACTOR SHALL INCLUDE ALL COSTS IN BASE BID TO ADD BREAKER INTERLOCKS TO EXISTING MULTI-WIRE BRANCH CIRCUITS BASED ON CONTRACTOR'S INVESTIGATION OF EXISTING CONDITIONS.

10. PROVIDE BREAKER LOCK OFF DEVICE ON ANY CIRCUIT BREAKER FEEDING A TRANSFORMER AS REQUIRED, PER NEC, OR CEC WHERE ADOPTED, 450.14. WHERE AN EXISTING PANEL IS BEING ALTERED OR MODIFIED IN ANY WAY, CONTRACTOR SHALL INCLUDE ALL COSTS IN BASE BID TO ADD BREAKER LOCK-OFF DEVICES TO EXISTING TRANSFORMER CIRCUIT BREAKERS BASED ON CONTRACTOR'S INVESTIGATION OF EXISTING CONDITIONS.

11. ALL CIRCUIT BREAKERS SHALL BE BOLT-ON TYPE AND SHALL BE SUITABLE FOR 75 DEGREE AMPACITY CONDUCTORS.

12. PANELS SHALL BE OF THE DEAD FRONT SAFETY TYPE. PANELS SHALL BE MINIMUM 20" WIDE AND 5-3/4" DEEP UNLESS OTHERWISE NOTED ON PLAN.

AS-BUILT PANEL DIRECTORY NOTE: BRANCH CIRCUIT LOCATIONS NOTED WITH "(E)" INDICATE EXISTING CIRCUIT(S). THE IDENTITIES OF THESE CIRCUITS ARE BASED ON EXISTING PANEL DIRECTORIES AND/OR LIMITED AS-BUILT INFORMATION. CONTRACTOR SHALL FIELD VERIFY EACH BRANCH CIRCUIT AND PROVIDE COMPLETE, TYPED AS-BUILT PANEL DIRECTORIES AS REQUIRED THAT DISTINGUISH EACH CIRCUIT PER NEC, OR CEC WHERE ADOPTED, ART 408.1 AND 408.4. COMPLETED DIRECTORIES SHALL BE SUBMITTED TO THE ELECTRICAL INSPECTOR PRIOR TO FINAL ELECTRICAL INSPECTION. INCLUDE ALL COSTS IN BID.

EXISTING CIRCUIT BREAKER NOTE: PROVIDE BREAKER INTERLOCK WITH ADJACENT BREAKER(S) FOR ANY MULTI-WIRE BRANCH CIRCUIT. BREAKER INTERLOCK GROUPING SHALL BE BY BRANCH CIRCUIT GROUP (i.e. MULTIPLE CIRCUITS SHARING A COMMON NEUTRAL (NEC. OR CEC WHERE ADOPTED. 210.4(B).) COMMON YOKE (NEC. OR CEC WHERE ADOPTED, 210.7(B),) OR FURNITURE SYSTEM NEC OR CEC WHERE ADOPTED, 605.6 AND 605.7). WHERE AN EXISTING PANEL IS BEING ALTERED OR MODIFIED IN ANY WAY, CONTRACTOR SHALL INCLUDE ALL COSTS IN BASE BID TO ADD BREAKER INTERLOCKS TO EXISTING MULTI-WIRE BRANCH CIRCUITS BASED ON

CONTRACTOR'S INVESTIGATION OF EXISTING CONDITIONS.

### A. GENERAL NOTES:

- 1. THE LIGHTING FIXTURES, LAMPS, BALLASTS, POWER SUPPLIES, DRIVERS AND TRANSFORMERS FOR THIS PROJECT HAVE BEEN SPECIFIED TO ENSURE THAT SPECIFIC AESTHETIC AND PERFORMANCE REQUIREMENTS WILL BE SATISFIED. THESE PRODUCTS HAVE BEEN CAREFULLY RESEARCHED AND EACH SPECIFIED ITEM HAS UNIQUE QUALITIES WHICH WERE DETERMINED TO BE ESSENTIAL IN SATISFYING THE OWNER'S, ARCHITECT'S, ENGINEER'S AND LIGHTING CONSULTANT'S DESIGN CRITERIA.
- 2. CONTRACTOR SHALL PROVIDE ALL MATERIALS AS DETAILED ON DRAWINGS AND/OR SCHEDULES, AND LABOR AS REQUIRED TO ACHIEVE A COMPLETE AND OPERATING LIGHTING SYSTEM.
- 3. CONTRACTOR SHALL NOTIFY THE ELECTRICAL ENGINEER AND/OR LIGHTING CONSULTANT OF ANY PROVISIONS OF THE SPECIFICATION THAT IS IN CONFLICT WITH LOCALLY ENFORCED CODES.
- 4. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT OF ANY REQUIRED MODIFICATIONS THAT ARE NOT SHOWN ON THE DRAWINGS.
- 5. ALL ELECTRICAL MATERIAL SHALL BE IN NEW & UNDAMAGED CONDITION WHEN INSTALLED. ALL EQUIPMENT SHALL BE LISTED BY A NATIONALLY RECOGNIZED TESTING LABORATORY.
- 6. ALL DIMENSIONS & MEASUREMENTS FOUND ON PLANS ARE APPROXIMATE. CONTRACTOR SHALL VALIDATE ALL DIMENSIONS PRIOR TO ORDERING MATERIAL TO INCLUDE MAKING FIELD MEASUREMENTS BASED ON ACTUAL SITE CONDITIONS TO DEVELOP COMPLETE ORDERS AND INSTALL SYSTEMS PER DRAWINGS AND
- 7. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION AND ELEVATION OF ALL LIGHTING FIXTURES AND ASSOCIATED DEVICES AND EQUIPMENT.
- 8. PRIOR TO AIMING/ADJUSTING ACTIVITIES, COMMISSIONING OR PUNCHWALK COMMENCEMENT, CONTRACTOR SHALL PROPERLY TEST AND VERIFY ALL CIRCUITRY AND CONTROL WIRING AND IMPLEMENT ALL CONTROLS PROGRAMMING.

#### B. INSTALLATION:

- 1. LOCATIONS OF THE FIXTURES SHALL BE PER THE ARCHITECTURAL REFLECTED CEILING PLAN(S) AND SHALL BE COORDINATED AT TIME OF ROUGH IN. CONFLICTS BETWEEN THE ARCHITECTURAL REFLECTED CEILING PLAN(S) AND THE ELECTRICAL/LIGHTING DESIGN PLAN(S) SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT IN WRITING PRIOR TO ORDERING FIXTURES.
- 2. LIGHTING DRAWINGS REPRESENT THE DESIGN INTENT OF THE EQUIPMENT, DEVICES, ETC. TO BE CONNECTED AND THE CIRCUITS TO WHICH THEY ARE TO BE CONNECTED. CONTRACTOR SHALL INSTALL ALL CONDUIT, J-BOXES AND ADDITIONAL HARDWARE AND DEVICES AS REQUIRED FOR A COMPLETE AND OPERATING
- 3. ALL LIGHTING FIXTURES SHALL BE MOUNTED AND INDIVIDUALLY SUPPORTED IN ACCORDANCE WITH APPLICABLE CODES. FIXTURES SHALL BE FURNISHED AND INSTALLED WITH ALL REQUIRED MOUNTING DEVICES, HARDWARE AND ACCESSORIES.
- 4. CONTRACTOR TO VERIFY LIGHTING FIXTURE MOUNTING HARDWARE IS COMPATIBLE WITH APPROVED MOUNTING CONDITIONS. MOUNTING CONDITIONS MUST ALLOW FOR AIMING AND ADJUSTING OF LIGHTING FIXTURES ON SITE
- 5. CONTRACTOR TO INCLUDE AIMING/ADJUSTING LABOR AFTER DARK AS REQUIRED FOR ANY ADJUSTABLE LIGHTING FIXTURE AND FOR EACH INDIVIDUAL LIGHTING FIXTURE HEAD OR LAMP HOLDER IN A MULTI-FIXTURE/MULTI-LAMP ASSEMBLY. LIGHTING FIXTURES TO BE AIMED/ADJUSTED PER THE DIRECTION OF OWNER, ARCHITECT AND/OR LIGHTING CONSULTANT.
- 6. CONTRACTOR TO SUPPLY ADEQUATE SUPPORT INCLUDING LADDERS, LIFTS OR OTHER EQUIPMENT REQUIRED TO ACCESS LIGHTING FIXTURES AT THE TIME OF FOCUS, INCLUDING EVENING OR NIGHT WORK AS MAY BE REQUIRED DUE TO SCHEDULE CONFLICT OR DAYLIGHT IMPACT. AIMING/ADJUSTING LABOR SHALL BE PREPARED FOR WORK WITH COMMON HAND TOOLS TO MAKE ADJUSTMENTS AND MINOR REPAIRS DURING
- 7. ALL COVE MOUNTED LIGHTING FIXTURES SHALL EXTEND THE FULL LENGTH OF THE COVE. CONTRACTOR TO FIELD MEASURE COVE LENGTH AND ORDER QUANTITY OF LIGHTING FIXTURES AS REQUIRED. PROVIDE COMPLETE MANUFACTURER SHOP DRAWINGS OF BUILT—IN COVE OR LINEAR LIGHTING SYSTEMS.
- 8. CONTRACTOR TO REPLACE ALL INOPERATIVE LAMPS, LED ARRAYS OR SYSTEMS AT THE END OF THE CONSTRUCTION PHASE PRIOR TO THE FOCUS AND PROGRAMMING PHASE AND AGAIN PRIOR TO OWNER OCCUPANCY OR PROJECT OPENING.
- OCCUPANCY OR PROJECT OPENING.

  9. ALL POLE MOUNTED FIXTURES, POST MOUNTED FIXTURES AND BOLLARDS SHALL BE PROVIDED WITH A STRUCTURAL FOOTING AS DETAILED ELSEWHERE IN THE DRAWINGS. FOOTING SIZE TO BE PROVIDED BY
- STRUCTURAL ENGINEER. REFERENCE FIXTURE SCHEDULE AND DETAILS FOR MORE INFORMATION.

  10. ALL EXIT SIGNS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE LOCAL FIRE PREVENTION CODE AUTHORITY. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY HARDWARE SUCH THAT ALL EXIT SIGNS ARE INSTALLED IN AN APPROVED VISIBLE LOCATION. THE CONTRACTOR SHALL VERIFY CHEVRONS AND NUMBER OF FACES PER EXIT SIGN WITH ARCHITECTURAL REFLECTED CEILING PLAN(S). ANY DISCREPANCIES BETWEEN EXIT SIGNS DEPICTED ON ARCHITECTURAL AND ELECTRICAL PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO ORDERING EXIT SIGNS.

#### C. SUBMITTALS AND SUBSTITUTIONS:

- CONTRACTOR TO SUBMIT FOR APPROVAL ON THE PRODUCTS THEY INTEND TO FURNISH WITHIN TEN (10)
  DAYS OF AWARD OF CONTRACT. FAILURE TO SUBMIT WITHIN DEADLINE CONSTITUTES A GUARANTEE THAT
  ONLY THE BASE SPECIFIED PRODUCTS WILL BE SUPPLIED AND THAT NO OTHER PRODUCTS, WHETHER
  LISTED AS ALTERNATES OR NOT, WILL BE CONSIDERED.
- 2. CONTRACTOR TO PROVIDE A SUBMITTAL/SHOP DRAWING SUBMITTAL FOR EACH LIGHTING FIXTURE TYPE INCLUDING ACCESSORIES, BALLAST(S), POWER SUPPLIES, DRIVER(S) TRANSFORMER(S), AND INTEGRAL EMERGENCY BATTERIES AND TEST SWITCHES. ANY LIGHTING FIXTURE SUBMITTAL PROVIDED WITHOUT SPECIFIC LIGHTING FIXTURE'S ACCESSORIES, BALLAST, POWER SUPPLY, DRIVER, TRANSFORMER OR BATTERY INFORMATION SHALL BE REJECTED AS INCOMPLETE.
- 3. SUBSTITUTIONS OF THE SPECIFIED PRODUCTS ARE STRICTLY PROHIBITED UNLESS APPROVED AS STATED HEREIN. LIGHTING FIXTURE SUBSTITUTIONS SHALL BE FORMALLY PRESENTED TO THE ELECTRICAL ENGINEER AND/OR LIGHTING CONSULTANT, BY APPOINTMENT ONLY, AT LEAST TEN (10) WORKING DAYS PRIOR TO BID TIME. THE SUBMITTAL MATERIAL SHALL INCLUDE THE FOLLOWING ITEMS.
- a. A COMPLETE AND OPERATING SAMPLE, WIRED FOR 120V OPERATION, WITH LAMP, CORD AND PLUG.
  b. A COMPLETE PHOTOMETRIC REPORT, FOR THE PROPOSED SUBSTITUTE PRODUCT, USING THE SPECIFIED LAMP OR LED TYPE AND WATTAGE, INCLUDING TABULATED CANDLEPOWER VALUES, COEFFICIENT OF
- UTILIZATION, AND AN ISO—FOOT—CANDLE DIAGRAM. PRORATED DATA WILL NOT BE ACCEPTABLE. THE PHOTOMETRIC REPORT MUST BE DONE IN ACCORDANCE WITH PUBLISHED I.E.S. TESTING PROCEDURES AND CERTIFIED BY A REGISTERED ELECTRICAL ENGINEER.

  c. A CURRENT ORIGINAL CATALOG DATA SHEET WITH LIGHTING FIXTURE CATALOG NUMBERS. MODIFIED
- c. A CURRENT ORIGINAL CATALOG DATA SHEET WITH LIGHTING FIXTURE CATALOG NUMBERS. MODIFIE
  DATA SHEETS WILL NOT BE ACCEPTABLE.
- d. A SIGNED COPY OF THE "SUBSTITUTION COMPLIANCE FORM", LOCATED IN THE DIVISION 1 SPECIFICATION, STATING THAT IF THE PROPOSED SUBSTITUTION IS ACCEPTED, THE PROJECT SCHEDULE WILL NOT BE NEGATIVELY AFFECTED. IF THE COMPLETION OF THE PROJECT IS DELAYED BECAUSE OF THE APPROVED SUBSTITUTION, THE CONTRACTOR WILL BE RESPONSIBLE FOR PAYMENT OF ANY ESTABLISHED LIQUIDATED DAMAGES.
- e. FOR SPECIFIC INTERIOR FIXTURE SUBSTITUTIONS, WHEN DIRECTED BY THE ELECTRICAL ENGINEER AND/OR LIGHTING CONSULTANT, A POINT—BY—POINT SCALED COMPUTER PRINTOUT SHALL BE PROVIDED VERIFYING THE ILLUMINATION LEVELS FOR THE SPECIFIC INTERIOR AREA. IF THE SUBSTITUTED FIXTURE IS AN EMERGENCY FIXTURE, THE REPORT SHALL BE RUN IN BOTH NORMAL AND EMERGENCY MODES. THIS REPORT SHALL BE CONFIGURED WITH SPECIFIC CONSTRAINTS, AS DIRECTED BY THE ENGINEER OF RECORD. THE REPORT MUST SHOW THAT THE SUBSTITUTED FIXTURE PROVIDES PERFORMANCE EQUAL
- TO OR BETTER THAN THE LIGHTING LEVELS OF THE SPECIFIED PRODUCT.

  f. FOR ALL EXTERIOR FIXTURE SUBSTITUTIONS, A POINT—BY—POINT SCALED COMPUTER PRINTOUT SHALL BE PROVIDED VERIFYING THE ILLUMINATION LEVELS FOR THE ENTIRE SITE PLAN BASED ON USING THE PROPOSED ALTERNATIVE FIXTURES. THE REPORT MUST SHOW THAT THE SUBSTITUTED FIXTURE PROVIDES PERFORMANCE EQUAL TO, OR BETTER THAN THE LIGHTING LEVELS AND UNIFORMITY RATIOS (MAX:MIN AND AVG:MIN) OF THE SPECIFIED PRODUCT. THIS REPORT SHALL BE CONFIGURED WITH THE FOLLOWING CONSTRAINTS.
- i. THE SPACING INCREMENT OR POINTS ON THE VERIFICATION REPORT SHALL NOT EXCEED TEN (10) FEET IN EITHER DIRECTION.
- ii. THE PHOTOMETRIC CALCULATION SHALL BE BASED ON PROVIDING MAINTAINED FOOT—CANDLE LEVELS USING MEAN LAMP LUMENS AND A LIGHT LOSS FACTOR, AS DIRECTED BY THE ENGINEER OF RECORD.
   iii. THE PHOTOMETRIC CALCULATION SHALL SHOW ANY ADDITIONAL ENERGY AND/OR ENERGY COSTS, FOR A TEN YEAR PERIOD, AS COMPARED TO THE ORIGINALLY SPECIFIED ITEM. THE TOTAL COSTS FOR THESE EXPENSES WILL BE DEDUCTED FROM THE CONTRACT COST.
- 4. CONFLICTS BETWEEN CATALOG NUMBERS AND LIGHTING FIXTURE DESCRIPTIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ELECTRICAL ENGINEER AND/OR LIGHTING CONSULTANT PRIOR TO BID TIME FOR CLARIFICATION.
- 5. FIXTURE FINISHES:
- a. ALL FIXTURE FINISHES AND COLORS, UNLESS NOTED AS CUSTOM, SHALL BE SELECTED FROM THE MANUFACTURERS STANDARD COLOR OPTIONS AS LISTED ON THE FIXTURE SPECIFICATION SHEET. STANDARD FINISH SHALL BE SELECTED BY THE ARCHITECT, INTERIOR DESIGNER OR OWNER. THIS DIRECTION WILL BE PROVIDED IN THE SHOP DRAWING REVIEW PROCESS.
- b. ALL FIXTURES INDICATED WITH A PREMIUM OR CUSTOM COLOR SHALL BE ASSIGNED A CUSTOM COLOR REFERENCE NUMBER (SUCH AS RAL#) OR PROVIDE FIVE (5) PAINT CHIPS FOR MANUFACTURER TO USE TO MATCH COLOR. PREMIUM OR CUSTOM FINISH SHALL BE SELECTED BY THE ARCHITECT, INTERIOR DESIGNER OR OWNER. THIS DIRECTION WILL BE PROVIDED IN THE SHOP DRAWING REVIEW PROCESS.

- 6. [OPTION?] IN THE LIGHTING FIXTURE MODEL NUMBER INDICATE A FIXTURE OPTION THAT THE CONTRACTOR MUST IDENTIFY PRIOR TO ORDERING/PROVIDING SUBMITTALS, INCLUDING, BUT NOT LIMITED TO: VOLTAGE, MOUNTING CONDITION/HARDWARE, FINISH, DIMMING REQUIREMENTS/BALLAST INFORMATION.
- a. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND PROVIDING ALL HANGERS, CLIPS AND NECESSARY HARDWARE TO INSTALL THE FIXTURE IN THE ENVIRONMENT AS SHOWN ON THE ARCHITECTURAL PLANS. ALL FIXTURES SHALL BE PROVIDED WITH ALL REQUIRED STRUCTURAL SUPPORTS AS REQUIRED BY THE CURRENTLY ADOPTED CODES.
- b. VOLTAGES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO ORDERING SEE ELECTRICAL DRAWINGS FOR BRANCH CIRCUIT INFORMATION. IT IS POSSIBLE THAT FIXTURES WILL BE REQUIRED IN VARIOUS VOLTAGES
- 7. "NO KNOWN EQUAL" LIGHTING FIXTURE PRICING/BIDDING NOTES:
- a. EACH FIXTURE IDENTIFIED AS "NO KNOWN EQUAL" ON THIS PROJECT SHALL BE BID IN A "LINE ITEM" FORMAT. A PER UNIT MATERIAL COST SHALL BE PROVIDED FOR EACH "NO KNOWN EQUAL" FIXTURE. THIS PRICE SHALL INCLUDE LAMPS AS WELL AS ALL OTHER REQUIRED MATERIALS REQUIRED FOR INSTALLATION. THE FIXTURE PRICE QUOTED WILL BE UTILIZED, PRIOR TO SHOP DRAWING APPROVAL, FOR "ADDING" AND/OR "DELETING" ANY QUANTITY OF THE FIXTURE.
- b. A UNIT COST SHALL BE SUBMITTED FOR EACH "NO KNOWN EQUAL" FIXTURE. SUBMIT THE PRICING AS PART OF THE BID FORM ON A SEPARATE 8 1/2" X 11" SHEET.
- c. FAILURE TO SUBMIT A LINE ITEM FOR EACH "NO KNOWN EQUAL" FIXTURE MAY RESULT IN THE REJECTION, REFUSAL, OR NON-ACCEPTANCE OF THE CONTRACTOR'S BID.
- 8. FIXTURES IDENTIFIED AS "NO KNOWN EQUAL OWNER STANDARD" OR "CAMPUS STANDARD" ARE TO BE PROVIDED AS SPECIFIED, WITH SUBSTITUTIONS STRICTLY PROHIBITED. SEE ADDITIONAL NOTES FOR "NO KNOW EQUAL" BIDDING REQUIREMENTS.

#### D. LIGHTING FIXTURE SPECIFICATIONS:

- ALL EXTERIOR LIGHTING EQUIPMENT SHALL BE RATED FOR WET LOCATION AND THE IP RATING OF ALL
  EQUIPMENT, INCLUDING BALLAST, POWER SUPPLY AND TRANSFORMER ENCLOSURES SHALL CONFORM TO
  THE CONDITIONS IN WHICH THE LIGHTING FIXTURE IS MOUNTED.
- 2. ALL BALLASTS, POWER SUPPLIES, DRIVERS AND/OR TRANSFORMERS THAT ARE REMOTELY LOCATED SHALL BE INSTALLED AS NEAR TO THE LIGHTING FIXTURE(S) AS POSSIBLE, HIDDEN FROM PUBLIC VIEW IN AN ACCESSIBLE COMPARTMENT THAT IS WELL VENTILATED. CONTRACTOR TO COORDINATE LOCATION(S) WITH ARCHITECT PRIOR TO ROUGH—IN.
- 3. ALL TRANSFORMERS SHALL BE FUSED ON THE SECONDARY SIDE.
- 4. COLOR FILTERS SHALL BE GLASS OR DICHROIC UNLESS OTHERWISE INDICATED ON DRAWINGS.
- 5. CONTRACTOR TO PROVIDE 20% ADDITIONAL COLOR FILTERS FOR EACH COLOR AND SIZE.
- 6. CONTRACTOR TO VERIFY THAT ALL LIGHTING FIXTURES SPECIFIED WITH A COLOR FILTER ARE SUPPLIED WITH ANY AND ALL ATTACHMENT DEVICES FOR THE FILTER.
- 7. ALL TRACK LIGHTING FIXTURES SHALL BE PROVIDED WITH THE APPROPRIATE TRACK SYSTEM WHICH SHALL INCLUDE ALL MISCELLANEOUS COMPONENTS REQUIRED, AS WELL A ANY REQUIRED CIRCUIT LIMITERS FOR A COMPLETE INSTALLATION. TRACK LENGTH(S) SHALL BE PER DRAWINGS.

#### E. DRIVERS / TRANSFORMERS:

- 1. [OPTION?] IN FIXTURE MODEL NUMBER INDICATE THAT THE FIXTURE DRIVER TYPE AND QUANTITY MUST BE VERIFIED BY THE CONTRACTOR USING FIXTURE CALLOUT INFORMATION AND FIXTURE SWITCHING CONFIGURATION INFORMATION.
- 2. CONTINUOUS DIMMING AND CONTROLLABLE LED:

THAN 0.85 AND MAXIMUM THD OF 20% AT FULL LOAD.

- a. PROVIDE CONTROLLABLE LED DIMMING DRIVERS (INTEGRAL OR REMOTE) WITH POWER FACTOR GREATER
- b. PRIOR TO BID CONTRACTOR TO VERIFY DRIVER COMPATIBILITY WITH DIMMERS, DIMMING CONTROL SYSTEM(S) AND LIGHTING CONTROL SYSTEM(S) WITH RESPECTIVE LIGHTING MANUFACTURER(S) AND LIGHTING/DIMMING CONTROL SYSTEM MANUFACTURERS. IF COMPATIBILITY DOCUMENTATION IS UNAVAILABLE FOR A GIVEN LED FIXTURE/LIGHTING CONTROL SYSTEM COMBINATION, CONTRACTOR SHALL INCLUDE COSTS IN THE BASE BID FOR RESPECTIVE LIGHTING MANUFACTURER AND LIGHTING CONTROLS MANUFACTURER TO TEST/WARRANT COMPATIBILITY OF SAID COMBINATIONS.
- c. CONTINUOUS LED DIMMING DRIVERS SHALL BE AT MINIMUM 4-WIRE 0-10V 10% DIMMING (HOT, NEUTRAL, DIM+, DIM-). THE FIXTURE PART NUMBER SHOULD INDICATE THE TYPE OF DIMMING
- d. THE FIXTURE PART NUMBER SHOULD INDICATE THE TYPE OF DIMMING PROTOCOL REQUIRED.

### F. EMERGENCY FIXTURES / BATTERY PACKS:

- 1. LIGHT FIXTURES INDICATED AS EMERGENCY SHALL BE IDENTIFIED / PROVIDED AS FOLLOWS:
- a. INTEGRAL BATTERY PACK (EB):
- 3a/3EB FIXTURE CONNECTED TO CIRCUIT "3", CONTROL SWITCHLEG "a" WITH THE BATTERY CHARGING LEAD CONNECTED TO A CONSTANT HOT CIRCUIT "3".
- 3NL/3EB FIXTURE CONNECTED TO A CONSTANT HOT CIRCUIT "#3". BATTERY CHARGING LEAD CONNECTED TO A CONSTANT HOT CIRCUIT "3".
- b. REMOTE BACK-UP SOURCE (EM):
  - 3a/3EM ROUTED THROUGH A U.L. LISTED TRANSFER RELAY (LC & D #GR-2001E/S) FOR SWITCHED CONTROLS OR A U.L. LISTED TRANSFER SWITCH (BODINE #GTD SERIES DEVICE) FOR DIMMING CONTROLS. CONNECTED TO A CONSTANT HOT EMERGENCY CIRCUIT "3". SEE DISTRIBUTED LIGHTING CONTROL SPECIFICATIONS FOR DEVICE REQUIREMENTS WHEN CONTROLLED BY OCCUPANCY SENSORS.
- 3NL/3EM FIXTURE CONNECTED TO A CONSTANT HOT EMERGENCY CIRCUIT "3". c. REMOTE BACK—UP SOURCE (EM) NOTES:
- ALL REMOTE BACK UP SOURCE (EM) FIXTURES SHALL BE PROVIDED WITH AN IN LINE FUSE.
   PROVIDE ADDITIONAL LABELING TO INDICATE FIXTURE IS PROTECTED BY A FUSE.
- 2. EMERGENCY BATTERY PACK NOTES:
- a. PROVIDE INTEGRAL TEST SWITCH OPTION FOR ALL EMERGENCY BATTERY PACKS INSTALLED IN LIGHT FIXTURES.
- b. ALL RECESSED DOWNLIGHTS SUPPLIED WITH A BATTERY PACK SHALL BE PROVIDED WITH AN INTEGRAL COMBINATION TEST SWITCH / CHARGING INDICATOR LIGHT— MOUNTED INSIDE THE REFLECTOR. REMOTE TEST SWITCH / CHARGING LIGHTS ARE NOT ALLOWED. THE TEST SWITCH / CHARGING INDICATOR LIGHT SHALL BE SECURELY ATTACHED TO THE REFLECTOR WITH 18" OF SLACK LEADS, FOR EASY REMOVAL OF THE REFLECTOR ASSEMBLY.
- c. BATTERY PACKS ALL SHALL BE PROVIDED WITH A COMBINATION TEST SWITCH / CHARGE LIGHT.
- d. CONTRACTOR TO VERIFY WITH FIXTURE MANUFACTURER(S) PRIOR TO BID THAT EMERGENCY BATTERY
- PACKS ARE INTEGRAL TO FIXTURE HOUSINGS.

  e. SHOULD THE SPECIFIED LED EMERGENCY BATTERY PACK(S) NOT FIT WITHIN A GIVEN FIXTURE(S), CONTRACTOR SHALL INCLUDE ALL COSTS IN BASE BID TO LOCATE/CONNECT SELF—TESTING MINI INVERTER(S) (IOTA #ILS SERIES OF BODINE#ELI—S—[WATT?]) REMOTELY FROM THE FIXTURE(S) IN THE NEAREST ELECTRICAL ROOM OR TO LOCATE EMERGENCY BATTERY PACK(S) REMOTELY FROM THE FIXTURE ABOVE THE NEAREST ACCESSIBLE CEILING.
- f. EMERGENCY OPERATION OF LED FIXTURE FOR A MINIMUM OF 90 MINUTES, AND A MINIMUM OF 10 WATTS, OR AS SPECIFIED. ACCEPTABLE MANUFACTURES: BODINE OR IOTA.
- 9. TO MAINTAIN UL LISTING OF LED FIXTURE, FIXTURE MANUFACTURER(S) SHALL INSTALL LED EMERGENCY BATTERY PACKS AT THE FACTORY AND OBTAIN A UL LISTING FOR THE FIXTURE WITH EMERGENCY BATTERY PACK, FIELD—INSTALLATION OF LED EMERGENCY BATTERY PACK9S) IS PROHIBITED.
- h. PROVIDE "DL" OPTION IN ALL DAMP LABEL INSTALLATIONS.

LIGHTING FIXTURE SCHEDULE					
SYMBOL	TYPE	MANUFACTURER AND MODEL NUMBER	FIXTURE VA/ WATTS	LAMP/ LAMP OPTION	GENERAL DESCRIPTION
<b>⊢</b> 0−1	(1)	BIRCHWOOD LIGHTING BRA-LED-SLO-35-4-FW-277-EB-D10-SM - EQUAL BY:	4.5W/FT	LED/3500°K	SURFACE MOUNTED 4' LED STRIP LIGHT. WET LOCATION LISTED. 3500K. FROSTEI WHITE LENS. 277V, 0-10V DIMMING. 489 LM/FT. HEAVY GAUGE ALUMINUM HOUSING. MATCH EXISTING FIXTURE CONFIGURATION.
	NFRAI I	LIGHTING FIXTURE SCHEDULE NOTES FOR CRITI	CAL FIXTURE	SPECIFICATI	ON AND ORDERING INFORMATION







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Area	a Descriptio	Specific Area Type per Table 140.7-B	Specific Area (ft <sup>2</sup> ) <sup>1</sup>	Allowed Density (W/ft²)	Extra Allowance (Watts)	Luminaire Name or Item Tag	Watts per Luminaire	# of Luminaires	Design Watts	Allowance (Watts)
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STATE OF CALIFORNIA			
Outdoor Lighting			
NRCC-LTO-E (Created 9/17)			CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE		The state of the s	NRCC-LT
Project Name: Picante MS Sh Project Address: 1990 S A St	hade Structure	Report Page: Date Prepared:	Page 1/22/2
roject Address: 1990 5 A St		Date Prepared.	1/24/6
DOCUMENTATION AUTHOR	R'S DECLARATION STATEMENT		
Documentation Author Name:	tk1sc	Documentation Author Signature:	
Company:	tk1sc	Signature Date: 1/22/2020	
Address: 15231 Laguna (	Canyon Road, Suite 100	CEA/ HERS Certification Identification (if application	ole):
City/State/Zip:	Irvine, CA 92618	Phone: 949-751-5800	
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CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance: http://www.energy.ca.gov/title24/2016standards

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Table Instructions: Please complete this table for areas using the wattage allowance per specific area type from <u>Table 140.7-B</u>. More than one specific area allowance may be taken in a single project, if applicable. However, multiple specific area allowances may not be taken for the exact same area on the site.

J. LIGHTING ALLOWANCE: PER APPLICATION

K. LIGHTING ALLOWANCE: SALES FRONTAGE

M. LIGHTING ALLOWANCE: PER SPECIFIC AREA

M. LIGHTING ALLOWANCE: PER SPECIFIC AREA

Specific Area Type per

<u>Table 140.7-B</u>

Non-sales Canopies/Tunnels

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance: http://www.energy.ca.gov/title24/2016standards

This Section Does Not Apply

This Section Does Not Apply

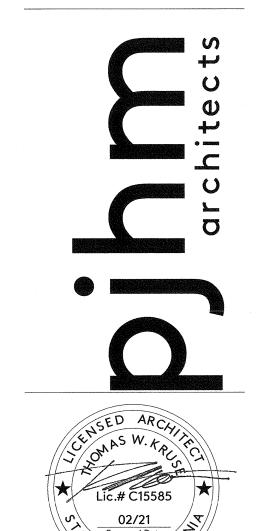
Area Description

Lunch Shelter

his document		ΛΡLIANCE ed to demon	stra	ite compliance	W	ith requirement	s in	§110.9, §130.0,	<i>§130</i>	7.2, §140.7,	and	l <u>§141.0(b)2L</u> for o	utdoc	r lighting scopes us	ing the prescriptive p	:-LTO- oath.
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D. EXCEPT	TIONAL CONDITIONS								
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No excepti	onal conditions apply to this project.								
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CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance: http://www.energy.ca.gov/title24/2016standards







IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT

# TITLE 24 PROCEDURES FOR TESTING AND ADJUSTING

CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK ASSOCIATED WITH FINAL INSPECTION AND APPLICABLE ACCEPTANCE REQUIREMENT PROCEDURES. INCLUDE ALL COSTS IN THE BASE BID. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO, CONSTRUCTION INSPECTION, MEASUREMENTS, MONITORING, FUNCTIONAL TESTING, CALIBRATING, ETC. CONTRACTOR SHALL ASSUME THE ROLE OF "FIELD TECHNICIAN" AND "RESPONSIBLE PERSON" AS DEFINED IN STATE OF CALIFORNIA 2019 BUILDING ENERGY EFFICIENCY STANDARDS NONRESIDENTIAL COMPLIANCE MANUAL SECTION 13.2.2.

LIGHTING CONTROL ACCEPTANCE TESTING AND ADJUSTING PROCEDURES - REFER TO NRCA-LTI-02-A AUTOMATIC DAYLIGHT CONTROL ACCEPTANCE TESTING AND ADJUSTING PROCEDURES - REFER TO NRCA-LTI-03-A DOCUMENTS. DEMAND RESPONSE LIGHTING CONTROL ACCEPTANCE TESTING AND ADJUSTING PROCEDURES - REFER TO

NRCA-LTI-04-A DOCUMENTS. INSTITUTIONAL TUNING PAF ACCEPTANCE TESTING AND ADJUSTING PROCEDURES - REFER TO NRCA-LTI-05-A

OUTDOOR LIGHTING CONTROL ACCEPTANCE TESTING AND ADJUSTING PROCEDURES - REFER TO NRCA-LTO-02-A

ALL LIGHTING CONTROLS TESTING AND ADJUSTING DOCUMENTS NOTED ABOVE ARE AVAILABLE FROM THE CALIFORNIA ENERGY COMMISSION WEB SITE AT:

https://ww2.energy.ca.gov/2015publications/CEC-400-2015-033/appendices/forms/NRCA/

SECTION 13.2.2.

TITLE 24 GENERAL NOTE

SATISFACTION OF THE ENFORCEMENT AGENCY.

10-103(a)3B AND SECTION 130.4 FOR MORE INFORMATION.

CHAPTER 13 FOR MORE DETAILED REQUIREMENTS / INFORMATION.

CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK ASSOCIATED WITH FINAL INSPECTION AND APPLICABLE ACCEPTANCE REQUIREMENT PROCEDURES. INCLUDE ALL COSTS IN THE BASE BID. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO, CONSTRUCTION INSPECTION, MEASUREMENTS, MONITORING, FUNCTIONAL TESTING, CALIBRATING, ETC. CONTRACTOR SHALL ASSUME THE ROLE OF "FIELD TECHNICIAN" AND "RESPONSIBLE PERSON" AS DEFINED IN

SEE STATE OF CALIFORNIA 2019 BUILDING ENERGY EFFICIENCY STANDARDS NONRESIDENTIAL COMPLIANCE MANUAL

SEE STATE OF CALIFORNIA 2019 BUILDING ENERGY EFFICIENCY STANDARDS RESIDENTIAL COMPLIANCE MANUAL CHAPTER 2 FOR MORE DETAILED REQUIREMENTS / INFORMATION.

PROVIDE COMPLETED INSTALLATION CERTIFICATE(S) AND CERTIFICATE(S) OF ACCEPTANCE AS REQUIRED TO THE

STATE OF CALIFORNIA 2019 BUILDING ENERGY EFFICIENCY STANDARDS NONRESIDENTIAL COMPLIANCE MANUAL

SEE STATE OF CALIFORNIA 2019 BUILDING ENERGY EFFICIENCY STANDARDS SECTIONS 10-103(a)3A AND

# ISOMETRIC VIEW

SINGLE AND/OR MULTIPLE CONDUITS AS REQUIRED ERICO CADDY
SUPPORTS WITH ALL
ACCESSORIES REQUIRED
FOR COMPLETE INSTALLATION CORRUGATED CANOPY
NOTE: SECURE SUPPORTS AS RECOMMENDED BY MAUFACTURER
ONLY. DO NOT PENETRATE CANOPY MATERIAL.

ELEVATION VIEW

CONDUIT OVER SEISMIC JOINT ON CANOPY DETAIL

SCALE: N.T.S.







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- or as required to provide a complete installation of electrical systems for this project. Work required under this specification is not limited to just the Electrical drawings. Refer to Architectural, Structural, Landscape, and Mechanical/Plumbina drawinas as well as all other drawings applicable to this project, which designate the scope of work to be accomplished. The intent of the Drawings and Specifications is to provide a complete and operable electrical system that includes all documents that are a part of the Contract.
- 1. Work Included: Furnish labor, material, services and skilled supervision necessary for the construction, erection, installation, connections, testing, and adjustment of all circuits and electrical equipment specified herein, or shown or noted on Drawings, and its delivery to the Owner complete in all respects ready for use.
- 2. The electrical Work includes installation or connection of certain materials and equipment furnished by others. Verify installation details, installation and rough—in locations from the actual equipment or from the equipment shop drawings.
- B. Electrical Drawings: Electrical Drawings are diagrammatic, and are intended to convey the scope of work, indicating intended general arrangement of equipment, conduit and outlets. Follow Drawings in laying out Work and verify spaces for installation of materials and equipment based on actual dimensions of equipment furnished.
- 1.2 QUALITY ASSURANCE A. Design, manufacture, testing and method of installation of all apparatus and materials furnished under requirements of these specifications shall conform to latest publications or
  - 1. Institute of Electrical and Electronic Engineers IEEE
  - 2. National Electrical Manufacturers' Association NEMA
- 3. Underwriter's Laboratories, Inc. UL

standard rules of the following:

- 4. National Fire Protection Association NFPA
- 5. Federal Specifications Fed. Spec. 6. American Society for Testing and Materials — ASTM
- 7. American National Standards Institute ANSI 8. National Electrical Code — NEC
- 9. National Electrical Safety Code NESC
- 10. Insulated Cable Engineers Association ICEA
- 11. American Institute of Steel Construction AISC
- 12. State and Municipal Codes In Force In The Specific Project Area 13. Occupational Safety and Health Administration (OSHA)
- 14. Electronics Industries Association/Telecommunications Industry Association (EIA/TIA)
- 15. California Electrical Code (where adopted)
- 16. Local Authority Having Jurisdiction (AHJ) Published Electrical Standards and Codes (as
- applicable). B. Perform Work in accordance with the CALIFORNIA ELECTRICAL CODE, applicable building ordinances, and other applicable codes, hereinafter referred to as the "Code." The Contractor shall comply with the Code including local amendments and interpretations without added cost to the Owner. Where Contract Documents exceed minimum requirements, the Contract
- unless variance is approved. 1. Comply with all requirements for permits, licenses, fees and codes. The Contractor, at Contractor's expense, shall obtain all permits, licenses, fees, special service costs, inspections and arrangements required for Work under this contract, unless otherwise

Documents take precedence. Where code conflicts occur, the most stringent shall apply

- 2. Comply with requirements of the applicable utility companies serving this Project. Make all arrangements with utility companies for proper coordination of Work. 1.3 GENERAL REQUIREMENTS
- A. Guarantee: Furnish a written guarantee for a period of one—year from date of acceptance.
- B. Wherever a discrepancy in quantity or size of conduit, wire, equipment, devices, circuit breakers, etc., (all materials), arises on the Drawings and/or in the Specifications, the
- Contractor shall be responsible for providing and installing all material and services required by the strictest condition noted on Drawings and/or in Specifications to ensure complete and operable systems as required by the Owner and Engineer. C. All Core Cutting, Drilling, and Patching:
- 1. For the installation of work under this Section, the aforementioned shall be performed under this Section of the Specifications and the Concrete section of the Specifications. 2. No holes will be allowed in any structural members without the written approval of the
- Project's Structural Engineer. 3. For penetrations of concrete slabs or concrete footings, the work shall be as directed in the Concrete Section of Specifications.
- 4. The Contractor shall be responsible for patching and repairing surfaces where he is required to penetrate for work under this contract.
- 5. Penetrations shall be sealed to meet the rated integrity of the surface required to be patched and repaired. The patched surface shall be painted or finished to match the existing surface.
- D. Verifying Drawings and Job Conditions:
- 1. The Contractor shall examine all Drawings and Specifications in a manner to be fully cognizant of all work required under this Section.
- 2. The Contractor shall visit the site and verify existing conditions. Where existing conditions differ from Drawings, adjustment(s) shall be made and allowances included for all necessary equipment to complete all parts of the Drawings and Specifications. 1.4 WORK IN COOPERATION WITH OTHER TRADES
- A. Examine the Drawings and Specifications and determine the work to be performed by the electrical, mechanical and other trades. Provide the type and amount of electrical materials and equipment necessary to place this work in proper operation, completely wired, tested and ready for use. This shall include all conduit, wire, disconnects, relays, and other devices for the required operation sequence of all electrical, mechanical and other systems or equipment.
- B. Provide a conduit—only system for low voltage wiring required for control of mechanical and plumbing equipment described in this or other parts of the Contract Documents. Install all control housings, conduits, and backboxes required for installing conduit to the controls.
- C. Install separate conduits between each heating, ventilating and air conditioning sensing device and its control panel and/or control motor. Before installing any conduit for heating, ventilating and air conditioning control wiring, verify the exact requirements from the control diagrams provided with the equipment manufacturer's shop drawings. 1.5 TESTING AND ADJUSTMENT
- A. Upon completion of all electrical work, the Contractor shall test all circuits, switches, light fixtures, lighting control and dimming systems including distributed systems, UPSs, generators, SPDs, lighting inverters, transfer switches, motors, circuit breakers, motor starter(s) and their auxiliary circuits and any other electrical items to ensure perfect operation of all electrical equipment.
- B. Equipment and parts in need of correction, and discovered during such testing, shall be immediately repaired or replaced with all new equipment and that part of the system shall then be retested. All such replacement or repair shall be done at no additional cost to the
- C. All circuit(s) shall be tested for continuity and circuit integrity. Adjustments shall be made for circuits not complying with testing criteria.
- D. All test reports, including copies of any required Energy Code Acceptance Forms (e.g. CA Title 24 Acceptance For Code Compliance Forms) should be submitted to the Engineer at completion of project.
- 1.6 IDENTIFICATION
- A. Nameplates shall be provided for unit substations, switchgear, switchboards, distribution boards, distribution panels, panel boards, motor control centers, transformers, transfer switches, contactors, starters, disconnect switches, enclosed circuit breakers/switches, Inverters, UPSs, PDUs, RDCs, SPDs, lighting control panels, dimming panels, door releasing system panels, fire alarm/central monitoring terminal cabinets/power supplies/control panels, and all low voltage system terminal and control cabinets.
- 1. Nameplate inscriptions shall be identical to the equipment designations indicated in plans and specifications. Nameplates shall be engraved with the device designation/identification on the top line, source identification for the device on the 2nd line per NEC, or CEC where adopted, Art 408.4 and load designation for the device on the bottom line. Where load designation consists of a branch circuit, omit bottom line. Where device designation is not indicated on plans/specifications, Contractor shall submit a written clarification request to the Engineer.
  - Example: Transformer 1TA Source Disconnecting Location: Switchboard MSA located in RM 110 Load: Panels 1LA & 1LB
- 2. All circuit breakers/fuses in switchgear, switchboards, distribution boards, distribution panels. UPS output circuit breakers. PDU sub-feed circuit breakers and motor control centers shall have individual nameplates located immediately adjacent to the respective device. Nameplate inscription shall identify the downstream equipment or device served by the circuit breaker or fuse.
- B. Identification nameplates, unless otherwise noted (UON), shall be laminated/extruded modified acrylic that is 3/32" thick, UV-stabilized, matte finish, suitable for use in 180 deg F ambient, with beveled edges and engraved white letters 3/8" high, minimum, on 1-1/2" high black background (utility/normal and optional standby power systems) for single line of text. Where two lines of text are required, provide min. 2" high nameplate. Where three lines of text are required, provide min. 2.5" high nameplate. Provide white letters on red background for all NEC, or CEC where adopted, Article 517 essential power systems, Article 700 Emergency Systems, Article 701 Legally required standby systems and Article 708 COPS.

- C. Identification nameplates for new switchgear, switchboards, distribution boards, distribution panels, panelboards and motor control centers shall be attached with switchgear manufacturer-provided screws via switchgear manufacturer factory pre-drilled holes. A factory option to rivet identification nameplates to the equipment is only acceptable if screw-fastened nameplates are not an available option from the switchgear manufacturer Field drilling or other mechanical attachment methods that change/void the NEMA or NTRL rating of the enclosure are strictly forbidden.
- D. Identification nameplates for transformers, transfer switches, disconnect switches, enclosed circuit breakers/switches, inverters, UPSs, PDUs, RDCs, SPDs, lighting control panels, dimming panels, door-releasing system panels, terminal cabinets and all circuit breakers/fuses in switchgear, switchboards, distribution boards, distribution panels, UPS output circuit breakers PDUs, PDU sub-feed circuit breakers, and motor control centers shall be attached to the equipment by self-adhesive backing integral to the nameplates. When equipment is located outdoors, provide nameplates without self—adhesive backing and attach to equipment using weather-rated, UV-resistant epoxy. In all cases, clean surfaces before applying identification nameplates parallel to equipment lines.
- E. Warning Placards, as required by General Single Line Diagram Notes for multiple power sources, or instruction placards, as required for all kirk-key interlock schemes, all UPS bypass procedures or as required elsewhere in the plans/specifications shall be engraved 1/2" high with white lettering on a red background using the same material specified for identification nameplates with a self-adhesive backing. Warning/instruction placards shall be attached to the face of the equipment directly related to the placards. Provide a formal placard submittal for review by the Engineer prior to ordering any warning/instruction placards. In all cases, clean surfaces before applying warning/instruction placards parallel to
- F. Receptacles that are part of a UL—listed under floor computer room whip assembly, ceiling and/or cable/ladder tray-mounted receptacles used in lab, manufacturing, commercial kitchen environments or that are serving telcom/data/AV racks and cabinets shall have identification nameplates located on the wiring device plate cover. Nameplates shall be self-adhesive, 3/32" thick Micarta with beveled edges, engraved 1/4" high white lettering on black background with serving power source, circuit identification and NEMA/IEC receptacle type. Use of two (2) separate nameplates per device plate cover is acceptable. Affix nameplates to be visible when plugs are occupying receptacles.
- G. See wiring device section of this specification for additional wiring device plate cover labeling requirements.
- H. See drawings for panel board schedule directory installation requirements.
- I. See conduit installation section of this specification for conduit labeling requirements. 1.7 FINAL INSPECTION AND ACCEPTANCE
- A. After all requirements of the Specifications and/or the Drawings have been fully completed, representatives of the Owner will inspect the work. Contractor shall provide competent personnel to demonstrate the operation of any item or system to the full satisfaction of
- B. Final acceptance of the work will be made by the Owner after receipt of approval and recommendation of acceptance from each representative.
- 1.8 RECORD DRAWINGS A. Drawings of Record: The Contractor shall provide and keep up—to—date, a complete record
- set of drawings. These shall be corrected daily and show every change from the original Drawings. This set of prints shall be kept on the job site and shall be used only as a record set. This shall not be construed as authorization for the Contractor to make changes in the layout without definite instruction in each case. Upon completion of the work, a set of reproducible Contract Drawings shall be obtained from the General Contractor and all changes as noted on the record set of prints shall be incorporated thereon with black ink in a neat, legible, understandable and professional manner. Refer to the Supplementary General Conditions for complete requirements.
- 1.9 APPROVALS, EQUALS, SUBSTITUTIONS, ALTERNATIVES, NO KNOWN EQUAL
- A. Approvals: Where the words (or similar terms) "approved", "approval", "acceptable", and acceptance" are used, it shall be understood that acceptance by the Owner, Architect and Engineer are required.
- B. Equal: Where the words (or similar terms) "equal", "approved equal", "equal to", "or equal by", "or equal" and "equivalent" are used, it shall be understood that these words are followed by the expression "in the opinion of the Owner, Architect, and Engineer". For the purposes of specifying products, the above words shall indicate the same size, made of the same construction materials, manufactured with equivalent life expectancy, having the same aesthetic appearance/style (includes craftsmanship, physical attributes, color and finish), and the same performance.
- C. Substitution: For the purposes of specifying products, "substitution" shall refer to the submittal of a product not explicitly approved by the construction documents/specifications.
- 1. Substitutions of specified equipment shall be submitted and received by the Engineer ten (10) days prior to the bid date for review and written approval. Regulatory Agency approval for all substitutions will be the sole responsibility of the contractor. To receive consideration, requests for substitutions must be accompanied by documentary proof of its equality with the specified material. Documentary proof shall be in letter form and identify the specified values/materials alongside proposed equal values/materials. In addition, catalog brochures and samples, if requested, must be included in the submittal ONLY PRE-BID APPROVED PRODUCTS, ISSUED VIA A FORMAL BID ADDENDUM TO ALL BIDDERS. WILL BE ALLOWED ON THE PROJECT. REGARDLESS OF THE APPROVAL ON ANY SUBSTITUTION, ALL BIDS SHALL BE BASED ON THE PRODUCTS EXACTLY AS SPECIFIED. PRICING FOR EACH APPROVED SUBSTITUTION SHALL BE INCLUDED IN THE BID SUBMITTAL AS
- 2. In the event that written authorization is given for a substitution after award of contract, the Contractor shall submit to the Engineer quotations from suppliers/distributors of both the specified and proposed equal material for price comparison, as well as a verification of delivery dates that conform to the project schedule.
- 3. In the event of cost reduction, the Owner will be credited with 100 percent of the reduction, arranged by change order.
- 4. The Contractor warrants that substitutions proposed for specified items will fully perform the functions required. D. Alternates/Alternatives: For the purposes of specifying products, "alternatives/alternates" may be established to enable the Owner/Architect/Engineer to compare costs where alternative

materials or methods might be used. An alternate price shall be submitted in addition to

the base bid for consideration. If the alternate is deemed acceptable, written authorization

- E. No Known Equal: For the purposes of specifying products, "No Known Equal" shall mean that the Owner/Architect/Engineer is not aware of an equivalent product. The Contractor will need to submit a "Substitution" item, per the requirements listed above, if a different
- product is proposed to be utilized.
- 1.10 SHOP DRAWINGS/SUBMITTALS
- A. Shop Drawings/Submittals, unless required otherwise by general project specifications or instructions to bidders, shall be submitted in electronic format (PDF) to include a Letter of Transmittal (PDF), which shall give a list of the drawings submitted with dates and/or sytem(s) components contained within the submittal. Drawings and material cut sheets shall be complete in every respect and edited/marked to indicate specific items being provided. Printed/Hard copies are not acceptable.
- consecutively, and bear the approval of the Contractor as evidence that the Contractor has checked the drawings. Any drawings submitted without this approval will be returned to the Contractor for resubmittal. standard shop practice or other reasons, the Contractor shall make specific mention of such

B. The shop drawings/submittals shall be marked with the name of the project, numbered

- C. If the shop drawings show variations from the requirements of the Contract because of variations in the Contractor's letter of transmittal. If the substitution is accepted, the Contractor shall be responsible for proper adjustment that may be caused by the substitution. Samples shall be submitted when requested.
- . Only products listed as "Equal" within the contract documents, along with formally approved Substitutions" will be reviewed. Products not conforming to these items will not be reviewed and will be returned to the Contractor for re-submittal.
- E. Review comments used in response to shop drawings/submittals are: Product approved as submitted. 1. "No Exception Taken"
- Re-submittal not required, although the Contractor shall 2. "Furnish as Corrected" provide the submitted product with corrections as noted. Re-submittal required with corrections as noted. 3. "Revise and Resubmit" 4. "Rejected" Re-submittal required based upon the originally specified
- F. Shop drawings shall be submitted on the following, but not limited to:
- 1. Lighting fixtures, lamps and ballasts.
- 2. Switchgear, switchboards, distribution boards, motor control centers, panelboards, and bus ducts; complete with overcurrent device information.
- 6. Lighting control products/dimming system products.

4. Fire Alarm System/Central Monitoring System.

- 7. Pull boxes and underground vaults. 8. Terminal cabinets.
- 11. Power poles and floor boxes.

10. Cable tray, flexible cable tray and cable runway.

12. Arc flash, short-circuit, and coordination studies. 13. All other products called out on drawings that call for shop drawing submittal.

9. Lighting inverters, UPSs, RDCs, PDUs, generators, transfer switches, SPD systems.

- 1.11 MAINTENANCE, SERVICING, INSTRUCTION MANUALS AND WIRING DIAGRAMS
- A. Prior to final acceptance of the job, the Electrical Contractor shall furnish to the Owner at least four (4) copies of operating and maintenance and servicing instructions, as well as four (4) complete wiring diagrams for the following items or equipment:
- 1. Lighting control systems/dimming systems.
- 2. Fire Alarm System.
- Transformers. 4. Switchgear, switchboards, distribution boards, motor control centers, panel boards, and bus ducts: complete with overcurrent device information.
- 5. Lighting inverters, UPSs, PDUs, generators, transfer switches, SPD systems.
- B. All wiring diagrams shall specifically cover the system supplied. Typical drawings will not be accepted. Four (4) copies shall be presented to the Owner. 1.12 INTERRUPTION OF SERVICES/SERVICE SHUTDOWN
- A. Any interruption of electrical services, electrical circuits, electrical feeders, signal systems, communication systems, fire alarm systems, etc., required to perform work shall meet the specific prior-approval requirements of the Owner. Such work shall be scheduled with the Owner to be performed at the Owner's convenience.
- B. Interruptions/outages of any of the Owner's systems and services mentioned above shall be scheduled to occur during other than the Owner's normal business hours. Any overtime costs shall be borne by the Contractor.
- C. See drawings for any additional requirements regarding outages, interruption and any temporary services required.

- A. Materials and Equipment: All electrical materials and equipment, including custom-made equipment, shall be new and shall be listed by Underwriter's Laboratories (UL) and bear their label or be listed and certified by a Nationally Recognized Testing Lab (NRTL) that is also recognized by the local Authority—Having—Jurisdiction (AHJ).
- B. Switchgear/Switchboards/Distribution Boards/Motor Control Centers:
- 1. See general single line diagram notes on drawings for more information.
- C. Panelboards Branch Circuit: 1. See drawings for panel board schedules and specifications.
- D. Transformers:
- 1. See drawings for transformer schedules and specifications.
- 1. See drawings for lighting fixture and lamp schedules and additional specifications. Furnish, install, and connect a lighting fixture at each outlet where a lighting fixture type symbol (designated on plans) is shown as being installed. Each fixture shall be complete with all required accessories including sockets, glassware, boxes, spacers, mounting devices, fire rating enclosure and lamps.
- 2. Ballasts: See lighting fixture schedule notes. All noisy ballasts shall be replaced at no
- Lamps: See lamp/fixture schedule and lamp/lighting fixture schedule notes.
- 1. Provide wiring devices indicated per plan. Devices shall be specification grade. Acceptable manufacturers are Leviton, Pass & Seymour and Hubbell. Provide all similar devices of same manufacturer, unless indicated otherwise. All device colors shall be selected from the full range of manufacturer standard color options as selected by the Architect. This direction will be provided in the shop drawing review process.
- a. Wiring Devices (Decora) #16252-COLOR Convenience Receptacle #16352-COLOR Dedicated Receptacle 16262-IG-COLOR Convenience I.G. Receptacle Dedicated IG Receptacle 16362-IG-COLOR Convenience G.F.C.I. Receptacle GFNT1-COLOR Dedicated G.F.C.I. Receptacle GFNT2-COLOR Convenience Hospital Grade Receptacle 16252-HG?-COLOR Dedicated Hospital Grade Receptacle 16352-HG?-COLOR #GFNT1-HG? Convenience G.F.C.I. Hospital Grade Receptacle GFNT2-HG? D) Dedicated G.F.C.I. Hospital Grade Receptacle ) Tamper Resistant Convenience Receptacle #TDR15-COLOR 2) Tamper Resistant Dedicated Receptacle #TDR20-COLOR 3) Tamper Resistant GFCI Receptacle GFTR2-COLOR 14) Tamper Res. Conv. G.F.C.I. Hospital Grade Receptacle GFTR1-HG COLOR 5) Tamper Res. Ded. G.F.C.I. Hospital Grade Receptacle #GFTR2-HG COLOR 6) Weather/Tamper Resistant GFCI Receptacle #GFWT2-COLOR 16251-COLOR 17) Convenience Simplex Receptacle 8) Dedicated Simplex Receptacle 16351-COLOR 19) Recessed Clock Receptacle 5361-CH-COLOR (Non-Decora) 20) Single Pole Switch #5621-2-COLOR 21) Double Pole Switch #5622-2-COLOR 22) Three Way Switch 5623-2-COLOR 23) Four Way Switch #5624-2-COLOR 24) Pilot Light Switch "On" 5628-2-COLOR 25) Pilot Light Switch "Off" #5631-2-COLOR #5657-2-COLOR 26) Projection Screen Switch 5657-2-COLOR 27) Low Voltage Momentary Switch 1221-2L-COLOR 28) Keyed Switch Non-Decora)
- 29) Door Jam Switch b. Use of dedicated receptacles is required where plans depict a branch circuit supplying only a single simplex or duplex receptacle. Use of controlled receptacles is required where depicted on plans — See controlled receptacle specifications for additional

#1865-COLOR

- 2. I.G. (isolated ground) receptacle bodies shall be of a basic color specified above with an orange triangle to symbolize isolated ground.
- 3. H.G. (hospital grade) receptacle bodies shall be of a basic color specified above with a green circle to symbolize hospital grade. 4. When shown circuited with an I.G. conductor, all receptacles shall be of the I.G. type. As an example, a NEMA L6-30R denoted on the plans and shown circuited with an I.G.
- conductor shall be an I.G. version of the receptacle. 5. Wiring devices located in wood finished areas shall generally be black unless otherwise indicated by the Architect 6. Wiring devices located in mirrors shall generally be white with stainless steel cover plates
- unless otherwise indicated by the architect. 7. In addition to other device requirements listed elsewhere in this specification, 125V (volt), 15A (amp) and 20A Tamper—Resistant wiring devices shall be provided as follows:
- a. In dwelling units per NEC, or CEC where adopted, Article 210.52. b. In pediatric care areas per NEC, or CEC where adopted, Article 517.18 (C)
- c. In child care or day care facilities.
- d. In wet and/or exterior locations. 8. Wiring devices shall be listed "hospital grade", and so identified, in the following locations: a. Patient bed locations within general care areas per NEC, or CEC where adopted, Article 517.18(B).
- b. Patient bed locations within critical care areas per NEC, or CEC where adopted,
- c. In "other-than-hazardous" anesthetizing locations per NEC, or CEC where adopted, Article 517.61(C)(2).
- 9. Wiring device cover plates located on recessed boxes shall be commercial grade nylon. Plate color shall match wiring device color UON on plans. Cover plates utilized on surface mounted boxes shall be metal. Plastic cover plates are unacceptable. 10. Except as otherwise noted, all wiring device plates on the project shall be labeled with panel and circuit number(s) utilizing a Brother P-Touch labeling system with 1/2" tape

(yellow on black) or equal by Herman—Tellerman or Panduit. Locate label on the

concealed side of the wiring device plate. Handwritten labels are unacceptable.

- 11. The Contractor shall provide duplex receptacle outlets in the appropriate configurations necessary to comply with applicable energy code requirements for controlled receptacles and as shown on plans. All wiring devices indicated to be controlled receptacles shall be NEMA-approved, electrical code-compliant with factory markings on the face of the receptacle(s) with the word "Controlled" or utilize further markings and symbols to indicate which receptacles on each outlet is/are controlled. Stickers, field-applied markings or other non-permanent markings are not acceptable. Where a GFCI receptacle outlet is required to be controlled, provide an adjacent controlled duplex receptacle outlet connected on the load side of the GFCI outlet. Generally, one receptacle in a duplex receptacle outlet is required to be controlled. It may be the lower receptacle or uppe receptacle based on manufacturer offering. However, the controlled receptacle location within a controlled receptacle outlet shall remain consistent throughout the project. Where an existing duplex receptacle outlet is required to be controlled, provide a new wiring device with the appropriate control configuration necessary to comply with plans. All controlled receptacles shall be connected to a branch circuit controlled by an occupancy sensor-based or relay panel lighting control system. Acceptable
- manufacturers are Leviton, Pass and Seymour & Hubbell. 12. The following wiring device plates shall have custom engraving:
- a. Key operated switches, switches with pilot lights, and switches for the control of motors, heaters and ventilators. Engraving shall be black and occur on the exposed side of the plate indicating the motor, heater, or ventilator controlled.
- b. Receptacles on optional standby generator and/or UPS power shall have custom engraved plates with the words "Generator" or "UPS" in black letters. In addition, where located in telecommunications closets, IDFs, server rooms, data centers, labs (wet, dry or electronic) indicating panel board and circuit number.

- c. For Health Care Facilities, provide custom engraved device cover plates, for all devices, indicating panel board and circuit number. Devices served by normal/utility power circuits shall have black lettering; devices served by essential electrical system power circuits shall have red lettering.
- d. All stainless steel and nylon device plates shall be engraved using a rotary engraving process except for black lettering on stainless steel device plates which may be accomplished via laser etching process. All lettering shall be 3/16" high. Provide a dimensioned submittal drawing detailing a typical device faceplate with engraving.
- G. Weatherproof Outlet Covers/Assemblies: All Receptacles identified as weatherproof on the drawings shall be weather-resistant, tamper-resistant, GFCI type and equipped as follows:
- 1. Type WP—A: Recessed wall box with a hinged, lockable, cast aluminum, self—closing, gasket-equipped door that is wet location-listed raintight while "in use". Unit shall comply with NEC, or CEC where adopted, Article 406.9(A) and (B). UON on drawings, provide a minimum of 2 separate compartments suitable for installation of power
- a. A 20A Weather-resistant, tamper-resistant, GFCI duplex receptacle in the first compartment. Provide branch circuiting per plans.

drawings, provide the following:

receptacles, AV or communications outlets. Additionally, unless otherwise noted on

- b. A blank metal plate suitable for field installation of power, AV or communications devices in the second compartment
- c. Where indicated on plans as requiring data, AV, or other low voltage service outlet, provide min. 3/4" C.O. with pull string routed from the second compartment to nearest low voltage pull box. Where shown mounted in a building wall, any blank/unused compartment shall be equipped minimum 3/4" C.O. with pull string routed to the nearest accessible ceiling space.
- d. See wiring device section of this specification for additional wiring device plate cover labeling requirements.
- e. (1) key minimum per device (minimum of (2) per project) to the Owner's project manager upon completion of project.
- f. Custom color powder coat finish as selected by Architect Include all costs in base bid for same. g. In locations with sufficient wall depth, provide 6" wide x 6" tall x 5-1/2" deep

recessed wall box (C.W. Cole #TL310-WCS-K1-CUSTOM COLOR).

- h. In locations utilizing shallow stud walls construction or other walls of insufficient depth, provide 10-3/4" wide x 7-3/8" tall x 3-7/8" deep recessed wall box (C.W. Cole #TL310-WCS-SH-K1-CUSTOM COLOR). i. See drawings for additional details.
- 2. Type/Subscript WP-B: Wet location-listed raintight while "in use" cast copper-free aluminum, extra-duty, lockable cover with baked aluminum lacquer finish and one-gang, weather-resistant, tamper-resistant GFCI receptacle. Hubbell WP26E series. Polycarbonate covers are unacceptable. Unit shall comply with NEC, or CEC where adopted, Article 406.9(A) and (B). Contractor shall powder coat cover assembly to a custom color where receptacle locations are deemed by the Architect to be in
- aesthetically sensitive or public spaces. Custom color as selected by Architect. 3. Type WP-C: (C.W. Cole #TL310-WCS-PED-ADA-K1-CUSTOM COLOR or #TL310-WCS -PED-K1-CUSTOM COLOR) pedestal device box with a hinged, lockable, cast aluminum self-closing, gasket-equipped door that is wet location - listed raintight while "in use" Unit shall comply with NEC, or CEC where adopted, Article 406.9(A) and (B). UON on drawings, provide a minimum of 2 separate compartments suitable for installation power receptacles, AV or communications outlets. Additionally, unless otherwise noted on drawings, provide the following:
  - a. A 20A weather—resistant, tamper—resistant, GFCI duplex receptacle in the first compartment. Provide branch circuiting per plans.
  - b. A blank metal plate suitable for field installation of power, AV or communications devices in the second compartment.
- c. Where indicated on plans as requiring data, AV or other LV outlet, provide min. 3/4" C.O. with pull string routed from the second compartment to nearest low voltage pull
- d. See wiring device section of this specification for additional wiring device plate cover labelina requirements. e. 1 key minimum per device (minimum of 2 per project) to the Owner's project
- manager upon completion of project. f. Include all costs in base bid for ADA version (22.5" tall) of pedestal box. Prior to ordering material, contractor shall coordinate with architect and/or AHJ to determine which pedestal box locations do not require ADA compliance and may be changed to
- q. Custom color powder coat finish as selected by Architect. Include all costs in base bid for same. h. See drawings for additional details.
- 4. Type/Subscript WP-D: Damp location-listed (not-raintight-in-use) cast copper-free, pad lockable, die-cast aluminum cover with baked aluminum lacquer finish and one gang GFCI receptacle. Hubbell/rayco 502?/503? Series. Polycarbonate covers are unacceptable. Unit shall comply with NEC, or CEC where adopted, article 406.9(A) and (B). Custom color powder coat finish as selected by Architect. Include all costs in
- H. Motor Controllers/Starters: See drawings for motorized equipment schedules and

the standard (11.5" tall) version of the pedestal box.

- I. Circuit Breakers. 1. Service entrance circuit breakers smaller than 400A frame shall be thermal—magnetic trip with inverse time current characteristics unless otherwise indicated below. Service entrance main circuit breakers and main circuit breakers, 400A frame and larger shall be 100% rated, solid—state type as outlined in this specification. All other service entrance circuit breakers, 400A frame and larger, shall be 100% rated, solid-state type as
- outlined in this specification. 2. All non-service entrance circuit breakers 225A and larger shall be thermal magnetic type and have continuously adjustable instantaneous pick-ups of approximately 5 to 10 times trip rating. Breakers shall have either tamper—resistant rating dials or easily changed trip rating plugs with trip ratings as indicated on the Drawings. Rating plugs shall be interlocked so they are not interchangeable between frames. Additionally, all non-service entrance circuit breakers, 600A frame and larger, located in 480V 3 phase, 3-wire or 277/480V, 3 phase 4-wire switchgear, distribution boards, panel boards or busway plugs, shall be solid state, 100% rated. Breaker shall have built-in test points for testing long delay, short delay and instantaneous, and ground fault (where shown) functions of the breaker by means of a 120V operated test kit. Contractor shall utilize a test kit
- capable of testing all breakers 400A and above at the Engineer's request. 3. All non-service entrance circuit breakers less than 225A shall be molded plastic case, air circuit breakers conforming to UL 489. Provide breakers with thermal magnetic trip units, and a common trip bar for two- or three-pole breakers, connected internally to each pole so tripping of one pole will automatically trip all poles of each breaker. Provide breakers of trip-free and trip-indicating bolt-on type, with quick-make, quick-break contacts. Provide single two- or three-pole breaker interchangeability. Provide padlocking device for circuit breakers as shown on the Drawings.
- 4. Where a Current Limiting Circuit Breaker (CLCB) is indicated on drawings or as required elsewhere in this specification, provide a UL listed current limiting thermal magnetic circuit breaker(s) UON. An independently operating limiter section within a molded case is not allowed. Coordinate CLCB ratings as required to protect electrical system components on the load side of the CLCB to include, but not limited to, protecting automatic transfer switches, panel boards and lighting control panels.
- 5. Where a solid state circuit breaker is indicated on drawings or as required elsewhere in this specification, provide a solid state circuit breaker with minimum five function complete with built-in current transformers. The five functions shall be independently adjustable and consist of Overload/Long Time Amp Rating, Long Time Delay, Short Time Delay, Short Circuit/Instantaneous Pick-up, but may also include Shunt Trip and/or Ground Fault if so indicated on the Drawings. Rating plugs shall be interlocked so they are not interchangeable between frames. Breaker shall have built—in test points for testing long delay and instantaneous, and ground fault (where shown) functions of the breaker by means of a 120V operated test kit. Contractor shall utilize a test kit capable of testing all breakers 400A and above, at the Engineer's request.
- 6. Circuit breakers, 1200A Frame or larger, or circuit breakers with sensors or adjustable trip settings, 1200A or larger, shall be equipped with an Energy Reducing Maintenance Switch that complies with NEC, or CEC where adopted, 240.87 (B) (3) unless specified elsewhere with an alternate arc energy reduction method allowed by this same code
- 7. Ground Fault Interrupting Breakers: Provide with molded plastic case, air circuit breakers, similar to above with ground fault circuit interrupt capability, conforming to UL Class A,

10. Series-Rated Breakers: UL listed series-rated combinations of breakers can be used to

8. Arc Fault Interrupting Breakers: Provide with molded plastic case, air circuit breakers. similar to above with arc fault circuit interrupt capability, conforming to UL 1699. Provide on all dwelling—unit circuits supplying bedrooms, sleeping quarters, etc., as required to comply with NEC, or CEC where adopted, Article 210.12.

9. Tandem or half-sized circuit breakers are not permitted.

off position.

- obtain panelboard—interrupting ratings shown on Drawings. If series—rated breakers are used, switchboards, distribution boards and panelboards shall be appropriately labeled to indicate the use of series rated breakers. Shop drawing submittal shall include chart of UL listed devices which coordinate to provide series rating.
- 11. Circuit breakers shall be standard interrupting construction. Panelboards shall accept standard circuit breakers up to 100A. 12. Circuit breaker handle accessories shall provide provisions for locking handle in the on or
- 13.. Shunt trip equipped circuit breakers shall be provided on all elevator feeders. 14. Temperature compensating circuit breaker(s) shall be provided when located in outdoor enclosure(s) or when located in an enclosure subject to high ambient heat due to nearby industrial processes, etc.
- breakers to accept conductor quantities and sizes shown on drawings. 16. All circuit breaker terminations shall be suitable for use with 75 degree Celsius ampacity conductors. Listed, dual-rated pin terminals, straight or offset, are acceptable for use to

in accommodating oversized or parallel conductor installations.

15. Provide 75 degree Celsius-rated conductor lugs/lug kits as required on all circuit

- 17. Circuit breakers serving Fire Alarm or Central Monitoring panels and power supplies shall be red in color and lockable in the "ON" position.
- J. Disconnect Switches: 1. Non-fusible or fusible, heavy-duty, externally operated horsepower-rated, 600V A.C: Provide NEMA 3R, lockable enclosures for all switches located on roof tops, in wet or
- damp areas and in any area exposed to the elements. 2. Fusible switches shall be Class "R" when 600A or less, and Class "L" when greater than
- 3. Amperage, horsepower, voltage, and number of poles per drawings: All shall be clearly
- 4. Provide the Owner's project manager with one (1) spare set of fuses and two (2) sets of fuse clips/fuses for every set of fuses on the project.
- K. Fuses 1. Provide fuses at all locations shown on the Drawings and as required for supplemental
  - a. Fuses shall be manufactured by Bussmann, Shawmut or equal.
  - b. All fuses shall be the product of a single manufacturer.
- 2. Main and Feeder Protection: a. Protective devices rated greater than 600A: Provide Bussman Hi-Cap fuses, Class L, current—limiting, having an interrupting rating of 200,000A RMS.
- b. Protective devices rated 600A or less: Provide Bussman Class R fuses, Class RK series current—limiting fuses, having an interrupting rating of 200,000A RMS.
- a. Where rating of protective device is greater than 600A: Provide Bussman Hi-Cap fuses, Class L, current-limiting, having an interrupting rating of 200,000A RMS.
- b. Where rating of protective device is 600A or less: Provide Bussman Class RK series current-limiting fuses, having an interrupting rating of 200,000A RMS. c. Where fuses feeding motors are indicated, but not sized: It shall be the responsibility of the Contractor to coordinate the fuse size with the motor to provide
- proper motor running protection. d. When rejection type fuses are specified (Class RK series) the fuse holder of all switches (specified in other Sections) shall be suitable for the fuses provided.
- L. Cable Tray, Flexible Cable Tray and/or Cable Runway: 1. See drawings for Cable Tray, Flexible Cable Tray and/or Cable Runway specifications.
- 1. See drawings for UPS schedules and specifications.

M. Uninterruptible Power Systems (UPS):

N. Power Distribution Units (PDU):

O. Generator Systems:

- 1. See drawings for PDU schedules and specifications.
- 1. See drawings for Generator schedules and specifications. P. Transfer Switches:
- 1. See drawings for Transfer Switch schedules and specifications. Q. Lighting Control/Dimming Systems:
- 1. See drawings for Lighting Control and/or Dimming Systems schedules and specifications. 2. Wall box dimmers shall be rocker-type as manufactured by Lutron (no known equal except as noted below). Dimmers and dimmer faceplates shall match the color of adjacent switches and faceplates. Dimmers and dimmer faceplates in wood finished areas shall generally be black unless otherwise indicated by the Architect. The Contractor shall obtain written approval of the Architect regarding final dimmer and
- shall be ganged together with a common cover plate. Provide dimmers as follows: a. Incandescent: Lutron DIVA DV-10P or DV-103P (3-way) (1000 Watt max.)
- Lutron DIVA DVELV-300P or DVELV-303P-(3-way) b. Electronic Low Voltage: (300 Watt) Lutron DIVA DVLV-10P or DVLV-103p (3-way) c. Magnetic Low Voltage: (800 Watt max.)

dimmer faceplate color selection prior to ordering material. Multiple dimmers/switches

- Lutron DIVA DVF-103P (single/3way, 8A @ 120V) or d. Fluorescent (3-Wire): DVF-103P-277 (single/3way, 6A @ 277V) Lutron DIVA DVTV with PP-???H Power Pack e. Fluorescent (0-10V):
- Lutron DIVA DVFTU-5A3P with Lutron H.P. module where f. Fluorescent (Lutron Tu-Wire): g. LED (0-10V): Lutron DIVA DVTV with PP-???H Power Pack
- Lutron DIVA DVFSQ-F (1.5A @ 120V max, 3 speed, i. Fan Control: single pole, 3-way) 3. Contractor shall verify if dimmer(s) requires derating when ganged. Contractor shall provide, and provide connections to, additional Lutron Power Modules, Lutron Power Packs, and/or Lutron Interface Modules where required to accommodate loads higher than dimmers standard or derated load—carrying capacity. Note — contractor may

Lutron DIVA DVCL-153P

- provide a Lutron recommended dimmer type (typically a #DVF-103P unit) to control the necessary power modules or interface devices.
- R. Fire Alarm System/Central Monitoring System:
- S. Surge Protective Device (SPD): 1. See drawings for SPD specifications.

h. Screw Base CFL/LED:

Galvanized Rigid Conduit (GRC) shall be full weight threaded type steel. Steel conduit shall be protected by overall zinc coating to inside and outside surfaces, applied by the

1. See drawings for Fire Alarm System or Central Monitoring System specifications.

hot dip, metallizing, or sherardizing process. 2. Intermediate Metal Conduit (IMC) shall be hot-dipped galvanized in accordance with UL 1242, and meet Federal Specification WWC-581 (latest revision).

3. Electrical Metallic Tubing (EMT) shall be zinc—coated steel with baked enamel or plastic

finish on inside surfaces except as noted below. EMT shall be dipped in a chromic acid

bath to chemically form a corrosion—resistant protective coating of zinc chromate over galvanized surface. 4. Flexible metal conduit shall be constructed of aluminum or hot—dipped galvanized steel strips wound spirally with interlocking edges to provide greatest flexibility with maximum strength. Interior surfaces shall be smooth and offer minimum drag to pulling in

conductors. Used only as directed in writing by the Engineer with the exception of 400

Hz feeders and 400 Hz branch circuits which shall be run in flexible aluminum conduit.

5. Liquid—tight conduit (Seal—Tite) shall be galvanized steel flexible conduit as above except with moisture and oil-proof jacket, pre-cut lengths and factory-installed fittings. For outdoor installations and motor connections only unless otherwise noted on drawings. 6. Factory assembled, or off-site assembled wiring systems (such as Metal Clad (MC)

Cable, Type AC Cable, Type NM Cable, Type BX Cable, etc.) shall not be used unless

otherwise indicated in the Allowed Specification Deviations Section or Deductive/Additive

Alternate Pricing Section generally located on the symbols list drawing. 7. When approved for use in the Allowed Specification Deviations Section, generally located on the symbols list drawing, MC cables shall be allowed for lighting branch circuits (homeruns shall be EMT), receptacle branch circuits (homeruns shall be EMT) and poke—thru fed systems furniture homeruns. MC shall not be used where exposed, except for a maximum 6' length for final connections to light fixtures, or terminate in electrical panelboards or distribution boards. Equipment ground conductor shall be green. Isolated ground conductor shall be green with yellow stripe. Provide 600V rated aluminum or lightweight steel interlocking armor Metal Clad (MC) cable with copper conductors, THHN (90 degree C) insulation, and integral equipment grounding conductor and isolated grounding conductor as required. Type AC cable listed for use in patient care areas for non-essential electrical system branch circuits per NEC, or CEC where adopted, Article 517.13 shall be required in such areas in lieu of MC cable. Type AC and MC cable

shall not be used for essential electrical system branch circuits. MC cable shall be

manufactured to Underwriters Laboratories Standard 1569. See Part 3 - Execution in

- this specification for additional installation requirements. 8. Nonmetallic Flexible Tubing (ENT) shall not be used unless otherwise indicated in the Allowed Specification Deviations Section or Deductive/Additive Alternate Pricing Section generally located on the symbols list drawing. Use of ENT, if allowed, is strictly limited to use in CMU walls and parking structure decks or as directed in writing by the Engineer. See Execution section of this specification for additional installation
- a. Polyvinyl chloride (PVC) rigid conduit, Schedule 40, Type II for underground installation only with solvent welded joints, conforming to UL requirements, listed for exposed and

direct burial application.

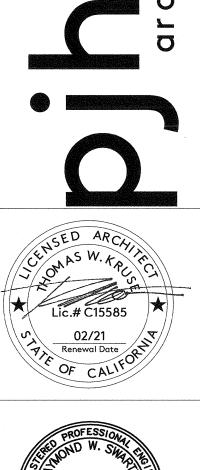
(Raychem or equal).

. Non-Metallic Conduit:

10. Fire-rated MC Cable: a. 2-hour fire-rated, polymer insulated 600V MC cable listed and conforming to UL 2196 and UL 1569 requirements for installation as an Electrical Circuit Protective System for use in complying with NEC, or CEC where adopted, Articles 695 and 700. Where adopted, cable sheath shall be suitable for use as a NEC or CEC equipment grounding conductor, and shall be listed for use in wet locations to 90 degrees C

b. Conduit and fittings shall be produced by the same manufacturer.

b. Cable connectors shall be brass MC connectors.



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- of metal, smooth inside and out, thoroughly galvanized, and sherardized cadmium plated. 2. Metallic condulet covers shall have the same finish as the fitting and shall be provided for the opening of each fitting where conductors do not pass through the cover.
- 3. Connector, coupling, locknut, bushings and caps used with rigid conduit shall be steel. threaded and thoroughly galvanized. Bushings shall be insulated.
- 4. UON all interior EMT fittings, connectors and couplings installed in concealed locations, areas not considered to be wet or damp locations by the AHJ, or areas not subject to physical damage, shall be steel, zinc or cadmium plated, threadless, compression, steel locking ring type with insulated throat. Where suitable for use, steel set screw fittings are allowed for trade sizes of 2" and smaller. Insulated throat is not required for fittings, connectors and couplings 1" and smaller.
- 5. All interior and exterior EMT fittings, connectors and couplings, 2" and smaller, installed in exposed or concealed locations that are considered by the AHJ to be wet or damp locations, shall be raintight—listed, steel, zinc or cadmium plated, threadless, compression, steel locking ring type with insulated throat. If raintight-listed, EMT fittings, connectors and couplings are unavailable for a given trade size or if conduit is installed in an area subject to damage — provide rigid metallic or intermediate metallic conduits, fittings, connectors and couplings as required.
- 6. Flexible steel conduit connectors shall be a malleable iron clamp or squeeze type or steel twist-in type with insulated throat. The finish shall be zinc or cadmium plating.
- 7. Conduit unions shall be "Erickson" couplings, or approved equal. The use of running threads will not be permitted.
- V. 600V Conductors Wire and Cable:
- 1. All conductors shall be copper. Provide stranded conductor for #10 AWG and larger or when making flexible connections to vibrating machinery. Use compression "fork" type connectors or transition to solid conductors when connecting to switches, receptacles,
- 2. Type THHN/THWN-2 thermoplastic, 600V, UL approved, dry and wet locations rated at 90 degrees Celsius, for conductors of all sizes from #12 AWG up to and including 1000 kcmil. RHH/RHW insulation is allowed only to provide an Electrical Circuit Protective System to comply with NEC, or CEC where adopted, Articles 695 and 700.
- 3. Wire and cable shall be new, manufactured not more than six (6) months prior to installation, shall have size, type of insulation, voltage rating and manufacturer's name permanently marked on outer covering at regular intervals.
- 4. Wire and cable shall be factory color-coded by integral pigmentation with a separate color for each phase and neutral. Each system shall be color-coded and it shall be maintained throughout.
- 5. Systems Conductor Color Coding: a. Power 208/120V, 3PH, 4W:
- 1) Phase A = Black
- 2) Phase B = Red
- 3) Phase C = Blue
- 4) Neutral = White or White with Phase Color Tracer
- 5) Switchlegs = Purple (Switchlegs shall also be identified separately by
- 6) Travelers = Purple with Black stripe or Pink
- b. Power 480/277V, 3PH, 4W:
- 1) Phase A = Brown
- 2) Phase B = Orange3) Phase C = Yellow
- 4) Neutral = Grey or Grey with Phase Color Tracer
- 5) Switchlegs = Purple (Switchlegs shall also be identified separately by
- 6) Travelers = Purple with Black stripe or Pink.
- c. Ground Conductors: Green
- d. Isolated Ground Conductors: Green with continuous Yellow stripe
- e. Fire Alarm System: As recommended by the manufacturer
- 6. All color—coding for #12 through #6 AWG conductor shall be as identified above. Conductors #4 AWG and larger shall be identified by utilizing phase tape at each
- 7. No conductors carrying 120V or more shall be smaller than #12 AWG. 8. Aluminum conductors shall not be used.
- 9. Wire-pulling compounds used as lubricants in installing conductors in raceways shall only be "Polywater J". No oil, grease, graphite, or similar substances may be used. Pulling of #1/0 or larger conductors shall be done with an approved cable pull machine. Other methods; e.g. using vehicles or block and tackle to install conductors are not acceptable.
- W. Medium Voltage Conductors (greater than 600V):
- 1. See drawings for Medium Voltage Cable Schedule and Specifications. X. Junction and Pullboxes:
- 1. For interior dry locations, boxes shall be NEMA 1 galvanized one-piece drawn steel,
- knockout type, with removable, machine screw secured covers. 2. For outside, damp or surface locations, boxes shall be NEMA 3R heavy cast aluminum or
- cast iron with removable, gasketed, non-ferrous machine screw secured covers.
- 3. For in-grade applications, junction and pull boxes shall be pre-cast concrete or molded fiberglass manufactured by Christy, Brooks—Jensen, or Utility Vault Co. Fiberglass boxes
- a. Be used only in landscape planter areas that are not subject to damage from lawnmowers, tractors and other machinery.
- b. Not be used in lawn or turf areas.
- c. Not exceed 11" W x 17" L in size unless required to be larger to meet code requirements.
- 4. All boxes shall be sized for the number and sizes of conductors and conduits entering the box and equipped with plaster rings where required.
- 5. All boxes located in traffic areas shall be traffic rated.
- Y. Outlet Boxes:
- 1. For fixtures, boxes shall be galvanized, one-piece drawn steel, knockout type equipped with 3/8" fixture studs and plaster rings where required. 2. For convenience outlets, wall switches, or other devices, outlet boxes shall be galvanized

one-piece drawn steel, knockout type  $4" \times 4" \times 2-1/8"$  minimum size with plaster rings

- as required. 3. For locations where standard boxes are not suitable due to number and size of conduit to be terminated, special boxes shall be designed to fit space or meet other
- requirements and submitted for approval. 4. For exposure to weather, damp locations, or surface mounting, outlet boxes shall be heavy cast aluminum or cast iron with threaded hubs; covers shall be watertight with
- aaskets and non-ferrous screws. 5. Outlet boxes used for support of ceiling fans shall be galvanized, one-piece drawn steel, knockout type equipped with bracing bars and plaster rings where required and listed for ceiling fan support use. Such boxes shall be labeled and capable of supporting ceiling
- fan weights up to 70 pounds. 6. See drawings for floor box installation notes and specifications.
- Z. Plywood Backboards: Where indicated for telephone or communications system terminals or other equipment assemblies, provide backboards of size indicated. Use 3/4" thick x 8' tall (length per plans), Douglas Fir, void-free, kiln-dried, fire-rated plywood finished on one side and prime coat painted on all surfaces with finish coat of enamel paint, color by architect. Leave one (1) fire-rating stamp/sheet exposed for inspection. AA. Terminal Cabinets:
- 1. Terminal cabinets shall be fabricated of hot dipped galvanized code gauge sheet metal for flush or surface mounting, complete with barriered sections, a door for each vertically barriered section, and sizes as indicated on plan. Doors shall be hinged and lockable. Locks shall be keyed to match the branch circuit panelboards. Terminal cabinet trims shall match the branch circuit panels.
- 2. Provide each terminal cabinet with a full size mounting backplate. 3. Terminal cabinets shall be installed complete with full-lenath skirts of the same
- construction and finish as the terminal cabinet. 4. Where mounted outdoors, terminal cabinets shall be NEMA 3R, weatherproof complete with
- gaskets and required sealant to prevent moisture from entering the terminal cabinet.
- 5. All terminal cabinets and terminal cabinet barriered sections shall be labeled by the cabinet or cabinet section use (i.e. CATV, Security, etc.). Labels shall be Micarta type as specified elsewhere in these specifications. Unless otherwise noted, all termination blocks and cables shall be labeled per ANSI/EIA 606 standard.
- BB. Painting: Terminal cabinets, panels, junction boxes, pull boxes, etc., and conduit installed in public view shall be painted with colors selected by the Architect to match the subject surface. Refer to painting section of the specifications for additional requirements.

- CC. Seismic Design, Certification, and Anchoring of Electrical Equipment:
- 1. Contractor shall include all costs in the base bid for labor, materials, all special inspections and structural engineering design necessary to meet the Seismic Design Requirements for Non-structural Components (Chapter 13, ACE SEI 7-05 Minimum Design loads for Buildings and Other Structures) as required by IBC, or CBC where adopted, Section 1708 and as related to the installation of all electrical equipment furnished under this contract. See Specific Project Site Seismic Criteria on architectural and/or structural plans which include Building Occupancy Category, Seismic Design Category, Design Spectral Response Acceleration ( $S_{DS}$ ), Height factor ratio (z/h) and Site Class. Non-structural Component Importance Factor (b) for a particular component shall be determined based on the following criteria:
- a. Ip=1.0: Non-life safety, Non-structural Components in an Occupancy Category IV Facility not required for continued operations of the facility or in any other Occupancy Category Facility where component failure will not impair continued operation of the facility.
- b. Ip=1.5: Designated Seismic Systems are those non-structural components in any Occupancy Category IV facility (except as noted above) or that are a part of any code-defined Critical, Life Safety, Emergency and Legally Required Standby Electrical System. Additionally, those non-structural components containing hazardous materials shall be classified as Designated Seismic Systems. While Designated Seismic Systems are generally identified on the plans, they may include items such as Generators, Automatic Transfer Switches, UPS units and all associated electrical distribution equipment and components necessary for the designated seismic system to form a complete and operable system. The Contractor shall ultimately be responsible for identifying Designated Seismic Systems. For any electrical component either identified on the plans or determined by the contractor to be a Designated Seismic System, all line and load side electrical distribution systems supporting that Designated Seismic System (including, but not limited to, feeders, panel boards switchboards, transformers, all related component supports and attachments, etc.) shall be considered a part of the designated seismic system for the purposes of code-compliance and seismic certification.
- c. z/h Height factor ratio: See plans for respective equipment locations.

compression, and torsion forces.

2. Provide a delegated—design submittal for each of the following seismic—restraint systems a. Restraint Channel Bracinas consisting of MFMA-4, shop-or field-fabricated bracina assembly made of slotted steel channels with accessories for attachment to braced component at one end and to building structure at the other end, with other

matching components, and with corrosion-resistant coating; rated in tension,

- b. Restraint Cables consisting of ASTM A 603 galvanized—steel cables. End connections made of steel assemblies with thimbles, brackets, swivel, and bolts designed for restraining cable service, with a minimum of two clamping bolts for cable engagement.
- c. Seismic-Restraint Accessories consisting of hanger rod/hanger rod stiffener assemblies, multifunctional steel connectors for attaching hangers to rigid channel bracings and/or restraint cables, bushings for floor and wall-mounted equipment, anchor bolts, and resilient isolation washers and bushings.
- d. Mechanical Anchor Bolts consisting of drilled—in and stud—wedge or female—wedge type in zinc—coated steel for interior applications and stainless steel for exterior applications. Select anchor bolts with strength required for anchor and as tested according to ASTM E 488.
- e. Adhesive Anchor Bolts consisting of drilled—in and capsule anchor system containing resin and accelerator, or injected polymer or hybrid mortar adhesivé. Provide specific LEED-compatible, environmentally-friendly resins and adhesives on all LEED projects. Provide anchor bolts and hardware with zinc-coated steel for interior applications and stainless steel for exterior applications. Select anchor bolts with strength required for anchor and as tested according to ASTM E 488.
- 3. Submittal shall include design calculations and details for selecting seismic restraints complying with performance requirements, design criteria, and analysis data signed and segled by the contractor's structural engineer responsible for their preparation. Calculations shall include, but not be limited to, static and dynamic loading caused by equipment weight, operation, and seismic and, if applicable, wind forces required to select seismic and, if applicable, wind restraints and for designing vibration isolation bases. Provide seismic and wind-restraint detailing to support system selection. arrangement of restraints, attachment locations, methods, and spacings with all components identified to include their strengths, directions and values of forces transmitted to the structure during seismic events and association with vibration isolation devices. Sizes of components shall be selected so strength will be adequate to carry present static and seismic loads to accommodate 25% spare future capacity within
- 4. Any pre-approval and evaluation documentation shall have a California Office of Statewide Health Planning and Development (OSHPD) Special Seismic Certification Preapproval (OSP) demonstrating horizontal and vertical load testing and analysis showing maximum seismic-restraint ratings, by ICC-ES or another agency acceptable to authorities having jurisdiction. Ratings based on independent testing are preferred to ratings based on calculations. If preapproved ratings are not available, submittals based on independent testing are preferred. Calculations (including combining shear and tensile loads) that support seismic-restraint designs must be signed and sealed by a qualified professional
- 5. Coordinate the location of embedded connection hardware with supported equipment attachment and mounting points and with requirements for concrete reinforcement and formwork specified elsewhere in the project specifications.
- 6. Install flexible connections in runs of raceways, cables, wireways, cable trays, and busways where they cross seismic joints, where adjacent sections or branches are supported by different structural elements, and where connection is terminated to equipment that is anchored to a different structural element from the one supporting them as they approach equipment. Flexible connection limitations of the NEC, or CEC where adopted, shall apply.
- 7. Install seismic—restraint devices using methods approved by OSHPD or an agency acceptable to authorities having jurisdiction providing required submittals for component. 8. Multiple Raceways or Cables: Secure raceways and cables to trapeze member with clamps approved for application by OSHPD or an agency acceptable to authorities having
- 9. The contractor shall engage a qualified testing agency to perform tests and inspections as listed in other Project Specifications, but as a minimum shall include at least four of each type and size of installed anchors and fasteners selected by Architect. Schedule tests with Owner, through Architect, before connecting anchorage device to restrained component (unless post connection testing has been approved), and with at least seven days' advance notice. Obtain Architect's approval before transmitting test loads to structure. Provide temporary load-spreading members as required. Test to 90 percent of rated proof load of device. Prepare and submit test and inspections reports.
- DD. Trenching and Backfilling: Contractor shall be responsible for trenching and backfilling. Refer to applicable trenching and backfilling specifications for complete requirements. PART 3 - EXECUTION
- 3.1 PREPARATION AND INSTALLATION
- A. Installation of Conduit and Outlet Boxes:
- 1. All conduit installed in the dry walls or ceilings of a building shall be steel tube (EMT), aluminum tube (EMT), or intermediate Metal Conduit (IMC). Flexible conduit shall not be used in lieu of EMT, IMC or rigid conduit except as noted herein.
- 2. Galvanized rigid conduit (GRC) or intermediate metal conduit (IMC) shall be used as
- a. When noted on the drawings.
- b. When considered exposed to damage by the local AHJ.

substitution request requirements of these specifications.

- c. When installed in wet or damp locations and of a trade size where listed-raintight fittings, connectors, couplings, etc. are unavailable. d. When required by NEC or CEC Article 517.13
- e. When installed in concrete and masonry. The use of ENT in CMU walls and parking structures may be allowed only as directed in writing by the Engineer. Request for ENT substitution must be made prior to bid and in accordance with pre-bid
- 3. Intermediate metal conduit (IMC), is approved for use in all locations as approved for GRC or EMT and in accordance with NEC, or CEC where adopted, Article 342.
- 4. Flexible steel conduit shall only be permitted to be used at light fixture outlets and connections to vibrating electrical equipment. All flexible steel conduit runs shall be less than 6'-0". Except when concealed in walls or other structural elements, all outdoor installation shall be made using liquid-tight flex with approved fittings. Include a separate insulated green ground conductor sized per NEC in each conduit. Other uses of flexible conduit shall be allowed only as approved in writing by the Engineer.
- 5. Flexible liquid-tight conduit shall be installed in lieu of the flexible steel where required by NEC, or CEC where adopted, in damp and wet location, where exposed to weather, in refrigerated area (65 Dea. F or less), and/or between seismic joints. All rotating electrical equipment shall be supplied with flexible, liquid—tight conduit with appropriate slack and shall not exceed thirty-six (36) inches. Include a separate insulated green around conductor sized per NEC in each conduit. Other uses of liquid-tight flexible conduit shall be allowed as approved in writing by the Engineer on a case by case
- size minimum and shall be wrapped with 20 mil polyvinyl chloride plastic tape. PVC conduit installed underground or imbedded in concrete shall be 3/4" minimum trade size. 7. Where required for providing an Electrical Circuit Protective System to comply with NEC. or CEC where adopted, Articles 695 and 700, utilize UL Listed 2-hour fire-rated, MC

6. Rigid metallic conduit installed underground or embedded in concrete shall be 1" trade

- cable or UL Listed 2-hour fire-rated RHH/RHW conductors in conduit. 8. Conduit shall be run so as not to interfere with other piping, fixtures or equipment.
- be shouldered in fitting. 10. No running threads will be permitted in locations exposed to the weather, in concrete or underground. Special union fittings shall be used in these locations.

11. Where conduit is underground, under slabs or grade, exposed to the weather, or in wet

9. The ends of all conduits shall be cut square, carefully reamed out to full size and shall

locations, make joints liquid tight and gas tight. 12. All metal conduit in masonry and concrete and where concealed under floor slabs shall have joints painted with thread compound prior to makeup.

- 13. PVC conduit shall not be run in walls except where approved by the Engineer prior to bid in limited instances that may include concrete or CMU walls used in site retaining,
- parking structures, or exterior equipment yard or enclosure walls, etc. 14. Where conductors enter a raceway or a raceway in a cabinet, pull box, junction box, or auxiliary gutter, the conductors shall be protected by a plastic bushing type fitting providing a smoothly rounded insulating surface.
- 15. Where conduit extends through roof to equipment on roof area, the Contractor shall provide flashing material compatible with the roofing system as required by the roofing specifications or as required by the Owner's roof warranty. This flashing shall be delivered to the roofing Contractor for installation. The actual location of all such roof penetrations and outlets shall be verified by the Architect/Owner. Contractor to verify type of flashing prior to bid and include all costs.
- 16. All conduit shall be supported at intervals not less than 6'-0" and within 12" from any outlet and at each side of bends and elbows. Conduit supports shall be galvanized, heavy stamped, two-hole conduit clamp properly secured.
- 17. Where conduit racks are used, the rack shall consist of two piece conduit clamps attached to galvanized steel slotted channels, properly secured via threaded rods attached directly to the building structure.
- 18. Nail-in conduit supports, one-piece set screw type conduit clamps or perforated iron for supporting conduit shall not be used. 19. Seismic Conduit Support:
- a. All conduit shall be supported in such a manner that it is securely attached to the structure of the building. Attachment is to be capable of supporting the tributary weight of conduit and contents in any direction. Maximum spacing of support and braces are to be as follows: MAXIMUM SPACING
- 20. All conduit runs shall be installed parallel or perpendicular to walls, structural members, or intersection of vertical planes and ceilings. Field made bends and offset shall be avoided where possible. Crushed or deformed raceway shall not be installed. 21. Open knockouts in outlet boxes only where required for inserting conduit.
- 23. Outlet boxes on metal studs shall be attached to metal hangers, tack welded or screwed to studs; On wood studs attachment shall be with wood screws, nails are not acceptable. 24. Recessed boxes shall not be mounted back—to—back in any wall; minimum offset shall

22. Locate wall outlet of the same type at same level in all rooms, except where otherwise

- be 24 inches. 25. Junction Boxes that do not contain any device(s) shall be located in storage rooms, electrical closets or above accessible ceilings, not in hard lid ceilings or other forms of inaccessible ceilings. Place boxes which must be exposed to public view in a location approved by the Owner's Project Manager. Provide covers or plates to match adjacent surfaces as approved by the Owner's Project Manager.
- 26. Surface mounted pull boxes, terminal cabinets, junction boxes, panel boards etc., shall be attached to walls using appropriate screws, fasteners, backing plates, stud blocking, etc., as detailed on architectural and/or structural drawings. If architectural and/or structural drawings are not provided on the project, Contractor shall provide all necessary mounting hardware and backing support to comply with local building code requirements and any additional requirements imposed by the local Authority—Having—Jurisdiction.
- 27. Except where below grade, sleeves shall be installed where conduit passes through masonry or concrete walls and shall be 24 gauge galvanized steel no more than 1/2" greater in diameter than the outside diameter of the conduit. When located in non-rated structures, caulk conduit sleeve with stone wool. When located in fire rated structures, provide UL listed fire stopping system. See fire stopping section of this specification for additional requirements.
- 28. All boxes shall be covered with outlet box protector. Appleton SB-CK, or similar device/method to keep dirt/debris from entering box, conduit or panels. If dirt/debris does get in, it shall be removed prior to pulling wires.
- 29. All boxes installed outdoors shall be suitable for outdoor installations, gasketed, screw cover, and painted as directed by the Architect with weatherproof paint to match building. 30. All conduit entries to outdoor mounted panels, cabinets, boxes, etc., shall be made using
- Myers "SCRU-TITE" hubs Series ST. 31. Provide nylon or a 1/8-inch O.D. polyethylene rope, rated at 250 pounds tensile strength, in all conduits more than 5 feet in length left empty for future use. Not less than 5 feet of rope shall be left at each end of the conduit. Tag all lines with a

plastic tag at each end indicating the termination/stub location of the opposite end of

- the conduit. 32. All multiple conduit runs within suspended ceilings shall be suspended from building structure by means of unistrut hangers/racks. Conduit shall not be allowed to lay on ceiling or be supported from ceiling suspension wires or other suspension system. Support conduit to structure above suspended ceilings 8" minimum above ceiling to allow
- removal of ceiling tile. Maintain two inch clearance above recessed light fixtures. 33. All exposed conduits and support hardware shall be painted to match the finish of the wall or ceiling to which it is supported.
- 34. Where conduits or wireways cross seismic joints, provide approved flexible conduit connection or approved expansion/deflection fitting to allow for displacement of conduit in all three axes. Connection shall allow for movement in accordance with design of seismic joint. Non-flexible raceways crossing expansion joints or other areas of possible structural movement shall make provision for 3-way movement at such points by means of expansion/deflection fittings. Fittings shall be installed in the center of their axes of movement and shall not be deflected to make part of a conduit bend, or compressed or extended to compensate for incorrect conduit length. Install flexible conduit connection(s) or approved expansion/deflection fitting(s) complete with ground jumpers. Where necessary, provide approved expansion joints to allow for thermal expansion and contraction of conduit(s). Install expansion joints complete with ground jumpers.
- 35. Seal all conduits where termination is subject to moisture or where conduit penetrates exterior wall, floor or roof, in refrigerated areas, classified (hazardous areas) and as indicated on the drawings.
- 36. Except as otherwise indicated on the drawings or elsewhere in these specifications, bends in feeder and branch circuit conduit 2 inches or larger shall have a radius or curvature of the inner edge, equal to not less than ten (10) times the internal diameter of the conduit. Except where sweeping vertically into a building where sweep radius equals ten (10) times conduit diameter, underground communications and building interconnect conduits 3 inches or larger shall have a minimum 12'-6" radius or curvature of the inner edge. For the serving utilities, radius bends shall be made per their respective
- 37. Tag all empty conduits at each accessible end with a permanent tag identifying the purpose of the conduit, footage end-to-end, and the location of the other end. In wet, corrosive outdoor or underground locations, use brass, bronze, or copper 16 gauge tags secured to conduit ends with #16 or larger galvanized wire. Inscribe on the tags, with steel punch dies, clear and complete identifying information.
- 38. The following additional requirements shall apply to underground conduits: a. Underground conduit shall be Schedule 40 PVC (polyvinyl chloride) unless otherwise

adopted. Article 517.13.

b. For all communications conduits 2" and larger, and feeders 100A or greater, provide with a minimum 3", (2,000 LB) concrete envelope, 2" minimum separation between conduits, installed at depth of not less than 24" below grade. (Provide concrete encasement and/or greater minimum conduit depth as required by the Utility Companies.) Conduit separation within a duct bank shall be maintained using plastic spacers located at 5'-0" intervals. Where power and communication conduits are run in a common trench, a 12" minimum separation shall be maintained between power and communication conduits or as required by Utility Companies. Where concrete encasement is not required by serving utilities for a utility—only duct bank, provide free draining sand bedding suitable to acheive 95% relative compaction based on

indicated elsewhere in these specifications or as required per NEC, or CEC where

- ASTM D1557 using 6" lifts or directed by Utility Company Standards. c. In all cases, where any conduit(s) pass under a building slab or footing, the electrical contractor will provide a Bentonite clay or concrete barrier that conforms to the height and width of the trench excavation extending a minimum of 24" on either side of the foundation. In all cases, where conduit(s) pass through a sleeve in a footing or other foundation element, the electrical contractor will provide a Bentonite clay or concrete barrier between the sleeve and the conduit(s) surrounding the conduit(s) for the entire depth of the sleeve. The barrier is required to prevent passage of moisture under or through the slab or footing via the trench or sleeve.
- d. Where underground conduit passes under a building slab, concrete encasement may not be required, except as required above, contact the Engineer for written direction prior to omitting any encasement.
- e. Underground conduits, which terminate inside building(s) below grade, such as in a basement level, or which slope so that water might flow into interior building spaces. shall be sealed at the point of penetration with a modular conduit seal (Link—Seal or equal by Rox Systems). Conduit/conduit sealing system penetrations of waterproofing membranes/systems on existing structures shall be completely restored as required to maintain membrane/system manufacturer and installer warrantee for the installation. All conduits shall be provided with a 4% slope away from buildings. All conduits shall be installed such that the water cannot accumulate in the conduit and such that water drains into the nearest manhole, pull box or vault and not into the facility. In instances where grade changes or elevation differences prevent sloping of conduit away from a building into the nearest manhole, pull box or vault or where accumulation of water in a manhole, pull box or vault may result in water traveling into the facility, conduits shall be sealed internally at each end of each conduit using conduit segling bushing, sized as required for the conductors contained within the conduit (0-Z Gedney #CSBG 100psig withstand or equal). In all cases, install plugs or caps in spare (empty) conduits at both ends of each conduit (Jackmoon or
- f. Include a separate insulated green ground conductor sized per NEC, or CEC where adopted, in each underground electrical feeder/branch circuit.
- g. All underground conduits with circuits rated at 40A or greater and all underground communications conduits shall be provided with a metallic marker tape located 12" below the finished grade.

equal) preventing both water and gas from entering the facility via the conduits.

h. Where underground conduits sweep into/through slabs, utilize PVC 90 degree sweeps that transition, via female PVC adapter to GRC coupling mounted flush in slab. GRC couplings shall be 1/2 lap taped with 20 mil tape. If the distance of the conduit run between a sweep and the next connecting sweep, pullbox, vault or manhole

exceeds 150 ft then the sweep shall be concrete encased. Exceptions:

- 1) Communications conduits shown terminating at a finished floor shall have an additional 4" high GRC nipple equipped with a bushing, removable conduit plug, labeling tag and pull rope. Tie off pull rope to conduit plug.
- 2) Utility conduit sweeps shall be installed per the requirements of the respective utility company.
- i. All PVC conduit shall be glued for a water and gas tight installation. The Contractor shall use appropriate solvent on all joints prior to gluing conduit and fittings
- j. All underground conduit work shall conform to the Federal, State and Local Safety Orders or Rules regarding excavations, trenches and related earthwork. For projects in California, refer to the California Code of Regulations, Title 8, Construction Code
- Sections 1540 and 1541 for additional requirements. 39. Installation of Metal Clad (MC) Cable (when use is permitted in the Allowed Specification Deviations Section or Deductive/Additive Alternate Pricing Section generally located on the symbols list drawing).
- walls. J-box shall be permanently labeled with panel identification and circuit numbers contained within. b. Overhead MC cable runs shall generally follow building lines to provide a neat and

workmanlike installation.

a. Provide J-box above accessible ceiling prior to running MC cable within partitions or

- c. Provide code-sized J-boxes to accommodate MC cable splicing in general. For systems furniture poke—through feeds utilizing MC cable, transition from MC cables to conduit and wire near the panelboard in the TI accessible ceiling space on the floor below the panel board via code-sized gutter(s). Utilize UL listed, insulated barrier strips with recessed screw heads (Ideal #89-6?? series or equal) fastened within the autter(s), terminate MC conductors on one side of the strip(s) and individual conductors in conduit from the panel board(s) on the other side of the strip(s). Label each terminal strip(s) with panel designation. Label each phase conductor with circuit number using wire markers (ideal or equal). Wire nuts are not an acceptable alternative to the terminal strips in these underfloor transition locations.
- Provide (1) spare 3/4" conduit from each gutter to its respective panelboard. d. MC cable shall not run directly into panelboards, distribution boards or electrical
- e. MC cabling shall be provided with its own code—approved ceiling support wires, cable hangers, individual spring steel support clips, steel trapeze hangers, threaded rods or dedicated #10 AWG drop wire. Cable supports shall be fastened to concrete slabs, beams, joists or other structural members of the building. In no case shall MC cable rest on ceilings, suspended ceilings or structures. Do not support MC cable using ceiling support wires. The use of nylon cable ties to support MC cable is not
- f. Use lock or spring nut MC cable fittings. g. Cable runs shall be continuous from wiring device to wiring device — no intermediate
- splicing J-boxes allowed. h. When terminating or splicing at a junction, outlet, or switch box, cut the cable with an armored cable rotary cutter such that 6" of free conductors remain for connections or splices. Use screw-in or spring lock connector and ensure a proper bonding by firmly tightening the connector to both the box and cable. Insert an anti-short bushing at cable ends to protect conductors from abrasion and use
- insulated connectors. i. MC Cable bend radius shall not be less than seven (7) times the external diameter of the cable.
- j. MC cables passing through fire-rated walls or floors shall be firestopped as required with a UL listed system. See firestopping requirements outlined elsewhere in this specification for additional requirements.
- in multiple MC cable runs bundled together into a single MC cable hanger or strap, unless support device is specifically listed for such purpose. Neutrals shall be counted as current carrying conductors. Maintain MC cable clearance of at least 6" from hot water and any other high temperature pipes. Maintain at least 12" clearance between MC cable(s) and

k. Installation shall not exceed code requirements for total current carrying conductors

cables and conduits at right angles. m. MC cabling shall not be run through exposed ceilings, where open grid conditions exist, exposed on walls, or exposed to view. See Power Plan and Lighting Plan

40. Installation of Electrical Nonmetallic Tubing (ENT) Cable (when use is permitted in the

General Notes for additional requirements.

telecommunication conduits and cables. MC cable shall cross telecommunication

- n. Use of MC-AP, "MC All Purpose" or MC cabling where the interlocked armor sheath forms all or a portion of the equipment grounding conductor is expressly prohibited.
- Allowed Specification Deviations Section or Deductive/Additive Alternate Pricing Section generally located on the symbols list drawing). a. When approved for use in the Allowed Specification Deviations Section or Deductive/Additive Alternate Pricing Section, generally located on the symbols list drawing, 1/2" and 3/4" trade size ENT shall be allowed for concealed lighting branch circuits, receptacle branch circuits and miscellaneous signal system circuits within
- concrete floors, walls and columns within parking structures. b. ENT conduit shall meet the requirements of Underwriters Laboratories Standards 1479 and 1653, NEMA TC-13, and be UL-listed.
- c. All ENT conduit, ENT fittings, ENT boxes and ENT accessories shall be UL listed and manufactured by the same manufacturer so as to form a complete ENT system. ENT systems shall only be used if they are listed for use in fire resistance rated concrete floors and ceilings with resistance ratings as indicated elsewhere in the project plans. ENT System shall comply with NEC, or CEC where adopted, Article
- d. All ENT fittings and ENT boxes shall be concrete—tight listed without the use of tape Additionally, ENT fittings shall be constructed of high-impact PVC and able to resist ENT conduit pull out forces of a minimum of 175 lbs. ENT fittings with fewer than 6 locking tabs for ENT connection shall utilize manufacturer—approved glue as additional protection from fitting/conduit separation. ENT conduit to rigid conduit transition fittings shall be equipped with set screw fittings on the rigid conduit side of the fitting. ENT to metal box fittings shall be equipped with a threaded end and
- e. Where tubing enters a box, fitting or other enclosure provide a bushing or adapter to protect conductors from abrasion unless the box, fitting, or enclosure design provides
- f. ENT junction boxes shall have brass screw inserts and shall be rated to support lighting fixtures weighing less than 50 lbs. g. Concrete tight metal boxes shall be used to support pendant hung fixtures or fixtures over 50 lbs.
- h. ENT shall be provided in continuous lengths between junction boxes without use of in-line splices or connectors and shall be clearly marked/labeled at least every
- i. All ENT conduit containing electrical branch circuits shall contain a code-sized equipment ground conductor. j. ENT shall transition to EMT, IMC, RMC, or rigid PVC, as appropriate or as called out elsewhere in this specification, for all exposed conduits within/on/under a parking
- k. ENT shall transition to appropriately sized PVC expansion joint(s) at all structure expansion or seismic joints.
- 1. ENT shall be securely fastened and supported every 2 3 ft. and within 1 ft. of every junction box and fitting to prevent movement and sag. m. ENT shall be routed straight without sags, or excessive bending. Where bends are required, comply with Table 362.24 of the NEC for minimum radius of bends. Number of bends shall not exceed quantity allowed by code where used for power and lighting branch circuit and/or feeder conductors. Where utilized for communications system conductors (phones, data cabling, etc.) number of bends shall
- not exceed the equivalent of (2) 90 degree bends with conduit length no more than 100 feet without installation of a TIA 569-compliant pull box. n. Separation of ENT from fitting(s), excessive sags or deflections in ENT runs that prevent pulling of wire, and other ENT system product or system installation failures/errors, shall be corrected by saw cutting and patching as necessary at no additional cost to the Owner. Use of surface mounted conduits and junction boxes as a repair method is unacceptable.
- o. Empty ENT runs shall be provided with a nylon pull string. p. Coordinate installation of raceway with structural steel and other structural members. Do not cut, notch or otherwise alter structural members without obtaining approval in
- writing from the Structural Engineer of Record. a. No more than (2) 3/4" ENT conduits may cross each other within a horizontal concrete slab without obtaining approval in writing from the Structural Engineer of
- B. Installation of 600V Conductors:
- 1. All electrical wire, including signal circuits, shall be installed in conduit. 2. All circuits and feeder wires for all systems shall be continuous from overcurrent

PST cold shrink connector insulator.

except in pull, junction or outlet boxes, or in panel or switchboard gutters. a. Utilize pre—insulated "winged" spring type connectors, 3M Company "Performance Plus" #0/B or #R/Y or equal and as required for splices and taps in conductors #6 AWG and smaller. When a spring connector is used in an underground environment or when subject to moisture, utilize a 3M Company Scotchcast 3507G epoxy resin connector sealing pack to seal the spring connector. THE USE OF PUSH-WIRE

protective device or switch to terminal or farthest outlet. No joints shall be made

CONNECTORS (e.g. "WAGO" OR EQUIVALENT) IS STRICTLY PROHIBITED. b. Wires #4 AWG and larger AWG shall be joined together as follows: 1) When located in an underground environment or when subject to moisture, the splice shall be made with compression connector and sealed by a 3M, or equal,

- 2) When located in an interior environment, the splice shall be made with an ILSCO or equal dual rated, insulated splicer—reducer connector or multi—tap connector listed for use with 75/90 degree Celsius rated conductors.
- c. Connections to busbar shall be made with dual-rated copper/aluminum one-piece compression lugs. Paralleled conductor connections shall be by mechanical lugs.
- 3. Thoroughly clean all conduit and wire—ways and see that all parts are perfectly dry before pulling any wires.
- 4. Install UL approved fixture wire from all lighting fixture lamp sockets into fixture outlet
- 5. For 20A branch circuit wiring, increase #12 conductors to #10 for 120V circuits longer than 100 feet and for 277V circuits longer than 150 feet.
- 6. Conductor Support: Provide conductor supports as required by codes and recommended by cable manufacturer. Where required, provide cable supports in vertical conduits and provide lower end of conduit with a ventilator.
- C. Grounding/Bonding: 1. Provide grounding and bonding for entire electric installation as shown on plans, as listed herein, and as required by applicable codes. Included, but not limited to, are items that
  - require grounding/bonding:
  - a. Conduit, raceways and cable trays. b. Neutral or identified conductors of interior wiring system.
  - c. Panel boards, Distribution boards, Switchgear and Switchboards. d. Non-current carrying metal parts of fixed equipment.
  - e. Telephone distribution equipment. f. Transformers, Inverters, UPS, PDU, RDC, Transfer Switch and Generator Systems.
  - q. Raised Flooring. h. Exposed metal in maintenance holes, hand holes.
  - i. Lightning Protection Systems and antennas.
  - Metal piping installed in or attached to a building/structure. k. Metallically isolated structural steel.
- I. Metallically isolated underground metal water piping.
- 2. In multi-occupancy buildings, Contractor shall bond metal water piping systems installed in, under or attached to a building and/or structure serving individual occupancies where the piping system(s) are metallically isolated from each other. Per NEC, or CEC where adopted, ART. 250.104(A)(2) and (3), the bonding conductor shall be sized per Table 250.122 and connected to the switchboard/panelboard serving that suite/occupancy.
- 3. Use of Ground Rods: Furnish and install required number of 3/4" x 10' copper clad ground rods to meet specified resistance, all required grounding wires, conduit and clamps. The size of the grounding conductors shall be not less than that set forth in the latest edition of the California Code of Regulations, Title 24, State of California and NEC (or CEC where adopted), unless otherwise indicated. Rods shall be installed such that at least 10 feet of length is in contact with the soil. Where rock bottom is encountered, the electrode shall be driven at an oblique angle not to exceed 45 degrees from vertical or shall be buried in a trench that is at least 30 inches deep. The upper end of the electrode shall be flush with or below ground level unless the above ground end and the grounding electrode conductor attachments are protected against physical damage. Unless otherwise noted, connection to the grounding electrode conductor may be by compression type or exothermic process connector. Mechanical connectors shall not be used.
- 4. Grounding System Connection:

Heating and Air Conditioning Units:

m. Elevator hydraulic piston/lift case.

- a. Compression connectors shall be unplated copper, manufactured by Burndy, or approved equal, designed specifically for the intended connection.
- b. Exothermic weld-type connectors shall be 'Cadweld' manufactured by Erico Products, or approved equal, designed specifically for the intended connection. c. Mechanical connectors shall not be used.
- 5. Isolated Ground Receptacles shall have an insulated ground wire connected between the receptacle and the panelboard isolated ground bus. Unless otherwise noted, this ground wire shall not be grounded at any other point, and shall be distinguished from other ground wires by a continuous yellow stripe. 6. Provide separate green equipment ground conductor in all electrical raceways to

effectively ground all fixtures, panels, controls, motors, disconnect switches, exterior

lighting standards, and non current—carrying metallic enclosures. Use bonding jumpers

grounding bushings, lugs, busses, etc., for this purpose. Connect the equipment ground

- to the building system ground. Use the same size equipment ground conductors as phase conductors, up through #10 AWG. Use NEC (or CEC where adopted) Table 250.122 for conductor size with phase conductors #8 and larger, if not shown on the 7. Clean the contact surfaces of all ground connections prior to making connections.
- connection at each air handler, exhaust fan, and supply fan, and install to preclude 9. Motors: Connect the ground conductor to the conduit with an approved grounding bushing, and to the metal frame with a bolted solderless lug. Bolts, screws and

8. Ductwork: Provide a flexible ground strap, No. 6 AWG equivalent, at each flexible duct

washers shall be bronze or cadmium plated steel. 10. Building grounding system resistance to ground shall not exceed 25 ohms unless otherwise noted and should be confirmed by testing.

D. Line Voltage and Low Voltage Power Supplies to all Mechanical Equipment Including Plumbing,

- 1. An electric power supply, including conduit, any necessary junction and/or outlet boxes and conductors and connection shall be furnished and installed by the Contractor for each item or mechanical equipment. 2. Power supplies to individual items of equipment shall be terminated in a suitable outlet
- or junction box adjacent to the respective item of equipment, or a junction box provided by the manufacturer or the equipment and directed by the Mechanical Contractor. Allow sufficient lengths of conductor at each location to permit connection to the individual equipment without breaking the wire run.

3. The location of all conduit terminations to the equipment is approximate. The exact

installation shall produce a complete and operable system.

sufficient to cover the cost of the installation.

location of these conduit terminations shall be located and installed as directed by the Mechanical or Plumbing Contractor. 4. Provide power supplies to all plumbing and mechanical equipment, including, but not limited to, equipment furnished and installed by Owner or Contractor, such as heating

and air conditioning equipment, pumps, boilers, auto valves and water coolers, etc. The

5. Unless otherwise noted, the Contractor shall furnish and install all conduit, boxes, wires, etc., for line voltage wiring and low voltage wiring. 6. It is the Contractor's responsibility to verify with the drawings of other trades regarding

the extent of his responsibility for mechanical equipment. The bid must include a sum

- 7. The location of all power supply connection and/or terminations to the mechanical equipment is approximate. The exact locations of these terminations shall be verified with other trades during construction. Prefabricated Equipment: Installation of all prefabricated items and equipment shall conform to the requirements of the manufacturer's specifications and installation instruction pamphlets. Where code requirements affect installation of materials and equipment, the more stringent requirements, code or manufacturer's instructions and/or specifications, shall
- F. Firestopping: 1. The Contractor shall be responsible for furnishing all material, labor, equipment, and
- services in conjunction with the selection and installation of a complete, fully functionina. code compliant, UL-listed, fire stop assembly/system(s) as required by project conditions. 2. Each fire stop assembly/system shall have an "F" and/or "T" rating as required by each condition requiring fire stopping. Each fire stop assembly/system shall have a current UL listing, as indicated in the latest edition of the UL Fire Resistance Directory. Contractor shall verify acceptability of all fire stopping methods and system selections with the authority having jurisdiction prior to installation. The Contractor shall install

each firestop assembly/system in accordance with the manufacturer's printed instructions

1. Provide a minimum 3" high housekeeping pad above finished floor/finished grade for all

centers, etc., flush with the face of the equipment. Located in mechanical central

plant(s), other mechanical spaces, and located outdoors, pads shall be flush with the

Confirm pad dimensions with local inspector prior to forming pad to ensure any local

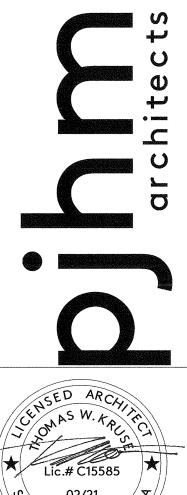
floor-mounted switchgear, switchboards, distribution boards, transformers, motor control

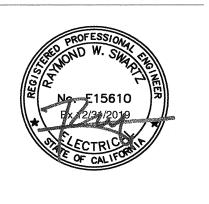
- 3. Each fire stop assembly/system shall be labeled with fire stop manufacturer-furnished label on each side of the fire stopping systems depicting UL number, etc. G. House Keeping Pads:
- face of the equipment. Confirm pad dimensions with local inspector prior to forming pad to ensure any local code interpretations/conditions are met regarding house 2. Unless otherwise noted above, provide a minimum 1-1/2" high housekeeping pad above finished floor/finished grade for all interior floor-mounted switchgear, distribution boards. transformers, motor control centers, transfer switches, etc., flush with the face of the equipment. All housekeeping pad heights are as measured from finished floor or grade.
- code interpretations/conditions are met regarding housekeeping pads 3. Provide a 1-1/2" high housekeeping pad above finished floor/finished for service equipment. Prior to pad rough-in, Contractor shall verify serving utility company's maximum meter height requirements and, if necessary, adjust height of housekeeping pad to comply with those requirements. In indoor applications, the pad shall be flush with the face of the switchgear. In outdoor applications, the housekeeping pad shall extend a minimum of 4 feet from the front of switchgear's weatherproof enclosure. Confirm pad dimensions with local inspector prior to forming pad to ensure any local code
- 4. All housekeeping pads located in, on, or attached to a building shall be seismically braced/connected to the building structure.

interpretations/conditions are met regarding housekeeping pads.

END OF SECTION

govern the work.





COLLABORATIVE 11870 Pierce Street, Suite 160 Riverside, California 92505 951,299,4160 www.tk1sc.com Nikolas Bruno - Electrical tk1sc Job #: 2020-0038

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IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT

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\	÷	EXAM	PLE F	ORM	DSA 103
y	ote:	The Example Form DSA-103 shown on this sheet is	for illustrati	on purpo	oses only to assist in the completion of future project specific form
D	SA-	103's. A Form DSA-103 is to be completed for each a ossed out on this sheet.	application t	that this I	PC is being incorporated into and the example form DSA-103 is to
Virginia de la constanta de la			addian of the f	>-1:5:- D	uilding Code (CBC) unless otherwise noted.
			edition of the C		
	AEGUI PA	EST OR SPECIAL INSPECTION	, ii	PERFORM	CODE REFERENCE AND NOTES
	<del></del>		ZKY.	Vollagi.	
<b>\$</b>	SC	DILS \			
*	<b>a</b> .	1. GENERAL: Verify that:	Table 1705A	.6 . T	
		site has been properly prior to placement of controlled fill and/or excavations for foundations,			
X		foundation excavations are extended to proper depth and have reached proper material, and	Periodic	GE*	* By geotechnical engineer or his or her qualified representative. (See Appendix for exemptions.)
		materials below footings are adequate to achieve the design bearing capacity.		Andreas de General de Constantes de Constant	
### ###		2. COMPACTED FILLS:	Table 1705A	.6	
X		Perform classification and testing of fill materials.	Test	LOR*	* Under the supervision of the geotechnical engineer.
X	D.	Verify use of proper materials, densities and inspect lift thicknesses, placement, and compaction during placement of fill.	Continuous	GE*	* By geotechnical engineer or his or her qualified representative.
X	C.	Test compaction of fill.  A CAST IN DIACE DEED FOLINDATIONS (DIEF	Test	LOR*	* Under the supervision of the geotechnical engineer.
	∦ a.	4. CAST-IN-PLACE DEEP FOUNDATIONS (PIEF Inspect drilling operations and maintain complete and accurate	Continuous	GE*	* By geotechnical engineer or his or her qualified representative. (See Appendix for exemptions.)
.A. ~~~~~~	Ç.	records for each pier.  Confirm pier locations, diameters, plumbness, bell diameters (if	- Communication	<b></b>	by geotechnical engineer of this of their qualities representative. (See Appendix for exemptions.)
X		applicable), lengths, and embedment into bedrock (if applicable). Record concrete or grout volumes.	Continuous	GE*	* By geotechnical engineer or his or her qualified representative. (See Appendix for exemptions.)
X	d.	Confirm adequate end strata bearing capacity.	Continuous	GE*	* By geotechnical engineer or his or her qualified representative. (See Appendix for exemptions.)
X		Concrete piers.	Provide tests a	nd inspectio	ns per CONCRETE section below.
<b>30</b>	CC	ONCRETE \	Table 1705A.3	, ACI 318-14	4 Sections 26.12 & 26.13
<b>***</b>		7. CAST IN PLACE CONCRETE  Material Verification and Testing:	Pri Militari da da Maria Maria da Maria da Maria da Maria da Maria da Angala da Angala da Angala da Angala da A	Faller 1889 (1985) State of the Space and a space of the	
X	a.	Verify use of required design mix.	Periodic	SI*	Table 1705A.3 Item 5, 1910A.1 (1909.2.3*). * To be performed by qualified batch-plant inspector
X	-	Identifiy, sample, and test reinforcing steel.	Test	LOR	and concrete sampling technician  1910A.2 (1909.2.4 <sup>+</sup> ); ACI 318-14 Section 26.6.1.2. DSA IR 17-10
<del></del>	Щ	During concrete placement, fabricate specimens for strength		<u> </u>	
X	-	tests,perform slump and air content tests, and determine the temperature of the concrete.	Test	LOR	Table 1705A.3 Item 6; ACI 318-14 Sections 26.5 & 26.12
<u>X</u>	d.	Test concrete (f'c).	Test	LOR	1905A.1.16 (1909.3.7*); ACI 318-14 Section 26.12.
<del></del>	T	Inspection:	<u> </u>		Default of 'continuous' per 1705A.3.3; If approved by DSA, batch plant inspection may be reduced
X	е.	Batch plant inspection Continuous O Periodic	See Notes	SI	to 'Periodic' subject to requirements in Section 1705A.3.3.1 or eliminated per 1705A.3.3.2. (See Appendix for exemptions.)
+	M	ASONRY	TMS 492-13/A	CI 530-13/A:	SCE 5-13 Table 3.1.3 & TMS 602-13/ACI 530.1-13/ASCE 6-13 Table 5
44	ST	EEL, ALUMINUM	. 1		3-10 AISC 360-10, AISC 341-10, AISC 358-10, AISI S100-07/S2-10
*		17. STRUCTURAL STEEL, COLD-FORMED STEE Material Verification:	EL, AND AL	UMINU	WUSED FOR STRUCTURAL PURPOSES
<del>niji di pangan pan</del>	a.	Verify identification of all materials and:		\ /	2202 A (2202 4 <sup>†</sup> ) Table 4705 A 2 4 Ham 2n 2n A O  0400 07/00 40 0 0 40 A 2 4 0 4 0 0 A 101
X		<ul> <li>Mill certificates indicate material properties that comply with requirements,</li> </ul>	Periodic	\','	<b>2203A.1</b> (2203.1*), <b>Table 1705A.2.1 Item 3a-3c</b> ; AISI S100-07/S2-10 Section A2.1 & A2.2, AISI S200-12 Section A3, AISI S220-11 Section A4. * By special inspector or qualified technician when
X	b.	Material sizes, types and grades comply with requirements.  Test unidentified materials	Test	LOR	performed off-site. <b>2203A.1</b> (2203.1 <sup>+</sup> ).
X	C.	Examine seam welds of HSS shapes	Periodic	SI	DSA IR 17-3.
X	e.	Inspection: Verify and document steel fabrication per DSA approved	Periodic	sı	Not applicable to cold-formed steel light-frame construction, except for trusses (1705A.2.4).
.A. 	-	construction documents.  18. HIGH STRENGTH BOLTS:	RCSC 2009		The applicable to cold-formed steel light-fighte constituction, except for trusses (1703A.2.4).
***************************************	1	Material Verification of High-Strength Bolts, Nuts, and Washers			
X		Verify identification markings and manufacturer's certificates of compliance conform to ASTM standards specified in the DSA	eriodic	SI	Table 1705A.2.1 Item 1, 2203A.1; RCSC 2009 Section 2.1. DSA IR 17-9
X	-	approved documents.  Test high-strength bolts, nuts and washers.	Test	LOR	2213A.1 (22(2.6.1 <sup>+</sup> ). RCSC 2009 Section 7.2 DSA IR 17-8
	r	Inspection of High-Strength Bolt Installation:			
X	C.	Bearing-type ("snug tight") connections.	Periodic	SI	Table 1705A.2. Item 2a; RCSC 2009 Section 9.1. DSA IR 17-9 1705A.2.5, Table 1705A.2.1 Items 4 & 5; DSA IR 17-3, AWS D1.1 and AWS D1.8 for structural
-		19. WELDING:			steel, AWS D1.2 for Aluminum, AWS D1.3 for cold-formed steel, AWS D1.4 for reinforcing steel.  (See Appendix for examptions.)
	Newbookensokkelselses	Verification of Materials, Equipment, Welders, etc:			
X		Verify weld filler material identification markings per AWS. designation listed on the DSA approved documents and the WPS.	Periodic	SI	DSA IR 17-3.
X	12	Verify weld filler material manufacturer's certificate of compliance.	Periodic	SI	DSA IR 17-3.
X		Verify WPS, welder qualifications and equipment.	Periodic	SI	DSA IR 17-3.
**	a.	19.1 SHOP WELDING: Inspect groove welds, multi-pass fillet welds, single pass fillet			
X		welds > 5/16", plug and slot welds	Continuous	SI	Table 1705A.2.1 Item 5a1-4. Per AlSC 360-10 (and AISC 341-10 as applicable). DSA IR 17-3.  1705A.2.2, Table 1705A.2.1 Item 5a.5 & 5a.6. Per AISC 360-10 (and AISC 341-10 as applicable).
X		Inspect single-pass fillet welds ≤ 5/16", floor and roof deck welds  23 ANCHOR BOLTS ANCHOR BODS & OTHER	Periodic	SI	DSA IR 17-3.
X		23. ANCHOR BOLTS, ANCHOR RODS, & OTHER Anchor Bolts and Anchor Rods	R STEEL:	LOR	IR 17-11 Sample and test anchor bolts and auchor rods not readily identifiable.
+	WC	DOD /			
+	TO	HER /			
	List	of required verified report(s):			
	1				/erified Report - Form DSA-293 ed Report - Form DSA-291
	3	Concrete Batch Plant Inspection: Laboratory Verified Report -	Form DSA-291	, or, for inde	pendently contracting SI, Special Inspection Verified Report - Form DSA-292
	4 5	Snop weiging Inspection: Laboratory Verified Report - For HS Bolt Installation Inspection: Laboratory Verified Report - I	rm DSA-291, or, Form DSA-291.	, tor indepen or, for inden	dently contracting SI, Special Inspection Verified Report - Form DSA-292 endently contracting SI, Special Inspection Verified Report - Form DSA-292
KEV	to C	olumns	M 1449 P. Calle Control of the American Spirit Spirit Control of the Spirit Control of t		
. \ i   1	Тур			2 Porfo	rmed By -
Conti	***************************************	s – Indicates that a continuous special inspection is required		GE – Indica	ites that the special inspection is to be performed by a registered geotechnical engineer or his or her
<del>************</del>	<del>Vi v 100 m denature</del>			authorized r	representative
Perio	dic – i	indicates that a periodic special inspection is required		LUK - Indic Laboratory I	cates that the test or inspection is to be performed by a testing laboratory accepted in the DSA Evaluation and Acceptance (LEA) Program. See section 4-335, 2013 CCR Title 24 Part 1.
Test -	- Indic	ates that a test is required		**************************************	es that the special inspection is to be performed by a special inspector
				**************************************	
		nptions/Waivers for Special Inspection and Structura		tified mil	It test reports are provided for each shipment of such reinforcement.

	Available Options							
Shelter Style			Eave F	leight	Recessed Anchor	Roof	"V" plugs	Snow
	Length	Width	Min.	Max.	Bolts./Footings	Downspouts	for bird control.	Region
20' Meramec	30', 42'		7' .	12'	Y/N	Y/N	Y/N	Y/N
30' Meramec	42', 54'		. 7'	12'	Y/N.	Y/N	Y/N	Y/N
16' Navajo			7'	12'	. Y/N	Y/N	Y/N	Y
20' Navajo			7'	12'	Y/N	Y/N	Y/N	Y
24' Navajo			. 7'	12'	Y/N	Y/N	Y/N	Y
30' Navajo			. 7'	12'	Y/N	Y/N	Y/N	Y
36' Navajo			7'	12'	Y/N	Y/N	Y/N	Y
40' Navajo			7'	12'	Y/N	Y/N	Y/N	Y
Illini	12' to 60' in 8' increments.	10', 16'	7'	12'	Y/N	Y/N	Y/N	Y
7' Shawnee	8' to 56' in 8' increments.		7'	12'	Y/N	Y/N	Y/N	Ý

/ 2. Per DSA-103 Appendix, concrete batch plant inspection is not required provided that the licensed weighmaster and batch ticket requirements 👌

1705A.3.3.2 are implemented.

DESCRIPTION  DEAD AND LIVE LOADS  ROOF LIVE LOAD (Lr)  ROOF DEAD LOAD (D)  SOILS AND GEOHAZARDS  ALLOWABLE VERTICAL BEARING PRESSURE  ADJACENT SLOPE MINIMUM SETBACK LIMITS (CBC 1808A.7)  SITE CLASS  SITE CLASS  SITE CLASS FOR LIQUEFIABLE SOIL HAZARD  ROOF SNOW LOAD  GROUND SNOW LOAD (Pg)  SLOPED ROOF SNOW LOAD (Ps)  SNOW EXPOSURE FACTOR (Ce)  SNOW IMPORTANCE FACTOR (I)  THERMAL FACTOR (CI)  MINIMUM SEPARATION FROM TALLER, ADJACENT STRUCTURES (IN SNOW REGIONS ONLY)  FLOOD DESIGN  WHEN THE SITE-SPECIFIC PROJECT IS LOCATED IN A FLOOD ZONE OTH BY A SOILS ENGINEER IS NEEDED TO VALIDATE THE ALLOWABLE SOIL V  WIND DESIGN	LIQUEFIABLE SOIL, OVER-THE-COUNTER SUBMITTAL IS NOT ALLOWED AND REGULAR PROJECT SUBMITTAL IS REQUIRED  22 PSF  20 PSF  1.1  1.0  1.2  20' - 0"
ROOF LIVE LOAD (Lr)  ROOF DEAD LOAD (D)  SOILS AND GEOHAZARDS  ALLOWABLE VERTICAL BEARING PRESSURE  ADJACENT SLOPE MINIMUM SETBACK LIMITS (CBC 1808A.7)  SITE CLASS  SITE CLASS  SITE CLASS F OR LIQUEFIABLE SOIL HAZARD  ROOF SNOW LOAD  GROUND SNOW LOAD (Pg)  SLOPED ROOF SNOW LOAD (Ps)  SNOW EXPOSURE FACTOR (Ce)  SNOW IMPORTANCE FACTOR (I)  THERMAL FACTOR (Ct)  MINIMUM SEPARATION FROM TALLER, ADJACENT STRUCTURES (IN SNOW REGIONS ONLY)  FLOOD DESIGN  WHEN THE SITE-SPECIFIC PROJECT IS LOCATED IN A FLOOD ZONE OTH BY A SOILS ENGINEER IS NEEDED TO VALIDATE THE ALLOWABLE SOIL V	VARIES, SEE CALCULATIONS  1500 PSF  15' MIN. FROM FACE OF FOOTING TO TOE OF SLOPE. 40' MIN FROM FACE OF FOOTING TO TOP OF SLOPE. D  IF STRUCTURE IS LOCATED IN SITE CLASS F OR AN AREA WILIQUEFIABLE SOIL, OVER-THE-COUNTER SUBMITTAL IS NOT ALLOWED AND REGULAR PROJECT SUBMITTAL IS REQUIRED  22 PSF  20 PSF  1.1  1.0  1.2  20' - 0"
SOILS AND GEOHAZARDS  ALLOWABLE VERTICAL BEARING PRESSURE  ADJACENT SLOPE MINIMUM SETBACK LIMITS (CBC 1808A.7)  SITE CLASS  SITE CLASS  SITE CLASS FOR LIQUEFIABLE SOIL HAZARD  ROOF SNOW LOAD  GROUND SNOW LOAD (Pg)  SLOPED ROOF SNOW LOAD (Ps)  SNOW EXPOSURE FACTOR (Ce)  SNOW IMPORTANCE FACTOR (I)  THERMAL FACTOR (Ct)  MINIMUM SEPARATION FROM TALLER, ADJACENT STRUCTURES (IN SNOW REGIONS ONLY)  FLOOD DESIGN  WHEN THE SITE-SPECIFIC PROJECT IS LOCATED IN A FLOOD ZONE OTH BY A SOILS ENGINEER IS NEEDED TO VALIDATE THE ALLOWABLE SOIL V	VARIES, SEE CALCULATIONS  1500 PSF  15' MIN. FROM FACE OF FOOTING TO TOE OF SLOPE. 40' MIN FROM FACE OF FOOTING TO TOP OF SLOPE. D  IF STRUCTURE IS LOCATED IN SITE CLASS F OR AN AREA WILIQUEFIABLE SOIL, OVER-THE-COUNTER SUBMITTAL IS NOT ALLOWED AND REGULAR PROJECT SUBMITTAL IS REQUIRED  22 PSF  20 PSF  1.1  1.0  1.2  20' - 0"
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ROOF SNOW LOAD  GROUND SNOW LOAD (Pg)  SLOPED ROOF SNOW LOAD (Ps)  SNOW EXPOSURE FACTOR (Ce)  SNOW IMPORTANCE FACTOR (I)  THERMAL FACTOR (Ct)  MINIMUM SEPARATION FROM TALLER, ADJACENT STRUCTURES (IN SNOW REGIONS ONLY)  FLOOD DESIGN  WHEN THE SITE-SPECIFIC PROJECT IS LOCATED IN A FLOOD ZONE OTH BY A SOILS ENGINEER IS NEEDED TO VALIDATE THE ALLOWABLE SOIL V	LIQUEFIABLE SOIL, OVER-THE-COUNTER SUBMITTAL IS NOT ALLOWED AND REGULAR PROJECT SUBMITTAL IS REQUIRED  22 PSF  20 PSF  1.1  1.0  1.2  20' - 0"
GROUND SNOW LOAD (Pg)  SLOPED ROOF SNOW LOAD (Ps)  SNOW EXPOSURE FACTOR (Ce)  SNOW IMPORTANCE FACTOR (I)  THERMAL FACTOR (Ct)  MINIMUM SEPARATION FROM TALLER, ADJACENT STRUCTURES (IN SNOW REGIONS ONLY)  FLOOD DESIGN  WHEN THE SITE-SPECIFIC PROJECT IS LOCATED IN A FLOOD ZONE OTH BY A SOILS ENGINEER IS NEEDED TO VALIDATE THE ALLOWABLE SOIL V	20 PSF 1.1 1.0 1.2 20' - 0"
SLOPED ROOF SNOW LOAD (Ps)  SNOW EXPOSURE FACTOR (Ce)  SNOW IMPORTANCE FACTOR (I)  THERMAL FACTOR (Ct)  MINIMUM SEPARATION FROM TALLER, ADJACENT STRUCTURES (IN SNOW REGIONS ONLY)  FLOOD DESIGN  WHEN THE SITE-SPECIFIC PROJECT IS LOCATED IN A FLOOD ZONE OTH BY A SOILS ENGINEER IS NEEDED TO VALIDATE THE ALLOWABLE SOIL V	20 PSF 1.1 1.0 1.2 20' - 0"
SNOW EXPOSURE FACTOR (Ce)  SNOW IMPORTANCE FACTOR (I)  THERMAL FACTOR (Ct)  MINIMUM SEPARATION FROM TALLER, ADJACENT STRUCTURES (IN SNOW REGIONS ONLY)  FLOOD DESIGN  WHEN THE SITE-SPECIFIC PROJECT IS LOCATED IN A FLOOD ZONE OTH BY A SOILS ENGINEER IS NEEDED TO VALIDATE THE ALLOWABLE SOIL V	1.1 1.0 1.2 20' - 0"
SNOW IMPORTANCE FACTOR (I)  THERMAL FACTOR (Ct)  MINIMUM SEPARATION FROM TALLER, ADJACENT STRUCTURES (IN SNOW REGIONS ONLY)  FLOOD DESIGN  WHEN THE SITE-SPECIFIC PROJECT IS LOCATED IN A FLOOD ZONE OTH BY A SOILS ENGINEER IS NEEDED TO VALIDATE THE ALLOWABLE SOIL V	1.0 1.2 20' - 0"
THERMAL FACTOR (Ct)  MINIMUM SEPARATION FROM TALLER, ADJACENT STRUCTURES (IN SNOW REGIONS ONLY)  FLOOD DESIGN  WHEN THE SITE-SPECIFIC PROJECT IS LOCATED IN A FLOOD ZONE OTH BY A SOILS ENGINEER IS NEEDED TO VALIDATE THE ALLOWABLE SOIL V	1.2 20' - 0"
MINIMUM SEPARATION FROM TALLER, ADJACENT STRUCTURES (IN SNOW REGIONS ONLY)  FLOOD DESIGN  WHEN THE SITE-SPECIFIC PROJECT IS LOCATED IN A FLOOD ZONE OTH BY A SOILS ENGINEER IS NEEDED TO VALIDATE THE ALLOWABLE SOIL V	20' - 0"
STRUCTURES (IN SNOW REGIONS ONLY)  FLOOD DESIGN  WHEN THE SITE-SPECIFIC PROJECT IS LOCATED IN A FLOOD ZONE OTH BY A SOILS ENGINEER IS NEEDED TO VALIDATE THE ALLOWABLE SOIL V	
WHEN THE SITE-SPECIFIC PROJECT IS LOCATED IN A FLOOD ZONE OTH BY A SOILS ENGINEER IS NEEDED TO VALIDATE THE ALLOWABLE SOIL V	
WHEN THE SITE-SPECIFIC PROJECT IS LOCATED IN A FLOOD ZONE OTH BY A SOILS ENGINEER IS NEEDED TO VALIDATE THE ALLOWABLE SOIL V	
ULTIMATE DESIGN WIND SPEED (Vult)	120 MPH
ULTIMATE DESIGN WIND SPEED (Vult) WIND EXPOSURE FACTOR	120 MPH
TOPOGRAPHIC FACTOR (Kzt)	1,0
ASCE 7-10 WIND ANALYSIS METHOD	1.0  CHAPTER 27 DIRECTIONAL PROCEDURE
VELOCITY PRESSURE EXPOSURE COEFFICIENT (Kz)	0.85
NET PRESSURE COEFFICIENT (Kz)	0.85 VARIES, SEE CALCULATIONS
WIND DIRECTIONALITY FACTOR (Kd)	VARIES, SEE CALCULATIONS  0.85
WIND DIRECTIONALITY FACTOR (Kd)  WIND VELOCITY PRESSURE (gh)	0.85 26.6 PSF
WIND VELOCIT I FREGOVICE (411)	26.5 PSF
SEISMIC DESIGN	
ASCE 7-10 ANALYSIS PROCEDURE	SECTION 12.8 EQUIVALENT LATERAL FORCE PROCEDURE
SEISMIC DESIGN CATEGORY	E
SEISMIC IMPORTANCE FACTOR	1.0
SITE CLASS	D
MAPPED MCE, 5% DAMPED, SPECTRAL RESPONSE ACCELERATION AT SHORT PERIOD (Ss)	2.5
SHORT PERIOD SITE COEFFICIENT (Fa)	1.0
DESIGN MCE, 5% DAMPED, SPECTRAL RESPONSE ACCELERATION AT SHORT PERIOD (Sps)	1.67
MAPPED MCE, 5% DAMPED, SPECTRAL RESPONSE ACCELERATION AT 1 SECOND PERIOD (S1)	1.25
LONG PERIOD SITE COEFFICIENT (Fv)	1.5
DESIGN, 5% DAMPED, SPECTRAL RESPONSE ACCELERATION AT 1 SECOND PERIOD (Sp1)	1.25
HORIZONTAL OR VERTICAL IRREGULARITY TYPES	NONE

BUILDING DATA					
CONSTRUCTION CLASSIFICATION	TYPE II-B				
OCCUPANCY CLASSIFICATION	A-3				
RISK CATEGORY	II .				
NUMBER OF STORIES	1				
SLOPE SETBACKS	FACE OF FOUNDATION TO TOE OF ASCENDING SLOPE: 15' MINIMUM. FACE OF FOUNDATION TO TOP OF DESCENDING SLOPE: 40' MINIMUM.				

# SHEET INDEX

AMERICANA	SHELTERS

- AMERICANA SHELTERS DESIGN NOTES, EXAMPLE FORM DSA 103 Ø G.1 10' AND 16' ILLINI SHELTER
- ILLINI SHELTER DESIGN NOTES, EXAMPLE FORM DSA 103 O IT.1 ILLINI SHELTER PLANS, SECTIONS AND DETAILS

# 20' MERAMEC SHELTERS

- ☐ MT20.0 20' MERAMEC SHELTER DESIGN NOTES, EXAMPLE FORM DSA 103 ☐ MT20.1 20' MERAMEC SHELTER PLANS, SECTIONS AND DETAILS
- 30' MERAMEC SHELTERS MT30.0 30' MERAMEC SHELTER DESIGN NOTES, EXAMPLE FORM DSA 103 MT30.1 30' MERAMEC SHELTER PLANS, SECTIONS AND DETAILS
- 16' NAVAJO SHELTERS □ NT16.0 16' NAVAJO SHELTER DESIGN NOTES, EXAMPLE FORM DSA 103 □ NT16.1 16' NAVAJO SHELTER PLANS, SECTIONS AND DETAILS
- 20' NAVAJO SHELTERS

# □ NT20.0 20' NAVAJO SHELTER DESIGN NOTES, EXAMPLE FORM DSA 103

- ☐ NT20.1 20' NAVAJO SHELTER PLANS AND ELEVATIONS
- ☐ NT20.2 20' NAVAJO SHELTER SECTIONS AND DETAILS

# 24' NAVAJO SHELTERS

- □ NT24.0 24' NAVAJO SHELTER DESIGN NOTES, EXAMPLE FORM DSA 103 NT24.1 24' NAVAJO SHELTER PLANS AND ELEVATIONS
- ☐ NT24.2 24' NAVAJO SHELTER SECTIONS AND DETAILS

# 30' NAVAJO SHELTERS

- □ NT30.0 30' NAVAJO SHELTER DESIGN NOTES, EXAMPLE FORM DSA 103
- □ NT30.1 30' NAVAJO SHELTER PLANS AND ELEVATIONS
- ☐ NT30.2 30' NAVAJO SHELTER SECTIONS AND DETAILS

# 36' NAVAJO SHELTERS

- □ NT36.0 36' NAVAJO SHELTER DESIGN NOTES, EXAMPLE FORM DSA 103
- □ NT36.1 36' NAVAJO SHELTER PLANS AND ELEVATIONS
- ☐ NT36.2 36' NAVAJO SHELTER SECTIONS AND DETAILS

# **40' NAVAJO SHELTERS**

- □ NT40.0 40' NAVAJO SHELTER DESIGN NOTES, EXAMPLE FORM DSA 103
- NT40.1 40' NAVAJO SHELTER PLANS AND ELEVATIONS
- ☐ NT40.2 40' NAVAJO SHELTER SECTIONS AND DETAILS

# 7' SHAWNEE SHELTER

□ ST7.0 SHAWNEE SHELTER DESIGN NOTES, EXAMPLE FORM DSA 103 ST7.1

SHAWNEE SHELTER PLANS, SECTIONS AND DETAILS

# **GENERAL NOTES**

SHELTER DESIGN

SUFFICIENT FOR EAVE HEIGHTS RANGING FROM 7' UP TO 12' TALL

REQUIRED EAVE HEIGHT FOR EACH SITE SHALL BE DETERMINED BY OWNER. THIS SHELTER HAS BEEN DESIGNED AS AN OPEN STRUCTURE. THE ADDITION OF ANY ENCLOSURE DIRECTLY ATTACHED TO THE SHELTER, SUCH AS WALLS, INSECT MESH, OR SHADE SCREENS, SHALL BE PROHIBITED AS

DESIGN AND CONSTRUCTION STANDARDS

2. 2016 CALIFORNIA BUILDING CODE (CBC), VOLUMES 1 AND 2 (PART 2, TITLE 24, CCR)

(2015 UNIFORM MECHANICAL CODE WITH 2016 CALIFORNIA AMENDMENTS)

6. 2016 CALIFORNIA ENERGY CODE .....

7. 2016 CALIFORNIA FIRE CODE (CFC) ...... ...... (PART 9, TITLE 24, CCR) (2015 INTERNATIONAL FIRE CODE WITH 2016 CALIFORNIA AMENDMENTS)

9. 2016 CALIFORNIA REFERENCED STANDARDS CODE ...... (PART 12, TITLE 24, CCR) IDENTIFICATION STAMP

11. NFPA 72 - 2016 12. REFERENCE CODE SECTIONS FOR APPLICABLE STANDARDS

b. 2016 CFC, CHAPTER 80

CONSTRUCTION CHANGES

A. CHANGES TO THE APPROVED PLANS AND SPECIFICATIONS SHALL BE MADE BY AN ADDENDA OR CONSTRUCTION

A. THE FOUNDATION SHALL REST ON SOUND SOIL THAT IS FREE OF ORGANIC AND DELETERIOUS MATERIALS AND

ACTUAL SOIL CONDITIONS AT EACH JOB SITE AND ANY REQUIRED ADJUSTMENTS TO THE FOOTING DESIGN SHALL BE

A. CONCRETE MIX DESIGN SHALL UTILIZE TYPE V CEMENT AND SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH

B. REINFORCING BARS SHALL BE DEFORMED BARS CONFORMING TO THE REQUIREMENTS OF MINIMUM ASTM A615 GRADE 40 FOR #4 AND SMALLER BARS AND GRADE 60 FOR BARS LARGER THAN #4.

MINIMUM CONCRETE CLEAR COVER FOR REINFORCING BARS SHALL BE 3". D. A CONCRETE MIX DESIGN IN ACCORDANCE WITH CBC SECTION CHAPTER 19A SHALL BE PERFORMED AND STAMPED BY A CIVIL ENGINEER LICENSED IN THE STATE OF CALIFORNIA. THE CONCRETE MIX DESIGN SHALL BE SUBMITTED TO

THE MIX DESIGN SHALL MEET THE CRITERIA HEREIN AND SHALL BE PROPER FOR LOCAL CONDITIONS INCLUDING, BUT NOT LIMITED TO, FREEZING AND THAWING EXPOSURE, CHEMICAL AND SALT EXPOSURE, AND SOIL CORROSIVITY WHERE SUCH PROBLEMS EXIST

NON-SHRINK GROUT OR DRY PACK SHALL BE A PREMIXED, NONMETALLIC FORMULA WITH A MINIMUM COMPRESSIVE STRENGTH OF 7000 PSI AT 28 DAYS AND HAVING THE FOLLOWING CHARACTERISTICS: NO SHRINKAGE AFTER PLACEMENT OR EXPANSION AFTER SET (ASTM C1090), ONE DAY COMPRESSIVE STRENGTH OF AT LEAST 3000 PSI (ASTM C109) AND INITIAL SET TIME OF NOT LESS THAN 45 MINUTES (ASTM C191), PROVIDE "HI-FLOW GROUT" OR "DRY PACK GROUT" BY EUCLID, OR AN APPROVED EQUAL.

A. STEEL PLATE SHALL CONFORM TO THE REQUIREMENTS OF ASTM A36, Fy = 36 ksi.

HOLLOW STRUCTURAL SECTIONS (HSS) SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500, GRADE B, Fy = 46 ksi. C. ALL STRUCTURAL STEEL SHALL BE IDENTIFIED BY MILL CERTIFICATE.

D. HIGH STRENGTH BOLTS (HSB) SHALL BE HOT-DIP GALVANIZED (ASTM A153, CLASS D MINIMUM) AND SHALL CONFORM TO THE REQUIRMENTS OF ASTM A325-N. HIGH STRENGTH BOLTS SHALL BE TIGHTENED TO A SNUG TIGHT CONDITION PLUS AN ADDITIONAL HALF TURN.

MATERIAL BEING WELDED. ALL WELDING SHALL BE PERFORMED BY AWS CERTIFIED WELDERS.

ALL WELDING SHALL BE APPROVED BY AN AWS CERTIFIED INSPECTOR.

**EQUIVALENT PAINT SYSTEM.** SHOP DRAWINGS OF ALL STRUCTURAL STEEL SHALL BE SUBMITTED TO HYYTINEN ENGINEERING FOR APPROVAL

K. ALL BOLT HOLE DIAMETERS SHALL BE EQUAL TO THE BOLT DIAMETER PLUS 1/16" U.N.O. BOLT HOLES FOR ANCHOR

BOLTS SHALL BE EQUAL TO THE BOLT DIAMETER PLUS 1/8". ANCHOR BOLTS SHALL CONFORM TO ASTM F1554, GRADE 36 AND SHALL BE HOT-DIP GALVANIZED (ASTM A153,

ALUMINUM

A. INTERLOCKING SEAM ALUMINUM ROOF DECK SHALL BE ROLL FORMED FROM ALUMINUM ALLOY 3004-H36 AND

C. EXTRUDED ALUMINUM RIDGE CAP SHALL BE FABRICATED FROM ALUMINUM ALLOY 6105-T5 AND SHALL CONFORM TO THE REQUIREMENTS SHOWN ON THE DRAWINGS.

THE REQUIREMENTS SHOWN ON THE DRAWINGS.

E. EXTRUDED ALUMINUM RIDGE CAP, GUTTER, AND FASCIA SHALL BE COATED WITH ANTI-GRAFFITI POLYESTER TGIC POWDER COAT FINISH MEETING AAMA 2604-02 SPECIFICATIONS.

A. SCREWS SHALL BE HILTI KWIK-PRO SELF DRILLING SCREWS WITH BOND SEAL WASHERS PER ICC ESR-2196 OR

ATTACHING TO ALUMINUM SHALL BE 8-18 HEX WASHER HEAD (HWH) #2 POINT SCREWS. C. ALL SCREWS SHALL BE STAINLESS STEEL, TYPE 304 MINIMUM, OR COATED WITH HILTI KWIK-COTE OR APPROVED

SHOP FABRICATION AND FIELD ASSEMBLY A. ALL STRUCTURAL STEEL AND ALUMINUM COMPONENTS SHALL BE SHOP FABRICATED SO THAT FIELD ASSEMBLY OF CONNECTIONS CAN BE PERFORMED USING ONLY BOLTING AND SCREW PLACEMENT.

A. THE OWNER SHALL EMPLOY A SPECIAL INSPECTOR TO PERFORM INSPECTION OF THE CONSTRUCTION OF THIS PC IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTER 17A OF THE 2016 CALIFORNIA BUILDING CODE (PART 2, TITLE 24, C.C.R.) AND THE DIVISION OF THE STATE ARCHITECT.

THE OWNER SHALL EMPLOY A CLASS 2 (MINIMUM) PROJECT INSPECTOR, APPROVED BY DSA, FOR THE INSPECTION OF THE CONSTRUCTION OF THESE SHELTERS.

THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT. FIRE LIFE SAFETY

A. AN AUTOMATIC FIRE PROTECTION SYSTEM MAY BE REQUIRED FOR THIS BUILDING DEPENDING ON SITE SPECIFIC REQUIREMENTS. WHERE REQUIRED, THE AUTOMATIC FIRE PROTECTION SYSTEM SHALL BE DESIGNED BY OTHERS THE DESIGN OF THIS SHELTER IS CAPABLE OF SUPPORTING THE WEIGHT OF A FIRE SPRINKLER SYSTEM (1.5 PSF).

PLACEMENT WITHIN ANY FIRE HAZARD SEVERITY ZONE.

STRUCTURAL COMPONENTS

# NOTICE OF DISCLAIMER FOR STRUCTURAL ENGINEERING RESPONSIBILITY

- 1. THIS NOTICE SHALL BE GIVEN TO DSA PRIOR TO THE APPROVAL OF PLANS AND SPECIFICATIONS.
- 2. FOR THE SITE SPECIFIC PROJECT, ROGER HYYTINEN IS NOT THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE, UNLESS NOTED OTHERWISE.
- OF PLANS AND SPECIFICATIONS FOR THE SHELTER(S) OF THIS PC ONLY.
- RESPONSIBILITY FOR THE SITE SPECIFIC PROJECT.
- QUALIFIED ENGINEER BY THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE. THESE ACTIVITIES INCLUDE, BUT ARE NOT LIMITED TO, APPROVAL OF INSPECTOR QUALIFICATIONS. STRUCTURAL OBSERVATION OF CONSTRUCTION, REVIEW OF INSPECTION REPORTS, AND SIGNING OFF THE VERIFIED REPORT FOR COMPLETED WORK.
- ROGER HYYTINEN WILL BE RESPONSIBLE FOR RESPONDING TO QUESTIONS PERTAINING TO THE PLANS AND SPECIFICATIONS FOR THE SHELTER(S) OF THIS PC WHICH ARISE DURING PLAN CHECK AND
- IN THE EVENT THAT ROGER HYYTINEN IS REQUIRED TO PROVIDE STRUCTURAL OBSERVATION OF CONSTRUCTION, HE SHALL BE NOTIFIED IN WRITING PRIOR TO THIS REQUIREMENT BEING MADE, ALSO, HIS ANTICIPATED ADDITIONAL FEES FOR THIS ADDITIONAL WORK SHALL BE PAID IN ADVANCE, PRIOR TO ANY STRUCTURAL OBSERVATION OR CONSTRUCTION SERVICES BEING PERFORMED.



A. THE STRUCTURAL DESIGN OF THE COMPONENTS AND CONNECTIONS OF THIS SHELTER ARE

INCREASED WIND FORCES MAY RESULT.

A. THE DESIGN OF THIS STRUCTURE IS IN CONFORMANCE WITH THE FOLLOWING STANDARDS AND ALL PHASES OF CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING STANDARDS.

1. 2016 CALIFORNIA ADMINISTRATIVE CODE (CAC) ...... (PART 1, TITLE 24, CCR, EFFECTIVE JULY 1, 2014)

(2015 INTERNATIONAL BUILDING CODE WITH 2016 CALIFORNIA AMENDMENTS) 3. 2016 CALIFORNIA ELECTRICAL CODE ...... (PART 3, TITLE 24, CCR)

(2014 NATIONAL ELECTRICAL CODE WITH 2016 CALIFORNIA AMENDMENTS) 4. 2016 CALIFORNIA MECHANICAL CODE (CMC) ...... (PART 4, TITLE 24, CCR)

5. 2016 CALIFORNIA PLUMBING CODE (CPC) ...... (PART 5, TITLE 24, CCR) (2015 UNIFORM PLUMBING CODE WITH 2016 CALIFORNIA AMENDMENTS) ........... (PART 6, TITLE 24, CCR, EFFECTIVE JULY 1, 2014)

8. 2016 CALIFORNIA GREEN BUILDING STANDARDS CODE ......(PART 11, TITLE 24, CCR, EFFECTIVE JULY 1, 2014) DIV. OF THE STATE ARCHITECT 10. NFPA 13 - 2016

a. 2016 CBC, CHAPTER 35

CHANGE DOCUMENT (CCD) APPROVED BY THE DSA AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24, C.C.R. IV. FOUNDATION

CAPABLE OF SUPPORTING 1500 PSF VERTICAL BEARING PRESSURE. B. FOR LATERAL LOADING, THE FOUNDATION HAS BEEN DESIGNED TO THE MINIMUM LATERAL BEARING VALUE IN CBC TABLE 1806A.2. THIS IS 100 PSF/FT LATERAL BEARING. C. FOUNDATION DESIGN SHOWN IS BASED ON SOIL CONDITIONS GIVEN IN NOTES A AND B, ABOVE. OWNER SHALL VERIFY

D. FOUNDATIONS HAVE NOT BEEN DESIGNED FOR LOCATIONS WITH LIQUEFIABLE SOIL

OF 4500 PSI. CONCRETE EXPOSED TO FREEZE AND THAW CYCLES SHALL BE AIR ENTRAINED PER ACI 318 SECION

THE INSPECTOR OF RECORD PRIOR TO CONSTRUCTION.

VI. STRUCTURAL STEEL

ALL HIGH STRENGTH BOLTS SHALL HAVE CERTIFICATION. WELDING SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICAN WELDING SOCIETY'S SPECIFICATION FOR THE

WELD ELECTRODES SHALL BE E70XX AND SHALL CONFORM TO THE REQUIREMENTS OF AWS D1.8-6.3 FOR DEMAND

STRUCTURAL STEEL SHALL BE PAINTED WITH ZINC-RICH PRIMER, UNDERCOAT, AND FINISH COAT, OR APPROVED

CLASS D MINIMUM).

SHALL CONFORM TO THE DECK PROFILE SHOWN ON THE DRAWINGS B. ALUMINUM ROOF DECK SHALL BE COATED WITH HEAT REFLECTIVE BASF ULTRA-COOL COATING OR APPROVED

EXTRUDED ALUMINUM FASCIA SHALL BE FABRICATED FROM ALUMINUM ALLOY 6063-T5. EXTRUDED ALUMINUM GUTTER SHALL BE FABRICATED FROM ALUMINUM ALLOY 6105-T5. ALUMINUM COMPONENTS SHALL CONFORM TO

B. SCREWS ATTACHING TO STEEL SHALL BE 12-24 HEX WASHER HEAD (HWH) #5 POINT SCREWS. SCREWS

THE MANUFACTURER SHALL PROVIDE A SCREW CERTIFICATION LETTER STATING THAT SCREWS PROVIDED MATCH THE SIZE AND TYPE SPECIFIED HEREIN. THE CERTIFICATION LETTER SHALL BE SUBMITTED TO THE INSPECTOR OF RECORD PRIOR TO INSTALLATION.

A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT (OWNER) SHALL CONDUCT ALL

C. THE METAL ROOFING COMPLIES WITH FIRE CLASSIFICATION B. THIS SHELTER HAS NOT BEEN DESIGNED FOR

NEITHER PIPING NOR CONDUIT ARE ALLOWED TO PENETRATE FOUNDATIONS, BASEPLATES, OR OTHER

- FOR THE SITE SPECIFIC PROJECT, ROGER HYYTINEN'S RESPONSIBILITY IS LIMITED TO THE PREPARATION
- STRUCTURAL OBSERVATION OF CONSTRUCTION IS SPECIFICALLY EXCLUDED FROM ROGER HYYTINEN'S
- ALL CONSTRUCTION ACTIVITIES RELATED TO STRUCTURAL ENGINEERING SHALL BE DELEGATED TO A
- CONSTRUCTION.

**NVGI** 

R.H.

4/26/18

SCALE

AS NOTED

JOB NO.

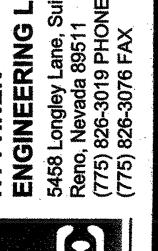
67-16

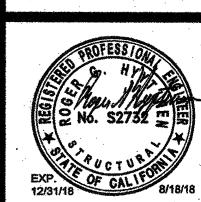
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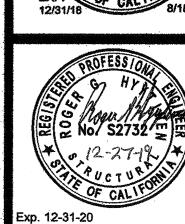
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IDENTIFICATION STAVE? DIV. OF THE STATE ARCHITECT 02 11 5 7 3 1 AC TM FLS TE SST DATE 28 Availe18







<u> </u>	EXAMI	PLE FO	ORM	DSA 103
Dĝ				ses only to assist in the completion of future project specific form PC is being incorporated into and the example form DSA-103 is to
		edition of the C	alifornia Bu	Illding Code (CBC) unless otherwise noted.
	du RED EST OR SPECIAL INSPECTION	jù.	PER CAN	CODE REFERENCE AND NOTES
		/ Ar.	1 80 BY	
*	SOILS \ 1. GENERAL:	Table 1705A.	6	
	a. Verify that: • site has been prepared properly prior to placement of controlled			
X	fill and/or excavations for foundations,  • foundation excavations are extended to proper depth and have reached proper material, and  • materials below footings are adequate to achieve the design bearing capacity.	Periodic	GE*	* By geotechnical engineer or his or her qualified representative. (See Appendix for exemptions.)
*	2. COMPACTED FILLS:	Table 1705A.	<del></del>	
X	a. Perform classification and testing of fill materials.      b. Verify use of proper materials, densities and inspect lift	Test	LOR*	* Under the supervision of the geotechnical engineer.
X	thicknesses, placement, and compaction during placement of fill.	Continuous	GE*	* By geotechnical engineer or his or her qualified representative.
<u>X</u>	c. Test compaction of fill.  4. CAST-IN-PLACE DEEP FOUNDATIONS (PIER	Test	LOR*	* Under the supervision of the geotechnical engineer. 05A.8
X	Inspect drilling operations and maintail complete and accurate records for each pier.	Continuous	GE*	* By geotechnical engineer or his or her qualified representative. (See Appendix for exemptions.)
х	Confirm pier locations, diameters, plumbness, bell diameters (if applicable), lengths, and embedment into badrock (if applicable).  Record concrete or grout volumes.	Continuous	GE*	* By geotechnical engineer or his or her qualified representative. (See Appendix for exemptions.)
X	d. Confirm adequate end strata bearing capacity.	Continuous	GE*	* By geotechnical engineer or his or her qualified representative. (See Appendix for exemptions.)
X	e. Concrete piers.			ns per CONCRETE section below.
***	CONCRETE \ 7 CAST IN BLACE CONCRETE	Table 1705A.3	, ACI 318-14	Sections 26.12 & 26.13
	7. CAST IN PLACE CONCRETE  Material Verification and Testing:			
x	a. Verify use of required design mix.	Periodic	SI*	Table 1705A.3 Item 5, 19/0A.1 (1909.2.3*). * To be performed by qualified batch-plant inspector and concrete sampling technician
X	b. Identifiy, sample, and test reinforcing steel.	Test	LOR	1910A.2 (1909.2.4 <sup>+</sup> ); CI 318-14 Section 26.6.1.2. DSA IR 17-10
X	c. During concrete placement, fabricate specimens for strength tests, perform slump and air content tests, and	Test	LOR	Table 1705A.3 item 6; ACI 318-14 Sections 26.5 & 26.12
*****************	determine the temperature of the concrete.			
X	d. Test concrete (f <sub>c</sub> ).  Inspection:	Test	LOR	1905A.1.16 (1909.3.7*); ACI 318-14 Section 26.12.
X	e. Batch plant inspection   Continuous   Periodic	see Notes	SI	Default of Continuous' per 1705A.3.3; If approved by DSA, batch plant inspection may be reduced to 'Periodic' subject to requirements in Section 1705A.3.3.1 or eliminated per 1705A.3.3.2. (See Appendix for exemptions.)
+	MASONRY	TMS 492-13/A	CI 530-13/AS	SCE 5-13 Table 3.1.3 & TMS 602-13/ACI 530.1-13/ASCE 6-13 Table 5
梅	STEEL, ALUMINUM	Table 1706A.2	.1, AISC 303	3-10, AISC 360-10, AISC 341-10, AISC 358-10, AISI S100-07/S2-10
	17. STRUCTURAL STEEL, COLD-FORMED STEE	EL, AND AL	UMINU	USED FOR STRUCTURAL PURPOSES
	Material Verification:  a. Verify identification of all materials and:	<u> </u>		2203A.1 (2203.1 <sup>+</sup> ), Table 1705A.2.1 Item 3a-3c; AISI S100-07/S2-10 Section A2.1 & A2.2, AISI
X	<ul> <li>Mill certificates indicate material properties that comply with requirements,</li> <li>Material sizes, types and grades comply with requirements.</li> </ul>	Periodic	X	S200-12 Section A3, AISI S220-11 Section A4. * By special inspector or qualified technician when performed off-site.
X	b. Test unidentified materials     c. Examine seam welds of HSS shapes	Test Periodic	LOR	<b>2203A.1</b> (2203.1 <sup>+</sup> ).  DSA IR 17-3.
	Inspection:  e. Verify and document steel fabrication per DSA approved	/	<u></u>	
X	construction documents.	Periodio	SI	Not applicable to cold-formed steel light-frame construction, except for trusses (1705A.2.4).
	18. HIGH STRENGTH BOLTS:  Material Verification of High-Strength Bolts, Nuts, and Washer	RCSC 2009 s:		
X	Verify identification markings and manufacturer's certificates of compliance conform to ASTM standards specified in the DSA	Periodic	SI	Table 1 05A.2.1 Item 1, 2203A.1; RCSC 2009 Section 2.1. DSA IR 17-9
X	approved documents.  b. Test high-strength bolts, nuts and washers.	Test	LOR	2213A.1 (2212.6.1 <sup>+</sup> ). RCSC 2009 Section 7.2 DSA IR 17-8
	Inspection of High-Strength Bolt Installation:			
<u>X</u>	c. Bearing-type ("snug tight") connections.  19. WELDING:	Periodic	SI	Table 1705A.2.1 Item 2a; RCSC 2009 Section 9.1. DSA IR 17-9  1705A.2.5, Table 1705A.2.1 Items 4 & 5; DSA IR 17-3, AWS D1.1 and AWS D1.8 for structural steel, AWS D1.2 for Aluminum, AWS D1.3 for cold-formed steel, AWS D1.4 for reinforcing steel. (See Appendix for exemptions.)
	Verification of Materials, Equipment, Welders, etc:			
<b>X</b> .	<ul> <li>a. Verify weld filler material identification markings per AWS designation listed on the DSA approved documents and the WPS.</li> </ul>	Periodic	SI	DSA IR 17-3.
X	b. Verify weld filler material manufacturer's certificate of compliance.	Periodic	Sì	DSA IR 17-3.
X	c. Verify WPS, welder qualifications and equipment.	Periodic	SI	DSA IR 17-3.
*	19.1 SHOP WELDING:  a. Inspect groove welds, multi-pass fillet welds, single pass fillet	Continuous	SI	Table 1705A.2.1 item 5a1-4. Per AISC 360-10 (and AISC 341-10 as applicable). DSA IR 17-3.
X	welds > 5/16", plug and slot welds		SI	1705A.2.2, Table 1705A.2.1 Item 5a.5 2 5a.6. Per AISC 360-10 (and AISC 341-10 as applicable).
X	<ul> <li>b. Inspect single-pass fillet welds ≤ 5/16°, floor and roof deck welds</li> <li>23. ANCHOR BOLTS, ANCHOR RODS, &amp; OTHER</li> </ul>	Periodic R STEEL:	1 31	DSA IR 17-3.
X	a. Anchor Bolts and Anchor Rods	Test	LOR	IR 17-11 Sample and test anchor bolts and anchor rods not readily identifiable.
	WOOD /	,		
+	OTHER /	***************************************		
<del>*************************************</del>	List of required verified report(s):  Soils testing an	d Inspection: G	entechnical \	Verified Report - Form DSA-293
·	All Structur Concrete Batch Plant Inspection: Laboratory Verified Report Shop/Welding Inspection: Laboratory Verified Report - Fo	ral Testing: Laborated Form DSA-29 orm DSA-291, or	oratory Verifi 1, or, for inde r, for indepe	ied Report - Form DSA-291 ependently contracting SI, Special Inspection Verified Report - Form DSA-292 ndently contracting SI, Special Inspection Verified Report - Form DSA-292 pendently contracting SI, Special Inspection Verified Report - Form DSA-292
KEY	to Columns			
1	Type -	Van skurskiles brokksliniskis om listuskis Fritani	2 Perfe	ormed By -
Conti	inuous - Indicates that a continuous special inspection is required		GE - Indic	ates that the special inspection is to be performed by a registered geotechnical engineer or his or her
······································	dic - Indicates that a periodic special inspection is required		LOR - Indi	representative  icates that the test or inspection is to be performed by a testing laboratory accepted in the DSA  Evaluation and Acceptance (LEA) Program. See section 4-335, 2013 CCR Title 24 Part 1.
Test	- Indicates that a test is required			tes that the special inspection is to be performed by a special inspector
1631	- Indicates that a test is required		Jos - Indica	tes that the special mapector is to be performed by a special mapector
	· · · · · · · · · · · · · · · · · · ·	provided ce		ill test reports are provided for each shipment of such reinforcement ovided that the licensed weighmaster and batch ticket requirements of

DESCRIPTION	DESIGN VALUES
DEAD AND LIVE LOADS	
ROOF LIVE LOAD (Lr)	20 PSF
ROOF DEAD LOAD (D)	5 PSF
SOILS AND GEOHAZARDS	I area por
ALLOWABLE VERTICAL BEARING PRESSURE	1500 PSF  15' MIN. FROM FACE OF FOOTING TO TOE OF SLOPE.
ADJACENT SLOPE MINIMUM SETBACK LIMITS (CBC 1808A.7)	40' MIN FROM FACE OF FOOTING TO TOP OF SLOPE.
SITE CLASS SITE CLASS F OR LIQUEFIABLE SOIL HAZARD	IF STRUCTURE IS LOCATED IN SITE CLASS F OR AN AREA LIQUEFIABLE SOIL, OVER-THE-COUNTER SUBMITTAL IS NO ALLOWED AND REGULAR PROJECT SUBMITTAL IS REQUIR
ROOF SNOW LOAD	
GROUND SNOW LOAD (Pg)	22 PSF
SLOPED ROOF SNOW LOAD (Ps)	20 PSF
SNOW EXPOSURE FACTOR (Ce)	1.1
SNOW IMPORTANCE FACTOR (I)	1,0
THERMAL FACTOR (Ct)	1,2
MINIMUM SEPARATION FROM TALLER, ADJACENT STRUCTURES (IN SNOW REGIONS ONLY)	20' - 0"
FLOOD DESIGN	
WHEN THE SITE-SPECIFIC PROJECT IS LOCATED IN A FLOOD ZONE OF BY A SOILS ENGINEER IS NEEDED TO VALIDATE THE ALLOWABLE SO	
WIND DESIGN	
ULTIMATE DESIGN WIND SPEED (Vult)	120 MPH
WIND EXPOSURE FACTOR	C
TOPOGRAPHIC FACTOR (Kzt)	1.0
ASCE 7-10 WIND ANALYSIS METHOD	CHAPTER 27 DIRECTIONAL PROCEDURE
VELOCITY PRESSURE EXPOSURE COEFFICIENT (Kz)	0.85
NET PRESSURE COEFFICIENT	VARIES, SEE CALCULATIONS
WIND DIRECTIONALITY FACTOR (Kd) WIND VELOCITY PRESSURE (gh)	0.85 26.6 PSF
72.20.71.11.11.10.00.71.2	
SEISMIC DESIGN	
TRANSVERSE LATERAL FORCE RESISTING SYSTEM	STEEL ORDINARY MOMENT RESISTING FRAMES
LONGITUDINAL LATERAL FORCE RESISTING SYSTEM	STEEL ORDINARY CANTILEVER COLUMNS
ASCE 7-10 ANALYSIS PROCEDURE	SECTION 12.8 EQUIVALENT LATERAL FORCE PROCEDURE
SEISMIC DESIGN CATEGORY	E
SEISMIC IMPORTANCE FACTOR	1.0
TRANSVERSE DESIGN BASE SHEAR (V)	605 # PER COLUMN
LONGITUDINAL DESIGN BASE SHEAR (V)	1676 # PER COLUMN
TRANSVERSE SEISMIC RESPONSE COEFFICIENT (Cs)	0.48
LONGITUDINAL SEISMIC RESPONSE COEFFICIENT (Cs)	1.33 3.5
TRANSVERSE RESPONSE MODIFICATION FACTOR (R)  LONGITUDINAL RESPONSE MODIFICATION FACTOR (R)	1.25
TRANSVERSE SYSTEM OVERSTRENGTH FACTOR (Ω0)	3,0
LONGITUDINAL SYSTEM OVERSTRENGTH FACTOR (Ω0)	1.25
TRANSVERSE DEFLECTION AMPLIFICATION FACTOR (Cd)	3.0
LONGITUDINAL DEFLECTION AMPLIFICATION FACTOR (Cd)	1.25
SITE CLASS	D
MAPPED MCE, 5% DAMPED, SPECTRAL RESPONSE	
ACCELERATION AT SHORT PERIOD (Ss)	2.5
	1.0
SHORT PERIOD SITE COEFFICIENT (Fa)	1.67
SHORT PERIOD SITE COEFFICIENT (Fa)  DESIGN MCE, 5% DAMPED, SPECTRAL RESPONSE ACCELERATION AT SHORT PERIOD (Sps)	
DESIGN MCE, 5% DAMPED, SPECTRAL RESPONSE ACCELERATION AT SHORT PERIOD (Sps) MAPPED MCE, 5% DAMPED, SPECTRAL RESPONSE	1.25
DESIGN MCE, 5% DAMPED, SPECTRAL RESPONSE ACCELERATION AT SHORT PERIOD (Sps)	
DESIGN MCE, 5% DAMPED, SPECTRAL RESPONSE ACCELERATION AT SHORT PERIOD (Sps)  MAPPED MCE, 5% DAMPED, SPECTRAL RESPONSE ACCELERATION AT 1 SECOND PERIOD (S1)	1.25

BUILDING DATA				
CONSTRUCTION CLASSIFICATION	TYPE II-B			
OCCUPANCY CLASSIFICATION	A-3			
RISK CATEGORY				
NUMBER OF STORIES	1			
MINIMUM SEISMIC SEPARATION	10"			
SLOPE SETBACKS	FACE OF FOUNDATION TO TOE OF ASCENDING SLOPE:  15' MINIMUM.  FACE OF FOUNDATION TO TOP OF DESCENDING SLOPE:			

# NOTICE OF DISCLAIMER FOR STRUCTURAL ENGINEERING RESPONSIBILITY

- 1. THIS NOTICE SHALL BE GIVEN TO DSA PRIOR TO THE APPROVAL OF PLANS AND SPECIFICATIONS.
- 2. FOR THE SITE SPECIFIC PROJECT, ROGER HYYTINEN IS NOT THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE, UNLESS NOTED OTHERWISE.
- FOR THE SITE SPECIFIC PROJECT, ROGER HYYTINEN'S RESPONSIBILITY IS LIMITED TO THE PREPARATION OF PLANS AND SPECIFICATIONS FOR THE SHELTER(S) OF THIS PC
- STRUCTURAL OBSERVATION OF CONSTRUCTION IS SPECIFICALLY EXCLUDED FROM ROGER HYYTINEN'S RESPONSIBILITY FOR THE SITE SPECIFIC PROJECT.
- ALL CONSTRUCTION ACTIVITIES RELATED TO STRUCTURAL ENGINEERING SHALL BE DELEGATED TO A QUALIFIED ENGINEER BY THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE. THESE ACTIVITIES INCLUDE, BUT ARE NOT LIMITED TO, APPROVAL OF INSPECTOR QUALIFICATIONS, STRUCTURAL OBSERVATION OF CONSTRUCTION, REVIEW OF INSPECTION REPORTS, AND SIGNING OFF THE VERIFIED REPORT FOR COMPLETED WORK.
- ROGER HYYTINEN WILL BE RESPONSIBLE FOR RESPONDING TO QUESTIONS PERTAINING TO THE PLANS AND SPECIFICATIONS FOR THE SHELTER(S) OF THIS PC WHICH ARISE DURING PLAN CHECK AND CONSTRUCTION.
- IN THE EVENT THAT ROGER HYYTINEN IS REQUIRED TO PROVIDE STRUCTURAL OBSERVATION OF CONSTRUCTION, HE SHALL BE NOTIFIED IN WRITING PRIOR TO THIS REQUIREMENT BEING MADE. ALSO, HIS ANTICIPATED ADDITIONAL FEES FOR THIS ADDITIONAL WORK SHALL BE PAID IN ADVANCE, PRIOR TO ANY STRUCTURAL OBSERVATION OR CONSTRUCTION SERVICES BEING PERFORMED.

### **GENERAL NOTES**

SHELTER DESIGN A. THE STRUCTURAL DESIGN OF THE COMPONENTS AND CONNECTIONS OF THIS SHELTER ARE

SUFFICIENT FOR EAVE HEIGHTS RANGING FROM 7' UP TO 12' TALL.

B. REQUIRED EAVE HEIGHT FOR EACH SITE SHALL BE DETERMINED BY OWNER. C. THIS SHELTER HAS BEEN DESIGNED AS AN OPEN STRUCTURE. THE ADDITION OF ANY ENCLOSURE DIRECTLY ATTACHED TO THE SHELTER, SUCH AS WALLS, INSECT MESH, OR SHADE SCREENS, SHALL BE PROHIBITED AS

INCREASED WIND FORCES MAY RESULT. DESIGN AND CONSTRUCTION STANDARDS A. THE DESIGN OF THIS STRUCTURE IS IN CONFORMANCE WITH THE FOLLOWING STANDARDS AND ALL PHASES OF

CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING STANDARDS.

1. 2016 CALIFORNIA ADMINISTRATIVE CODE (CAC) ......(PART 1, TITLE 24, CCR, EFFECTIVE JULY 1, 2014) 2. 2016 CALIFORNIA BUILDING CODE (CBC), VOLUMES 1 AND 2 (PART 2, TITLE 24, CCR)

(2015 INTERNATIONAL BUILDING CODE WITH 2016 CALIFORNIA AMENDMENTS)

3. 2016 CALIFORNIA ELECTRICAL CODE ...... (2014 NATIONAL ELECTRICAL CODE WITH 2016 CALIFORNIA AMENDMENTS)

4. 2016 CALIFORNIA MECHANICAL CODE (CMC) .......(PART 4, TITLE 24, CCR) (2015 UNIFORM MECHANICAL CODE WITH 2016 CALIFORNIA AMENDMENTS)

5. 2016 CALIFORNIA PLUMBING CODE (CPC) ......(PART 5, TITLE 24, CCR) (2015 UNIFORM PLUMBING CODE WITH 2016 CALIFORNIA AMENDMENTS)

6. 2016 CALIFORNIA ENERGY CODE ...... ..... (PART 6, TITLE 24, CCR, EFFECTIVE JULY 1, 2014) 7. 2016 CALIFORNIA FIRE CODE (CFC) ... .... (PART 9, TITLE 24, CCR)

(2015 INTERNATIONAL FIRE CODE WITH 2016 CALIFORNIA AMENDMENTS) 8. 2016 CALIFORNIA GREEN BUILDING STANDARDS CODE ......(PART 11, TITLE 24, CCR, EFFEGTIVE, JULY 1-2014)

9. 2016 CALIFORNIA REFERENCED STANDARDS CODE ......(PART 12, TITLE 24, CCR)V. OF THE STATE ARCHITECT 10. NFPA 13 - 2016

11. NFPA 72 - 2016 12. REFERENCE CODE SECTIONS FOR APPLICABLE STANDARDS

ACS ST FLSN. 1 SS CSC DATE JAN 3 0 2020 a. 2016 CBC, CHAPTER 35 b. 2016 CFC, CHAPTER 80

CONSTRUCTION CHANGES A. CHANGES TO THE APPROVED PLANS AND SPECIFICATIONS SHALL BE MADE BY AN ADDENDA OR CONSTRUCTION CHANGE DOCUMENT (CCD) APPROVED BY THE DSA AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24, C.C.R.

A. THE FOUNDATION SHALL REST ON SOUND SOIL THAT IS FREE OF ORGANIC AND DELETERIOUS MATERIALS AND

CAPABLE OF SUPPORTING 1500 PSF VERTICAL BEARING PRESSURE. B. FOR LATERAL LOADING, THE FOUNDATION HAS BEEN DESIGNED TO THE MINIMUM LATERAL BEARING VALUE IN CBC

TABLE 1806A.2. THIS IS 100 PSF/FT LATERAL BEARING. C. FOUNDATION DESIGN SHOWN IS BASED ON SOIL CONDITIONS GIVEN IN NOTES A AND B, ABOVE. OWNER SHALL VERIFY ACTUAL SOIL CONDITIONS AT EACH JOB SITE AND ANY REQUIRED ADJUSTMENTS TO THE FOOTING DESIGN SHALL BE DESIGNED BY OTHERS. D. FOUNDATIONS HAVE NOT BEEN DESIGNED FOR LOCATIONS WITH LIQUEFIABLE SOIL.

A. CONCRETE MIX DESIGN SHALL UTILIZE TYPE V CEMENT AND SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4500 PSI. CONCRETE EXPOSED TO FREEZE AND THAW CYCLES SHALL BE AIR ENTRAINED PER ACI 318 SECION

B. REINFORCING BARS SHALL BE DEFORMED BARS CONFORMING TO THE REQUIREMENTS OF MINIMUM ASTM A615 GRADE 40 FOR #4 AND SMALLER BARS AND GRADE 60 FOR BARS LARGER THAN #4.

MINIMUM CONCRETE CLEAR COVER FOR REINFORCING BARS SHALL BE 3". D. A CONCRETE MIX DESIGN IN ACCORDANCE WITH CBC SECTION CHAPTER 19A SHALL BE PERFORMED AND STAMPED BY A CIVIL ENGINEER LICENSED IN THE STATE OF CALIFORNIA. THE CONCRETE MIX DESIGN SHALL BE SUBMITTED TO

THE INSPECTOR OF RECORD PRIOR TO CONSTRUCTION. E. THE MIX DESIGN SHALL MEET THE CRITERIA HEREIN AND SHALL BE PROPER FOR LOCAL CONDITIONS INCLUDING, BUT NOT LIMITED TO, FREEZING AND THAWING EXPOSURE, CHEMICAL AND SALT EXPOSURE, AND SOIL CORROSIVITY WHERE SUCH PROBLEMS EXIST.

NON-SHRINK GROUT OR DRY PACK SHALL BE A PREMIXED, NONMETALLIC FORMULA WITH A MINIMUM COMPRESSIVE STRENGTH OF 7000 PSI AT 28 DAYS AND HAVING THE FOLLOWING CHARACTERISTICS: NO SHRINKAGE AFTER PLACEMENT OR EXPANSION AFTER SET (ASTM C1090), ONE DAY COMPRESSIVE STRENGTH OF AT LEAST 3000 PSI (ASTM C109) AND INITIAL SET TIME OF NOT LESS THAN 45 MINUTES (ASTM C191). PROVIDE "HI-FLOW GROUT" OR "DRY PACK GROUT" BY EUCLID, OR AN APPROVED EQUAL.

VI. STRUCTURAL STEEL

A. STEEL PLATE SHALL CONFORM TO THE REQUIREMENTS OF ASTM A36, Fy = 36 ksi. B. HOLLOW STRUCTURAL SECTIONS (HSS) SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500, GRADE B, Fy = 46 ksi. C. ALL STRUCTURAL STEEL SHALL BE IDENTIFIED BY MILL CERTIFICATE.

D. HIGH STRENGTH BOLTS (HSB) SHALL BE HOT-DIP GALVANIZED (ASTM A153, CLASS D MINIMUM) AND SHALL CONFORM TO THE REQUIRMENTS OF ASTM A325-N. HIGH STRENGTH BOLTS SHALL BE TIGHTENED TO A SNUG TIGHT CONDITION PLUS AN ADDITIONAL HALF TURN.

E. ALL HIGH STRENGTH BOLTS SHALL HAVE CERTIFICATION. F. WELDING SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICAN WELDING SOCIETY'S SPECIFICATION FOR THE MATERIAL BEING WELDED. ALL WELDING SHALL BE PERFORMED BY AWS CERTIFIED WELDERS.

G. WELD ELECTRODES SHALL BE E70XX AND SHALL CONFORM TO THE REQUIREMENTS OF AWS D1.8-6.3 FOR DEMAND

 H. ALL WELDING SHALL BE APPROVED BY AN AWS CERTIFIED INSPECTOR. STRUCTURAL STEEL SHALL BE PAINTED WITH ZINC-RICH PRIMER, UNDERCOAT, AND FINISH COAT, OR APPROVED

J. SHOP DRAWINGS OF ALL STRUCTURAL STEEL SHALL BE SUBMITTED TO HYYTINEN ENGINEERING FOR APPROVAL

K. ALL BOLT HOLE DIAMETERS SHALL BE EQUAL TO THE BOLT DIAMETER PLUS 1/16" U.N.O. BOLT HOLES FOR ANCHOR BOLTS SHALL BE EQUAL TO THE BOLT DIAMETER PLUS 1/8". L. ANCHOR BOLTS SHALL CONFORM TO ASTM F1554, GRADE 36 AND SHALL BE HOT-DIP GALVANIZED (ASTM A153,

A. INTERLOCKING SEAM ALUMINUM ROOF DECK SHALL BE ROLL FORMED FROM ALUMINUM ALLOY 3004-H36 AND

SHALL CONFORM TO THE DECK PROFILE SHOWN ON THE DRAWINGS.

B. ALUMINUM ROOF DECK SHALL BE COATED WITH HEAT REFLECTIVE BASF ULTRA-COOL COATING OR APPROVED

C. EXTRUDED ALUMINUM RIDGE CAP SHALL BE FABRICATED FROM ALUMINUM ALLOY 6105-T5 AND SHALL CONFORM TO THE REQUIREMENTS SHOWN ON THE DRAWINGS. D. EXTRUDED ALUMINUM FASCIA SHALL BE FABRICATED FROM ALUMINUM ALLOY 6063-T5. EXTRUDED ALUMINUM GUTTER SHALL BE FABRICATED FROM ALUMINUM ALLOY 6105-T5. ALUMINUM COMPONENTS SHALL CONFORM TO

THE REQUIREMENTS SHOWN ON THE DRAWINGS. E. EXTRUDED ALUMINUM RIDGE CAP, GUTTER, AND FASCIA SHALL BE COATED WITH ANTI-GRAFFITI POLYESTER TGIC POWDER COAT FINISH MEETING AAMA 2604-02 SPECIFICATIONS.

CLASS D MINIMUM).

A. .SCREWS SHALL BE HILTI KWIK-PRO SELF DRILLING SCREWS WITH BOND SEAL WASHERS PER ICC ESR-2196 OR

B. SCREWS ATTACHING TO STEEL SHALL BE 12-24 HEX WASHER HEAD (HWH) #5 POINT SCREWS. SCREWS ATTACHING TO ALUMINUM SHALL BE 8-18 HEX WASHER HEAD (HWH) #2 POINT SCREWS.

C. ALL SCREWS SHALL BE STAINLESS STEEL, TYPE 304 MINIMUM, OR COATED WITH HILTI KWIK-COTE OR APPROVED D. THE MANUFACTURER SHALL PROVIDE A SCREW CERTIFICATION LETTER STATING THAT SCREWS PROVIDED MATCH THE SIZE AND TYPE SPECIFIED HEREIN. THE CERTIFICATION LETTER SHALL BE SUBMITTED TO THE

SHOP FABRICATION AND FIELD ASSEMBLY A. ALL STRUCTURAL STEEL AND ALUMINUM COMPONENTS SHALL BE SHOP FABRICATED SO THAT FIELD ASSEMBLY. OF CONNECTIONS CAN BE PERFORMED USING ONLY BOLTING AND SCREW PLACEMENT.

INSPECTOR OF RECORD PRIOR TO INSTALLATION.

A. THE OWNER SHALL EMPLOY A SPECIAL INSPECTOR TO PERFORM INSPECTION OF THE CONSTRUCTION OF THIS PC IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTER 17A OF THE 2016 CALIFORNIA BUILDING CODE (PART

2. TITLE 24. C.C.R.) AND THE DIVISION OF THE STATE ARCHITECT. B. THE OWNER SHALL EMPLOY A CLASS 2 (MINIMUM) PROJECT INSPECTOR, APPROVED BY DSA, FOR THE

INSPECTION OF THE CONSTRUCTION OF THESE SHELTERS. C. A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT (OWNER) SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT.

AN AUTOMATIC FIRE PROTECTION SYSTEM MAY BE REQUIRED FOR THIS BUILDING DEPENDING ON SITE SPECIFIC

REQUIREMENTS. WHERE REQUIRED, THE AUTOMATIC FIRE PROTECTION SYSTEM SHALL BE DESIGNED BY OTHERS. THE DESIGN OF THIS SHELTER IS CAPABLE OF SUPPORTING THE WEIGHT OF A FIRE SPRINKLER SYSTEM (1.5 PSF). THE METAL ROOFING COMPLIES WITH FIRE CLASSIFICATION B. THIS SHELTER HAS NOT BEEN DESIGNED FOR PLACEMENT WITHIN ANY FIRE HAZARD SEVERITY ZONE.

XII. PENETRATIONS A. NEITHER PIPING NOR CONDUIT ARE ALLOWED TO PENETRATE FOUNDATIONS, BASEPLATES, OR OTHER STRUCTURAL COMPONENTS.

# SITE SPECIFIC OPTIONS

TO BE COMPLETED PRIOR TO PLAN CHECK SUBMITTAL. QUANTITY OF SHELTERS OF THIS PC AT THIS SITE 10'-0" SHELTER EAVE HEIGHT (7' MIN, 12' MAX)

**BUILDING AREA** CONCRETE SLAB OR ASPHALT PAVING (BY OTHERS) OVER FOOTINGS? 
☐ NO **ROOF DOWNSPOUTS?** 

ALUMINUM "V" PLUGS IN ROOF VOIDS FOR BIRD CONTROL? SNOW REGION?

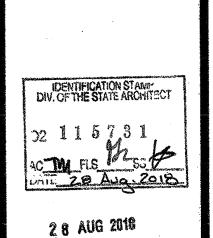
X YES ☐ NO X YES □ NO SNOW (p<sub>a</sub>≤ 22 PSF) ⊠ NON-SNOW

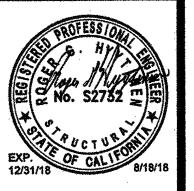
1260 SF 🔀 1620 SF

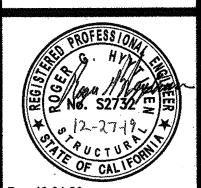
# SHEET INDEX

MT30.0 30' MERAMEC SHELTER DESIGN NOTES, EXAMPLE FORM DSA 103

MT30.1 30' MERAMEC SHELTER PLANS, SECTIONS AND DETAILS





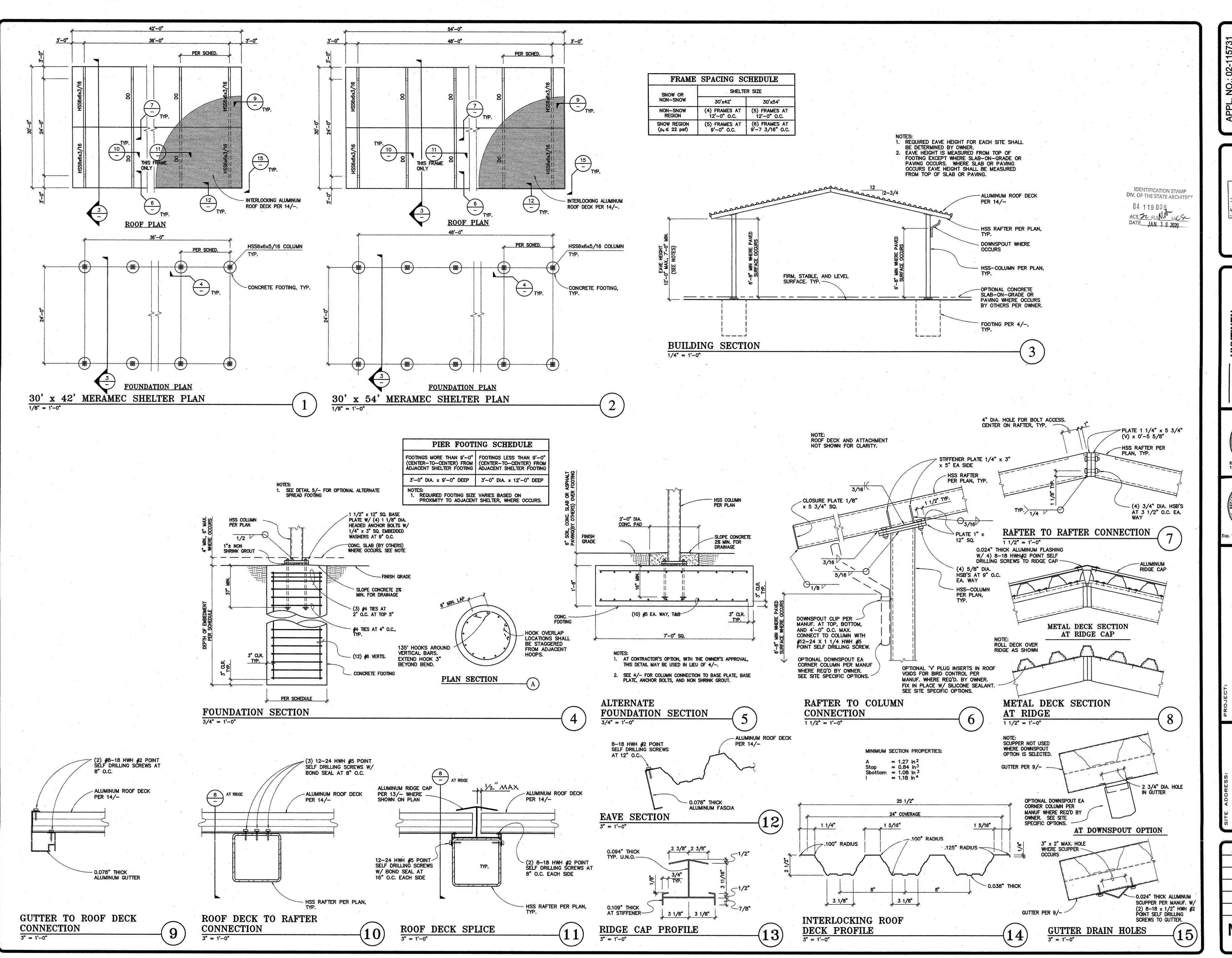


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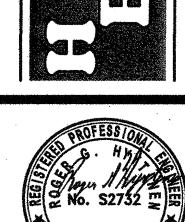
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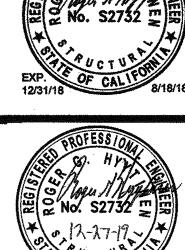
MT30.0

Engineering



IDENTIFICATION STANIFY DIV. OF THE STATE ARCHITECT ACTIM FLS A SO E





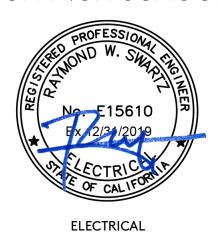


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Engineering

# PINACATE MIDDLE SCHOOL SHADE STRUCTURE PERRIS UNION HIGH SCHOOL DISTRICT









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DIVISION 01	GENERAL REQUIREMENTS
00 01 01	PROJECT TITLE SHEET
00 01 07	SEALS PAGE
01 11 00	SUMMARY OF WORK
01 20 00	PRICE AND PAYMENT PROCEDURES
01 21 00	ALLOWANCES
01 23 00	ALTERNATES
01 25 00	SUBSTITUTION PROCEDURES
01 31 00	PROJECT MANAGEMENT AND COORDINATION
01 32 16	CONSTRUCTION PROGRESS SCHEDULE
01 33 00	SUBMITTAL PROCEDURES
01 42 19	REFERENCE STANDARDS
01 45 00	QUALITY CONTROL
01 52 00	CONSTRUCTION FACILITIES
01 57 00	TEMPORARY CONTROLS
01 60 00	PRODUCT REQUIREMENTS
01 74 00	CLEANING AND WASTE MANAGEMENT
01 77 00	CLOSEOUT PROCEDURES
01 78 30	WARRANTIES AND BONDS
01 91 13	COMMISSIONING REQUIREMENTS

#### SECTION 01 11 00 SUMMARY OF WORK

#### **PART 1 GENERAL**

#### 1.01 SUMMARY

- A. Section Includes
  - 1. Summary of Work
- B. Products Supplied But Not Installed Under This Section
- C. Products Installed But Not Supplied Under This Section
- D. Related Sections
- E. Allowances
- F. Unit Prices
- G. Measurement Procedures
- H. Payment Procedures
- I. Alternates

#### 1.02 REFERENCES

A. Work of the Contract can be summarized by references to the Contract, Agreement, General Conditions, Special Conditions, Supplemental Conditions, Specification, Drawings, Addenda and modifications to the contract documents issued subsequent to the initial printing of this project manual and including, but not necessarily limited to, printed material referenced by any of these. It is recognized that work of the contract is also unavoidably affected or influenced by governing regulations, natural phenomenon including weather conditions and other forces outside the contract documents.

#### 1.03 DEFINITIONS

#### 1.04 SYSTEM DESCRIPTIONS

- A. Design Requirements, Performance Requirements
  - Provide quality workmanship for the related work indicated and specified herein, meeting the quality standards of the trades affected by the scope of work per these contract documents.
- B. Project/Work Identification

THIS CONSTRUCTION DOCUMENT PACKAGE INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING SCOPE:

- 1. GENERAL ALTERATION TO:
  - -(E) SITE WORK, UTILITIES
- 2. ADDITION TO:
  - -(E) 30'x54' SHADE STRUCTURE (A#04-111450) WITH (N)30'x54' SHADE STRUCTURE (PC#02-115731)
- 1.05 SUBMITTALS
- 1.06 QUALITY ASSURANCE
  - A. Qualifications
  - B. Regulatory Requirements
    - The contract documents indicate the intended occupancy and utilization of the buildings and its individual systems and facilities,

compliance with governing regulations is intended and required for the work and for the owner's occupancy and utilization.

- C. Certifications
- D. Field Samples
- E. Mock-ups
- F. Pre-installation Meetings
- 1.07 DELIVERY, STORAGE, AND HANDLING
- 1.08 PROJECT CONDITIONS
- 1.09 SEQUENCING
- 1.10 SCHEDULING
- 1.11 WARRANTY
- 1.12 SYSTEM STARTUP
- 1.13 OWNER'S INSTRUCTIONS
- 1.14 COMMISSIONING
- 1.15 MAINTENANCE

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- 2.01 MANUFACTURERS
- 2.02 EXISTING PRODUCTS
- 2.03 MATERIALS
- 2.04 MANUFACTURED UNITS
- 2.05 EQUIPMENT
- 2.06 COMPONENTS
- 2.07 ACCESSORIES
- 2.08 MIXES
- 2.09 FABRICATION
- 2.10 FINISHES
- 2.11 SOURCE QUALITY CONTROL

#### **PART 3 EXECUTION**

- 3.01 INSTALLERS
- 3.02 EXAMINATION
- 3.03 PREPARATION
- 3.04 ERECTION
- 3.05 INSTALLATION
- 3.06 APPLICATION
- 3.07 CONSTRUCTION
- 3.08 REPAIR/RESTORATION
- 3.09 RE-INSTALLATION
- 3.10 FIELD QUALITY CONTROL
- 3.11 ADJUSTING
- 3.12 CLEANING
- 3.13 DEMONSTRATION
- 3.14 PROTECTION
- 3.15 SCHEDULES

**END OF SECTION** 

SUMMARY OF WORK 01 11 00 - 2

## SECTION 01 20 00 PRICE AND PAYMENT PROCEDURES

#### **PART 1 GENERAL**

1.01 SUMN	1Α	RY
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- A. Section Includes
  - 1. Payment Procedures
  - 2. Schedule of Values
- B. Products Supplied But Not Installed Under This Section
- C. Products Installed But Not Supplied Under This Section
- D. Related Sections
  - 1 01 21 00 Allowances
  - 2. 01 23 00 Alternates
  - 3. 01 32 16 Construction Progress Schedule
  - 4. 01 77 00 Closeout Procedures
- E. Allowances
- F. Unit Prices
- G. Measurement Procedures
- H. Payment Procedures
- I. Alternates
- 1.02 REFERENCES
- 1.03 DEFINITIONS
- 1.04 SYSTEM DESCRIPTIONS
- 1.05 SUBMITTALS
  - A. Product Data
  - B. Shop Drawings
  - C. Samples
  - D. Quality Assurance/Control Submittals
    - 1. Schedule of Values
      - s. Submit a Preliminary Schedule of Values to the ARCHITECT and OWNER for review and approval within 5 calendar days after the date of OWNER issued Notice of Intent to Award (N.O.I.). Submit a PDF copy in Microsoft Excel spreadsheet format. AIA Document G703-1992 will not be accepted.
        - Preliminary Schedule of Values to include all trades, General Conditions, General Contractor's Overhead and Profit, and bonds and insurance for each site.
        - 2. Review and approval of Preliminary Schedule of Values by the ARCHITECT and OWNER shall be required prior to award of the construction contract.
      - b. Submit a Final Schedule of Values to the ARCHITECT for review and approval within 15 calendar days after the date of OWNER-CONTRACTOR Agreement. Submit a PDF copy in Microsoft Excel spreadsheet format. AIA Document G703-1992 will not be accepted.
      - c. In the Schedule of Values, the Contract Sum shall be broken down into specific elements of the Work, as follows, coded in accordance with the OWNER'S coding structure.
        - 1. General Contractor's Overhead and Profit
        - 2. Site Mobilization
        - 3. Bonds and Insurance

- 4. Field Supervision
- 5. Project Close-Out (Section of General Requirements)
- 6. Other General Conditions and General Requirements
- 7. Demolition each item/element itemized.
- 8. Site Clearing and Preparation
- 9. Site Earthwork
- 10. Site Improvements (Paving, etc.)
- 11. Site Utilities
- 12. Landscape Irrigation
- 13. Landscape Planting
- 14. Each CSI Format Division 2 through 48
- 15. HVAC Work
- 16. Plumbing
- 17. Fire Protection Sprinklers
- 18. Electrical Power and Lighting
- 19. Electrical Site Lighting
- 20. Fire Alarm and Smoke Detection Systems
- 21. Electrical Communications and Security Systems
- 22. Project Allowance
- d. On projects of more than one building, provide separate schedules for each building.
- e. The percent-complete values from the approved cost-loaded Construction Progress Schedule shall provide the basis for each Application for Payment. Before each Application, update the Progress Schedule with all approved Change Orders.
- 2. Application For Payment
  - a. Payment Application Forms: Use OWNER provided forms for the Application for Payment.
  - b. Submit Application for Payment to the ARCHITECT (four (4) signed original copies of each certified application). All copies shall be complete, including the updated Schedule of Values and Construction Progress Schedule, releases and similar attachments. Transmit each copy with a transmittal form listing attachments and recording appropriate information related to the application, in a manner acceptable to ARCHITECT.
  - c. Each certified Application for Payment shall be consistent with previous applications and payments as reviewed by ARCHITECT and paid for by OWNER.
  - d. Payment Application Times: The period of Work covered by each Application for Payment is based on the payment date for each progress payment as specified in the General Conditions. The period covered by each Application for Payment is the previous month.
  - e. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with the first certified Application for Payment include, but are not limited to, the following:
    - Certified Schedule of Values or Cost-Loaded Schedule
    - 2. Performance and payment bonds
    - 3. List of principal suppliers and fabricators

- 4. Worker Compensation certificates
- Auto Insurance
- 6. Hazardous Material Insurance Certificates
- 7. Construction Progress Schedule
- 8. Submittal Schedule
- 9. Emergency Contact List
- 10. Copies of authorizations and licenses from governing authorities for performance of the Work
- f. Application for Payment at Substantial Completion:
  Following OWNER issuance of the certificate of Substantial
  Completion, submit an Application for Payment together
  with the following:
  - 1. Occupancy permits and similar approvals by authorities having legal jurisdiction over the Work
  - 2. Removal of temporary facilities and services
  - 3. Testing, adjusting and balance records
  - 4. Removal of surplus materials, rubbish, and similar elements
  - 5. Meter readings
  - 6. Start-up performance reports
  - 7. OWNER training and orientations
  - 8. Change-over information related to OWNER occupancy, use, operation, and maintenance
  - 9. Final cleaning
  - 10. Ensure that incomplete Work is not accepted and will be completed without undue delay
  - 11. Advice on shifting insurance coverage
  - 12. List of defective Work, recognized as exceptions to certificate of Substantial Completion
  - 13. Change of door locks to OWNER system
- g. Final Payment Application: Administrative actions and submittals that must precede or coincide with submittal of the final Application for Payment include, but are not limited to, the following:
  - 1. Completion of Contract Closeout requirements
  - 2. Project record and other closeout documents
  - 3. Completion of final punch list items
  - 4. Delivery of extra materials, products and or stock
  - 5. Identification of unsettled claims
  - 6. Proof that taxes, fees, and similar obligations are paid
  - 7. Evidence of payment and release of liens
  - 8. Operating and maintenance instruction manuals
  - 9. Consent of surety to final payment
  - 10. Waivers and releases
  - 11. Warranties, guarantees and maintenance agreements
- h. Retention
  - Retention will be released no sooner than 35 days and not later than 60 days after Notice of Completion has been recorded with the County Recorder's Office.
- E. Closeout Submittals

- 1.06 QUALITY ASSURANCE
- 1.07 DELIVERY, STORAGE, AND HANDLING
- 1.08 PROJECT CONDITIONS
- 1.09 SEQUENCING
- 1.10 SCHEDULING
- 1.11 WARRANTY
- 1.12 SYSTEM STARTUP
- 1.13 OWNER'S INSTRUCTIONS
- 1.14 COMMISSIONING
- 1.15 MAINTENANCE

#### **PART 2 PRODUCTS**

- 2.01 MANUFACTURERS
- 2.02 EXISTING PRODUCTS
- 2.03 MATERIALS
- 2.04 MANUFACTURED UNITS
- 2.05 EQUIPMENT
- 2.06 COMPONENTS
- 2.07 ACCESSORIES
- 2.08 MIXES
- 2.09 FABRICATION
- 2.10 FINISHES
- 2.11 SOURCE QUALITY CONTROL

#### **PART 3 EXECUTION**

- 3.01 INSTALLERS
- 3.02 EXAMINATION
- 3.03 PREPARATION
- 3.04 ERECTION
- 3.05 INSTALLATION
- 3.06 APPLICATION
- 3.07 CONSTRUCTION
- 3.08 REPAIR/RESTORATION
- 3.09 RE-INSTALLATION
- 3.10 FIELD QUALITY CONTROL
- 3.11 ADJUSTING
- 3.12 CLEANING
- 3.13 DEMONSTRATION
- 3.14 PROTECTION
- 3.15 SCHEDULES

#### SECTION 01 21 00 ALLOWANCES

#### **PART 1 GENERAL**

#### 1.01 SUMMARY

- A. Section Includes
  - Submission Procedures
  - 2. Change Procedures
  - 3. Schedule of Allowances
- B. Products Supplied But Not Installed Under This Section
- C. Products Installed But Not Supplied Under This Section
- D. Related Sections
  - 1. (Division 0) Bid Form
- E. Allowances
  - 1. Add monetary value of scheduled allowances to base bid price.
  - Change Order Items which occur during the course of construction shall be deducted from the allowance set forth for each CONTRACTOR.
  - Change Items will be processed as described in the General Conditions of the Contract and will be included in a formal Change Order. All Change Orders must be signed by the ARCHITECT, OWNER and CONTRACTOR prior to fabrication or use.
  - 4. Any portion of the allowance remaining at the end of the project shall be deducted from the contract via Change Order.
  - 5. For schedule of allowances, see section 3.15.
- F. Unit Prices
- G. Measurement Procedures
- H. Payment Procedures
- I. Alternates
- 1.02 REFERENCES
- 1.03 DEFINITIONS
- 1.04 SYSTEM DESCRIPTIONS
- 1.05 SUBMITTALS
- 1.06 QUALITY ASSURANCE
- 1.07 DELIVERY, STORAGE, AND HANDLING
- 1.08 PROJECT CONDITIONS
- 1.09 SEQUENCING
- 1.10 SCHEDULING
- 1.11 WARRANTY
- 1.12 SYSTEM STARTUP
- 1.13 OWNER'S INSTRUCTIONS
- 1.14 COMMISSIONING
- 1.15 MAINTENANCE

#### **PART 2 PRODUCTS**

- 2.01 MANUFACTURERS
- 2.02 EXISTING PRODUCTS
- 2.03 MATERIALS
- 2.04 MANUFACTURED UNITS
- 2.05 EQUIPMENT

- 2.06 COMPONENTS
- 2.07 ACCESSORIES
- 2.08 MIXES
- 2.09 FABRICATION
- 2.10 FINISHES
- 2.11 SOURCE QUALITY CONTROL

#### **PART 3 EXECUTION**

- 3.01 INSTALLERS
- 3.02 EXAMINATION
- 3.03 PREPARATION
- 3.04 ERECTION
- 3.05 INSTALLATION
- 3.06 APPLICATION
- 3.07 CONSTRUCTION
- 3.08 REPAIR/RESTORATION
- 3.09 RE-INSTALLATION
- 3.10 FIELD QUALITY CONTROL
- 3.11 ADJUSTING
- 3.12 CLEANING
- 3.13 DEMONSTRATION
- 3.14 PROTECTION
- 3.15 SCHEDULES

A. No Allowances

#### SECTION 01 23 00 ALTERNATES

#### **PART 1 GENERAL**

#### 1.01 SUMMARY

- A. Section Includes
  - 1. Submission Procedures
  - 2. Documentation of changes to Contract Sum/Price and Contract Time
- B. Products Supplied But Not Installed Under This Section
- C. Products Installed But Not Supplied Under This Section
- D. Related Sections
  - 1. (Division 0) Bid Form
- E. Allowances
- F. Unit Prices
- G. Measurement Procedures
- H. Payment Procedures
- I. Alternates
  - 1. Indicate variation of Bid Price for Alternates described below and list in the Proposal any supplement to it, which requests a "difference" in Bid Price by [adding to] or [deducting from] the base bid price.
  - 2. Coordinate related work and modify surrounding work to integrate the Work of each Alternate.
  - Alternates quoted in the Proposal will be reviewed and accepted or rejected as stated in the Information for Bidders. Accepted Alternates will be identified in the Notice of Award.
  - 4. Once the responsible Bidder has been selected, the OWNER may determine to add to or deduct from the Contract any of the additive or deductive items in accordance with the Information for Bidders.
  - 5. For schedule of alternates, see section 3.15.
- 1.02 REFERENCES
- 1.03 DEFINITIONS
- 1.04 SYSTEM DESCRIPTIONS
- 1.05 SUBMITTALS
- 1.06 QUALITY ASSURANCE
- 1.07 DELIVERY, STORAGE, AND HANDLING
- 1.08 PROJECT CONDITIONS
- 1.09 SEQUENCING
- 1.10 SCHEDULING
- 1.11 WARRANTY
- 1.12 SYSTEM STARTUP
- 1.13 OWNER'S INSTRUCTIONS
- 1.14 COMMISSIONING
- 1.15 MAINTENANCE

#### **PART 2 PRODUCTS**

- 2.01 MANUFACTURERS
- 2.02 EXISTING PRODUCTS
- 2.03 MATERIALS

- 2.04 MANUFACTURED UNITS
- 2.05 EQUIPMENT
- 2.06 COMPONENTS
- 2.07 ACCESSORIES
- 2.08 MIXES
- 2.09 FABRICATION
- 2.10 FINISHES
- 2.11 SOURCE QUALITY CONTROL

#### **PART 3 EXECUTION**

- 3.01 INSTALLERS
- 3.02 EXAMINATION
- 3.03 PREPARATION
- 3.04 ERECTION
- 3.05 INSTALLATION
- 3.06 APPLICATION
- 3.07 CONSTRUCTION
- 3.08 REPAIR/RESTORATION
- 3.09 RE-INSTALLATION
- 3.10 FIELD QUALITY CONTROL
- 3.11 ADJUSTING
- 3.12 CLEANING
- 3.13 DEMONSTRATION
- 3.14 PROTECTION
- 3.15 SCHEDULES
  - A. No Alternates

# SECTION 01 25 00 SUBSTITUTION PROCEDURES

#### PART 1 GENERAL

#### 1.01 SUMMARY

- A. Section Includes
  - Provide, install, and finish of products specified under options and conditions for substitutions stated in this section of specifications and as needed for a complete, proper, and operable installation.
- B. Products Supplied But Not Installed Under This Section
- C. Products Installed But Not Supplied Under This Section
- D. Related Sections
  - 1. (Division 0) General Conditions
- E. Allowances
- F. Unit Prices
- G. Measurement Procedures
- H. Payment Procedures
- I. Alternates
- 1.02 REFERENCES
- 1.03 DEFINITIONS
- 1.04 SYSTEM DESCRIPTIONS
  - A. Products List
    - Submit six (6) copies of complete list of major products and systems which are proposed for installation. Include Substitution Request Form attached to the end of this specification. Digital submissions may be accepted at ARCHITECT'S discretion.
    - 2. Tabulate products and systems by specifications section number and title.
    - 3. For products and systems specified only by reference standards, list for each such product or system:
      - a. Name and address of manufacturer or fabricator.
      - b. Trade name.
      - c. Model or catalog designation, including date.
      - d. Manufacturer's or fabricator's data and literature on:
        Reference standards, performance test data, certifications.
  - B. Specified Options
    - 1. For products specified only by reference standard, select product meeting that standard, by any manufacturer.
    - 2. For products specified by naming several products or manufacturers, select any one (1) of the products or manufacturers named.
    - For products specified by naming one (1) or more products or manufacturers and stating "or equal", submit a request for substitutions for any product or manufacturer which is not specifically named, but only after submitting bid on specified products and systems.

- C. Submission of Data Substantiating a Request for a Substitution of "An Equal Item"
  - 1. A substitution request must be submitted to the OWNER not later than seven (7) days prior to the Bid Deadline specified in the Notice Inviting Bids. The OWNER will not consider any substitution request received thereafter, except to the extent provided in the General Conditions. Concurrently with submitting a substitution request, the Bidder must provide all information required pursuant to the General Conditions to substantiate the request. The OWNER shall not be required to make a determination in regard to any substitution request and/or substantiating information prior to award of the Contract. If the OWNER gives a Notice of Award for the Contract to a Bidder, but subsequently disapproves a substitution proposed by that Bidder, the Bidder must provide the Specified Item in accordance with the Contract Documents and at no additional cost to the OWNER.
  - It is the intent of the OWNER and ARCHITECT to have this project constructed with materials, products and systems originally designed and specified into project. This opportunity to request substitutions is not for the convenience of bidders or CONTRACTORS to submit bids for materials, products and systems which may be more familiar to them, or having a lesser cost.
  - 3. Submit separate request for each substitution item. Support each request with an explanation for the request, and include:
    - a. Complete data substantiating compliance of proposed substitutions with requirements stated in contract documents:
      - 1. Product identification, including manufacturer's name and address.
      - 2. Manufacturer's literature; identify: Product description, reference standards, performance and test data.
      - 3. Samples, as applicable.
      - 4. Name and address of similar projects on which product has been used, and date of each installation, as well as servicing agency and installer.
    - b. Itemized comparison of the proposed substitution with products specified, listing significant variations.
    - c. Data relating to changes in the construction schedule.
    - d. Any effect of substitution on separate contracts.
    - e. Any effect of substitution on in-place construction or other materials and systems to be installed.
    - f. Accurate cost data comparing proposed substitution with product specified.
    - g. Designation of required license fees or royalties.
    - h. Designation of availability of maintenance services and sources of replacement materials.
  - 4. Substitutions will not be considered for acceptance when:
    - a. Lesser material cost is the sole reason for request.
    - b. They are indicated or implied on shop drawings or product data submittals without formal request.
    - c. Acceptance may require revision of contract documents.

- 5. Substitute products shall not be ordered or installed without written acceptance and authorization of OWNER and ARCHITECT.
- 6. Substitutions shall be approved by OWNER and ARCHITECT prior to fabrication or use.
- 7. Only the OWNER and ARCHITECT will determine the acceptability of proposed substitutions.

#### D. Representations

- In making a legitimate, authorized formal request for substitution, represent that:
  - a. A thorough investigation has transpired concerning the proposed product, and it has been determined that it is equal to or superior in all respects to that specified.
  - b. The same warranties or bonds and guarantees will be provided as for that specified.
  - c. Installation of the accepted substitution will be coordinated into the work; and such changes to in-place work, ordered materials and products, or other work to be in progress prior to installation of the requested substitutions, will be performed without any additional cost to OWNER.

#### E. Duties

- 1. Requests for substitutions must be expeditiously forwarded for consideration per the requirements of the General Conditions.
- 2. Notification of decisions concerning acceptance or rejection will be in writing, and are final without need for clarification.
- 1.05 SUBMITTALS
- 1.06 QUALITY ASSURANCE
- 1.07 DELIVERY, STORAGE, AND HANDLING
- 1.08 PROJECT CONDITIONS
- 1.09 SEQUENCING
- 1.10 SCHEDULING
- 1.11 WARRANTY
- 1.12 SYSTEM STARTUP
- 1.13 OWNER'S INSTRUCTIONS
- 1.14 COMMISSIONING
- 1.15 MAINTENANCE

#### PART 2 PRODUCTS

- 2.01 MANUFACTURERS
- 2.02 EXISTING PRODUCTS
- 2.03 MATERIALS
- 2.04 MANUFACTURED UNITS
- 2.05 EQUIPMENT
- 2.06 COMPONENTS
- 2.07 ACCESSORIES
- 2.08 MIXES
- 2.09 FABRICATION
- 2.10 FINISHES
- 2.11 SOURCE QUALITY CONTROL

#### **PART 3 EXECUTION**

- 3.01 INSTALLERS
- 3.02 EXAMINATION
- 3.03 PREPARATION
- 3.04 ERECTION
- 3.05 INSTALLATION
- 3.06 APPLICATION
- 3.07 CONSTRUCTION
- 3.08 REPAIR/RESTORATION
- 3.09 RE-INSTALLATION
- 3.10 FIELD QUALITY CONTROL
- 3.11 ADJUSTING
- 3.12 CLEANING
- 3.13 DEMONSTRATION
- 3.14 PROTECTION
- 3.15 SCHEDULES

#### SUBSTITUTION REQUEST FORM

Date:
Attn:
PJHM Architects, Inc. 24461 Ridge Route Drive, Suite 100 Laguna Hills, CA 92653
Architect's Project No.:
Project:
Permit/Application No.:
The undersigned requests consideration of the following substitution:
Specified Item:
(Drawing Sheet/Detail No., Specification Section, Description, etc.)
Proposed Substitution:
Statement of Cause:

Special Note: Modifications to any language contained in this document is unacceptable. If modifications are made, the entire substitution package will be returned without review.

		hed the following submittal checklist for your use, verify all items are your substitution request submittal.			
		Substitution request has been submitted not later than seven (7) days prior to the bid deadline specified in the Notice Inviting Bids.			
		Notice Inviting Bids Date:Substitution Request Date:			
		Product description, specifications, drawings, photographs, performance and test data adequate for evaluation of the requests with applicable portions of the data clearly identified, manufacturer's literature, samples, names and address of the manufacturer's representative have all been provided.			
		Complete documentation of all regulatory approvals required by the Contract Documents for the proposed substitution.			
		Itemized comparison/analysis of proposed substitution with that of the specified product.			
		Detailed cost summary of the change, if any, to the Contract Sum.			
		Evaluation of the effect of the proposed substitution on the construction schedule and impact on completion date.			
		Description of changes to the Contract Documents which proposed substitution will require for its proper installation.			
		Manufacturer's Warranty comparison between the specified manufacturer and the proposed manufacturer.			
		ed states that the following paragraphs, unless modified on the are correct:			
A.	The proposed substitution does not affect dimensions shown on the Drawings.				
В.	The undersigned will pay all costs for changes to the building design, including engineering design, detailing and construction costs, and LAHJ review/approval fees caused by the requested substitution.				
C.	The proposed substitution will have no adverse affect on other trades or specified warranty requirements.				

D.

substitution.

Maintenance and service parts will be locally available for the proposed

Submitted By:		
Name:	Signature:	
Firm/Company:		
	Date:	
Approved by (ARCHITECT):		
Approved by (OWNER):		
Name:	Name:	
Signature:	Signature:	
Date:	Date:	
(ARCHITECT to include submittal o	approval stamp)	

The undersigned further states that the function, appearance and quality of the proposed substitution are equivalent or superior to the specified item.

# SECTION 01 31 00 PROJECT MANAGEMENT AND COORDINATION

#### **PART 1 GENERAL**

#### 1.01 SUMMARY

- A. Section Includes
  - 1. Coordination.
  - 2. Field engineering.
  - 3. Pre-construction conference.
  - 4. Progress meetings.
  - 5. Pre-installation conferences.
- B. Products Supplied But Not Installed Under This Section
- C. Products Installed But Not Supplied Under This Section
- D. Related Sections
- E. Allowances
- F. Unit Prices
- G. Measurement Procedures
- H. Payment Procedures
- I. Alternates
- 1.02 REFERENCES
- 1.03 DEFINITIONS
- 1.04 SYSTEM DESCRIPTIONS
  - A. Coordination
    - Coordinate scheduling, submittals, and work of the various sections
      of the specifications to assure efficient and orderly sequence of
      installation of interdependent construction elements with provisions
      for accommodating items installed later.
    - 2. Prior to commencement of a particular type or kind of work, examine relevant information, Contract Documents and subsequent data issued to the project.
    - 3. Verify that utility requirement characteristics of operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to and placing in service, such equipment.
    - 4. Coordinate space requirements and installation of mechanical and electrical work, which are indicated diagrammatically on drawings. Follow routing shown for pipes, ducts and conduit, as closely as practicable; place runs parallel with line of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance and for repairs.
    - 5. In finished areas, except as otherwise indicated, conceal pipes, ducts and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.
    - 6. In locations where several elements of mechanical and electrical work must be sequenced and positioned with precision in order to fit into available space, prepare coordination drawings showing the actual conditions required for the installation. Prepare coordination drawings prior to purchasing, fabricating or installing of the elements required to be coordinated.

- 7. Closing up of walls, roofs, concealed spaces, partitions, or furred spaces, backfilling and other covering up operations shall not proceed until all enclosed or covered work and inspections have been completed. Verify before proceeding.
- 8. Coordinate completion and clean up of work of separate sections in preparation for substantial completion (and for portions of work designated for OWNER'S full and/or partial occupancy).
- 9. After OWNER'S occupancy of premises, coordinate access to site for correction of defective work and work not in accordance with Contract Documents to minimize disruption of OWNER'S activities.
- Coordinate all utility company work in accordance with the General Conditions.
- B. Field Engineering (If applicable to project scope)
  - 1. CONTRACTOR shall employ a Land Surveyor, registered in the State of California and acceptable to the ARCHITECT.
  - 2. Control datum for survey is that established by OWNER provided survey. CONTRACTOR is to locate and protect survey control and reference points.
  - 3. Refer to Section 01 71 23 Field Engineering for limits of work for CONTRACTOR and OWNER.
- C. Pre-Construction Conference
  - OWNER shall schedule a conference immediately after receipt
    of fully executed Contract Documents prior to project mobilization.
  - 2. Mandatory Attendance: OWNER, ARCHITECT, CONTRACTORS and CONTRACTOR'S Job Superintendent.
  - 3. Optional Attendance: ARCHITECT'S consultants, subcontractors and utility company representatives.
  - 4. OWNER will preside at conference. ARCHITECT shall record meeting minutes and distribute copies through the OWNER.
  - 5. Agenda:
    - a. Execution of OWNER-CONTRACTOR Agreement.
    - b. Issue Notice to Proceed.
    - c. Submission of executed bonds and insurance certificates.
    - d. Distribution of Contract Documents.
    - e. Submission of list of subcontractors, list of products, schedule of values, project schedule, and submittal schedule.
    - f. Designation of responsible personnel representing the parties.
    - g. Procedures and processing of field decision, submittals, substitutions, applications for payments, proposal request, change orders and contract closeout procedures.
    - h. Scheduling.
- D. Job Start Meeting
  - After the OWNER awards the contract, and prior to the commencement of the work, a mandatory Job Start meeting (Pre-Job conference) shall be conducted by the OWNER with the CONTRACTOR and those subcontractors listed in its bid documents.
- E. Progress Meetings
  - ARCHITECT will schedule and administer meetings throughout progress of the work at bi-monthly (Every two weeks) intervals or more frequently if needed.

- 2. ARCHITECT will make arrangements for meetings, prepare agenda and preside at meetings. ARCHITECT will record minutes (Field Reports) and distribute copies.
- 3. Attendance required: OWNER, ARCHITECT, and CONTRACTOR. CONTRACTOR'S attendance is mandatory.
- 4. Minimum Agenda Items
  - a. Review minutes of previous meetings (Field Reports).
  - b. Review work progress.
  - c. Field observations, problems, and decisions.
  - d. Identification of problems which impede planned progress.
  - e. Review of submittals, schedule, and status of submittals.
  - f. Review of off-site fabrication and delivery schedules.
  - g. Maintenance of progress schedule.
  - h. Corrective measures to regain projected schedules.
  - i. Planned progress during succeeding work period.
  - j. Coordination of projected progress.
  - k. Maintenance of quality and work standards.
  - I. Effect of proposed changes on progress schedule and coordination.
  - m. Other business relating to work.
- F. Pre-Installation Conference
  - 1. When required in individual specification sections, convene a preinstallation conference prior to commencing work of the section.
  - 2. Require attendance of parties directly affecting, or affected by, work of the specific section.
  - 3. Notify ARCHITECT through OWNER at least five (5) days in advance of meeting date.
  - 4. CONTRACTOR shall prepare agenda, preside at conference, record minutes and distribute copies within two (2) days after conference to participants
  - 5. Review conditions of installation, preparation and installation procedures and coordination with related work.
- 1.05 SUBMITTALS
- 1.06 QUALITY ASSURANCE
- 1.07 DELIVERY, STORAGE, AND HANDLING
- 1.08 PROJECT CONDITIONS
- 1.09 SEQUENCING
- 1.10 SCHEDULING
- 1.11 WARRANTY
- 1.12 SYSTEM STARTUP
- 1.13 OWNER'S INSTRUCTIONS
- 1.14 COMMISSIONING
- 1.15 MAINTENANCE

#### **PART 2 PRODUCTS**

- 2.01 MANUFACTURERS
- 2.02 EXISTING PRODUCTS
- 2.03 MATERIALS
- 2.04 MANUFACTURED UNITS
- 2.05 EQUIPMENT
- 2.06 COMPONENTS

- 2.07 ACCESSORIES
- 2.08 MIXES
- 2.09 FABRICATION
- 2.10 FINISHES
- 2.11 SOURCE QUALITY CONTROL

#### **PART 3 EXECUTION**

- 3.01 INSTALLERS
- 3.02 EXAMINATION
- 3.03 PREPARATION
- 3.04 ERECTION
- 3.05 INSTALLATION
- 3.06 APPLICATION
- 3.07 CONSTRUCTION
- 3.08 REPAIR/RESTORATION
- 3.09 RE-INSTALLATION
- 3.10 FIELD QUALITY CONTROL
- 3.11 ADJUSTING
- 3.12 CLEANING
- 3.13 DEMONSTRATION
- 3.14 PROTECTION
- 3.15 SCHEDULES

# SECTION 01 32 16 CONSTRUCTION PROGRESS SCHEDULE

#### **PART 1 GENERAL**

#### 1.01 SUMMARY

- A. Section Includes
  - Construction Progress Schedule Procedures
- B. Products Supplied But Not Installed Under This Section
- C. Products Installed But Not Supplied Under This Section
- D. Related Sections
  - A. 01 11 00 Summary of Work
  - B. 01 20 00 Price and Payment Procedures
  - C. 01 25 00 Substitution Procedures
  - D. 01 31 00 Project Management and Coordination
  - E. 01 33 00 Submittal Procedures
  - F. 01 77 00 Closeout Procedures
- E. Allowances
- F. Unit Prices
- G. Measurement Procedures
- H. Payment Procedures
- I. Alternates
- 1.02 REFERENCES
- 1.03 DEFINITIONS
- 1.04 SYSTEM DESCRIPTIONS
- 1.05 SUBMITTALS
  - A. Schedule Submittals
    - CONTRACTOR shall submit Construction Progress Schedules as follows:
      - a. Preliminary Schedule: Submit a preliminary Baseline Schedule within fourteen days after Notice of Award.
         OWNER will review the Preliminary Schedule and return comments within ten workdays.
      - b. Initial Schedule: Revise the preliminary Schedule and resubmit within ten days, to provide the Project's Baseline Schedule.
      - c. Weekly Schedule Update: While retaining the Baseline Schedule, revise copies to show actual construction progress to date, and submit at scheduled weekly dates, or as otherwise required by the OWNER.
      - d. In the event that the progress of the Work or the sequencing of the activities of the Work differs significantly from that indicated in the Baseline Schedule, the Contractor shall submit a Recovery Schedule to the OWNER, demonstrating the CONTRACTOR'S plan to recover lost time, achieve all contractual milestones, and complete the work within the contract time. Appropriate recovery actions include, but are not limited to, assignments of additional labor or equipment, shift or overtime work, expediting of submittals or deliveries, overlapping of activities, or sequencing changes to increase activity concurrence. An accompanying narrative shall describe the cause of the problems and the

actions planned by the Contractor to recover the schedule. The OWNER will review the Recovery Schedule and provide comments, leading to approval of the schedule.

- e. With each Application for Payment.
- 1.06 QUALITY ASSURANCE
- 1.07 DELIVERY, STORAGE, AND HANDLING
- 1.08 PROJECT CONDITIONS
- 1.09 SEQUENCING
- 1.10 SCHEDULING
  - A. Form and Content of Schedules
    - Schedule shall be in the form of a computer-generated Critical Path Method (CPM) or Gantt format showing all construction activities required to complete the Work of the Project within the Contract Time and any OWNER-defined Milestones.
    - 2. CONTRACTOR shall utilize an established standard, centralized, Internet-based scheduling program.
    - 3. Schedule shall include but not be limited to the following:
      - a. Complete sequence, with start and completion dates, of each and every activity of construction or element of the construction process.
      - Phases of construction, with start and completion
         Milestones, as well as any other Milestones defined by the OWNER.
      - c. Critical submittals, including OWNER and ARCHITECT review and approval periods, including 15 workdays for the first submittal (10 days for resubmittal), 21 days when the ARCHITECT'S consultants must review, and 30 days for review of submittals of Structural Steel, Door Hardware, and Hollow Metal Doors and Frames.
      - d. Procurement, manufacture and/or fabrication; testing and delivery to the Project site of special long-lead-time material and equipment.
      - e. Operational start-up, test and balance, performance testing, and training of operators for systems and equipment; for Substantial Completion and for Final Completion.
      - f. Temporary facilities; construction of mock-ups, prototypes and/or samples; punch list; interfaces with Separate Work Contracts; and regulatory agency approvals and permits required for performance of the Work.
      - g. Deferred Approvals, allowing a minimum of ninety (90) days for all Deferred Approval items.
      - h. OWNER interfaces and Owner-Furnished equipment, either installed by CONTRACTOR (O.F.C.I.) or by OWNER (O.F.O.I.).
      - Decision dates for products specified by allowances, selection of finishes, and other ARCHITECT- or OWNERfurnished schedules or decisions.
    - 4. Schedule shall be updated periodically as specified to show progress of each activity and all changes since the previous submission, including:
      - a. Major changes in scope.

- b. Activities modified since previous updating.
- c. Revised projections due to changes.
- d. Other identifiable changes.
- B. Schedule Requirements
  - Schedule shall represent CONTRACTOR'S plan to complete the Work within the Milestones and/or Contract Time. However:
    - a. A schedule extending beyond the Milestones and/or Contract Time will not be acceptable.
    - A schedule indicating Work completed in less than the Milestones and/or Contract Time will not be acceptable.
       CONTRACTOR shall indicate any available float.
    - c. A schedule found unacceptable by the OWNER shall be revised by CONTRACTOR and resubmitted within five (5) days.
  - 2. Schedule shall be in sufficient detail to assure adequate planning and execution of Work, including but not limited to:
    - Start and completion of all items of Work and their major components, and all designated dates identified as Milestones by OWNER.
    - b. Construction activity durations shall be limited to no more than two reporting periods, with exception of fabrication and procurement activities, unless approved otherwise by OWNER. Activity durations shall be total of actual workdays to perform and complete that activity and shall not include consideration of weather impact on the activity.
    - c. Activities for procurement, delivery, and installation of equipment, materials and other supplies, including time for submittals, reviews and re-submittals. Include decision dates for selection of finishes.
    - d. Time for fabrication and delivery of manufactured products for the Work, showing interdependence of procurement and construction activities.
    - e. Identify each activity with applicable CSI Specification
      Division number, and coordinate with the CONTRACTOR'S
      approved "Schedule of Values." Include adequate
      breakdown of activities for the Mechanical and Electrical
      elements of the work, to enable accurate monitoring and to
      assure full coordination with OWNER'S operating personnel.
    - f. Each activity shall be capable of being cost and resource-loaded with the resulting cost total equal to the Contract
    - g. Activities shall include all associated interface activities contained within the Contract Documents including, but not limited to, OWNER maintenance-and-operations activities
    - h. Each activity shall be defined to permit reasonable monitoring and evaluation of progress in performance of the Work.
  - Notwithstanding acceptance of the Schedule, failure to identify and/or include any element of the Contract into the Schedule shall not release CONTRACTOR from obligation of completing all required Work in accordance with the Contract Completion Date or any Milestones.

- 4. Submittal of the Schedule shall constitute CONTRACTOR'S confirmation that the Schedule meets the requirements of the Contract Documents, and the Work will be executed in the sequence indicated in the Schedule.
- 5. If CONTRACTOR fails to comply with the specified requirements, OWNER reserves the right to engage an independent scheduling consultant and/or provide its own expertise to fulfill these requirements and shall be entitled to recover by assessment all incurred costs for the services from the CONTRACTOR.
- 6. Submittal of any Schedule is subject to review and acceptance by ARCHITECT and OWNER. OWNER retains the right to withhold progress payments in whole or part until CONTRACTOR submits a Schedule acceptable to OWNER.
- 1.11 WARRANTY
- 1.12 SYSTEM STARTUP
- 1.13 OWNER'S INSTRUCTIONS
- 1.14 COMMISSIONING
- 1.15 MAINTENANCE

#### **PART 2 PRODUCTS**

- 2.01 MANUFACTURERS
- 2.02 EXISTING PRODUCTS
- 2.03 MATERIALS
- 2.04 MANUFACTURED UNITS
- 2.05 EQUIPMENT
- 2.06 COMPONENTS
- 2.07 ACCESSORIES
- 2.08 MIXES
- 2.09 FABRICATION
- 2.10 FINISHES
- 2.11 SOURCE QUALITY CONTROL

#### **PART 3 EXECUTION**

- 3.01 INSTALLERS
- 3.02 EXAMINATION
- 3.03 PREPARATION
- 3.04 ERECTION
- 3.05 INSTALLATION
- 3.06 APPLICATION
- 3.07 CONSTRUCTION
- 3.08 REPAIR/RESTORATION
- 3.09 RE-INSTALLATION
- 3.10 FIELD QUALITY CONTROL
- 3.11 ADJUSTING
- 3.12 CLEANING
- 3.13 DEMONSTRATION
- 3.14 PROTECTION
- 3.15 SCHEDULES

**END OF SECTION** 

CONSTRUCTION PROGRESS SCHEDULE 01 32 16 - 4

# SECTION 01 33 00 SUBMITTAL PROCEDURES

#### **PART 1 GENERAL**

- 1.01 SUMMARY
  - A. Section Includes
    - 1. Submittal Procedures.
    - 2. Shop Drawings.
    - 3. Product Data.
    - 4. Samples.
    - 5. Manufacturers' Instructions.
    - 6. Manufacturers' Certificates.
    - 7. Coordinated Drawings.
  - B. Products Supplied But Not Installed Under This Section
  - C. Products Installed But Not Supplied Under This Section
  - D. Related Sections
  - E. Allowances
  - F. Unit Prices
  - G. Measurement Procedures
  - H. Payment Procedures
  - I. Alternates
- 1.02 REFERENCES
- 1.03 DEFINITIONS
- 1.04 SYSTEM DESCRIPTIONS
- 1.05 SUBMITTALS
  - A. Procedures
    - CONTRACTOR shall submit a Schedule of Submittals, listing their required submission and review dates to the ARCHITECT for review and acceptance. The schedule shall allow sufficient time for checking by the ARCHITECT. In addition, the submittal schedule shall be incorporated into and coordinated with the construction progress schedule. Additional service fees will be required, paid by the CONTRACTOR at no cost to the OWNER, to the ARCHITECT for ARCHITECT'S review of out of sequence submittals, excessive resubmittal attempts, expedited review requests, and submittals not in conformance with the submittal schedule time limits.
    - 2. Transmit separate request for each submittal directly to the ARCHITECT.
      - a. Bind submittals sturdily, neatly label covers.
      - b. Include ARCHITECT'S job number as it appears on Contract Documents.
      - c. Include A.H.J. application or approval numbers.
      - Digital submissions will be accepted at the discretion of the ARCHITECT.
    - 3. Sequentially number the transmittal forms. Re-submittals are to have original number with the letter 'R' followed by revision number. Example Naming: Submittal 07 92 00 R2
    - 4. Identify Project, CONTRACTOR, subcontractor or supplier; pertinent Drawing sheet and detail number(s) and specification section number, as appropriate.

- a. Provide name and telephone number of individual who may be contacted for further information.
- 5. Apply CONTRACTOR'S dated stamp with CONTRACTOR'S original signature or initials affixed thereto, certifying that review, verification of Products required, field dimensions, adjacent construction Work and coordination of information is in accordance with the requirements of the Work and Contract Documents. Stamped signatures or initials are not acceptable.
- 6. Schedule submittals to expedite the Project. Coordinate submission of related items.
  - a. Make all submittals in accordance with the progress schedule and far enough in advance of scheduled dates of installation to provide required time for reviews for securing necessary approvals for possible revision and re-submittal and for placing orders and securing delivery.
- 7. Identify variations from Contract Documents and Product or system limitations which may be detrimental to successful performance of the completed Work.
- 8. State effect of substitution on construction schedule and changes required in other work or products.
- 9. Provide space for CONTRACTOR and ARCHITECT review stamps.
- Revise and re-submit submittals as required, identify all changes made since previous submittal with revision clouds and revision delta symbols.
- 11. Distribute copies of reviewed submittals to concerned parties. Instruct parties to promptly report any inability to comply with provisions.
- 12. Determine and verify all field dimensions and conditions, materials, catalog numbers and similar data.
- 13. Coordinate as required with all trades and all public agencies involved.
- 14. Unless otherwise specifically authorized by ARCHITECT, make all submittals in groups pertaining to specification sections, containing all associated items. ARCHITECT will reject partial submittals as not complying with the provisions of this section.

#### A. Product Data

- Submit eight (8) copies. Seven (7) copies will be retained by the ARCHITECT.
- 2. Mark each copy to identify applicable products, models, options and other data. Supplement manufacturers' standard data to provide information unique to this Project.
- 3. After review, distribute and provide copies for Record Documents.

#### B. Shop Drawings

- Submit newly prepared information, drawn to accurate scale.
   Highlight, encircle or otherwise indicate deviations from the
   Contract Documents. Do not reproduce Contract Documents or
   copy standard information as the basis of Shop Drawings. Standard
   information prepared without specific reference to the Project will
   not be approved as Shop Drawings.
- 2. Shop Drawings shall include fabrications and installation drawings, setting diagrams, schedules, patterns, templates and similar drawings. Include the following information:
  - a. Dimensions.

- b. Identification of products and materials included.
- c. Compliance with specified standards.
- d. Notation of coordination requirements.
- e. Notation of dimensions established by field measurement.
- 3. Sheet Size: Except for templates, patterns and similar full-size drawings, submit Shop Drawings on sheets at least 8½ inch x 11 inch, but not larger than 30 inch x 42 inch.
- 4. The CONTRACTOR shall review, stamp with his approval as herein required, and submit with reasonable promptness and in orderly sequence, in accordance with the submittal schedule, all shop drawings required by the Contract Documents or subsequently by the ARCHITECT as covered by modifications. Shop drawings shall be properly identified. At the time of submission the CONTRACTOR shall inform the ARCHITECT in writing of any deviation in the shop drawings from the requirements of the Contract Documents.
- 5. Stamp: Each page of shop drawings shall bear the CONTRACTOR'S stamp, which shall signify the CONTRACTOR'S representation that he/she has determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and has checked and coordinated the information contained in the shop drawings. Each stamp shall be accompanied by a wet signature of the CONTRACTOR who may be contacted for information. Stamped signatures or initials are not acceptable.
- 6. Method of Review: Make initial submittal of eight (8) hard copies of the shop drawings to the ARCHITECT. Comments or corrections will be noted and returned to the CONTRACTOR, who shall identify all changes made since the previous submittal and re-submit in the same manner. When reviewed, the shop drawings will be stamped and returned to the CONTRACTOR who shall make distribution of copies to his/her subcontractors.
- 7. The ARCHITECT will review shop drawings with reasonable promptness so as not to cause any delay, but only for conformance with the design concept of the project and with the information given in the Contract Documents. The ARCHITECT'S favorable review of a separate item shall not indicate acceptance of an assembly in which the item functions.
- 8. Submittal of shop drawings to the ARCHITECT shall be made by the CONTRACTOR with a dated transmittal form or letter and not by subcontractors or suppliers.
- 9. The ARCHITECT'S review of shop drawings shall not relieve the CONTRACTOR of responsibility for any deviation from the requirements of the Contract Documents unless the CONTRACTOR has informed the ARCHITECT in writing of such deviation at the time of submission and the ARCHITECT has given written acceptance to the specific deviation, nor shall the ARCHITECT'S favorable review relieve the CONTRACTOR from responsibility for errors or omissions in the shop drawings.
- 10. No portion of work requiring shop drawings shall be commenced until the shop drawings have been returned with a favorable review by the ARCHITECT.
- C. Samples

- 1. Submit samples to illustrate functional and aesthetic characteristics of the Product with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
- 2. Submit samples of finishes from the full range of manufacturers' standard colors, textures and patterns for ARCHITECT selection or in custom colors selected.
- 3. Include identification on each sample with full Project information.
- 4. Submit a minimum of five (5) samples or as specified in individual sections of the specifications, four (4) of which will be retained by the ARCHITECT.
- 5. Reviewed samples which may be used in the Work are indicated in individual specification Sections.
- 6. Selection or rejection of samples will be made by the ARCHITECT in writing.
- D. Quality Assurance/Control Submittals
  - Design Data, Test Reports, Certificates, Manufacturers' Instructions, Manufacturers' Field Reports, Qualification Statements
    - a. When specified in individual specification sections, submit manufacturers' printed instructions for delivery, storage, assembly, installation, start-up, adjusting and finishing in quantities specified for Product Data.
    - b. Identify conflicts between manufacturers' instructions and Contract Documents.
    - c. When specified in individual specification sections, submit manufacturers' certificate to ARCHITECT for review in quantities specified for Product Data.
    - d. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference date, affidavits and certifications as appropriate.
    - e. Certificates may be recent or previous test results on material or product, but must be acceptable to ARCHITECT.
- E. Closeout Submittals
  - 1. When specified in individual specification sections, submit eight (8) copies. Seven (7) copies will be retained by the ARCHITECT.
  - 2. Mark each copy to identify applicable products, models, options and other data. Supplement manufacturers' standard data to provide information unique to this Project.
  - 3. After review, distribute and provide copies for Record Documents.
- 1.06 QUALITY ASSURANCE
- 1.07 DELIVERY, STORAGE, AND HANDLING
- 1.08 PROJECT CONDITIONS
- 1.09 SEQUENCING
- 1.10 SCHEDULING
- 1.11 WARRANTY
- 1.12 SYSTEM STARTUP
- 1.13 OWNER'S INSTRUCTIONS
- 1.14 COMMISSIONING
- 1.15 MAINTENANCE

#### **PART 2 PRODUCTS**

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## **PART 3 EXECUTION**

- 3.01 INSTALLERS
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- 3.12 CLEANING
- 3.13 DEMONSTRATION
- 3.14 PROTECTION
- 3.15 SCHEDULES

**END OF SECTION** 

# SECTION 01 42 19 REFERENCE STANDARDS

#### PART 1 GENERAL

### 1.01 SUMMARY

- A. Section Includes
  - 1. Definitions
  - 2. Specifications Format and Content
  - 3. Industry Standards
  - 4. Code and Standards
  - 5. Governing regulations/authorities
- B. Products Supplied But Not Installed Under This Section
- C. Products Installed But Not Supplied Under This Section
- D. Related Sections
- E. Allowances
- F. Unit Prices
- G. Measurement Procedures
- H. Payment Procedures
- I. Alternates

#### 1.02 REFERENCES

The standards are referenced in these specifications by acronyms which are listed below with the full name of the sponsoring organization and the address from which copies may be obtained.

AA Aluminum Association 900 19th Street NW, Suite 300 Washington, DC 20006 www.aluminum.org

AABC Associated Air Balance Council 1518 "K" Street, NW, Suite 503 Washington, DC 20005 www.aabchq.com

AAMA American Architectural Manufacturers Association 1827 Walden Office Square, Suite 104 Schaumburg, IL 60173-4268 www.aamanet.org

AASHTO American Association of State Highway and Transportation Officials 444 North Capitol Street, Suite 249 Washington, DC 20001 www.aashto.org

AATCC American Association of Textile Chemists and Colorists P.O. Box 12215 One Davis Drive Research Triangle Park, NC 27709-2215 www.aatcc.org ACI American Concrete Institute P.O. Box 9094 Farmington Hills, MI 48333-9094 www.aci-int.org

ACPA American Concrete Pipe Association 222 West Las Colinas Blvd., Suite 641 Irving, TX 75039-5423 www.concrete-pipe.org

ADC Air Diffusion Council 104 South Michigan Avenue, Suite 1500 Chicago, IL 60603

AF&PA American Forest and Paper Association 1111 19th Street, NW, Suite 800 Washington, DC 20036 www.afandpa.org

AGA American Gas Association 400 North Capitol Street N.W. Washington, D.C. 20001 www.aga.com

AHA American Hardboard Association 1210 West Northwest Hwy Palatine, IL 60067-1897 www.hardboard.org

AHAM Association of Home Appliance Manufacturers 1111 19th Street NW, #402 Washington, DC 20036 www.aham.org

Al Asphalt Institute Research Park Drive P.O. Box 14052 Lexington, KY 40512-4052 www.asphaltinstitute.org

AlA The American Institute of Architects 1735 New York Avenue, NW Washington, DC 20006-5292 www.e-architect.com

AISC American Institute of Steel Construction One East Wacker Drive, Suite 3100 Chicago, IL 60601-2001 www.aisc.org AISI American Iron and Steel Institute P.O. Box 4321 Chestertown, MD 21690 www.steel.org

AITC American Institute of Timber Construction 7012 South Revere Parkway, Suite 140 Englewood, CO 80112 www.aitc-glulam.org

ALCA Associated Landscape Contractors of America 12200 Sunrise Valley Drive, Suite 150 Reston, VA 20191 www.alca.org

ALI Associated Laboratories, Inc. P.O. Box 152837 1323 Wall Street Dallas, TX 75315

ALSC American Lumber Standards Committee P.O. Box 210 Germantown, MD 20875

AMCA Air Movement and Control Association International, Inc. 30 West University Drive Arlington Heights, IL 60004-1893 www.amca.org

ANLA American Nursery and Landscape Association 1250 "I" Street, NW, Suite 500 Washington, DC 20005-3922 www.anla.org

ANSI American National Standards Institute 11 West 42nd Street, 13th Floor New York, NY 10036-8002 www.ansi.org

APA APA-The Engineered Wood Association 2130 Barret Park Drive, Suite 102 Kennesaw, GA 30144-3681 www.apawood.org

APA Architectural Precast Association 6710 Winkler Road, Suite 8 Fort Myers, FL 33919 www.archprecast.org ARI Air Conditioning and Refrigeration Institute 4301 Fairfax Drive, Suite 425 Arlington, VA 22203 www.ari.org

ARMA Asphalt Roofing Manufacturers Association 1156-15th Street, NW, Suite 900 Washington, DC 20005 www.asphaltroofing.org

ASA Acoustical Society of America 500 Sunnyside Blvd. Woodbury, NY 11797 www.acoustics.org

ASCE American Society of Civil Engineers World Headquarters (703) 295-6300 1801 Alexander Bell Drive Reston, VA 20190-4400 www.asce.org

ASHRAE American Society of Heating, Refrigerating and Air Conditioning Engineers 1791 Tullie Circle, NE Atlanta, GA 30329-2305 www.ashrae.org

ASLA American Society of Landscape Architects 4401 Connecticut Avenue, NW, Fifth Floor Washington, DC 20008-2369 www.asla.org

ASME ASME International Three Park Avenue New York, NY 10016-5990 www.asme.org

ASPE American Society of Plumbing Engineers 3617 Thousand Oaks Blvd., Suite 210 Westlake, CA 91362-3649

ASQC American Society for Quality 611 East Wisconsin Avenue Milwaukee, WI 53201-3005 www.asq.org

ASSE American Society of Sanitary Engineers 28901 Clemens Road Westlake, OH 44145 www.asse-plumbing.org ASTM American Society for Testing and Materials 100 Barr Harbor Drive West Conshohocken, PA 19428-2959 www.astm.org

AWCI Association of the Wall and Ceiling Industries - International 307 East Annandale Road, Suite 200 Falls Church, VA 22042-2433 www.awci.org

AWI Architectural Woodwork Institute 1952 Isaac Newton Square Reston, VA 20190 www.awinet.org

AWPA American Wood-Preservers' Association 3246 Fall Creek Highway, Suite 1900 Granbury, TX 76049-7979

AWS American Welding Society 550 NW LeJeune Road Miami, FL 33126 www.amweld.org

AWWA American Water Works Association 6666 West Quincy Avenue Denver, CO 80235 www.awwa.org

BHMA Builders' Hardware Manufacturers Association 355 Lexington Avenue, 17th Floor New York, NY 10017-6603

BIA Brick Institute of America 11490 Commerce Park Drive Reston, VA 22091-1525 www.bia.org

CE Corps of Engineers (U.S. Department of the Army) 20 Massachusetts Avenue, NW Washington, DC 20314 CRD standards are available from:

U.S. Army Corps of Engineers Waterways Experiment Station Technical Report Distribution Section Services Branch, TIC 3909 Halls Ferry Road Vicksburg, MS 39180-6199 CBM Certified Ballast Manufacturers Association 1422 Euclid Avenue, Suite 402 Cleveland, OH 44115-2094

CCC Carpet Cushion Council P.O. Box 546 Riverside, CT 06878-0546 www.carpetcushion.org

CDA Copper Development Association 260 Madison Avenue, 16th Floor New York, NY 10016-2401 www.copper.org

CGA Compressed Gas Association 1725 Jefferson Davis Highway, Suite 1004 Arlington, VA 22202-4102 www.cganet.com

CISCA Ceilings & Interior Systems Construction Association 1500 Lincoln Highway, Suite 202 St. Charles, IL 60174 www.cisca.org

CISPI Cast Iron Soil Pipe Institute 5959 Shallowford Road, Suite 419 Chattanooga, TN 37421 www.cispi.org

CLFMI Chain Link Fence Manufacturers Institute 10015 Old Columbia Road, #B-215 Columbia, MD 21046 www.chainlinkinfo.org

CPSC Consumer Product Safety Commission East West Towers 4330 East-West Highway Bethesda, MD 20814

CPPA Corrugated Polyethylene Pipe Association 432 North Superior Street Toledo, OH 43604

CRA California Redwood Association 405 Enfrente Drive, Suite 200 Novato, CA 94949 www.calredwood.org

CRI Carpet and Rug Institute 310 South Holiday Avenue Dalton, GA 30722-2048 www.carpet-rug.com CRSI Concrete Reinforcing Steel Institute 933 North Plum Grove Road Schaumburg, IL 60173-4758 www.crsi.org

CSSB Cedar Shake and Shingle Bureau 515 116th Avenue, NE, Suite 275 Bellevue, WA 98004-5294 www.cedarbureau.org

CTI Ceramic Tile Institute of America 12061 West Jefferson Blvd. Culver City, CA 90230-6219 www.ceramic-tile.com

DHI Door and Hardware Institute 14170 Newbrook Drive Chantilly, VA 20151-2223 www.dhi.org

DIPRA Ductile Iron Pipe Research Association 245 Riverchase Parkway East, Suite O Birmingham, AL 35244 www.dipra.org

DOC Department of Commerce 5285 Port Royal Road Springfield, VA 22161

DOT Department of Transportation 400 Seventh Street, SW Washington, DC 20590

EIMA EIFS Industry Members Association 402 North Fourth Street, Suite 102 Yakima, WA 98901-2470 www.eifsfacts.com

EJMA Expansion Joint Manufacturers Association 25 North Broadway Tarrytown, NY 10591-3201 www.ejma.org

EPA Environmental Protection Agency 401 "M" Street, SW Washington, DC 20460 www.epa.gov

FCICA Floor Covering Installation Contractors Association 7439 Millwood Drive West Bloomfield, MI 48322-1234 www.fcica.com FM Factory Mutual 1151 Boston-Providence Turnpike P.O. Box 9102 Norwood, MA 02062-9102 www.fmglobal.com

FCCHR Foundation for Cross-Connection Control and Hydraulic Research University of Southern California KAP-200 University Park MC-2531 Los Angeles, CA 90089-25319

FS Federal Standards (Available from GSA) 470 East L'Enfant Plaza, SW, Suite 8100 Washington, DC 20407

FTI Facing Tile Institute % Stark Ceramics P.O. Box 8880 Canton, OH 44711

GA Gypsum Association 810 First Street NE, Suite 510 Washington, DC 20002 www.gypsum.org

GANA Glass Association of North America 3310 SW Harrison Street Topeka, KS 66611-2279 www.glasswebsite.com/gana

HMA Hardwood Manufacturers Association 400 Penn Center Blvd., Suite 530 Pittsburgh, PA 15235-5605 www.hardwood.org

HPVA Hardwood Plywood and Veneer Association 1825 Michael Farraday Drive P.O. Box 2789 Reston, VA 20195 www.hpva.org

IEEE Institute of Electrical and Electronic Engineers 445 Hoes Lane (212) 705-7900 Piscataway, NJ 08855-1331 www.standards.ieee.org

IESNA Illuminating Engineering Society of North America 120 Wall Street, 17th Floor New York, NY 10005-4001 www.iesna.org ILI Indiana Limestone Institute of America Stone City Bank Building, Suite 400 Bedford, IN 47421 www.iliai.com

ITS Intertek Testing Services P.O. Box 2040 3933 US Route 11 Cortland, NY 13045-7902 www.itsglobal.com

KCMA Kitchen Cabinet Manufacturers Association 1899 Preston White Drive Reston, VA 22091-4326 www.kcma.org

LMA Laminating Materials Association 116 Lawrence Street Hillsdale, NJ 07642-2730 www.lma.org

MBMA Metal Building Manufacturer's Association 1300 Sumner Avenue Cleveland, OH 44115-2851 www.mbma.org

MCAA Mechanical Contractors Association of America 1385 Piccard Drive Rockville, MD 20850-4329 www.mcaa.org

MFMA Maple Flooring Manufacturers Association 60 Revere Drive, Suite 500 Northbrook, IL 60062 www.maplefloor.org

MIA Marble Institute of America 33505 State Street Farmington, MI 48335 www.marble-institute.com

MIA Masonry Institute of America 2550 Beverly Blvd. Los Angeles, CA 90057 www.masonryinstitute.org

ML/SFAMetal Lath/Steel Framing Association (A Division of the NAAMM) 8 South Michigan Avenue, Suite 1000 Chicago, IL 60603 MSS Manufacturers Standardization Society for the Valve and Fittings Industry 127 Park Street, NE Vienna, VA 22180-4602 www.mss-hq.com

NAA National Arborist Association P.O. Box 1094 (603) 673-3311 Amherst, NH 03031-1094 www.natlarb.com

NAAMM National Association of Architectural Metal Manufacturers 8 South Michigan Avenue, Suite 1000 Chicago, IL 60603 www.naamm.org

NAIMA North American Insulation Manufacturers Association 44 Canal Center Plaza, Suite 310 Alexandria, VA 22314 www.naima.org

NAPA National Asphalt Pavement Association NAPA Building 5100 Forbes Blvd. Lanham, MD 20706-4413

NBGQA National Building Granite Quarries Association 1220 "L" Street, NW #100-167 Washington, DC 20005 www.nbgqa.com

NCMA National Concrete Masonry Association 2302 Horse Pen Road Herndon, VA 20171-3499 www.ncma.org

NCPI National Clay Pipe Institute P.O. Box 759 253-80 Center Street Lake Geneva, WI 53147 www.ncpi.org

NCRPM National Council on Radiation Protection and Measurements 7910 Woodmont Ave., Suite 800 Bethesda, MD 20814-3095 www.ncrp.com

NCSPA National Corrugated Steel Pipe Association 1255 23rd Street, NW, Suite 850 Washington, DC 20037 www.ncspa.org NEBB National Environmental Balancing Bureau 8575 Grovemont Circle Gaithersburg, MD 20877-4121 www.nebb.org

NECA National Electrical Contractors Association 3 Bethesda Metro Center, Suite 1100 Bethesda, MD 20814-5372 www.necanet.org

NEI National Elevator Industry 185 Bridge Plaza North, Suite 310 Fort Lee, NJ 07024

NEMA National Electrical Manufacturers' Association 1300 North 17th Street, Suite 1847 Rosslyn, VA 22209 www.nema.org

NFPA National Fire Protection Association One Batterymarch Park P.O. Box 9101 Quincy, MA 02269-9101 www.nfpa.org

NHLA National Hardwood Lumber Association P.O. Box 34518 Memphis, TN 38184-0518 www.natlhardwood.org

NIA National Insulation Association 99 Canal Center Plaza, Suite 222 Alexandria, VA 22314 www.insulation.org

NOFMA National Oak Flooring Manufacturers Association P.O. Box 3009 Memphis, TN 38173-0009 www.nofma.org

NPA National Particleboard Association 18928 Premiere Court Gaithersburg, MD 20879-1569 www.pbmdf.com

NPCA National Paint and Coatings Association 1500 Rhode Island Avenue, NW Washington, DC 20005-5597 www.paint.org NRCA National Roofing Contractors Association P.O. Box 809261 Chicago, IL 60680-9261 www.roofonline.org

NRMCA National Ready Mixed Concrete Association 900 Spring Street Silver Spring, MD 20910 www.nrmca.org

NSA National Stone, Sand and Gravel Association 2101 Wilson Blvd. Arlington, VA 22201 www.nssga.org

NSF NSF International P.O. Box 130140 Ann Arbor, MI 48113-0140 www.nsf.org

NSSEA National School Supply and Equipment Association 8300 Colesville Road, Suite 250 Silver Spring, MD 20910 www.nssea.org

NTMA National Terrazzo and Mosaic Association 3166 Des Plaines Avenue, Suite 121 Des Plaines, IL 60018 www.ntma.com

NUSIG National Uniform Seismic Installation Guidelines 12 Lahoma Court Alamo, CA 94526

NWWDA The Window and Door Manufacturer's Door Association 1400 East Touhy Avenue, Suite 470 Des Plaines, IL 60018 www.wdma.org

OSHA Occupational Safety and Health Administration (U.S. Department of Labor)
200 Constitution Avenue, NW
Washington, DC 20210

PCA Portland Cement Association 5420 Old Orchard Road Skokie, IL 60077-1083 www.portcement.org

PCI Precast/Prestressed Concrete Institute 175 W. Jackson Blvd. Chicago, IL 60604 www.pci.org

> REFERENCE STANDARDS 01 42 19 - 12

PDCA Painting and Decorating Contractors of America 3913 Old Lee Highway, Suite 33-B Fairfax, VA 22030 www.pdca.com

PDI Plumbing and Drainage Institute 45 Bristol Drive (508) 230-3516 South Easton, MA 02375 www.pdionline.org

PEI Porcelain Enamel Institute 4004 Hillsboro Pike, Suite 224-B Nashville, TN 37215 www.porcelainenamel.com

RFCI Resilient Floor Covering Institute 401 East Jefferson #102 Rockville, MD 20850 www.rfci.com

RIS Redwood Inspection Service c/o California Redwood Association 405 Enfrente Drive, Suite 200 Novato, CA 94949-7206 www.calredwood.org

SDI Steel Deck Institute P.O. Box 25 Fox River Grove, IL 60012 www.sdi.org

SDI Steel Door Institute 30200 Detroit Road Cleveland, OH 44145-1967 www.steeldoor.org

SIGMA Sealed Insulating Glass Manufacturers Association 401 N. Michigan Avenue Chicago, IL 60611-4267

SJI Steel Joist Institute 3127 Tenth Avenue, North Ext. Myrtle Beach, SC 29577-6760 www.steeljoist.org

SMA Stucco Manufacturers Association 14006 Ventura Blvd. Sherman Oaks, CA 91403 SMACNA Sheet Metal and Air Conditioning Contractors National Association, Inc. 4201 Lafayette Center Drive Chantilly, VA 20151-1209 www.smacna.org

SPI Society of the Plastics Industry, Inc. Spray Polyurethane Division 1801 "K" Street, NW, Suite 600K Washington, DC 20006 www.socplas.org

SPIB Southern Pine Inspection Bureau 4709 Scenic Highway Pensacola, FL 32504-9094 www.spib.org

SPRI (Formerly: Single Ply Roofing Institute) 200 Reservoir Street, Suite 309A Needham, MA 02494 www.spri.org

SSPC The Society for Protective Coatings 40 24th Street, Sixth Floor Pittsburgh, PA 15222-4656 www.sspc.org

SWI Steel Window Institute c/o Thomas Associates, Inc. 1300 Sumner Avenue Cleveland, OH 44115-2851 www.steelwindows.com

TCA Tile Council of America 100 Clemson Research Blvd. Anderson, SC 29625 www.tileusa.com

TPI Truss Plate Institute 583 D'Onofrio Drive, Suite 200 Madison, WI 53719

TPI Turfgrass Producers International 1855-A Hicks Road Rolling Meadows, IL 60008 www.turfgrasssod.org

UL Underwriters Laboratories, Inc. 333 Pfingston Road Northbrook, IL 60062 www.ul.com UNI Uni-Bell PVC Pipe Association 2655 Villa Creek Drive, Suite 155 Dallas, TX 75234 www.uni-bell.org

USDA U.S. Department of Agriculture 14th Street and Independence Avenue, SW Washington, DC 20250

USPS U.S. Postal Service 475 L'Enfant Plaza, SW Washington, DC 20260-0010

WA Wallcoverings Association 401 North Michigan Avenue Chicago, IL 60611-4267 www.wallcoverings.org

WCLIB West Coast Lumber Inspection Bureau P.O. Box 23145 Portland, OR 97281-3145 www.wclib.org

WCMA Window Covering Manufacturers Association 355 Lexington Avenue, 17th Floor New York, NY 10017-6603

WIC Woodwork Institute of California P.O. Box 980247 West Sacramento, CA 95798-0247 www.wicnet.org

WLPDIA Western Lath/Plaster/Drywall Industries Association 8635 Navajo Road San Diego, CA 92119

WMMPA Wood Molding & Millwork Producers Association 507 First Street Woodland, CA 95695 www.wmmpa.com

WRI Wire Reinforcement Institute P.O. Box 450 Findlay, OH 45839-0450 www.wirereinforcementinstitute.org

WWPA Western Wood Products Association - Yeon Building 522 S.W. Fifth Avenue, #500 Portland, OR 97204-2122 www.wwpa.org

## 1.03 DEFINITIONS

A. Regulations: Includes laws, ordinances, statutes and lawful orders issued by authorities having jurisdiction, as well as rules, conventions and agreements within the construction industry that control performance of the work.

#### 1.04 SYSTEM DESCRIPTIONS

- A. Specification Format and Content
  - Specifications are organized into Divisions and Sections based on the Construction Specifications Institute's 2004 Masterformat numbering system.
  - 2. The sections are placed in the Project Manual in numeric sequence; however, this sequence is not complete and the Table of Contents of the specifications must be consulted to determine the total listing of sections.
  - 3. The section title is not intended to limit the meaning or content of the section, nor is it to be fully descriptive of the requirements specified therein.
  - 4. The organization of the specifications shall not control the division of the work among subcontractors or establish the extent of work to be performed by any trade.
  - 5. Specifications use certain conventions regarding style of language and the intended meaning of certain terms, words and phrases when used in particular situations or circumstances. These conventions are:
    - Language used in Specifications and other Contract
      Documents is abbreviated. Words and meanings shall be
      interpreted as appropriate. Words that are implied, but not
      stated, shall be interpolated as the sense requires. Singular
      words shall be interpreted as plural and plural words
      interpreted as singular where applicable to maintain the
      context of the Contract Document indicated.
    - Imperative and streamlined language is generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by the CONTRACTOR. Subjective language is used for clarity to describe responsibilities that must be fulfilled indirectly by the CONTRACTOR, or by others when so noted.
    - 3. The words "shall be" are implied wherever a colon (:) is used within a sentence or phrase.

## B. Codes and Standards

- Latest edition of pertaining ordinances, laws, rules, codes, regulations, standards and others of public agencies having jurisdiction of the work are intended wherever reference is made in either the singular or plural to Code or Building Code except as otherwise specified, including but not limited to latest edition of those in the following listing.
- 2. Partial List of Applicable Codes
  - a. 2019 California Administrative Code,
     C.C.R., Title 24, Part 1
  - b. 2019 California Building Code,C.C.R., Title 24, Part 2, Volumes 1 and 2

- (Based on the 2018 International Building Code Volumes 1-2 and 2019 California Amendments)
- c. 2019 California Electrical Code,
   C.C.R., Title 24, Part 3
   (Based on the 2017 National Electrical Code)
- d. 2019 California Mechanical Code,
   C.C.R., Title 24, Part 4
   (Based on the 2018 IAPMO Uniform Mechanical Code and 2019 California Amendments)
- e. 2019 California Plumbing Code, C.C.R., Title 24, Part 5 (Based on the 2018 IAPMO Uniform Plumbing Code and 2019 California Amendments)
- f. 2019 California Energy Code, C.C.R., Title 24, Part 6
- g. 2019 California Historical Building Code, C.C.R., Title 24, Part 8
- h. 2016 California Fire Code,
   C.C.R., Title 24, Part 9
   (Based on the 2018 International Fire Code and 2019 California Amendments)
- 2019 California Existing Building Code, C.C.R., Title 24, Part 10
- j. 2019 California Green Building Standards Code, C.C.R, Title 24, Part 11
- k. 2019 California Referenced Standards Code,
   C.C.R., Title 24, Part 12; Title 19, Public Safety, SFM Regulations
- I. ASME A17.1/CSA B44-16 Safety Code for Elevators & Escalators
- 3. Partial List of Applicable Standards
  - a. NFPA 13 Automatic Sprinkler Systems, 2016 Ed.
  - b. NFPA 14 Standpipe Systems, 2016 Ed.
  - c. NFPA 17 Dry Chemical Extinguishing Systems, 2017 Ed.
  - d. NFPA 17A Wet Chemical Extinguishing Systems, 2017 Ed.
  - e. NFPA 20 Stationary Pumps, 2016 Ed.
  - f. NFPA 22 Water Tanks For Private Fire Protection, 2013 Ed.
  - g. NFPA 24 Private Fire Service Mains, 2016 Ed.
  - h. NFPA 72 National Fire Alarm and Signaling Code, 2016 Ed.
  - i. NFPA 80 Fire Doors and Other Opening Protectives, 2016 Ed.
  - j. NFPA 92 Standard for Smoke Control Systems, 2015 Edition
  - k. NFPA 253 Critical Radiant Flux of Floor Covering Systems, 2015 Ed.
  - I. NFPA 2001 Clean Agent Fire Extinguishing Systems, 2015 Ed.
  - m. ICC 300 ICC Standards on Bleachers, Folding and Telescoping Seating and Grandstands, 2012 Ed.
  - n. UL 300 Fire Testing of Fire Extinguishing Systems for Protection Of Restaurant Cooking Areas
  - o. UL 464 Audible Signal Appliances
  - p. UL 521 Heat Detectors for Fire Protective Signaling Systems
- 4. A copy of C.C.R. Title 24, 2019 Part 1-5 must be kept on site during construction.

 All addenda and construction change documents must be signed by the ARCHITECT.

## C. Industry Standards

- Except where Contract Documents include more stringent requirements, applicable construction industry standards shall apply as if bound into the Contract Documents to the extent referenced. Such standards are made part of Contract Documents by reference.
- 2. Conform to reference standard by date of issue current on date for receiving bids except when a specific date is indicated.
- 3. Where compliance with two (2) or more standards is specified and where standards may establish different or conflicting requirements for quantities or quality levels, the more stringent, higher quality and greater quantity of work shall apply.
- 4. The quantity or quality level shown or specified shall be the minimum provided or performed. Indicated numeric values are minimum or maximum, as appropriate, for the context of the requirements.
- 5. Each entity engaged in construction of the work is required to be familiar with industry standards applicable to its construction activity.
- Copies of applicable standards are not bound with the Contract Documents. Where copies of standards are needed to perform a required activity, CONTRACTOR shall obtain copies directly from publication source.
- 7. Trade association's names and titles of general standards are frequently abbreviated. Where such abbreviations are used in the Specifications or other Contract Documents, they shall mean the recognized trade association, standards-generating organization, authority having jurisdiction or other entity applicable to the content of the text provision. Refer to the "Encyclopedia of Associations", published by Gale Research Co., available in most libraries. A partial list is included at the end of this section.
- 8. Refer to individual specification sections and related drawings for names and abbreviations of trade associations and standards applicable to specific portions of the work.
- 9. 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.
- 1.05 SUBMITTALS
- 1.06 QUALITY ASSURANCE
- 1.07 DELIVERY, STORAGE, AND HANDLING
- 1.08 PROJECT CONDITIONS
- 1.09 SEQUENCING
- 1.10 SCHEDULING
- 1.11 WARRANTY
- 1.12 SYSTEM STARTUP
- 1.13 OWNER'S INSTRUCTIONS
- 1.14 COMMISSIONING
- 1.15 MAINTENANCE

- 2.01 MANUFACTURERS
- 2.02 EXISTING PRODUCTS
- 2.03 MATERIALS
- 2.04 MANUFACTURED UNITS
- 2.05 EQUIPMENT
- 2.06 COMPONENTS
- 2.07 ACCESSORIES
- 2.08 MIXES
- 2.09 FABRICATION
- 2.10 FINISHES
- 2.11 SOURCE QUALITY CONTROL

#### **PART 3 EXECUTION**

- 3.01 INSTALLERS
- 3.02 EXAMINATION
- 3.03 PREPARATION
- 3.04 ERECTION
- 3.05 INSTALLATION
- 3.06 APPLICATION
- 3.07 CONSTRUCTION
- 3.08 REPAIR/RESTORATION
- 3.09 RE-INSTALLATION
- 3.10 FIELD QUALITY CONTROL
- 3.11 ADJUSTING
- 3.12 CLEANING
- 3.13 DEMONSTRATION
- 3.14 PROTECTION
- 3.15 SCHEDULES

**END OF SECTION** 

## SECTION 01 45 00 QUALITY CONTROL

#### PART 1 GENERAL

## 1.01 SUMMARY

- A. Section Includes
  - 1. Quality assurance and control of installation.
  - 2. Certifications
  - 3. Field samples.
  - 4. Mock-up.
  - 5. Manufacturers' field services and reports.
- B. Products Supplied But Not Installed Under This Section
- C. Products Installed But Not Supplied Under This Section
- D. Related Sections
- E. Allowances
- F. Unit Prices
- G. Measurement Procedures
- H. Payment Procedures
- I. Alternates
- 1.02 REFERENCES
- 1.03 DEFINITIONS
- 1.04 SYSTEM DESCRIPTIONS
- 1.05 SUBMITTALS
- 1.06 QUALITY ASSURANCE
  - A. Qualifications
    - Monitor quality control over suppliers, manufacturers, products, services, site conditions and workmanship to produce work of specified quality.
    - 2. Comply fully with manufacturers' instructions including each step in sequence.
    - 3. Should manufacturers' instructions conflict with Contract Documents, request clarification from ARCHITECT before proceeding.
    - 4. 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.
    - 5. Perform work by persons qualified to produce workmanship of specified quality.
    - Where experience minimums for workmen, applicators, companies or manufacturers are required in individual sections, written certification and documentation substantiating such minimums shall be submitted and approved by the ARCHITECT, when requested.
    - 7. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion or disfigurement.
  - B. Regulatory Requirements
    - 1. All work pertaining to and all materials supplied for executing and completing this Contract shall comply with provisions specified in

the Contract Documents and with all applicable laws, regulations and ordinances governing Work.

#### C. Certifications

- 1. Manufacturers' Field Services and Reports
  - a. 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 and as applicable and to initiate instructions when necessary.
  - Manufacturer's Representatives shall report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.
  - c. Submit report of observation to ARCHITECT for review.

## D. Field Samples

- 1. Install field samples at the site as required by individual specifications sections for review by ARCHITECT.
- 2. Accepted samples represent a quality level for the Work.
- 3. Where field sample is specified in individual sections to be removed, clear area after field sample has been accepted by ARCHITECT and is no longer required for reference.

# E. Mock-ups

- 1. Tests will be performed under provisions identified in this section.
- 2. Assemble and erect specified items with specified attachment and anchorage devices, flashings, seals and finishes.
- 3. Where mock-up is specified in individual sections to be removed, clear area after mock-up has been accepted by ARCHITECT and is no longer required for reference.

## F. Pre-installation Meetings

- When specified in individual specification sections, require material or Product suppliers or manufacturers to provide qualified staff personnel to attend meetings regarding installation of specified Work.
- 1.07 DELIVERY, STORAGE, AND HANDLING
- 1.08 PROJECT CONDITIONS
- 1.09 SEQUENCING
- 1.10 SCHEDULING
- 1.11 WARRANTY
- 1.12 SYSTEM STARTUP
- 1.13 OWNER'S INSTRUCTIONS
- 1.14 COMMISSIONING
- 1.15 MAINTENANCE

#### **PART 2 PRODUCTS**

- 2.01 MANUFACTURERS
- 2.02 EXISTING PRODUCTS
- 2.03 MATERIALS
- 2.04 MANUFACTURED UNITS
- 2.05 EQUIPMENT

- 2.06 COMPONENTS
- 2.07 ACCESSORIES
- 2.08 MIXES
- 2.09 FABRICATION
- 2.10 FINISHES
- 2.11 SOURCE QUALITY CONTROL

## **PART 3 EXECUTION**

- 3.01 INSTALLERS
- 3.02 EXAMINATION
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- 3.09 RE-INSTALLATION
- 3.10 FIELD QUALITY CONTROL
- 3.11 ADJUSTING
- 3.12 CLEANING
- 3.13 DEMONSTRATION
- 3.14 PROTECTION
- 3.15 SCHEDULES

**END OF SECTION** 

# SECTION 01 52 00 CONSTRUCTION FACILITIES

#### PART 1 GENERAL

## 1.01 SUMMARY

- A. Section Includes
  - Furnishing and Installing:
    - a. Temporary Water
    - b. Temporary Sanitary Facilities
    - c. Fences and Barricades
    - d. Construction Equipment
    - e. Storage
    - f. Temporary Job Office
    - g. Temporary Electrical
    - h. Temporary Lighting
    - i. Temporary Heat
    - j. Temporary Ventilation
    - k. Barriers
    - I. Noise Control
    - m. Pollution Control
    - n. Exterior Enclosures
    - o. Access Roads
    - p. Progress Cleaning
    - q. Fire Protection
- B. Products Supplied But Not Installed Under This Section
- C. Products Installed But Not Supplied Under This Section
- D. Related Sections
- E. Allowances
- F. Unit Prices
- G. Measurement Procedures
- H. Payment Procedures
- I. Alternates
- 1.02 REFERENCES
- 1.03 DEFINITIONS
- 1.04 SYSTEM DESCRIPTIONS
- 1.05 SUBMITTALS
- 1.06 QUALITY ASSURANCE
- 1.07 DELIVERY, STORAGE, AND HANDLING
- 1.08 PROJECT CONDITIONS
  - A. Regulatory Requirements
    - 1. Comply with governing regulations and utility company regulations and recommendations.
    - Comply with pollution and environmental protection regulations for use of water and energy, for discharge of wastes and storm drainage from Project Site and for control of dust, air pollution and noise.
    - Temporary construction shall conform to requirements of State, County and Local authorities and underwriters which pertain to operation, health, safety and fire hazard. CONTRACTOR shall furnish and install items necessary for conformance with such

requirements, whether or not called for under the separate divisions of these specifications.

# B. Temporary Water

 The OWNER shall provide construction water at the closest existing fire hydrant as approved by the local jurisdiction. OWNER supplied point of connection shall include applicable temporary meter and backflow devices. CONTRACTORS requiring construction water shall provide all labor and materials (including cut and patch) to distribute.

## C. Temporary Sanitary Facilities

- 1. CONTRACTOR will provide and maintain required temporary chemical type toilet facilities and enclosures.
- 2. Existing facilities shall not be used.

#### D. Fences and Barricades

- After completion of site grading and before start of Work on the project site, CONTRACTOR may install a six (6) foot high temporary chain link fence with locked entrance gates to substantially enclose the entire project site. Any activities schedule to commence prior to the installation of fencing will be temporarily fenced by CONTRACTOR requiring same.
- 2. The CONTRACTOR requiring same shall construct and maintain planking, barricades, lights and warning signs as indicated as required by Local authorities and State safety ordinances and as necessary for the protection of the public.

# E. Construction Equipment

- CONTRACTOR shall erect, equip and maintain construction equipment in strict accordance with applicable statues, laws, ordinances and regulations of authority having jurisdiction.
- CONTRACTOR shall provide, maintain and move upon completion of the Work all temporary rigging, scaffolding, hoisting equipment, rubbish chutes, ramps, stairs, runways, platforms, ladders, railings and other temporary construction as required for all work hereunder.

### F. Storage

- Operations of the CONTRACTOR, including storage of materials, shall be confined to areas approved by OWNER. CONTRACTOR shall be liable for damage caused by him/her during such use of property of the OWNER or other parties. CONTRACTOR shall save the OWNER along with their respective officers, employees and agents, and the ARCHITECT and his employees, free and harmless from liability of any nature or kind arising from any use, trespass or damage occasioned by his operations on premises of third persons. Storage facilities shall provide protection of products from excessive cold, heat, moisture, humidity or physical abuse as specified in the respective sections for the products stored. Each CONTRACTOR requiring same shall provide their own temporary storage and security for same.
- Staging areas will be under the supervision of the CONTRACTOR.
   Materials shall be placed and relocated as necessary for the progress of the project.

# G. Temporary Job Office

1. Should any CONTRACTOR require office space, the CONTRACTOR requiring office space shall provide.

# H. Temporary Electrical

- 1. If requested by CONTRACTOR, OWNER shall provide temporary power as follows:
  - a. One (1) 200 amp single phase service.
  - b. A 50 amp sub-panel mounted on a post will not be more than 50 feet away from each building pad.
  - c. Each sub-panel shall be equipped with two (2) 110 volt receptacles, one (1) 220 volt receptacle and one (1) 50 amp twist-lock pigtail.
- 2. Any temporary power requirements beyond these provided will be the responsibility of the CONTRACTOR requiring same.
- 3. All welding will be done with self-contained gas powered units.

# I. Temporary Lighting

 Each CONTRACTOR shall be responsible to provide and maintain all temporary lighting as required to safely access and perform their work.

## J. Temporary Heat

- 1. Temporary heat will be supplied and maintained by the CONTRACTOR requiring same.
- 2. Do not use permanent equipment for temporary heating purposes unless specifically noted otherwise in the contract documents.

# K. Temporary Ventilation

All CONTRACTORS shall ventilate enclosed areas to assist cure of materials, dissipate humidity and to prevent accumulation of dust, fumes, vapors or gases as the above may be generated by them.

#### L. Barriers

- Provide barriers to prevent unauthorized entry to construction areas and to protect existing facilities and adjacent properties from damage from construction operations.
- 2. Provide barricades and covered walkways required by governing authorities for public rights-of-way and for public access to existing building.
- 3. Provided protection for plant life and trees designated to remain and for soft and hardscape areas adjacent to work, replace damaged materials as directed by the ARCHITECT.
- 4. Protect non-owned vehicular traffic, stored materials, site and structures from damage.
- 5. Construction workers shall not interact or communicate with students or staff except in emergency or safety related situations. (Post a sign to this effect at entry.)

## M. Noise Control

- CONTRACTORS shall ensure that all construction equipment utilized include noise-reduction features (e.g., mufflers and engine shrouds) that are no less effective than those originally installed by the manufacturer of such equipment.
- CONTRACTORS shall review and be knowledgeable of any CEQA documentation for this project restricting or limiting noise, and implement any and all scheduling or mitigation methods necessary to conform with the CEQA documents. This includes any Mitigated Negative or Negative Declaration instrument the OWNER has produced.

- 3. CONTRACTORS shall review and be knowledgeable of any federal, state or local agency requirements for noise restrictions and adhere to the policies outlined by the applicable laws and codes.
- N. Pollution Control
  - Provide methods, means and facilities to prevent contamination of soil, water and atmosphere from discharge of noxious, toxic substances and pollutants produced by construction operations.
- O. Exterior Enclosures
  - Provide temporary weather-tight closure of exterior openings to accommodate acceptable working conditions and protection for materials, to allow for temporary heating and maintenance or required ambient temperatures identified in individual specification Sections and to prevent entry of unauthorized persons. Provide access doors with self-closing hardware and locks.
- P Access Roads
  - 1. Provide and maintain access to fire hydrants, free of obstructions.
  - 2. Existing on-site roads may be used for construction traffic.
  - 3. CONTRACTORS may not park or drive on concrete walks or in the buildings at any time.
- Q. Progress Cleaning
  - Maintain areas free of waste materials, debris and rubbish.
     Maintain site in a clean and orderly condition.
  - 2. Each applicable CONTRACTOR shall remove debris and rubbish from pipe chases, plenums, attics, crawl spaces and other closed or remote spaces prior to the space being enclosed.
  - 3. Each applicable CONTRACTOR shall broom and vacuum clean interior areas prior to start of surface finishing and continue cleaning to eliminate dust.
  - 4. Remove waste materials, debris and rubbish from site periodically and dispose off-site.
- R. Fire Protection
  - 1. Fire protection during construction shall be provided in accordance with CFC, Chapter 33.
- 1.09 SEQUENCING
- 1.10 SCHEDULING
- 1.11 WARRANTY
- 1.12 SYSTEM STARTUP
- 1.13 OWNER'S INSTRUCTIONS
- 1.14 COMMISSIONING
- 1.15 MAINTENANCE

#### **PART 2 PRODUCTS**

- 2.01 MANUFACTURERS
- 2.02 EXISTING PRODUCTS
- 2.03 MATERIALS
- 2.04 MANUFACTURED UNITS
- 2.05 EQUIPMENT
- 2.06 COMPONENTS
- 2.07 ACCESSORIES
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- 2.10 FINISHES
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### **PART 3 EXECUTION**

- 3.01 INSTALLERS
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- 3.10 FIELD QUALITY CONTROL
- 3.11 ADJUSTING
- 3.12 CLEANING
- 3.13 DEMONSTRATION
- 3.14 PROTECTION
- 3.15 SCHEDULES

**END OF SECTION** 

# SECTION 01 57 00 TEMPORARY CONTROLS

#### **PART 1 GENERAL**

1.01 SUMMAI	RY
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- A. Section Includes
  - Water Control
  - 2. Dust Control
  - 3. Erosion and Sediment Control
  - 4. Noise Control
  - Pollution Control
- B. Products Supplied But Not Installed Under This Section
- C. Products Installed But Not Supplied Under This Section
- D. Related Sections
- E. Allowances
- F. Unit Prices
- G. Measurement Procedures
- H. Payment Procedures
- I. Alternates
- 1.02 REFERENCES
- 1.03 DEFINITIONS
- 1.04 SYSTEM DESCRIPTIONS
- 1.05 SUBMITTALS
- 1.06 QUALITY ASSURANCE
- 1.07 DELIVERY, STORAGE, AND HANDLING
- 1.08 PROJECT CONDITIONS
  - A. Project Environmental Requirements
    - 1. Water Control
      - a. Do not permit surface or subsurface water or other liquids to accumulate in or about the premises and vicinity thereof. Should such conditions be encountered or develop, control the water or other liquid and suitably dispose of it by means of temporary pumps, piping, drainage lines, troughs, ditches, dams or other methods as approved by the ARCHITECT and/or the authority having jurisdiction.

# 2. Dust Control

- a. Conduct earthwork operations in a manner to prevent windblown dust and dirt from interfering with the progress of the Work, the OWNER'S activities and the existing occupied structures in the areas immediately adjacent as well as adjacent properties.
- b. Periodically water construction areas as required to minimize accumulation of dust and dirt.
- c. Water spray or cover with tarpaulins truck loads of soil to additionally minimize generation of dust and dirt from construction operations.
- d. Prevent dust and dirt from accumulating on walks, roadways, parking areas and from washing into sewer and storm drain lines.
- 3. Erosion and Sediment Control

- a. Plan and execute construction by methods to control surface drainage from cuts and fills from borrow and waste disposal areas. Prevent erosion and sedimentation.
- b. Minimize amount of bare soil exposed at one time.
- c. Provide temporary measures such as berms, dikes and drains to prevent water flow over adjacent properties or City rights-of-way.
- e. Construct fill and waste areas by selective placement to avoid erosive surface silts or clays.
- f. Periodically inspect earthwork to detect evidence of erosion and sedimentation; promptly apply corrective measures.

#### 4. Noise Control

 Avoid excessive noise where adjacent operations may be detrimentally affected.

### 5. Pollution Control

- a. Provide methods, means and facilities to prevent contamination of soil, water and atmosphere from discharge of noxious, toxic substances and pollutants produced by construction operations.
- b. Burning of refuse, debris or other materials will not be permitted on the Site.
- Comply with regulatory requirements and anti-pollution ordinances during the course of construction and disposal operations.

## 6. Removal

- a. Remove all temporary control measures in accordance with regulatory requirements at the completion of construction.
- B. Existing Conditions
- 1.09 SEQUENCING
- 1.10 SCHEDULING
- 1.11 WARRANTY
- 1.12 SYSTEM STARTUP
- 1.13 OWNER'S INSTRUCTIONS
- 1.14 COMMISSIONING
- 1.15 MAINTENANCE

## PART 2 PRODUCTS

- 2.01 MANUFACTURERS
- 2.02 EXISTING PRODUCTS
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#### **PART 3 EXECUTION**

- 3.01 INSTALLERS
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- 3.10 FIELD QUALITY CONTROL
- 3.11 ADJUSTING
- 3.12 CLEANING
- 3.13 DEMONSTRATION
- 3.14 PROTECTION
- 3.15 SCHEDULES

**END OF SECTION** 

# SECTION 01 60 00 PRODUCT REQUIREMENTS

#### **PART 1 GENERAL**

## 1.01 SUMMARY

- A. Section Includes
  - 1. Products
  - 2. Transportation and Handling
  - 3. Storage and Protection
- B. Products Supplied But Not Installed Under This Section
- C. Products Installed But Not Supplied Under This Section
- D. Related Sections
- E. Allowances
- F. Unit Prices
- G. Measurement Procedures
- H. Payment Procedures
- I. Alternates

### 1.02 REFERENCES

- 1.03 DEFINITIONS
- 1.04 SYSTEM DESCRIPTIONS
  - A. Products
    - Products: Means new material, machinery, components, equipment, fixtures and systems forming the Work. Does not include machinery and equipment used for preparation, fabrication, conveying and erection of the Work. Products may also include existing materials or components required for reuse.
    - Do not use materials and equipment removed from existing premises, except as specifically permitted by the Contract Documents.
    - 3. Provide interchangeable components of the same manufacturer for similar components.
    - 4. The ARCHITECT may reject as non-complying such material and products that do not bear identification satisfactory to the ARCHITECT as to manufacturer, grade, quality and other pertinent.
    - 5. In event of damage, promptly make replacements and repairs to the approval of the ARCHITECT and at no additional cost to the OWNER.
    - 6. Additional time required to secure replacements and to make repairs will not be considered by the ARCHITECT to justify an extension in the Contract Time of Completion.
- 1.05 SUBMITTALS
- 1.06 QUALITY ASSURANCE
- 1.07 DELIVERY, STORAGE, AND HANDLING
  - A. Packing, Shipping, Handling, and Unloading
    - 1. Transport and handle products in accordance with manufacturer's instructions.
    - 2. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement or damage.

- B. Acceptance at Site
  - Promptly inspect shipments to assure that products comply with requirements, quantities are correct and products are undamaged.
- C. Storage and Protection
  - 1. Store and protect products in accordance with manufacturer's instructions, with seals and labels intact and legible. Store sensitive products in weather-tight, climate controlled enclosures.
  - 2. For exterior storage of fabricated products, place on sloped supports, above ground and protect as necessary to prevent deterioration or damage to the product.
  - When approved by the OWNER, provide off-site storage and protection in a bonded warehouse approved by OWNER when site does not permit on-site storage or protection at no cost to the OWNER.
  - 4. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to avoid condensation.
  - 5. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.
  - 6. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement or damage.
  - 7. Arrange storage of products to permit access for inspection.

    Periodically inspect to assure products are undamaged and are maintained under specified conditions.
- D. Waste Management and Disposal
- 1.08 PROJECT CONDITIONS
- 1.09 SEQUENCING
- 1.10 SCHEDULING
- 1.11 WARRANTY
- 1.12 SYSTEM STARTUP
- 1.13 OWNER'S INSTRUCTIONS
- 1.14 COMMISSIONING
- 1.15 MAINTENANCE

### **PART 2 PRODUCTS**

- 2.01 MANUFACTURERS
- 2.02 EXISTING PRODUCTS
- 2.03 MATERIALS
- 2.04 MANUFACTURED UNITS
- 2.05 EQUIPMENT
- 2.06 COMPONENTS
- 2.07 ACCESSORIES
- 2.08 MIXES
- 2.09 FABRICATION
- 2.10 FINISHES
- 2.11 SOURCE QUALITY CONTROL

## **PART 3 EXECUTION**

- 3.01 INSTALLERS
- 3.02 EXAMINATION
- 3.03 PREPARATION

3.04 **ERECTION** 3.05 INSTALLATION 3.06 APPLICATION 3.07 CONSTRUCTION 3.08 REPAIR/RESTORATION 3.09 **RE-INSTALLATION** 3.10 FIELD QUALITY CONTROL 3.11 **ADJUSTING** 3.12 CLEANING 3.13 DEMONSTRATION 3.14 PROTECTION

SCHEDULES

3.15

**END OF SECTION** 

# SECTION 01 74 00 CLEANING AND WASTE MANAGEMENT

#### **PART 1 GENERAL**

#### 1.01 SUMMARY

- A. Section Includes
  - 1. Provide throughout the construction period, maintain the buildings and site in a standard of cleanliness as described in the section.
- B. Products Supplied But Not Installed Under This Section
- C. Products Installed But Not Supplied Under This Section
- D. Related Sections
- E. Allowances
- F. Unit Prices
- G. Measurement Procedures
- H. Payment Procedures
- I. Alternates
- 1.02 REFERENCES
- 1.03 DEFINITIONS
- 1.04 SYSTEM DESCRIPTIONS
  - A. Conduct daily inspection, and more often if necessary, to verify that requirements for cleanliness are being met.
  - B. In addition to the standards described in this section, comply with pertinent requirements of governmental agencies having jurisdiction.
- 1.05 SUBMITTALS
- 1.06 QUALITY ASSURANCE
- 1.07 DELIVERY, STORAGE, AND HANDLING
- 1.08 PROJECT CONDITIONS
- 1.09 SEQUENCING
- 1.10 SCHEDULING
- 1.11 WARRANTY
- 1.12 SYSTEM STARTUP
- 1.13 OWNER'S INSTRUCTIONS
- 1.14 COMMISSIONING
- 1.15 MAINTENANCE

### **PART 2 PRODUCTS**

- 2.01 MANUFACTURERS
- 2.02 EXISTING PRODUCTS
- 2.03 MATERIALS
- 2.04 MANUFACTURED UNITS
- 2.05 EQUIPMENT
- 2.06 COMPONENTS
- 2.07 ACCESSORIES
- 2.08 MIXES
- 2.09 FABRICATION
- 2.10 FINISHES
- 2.11 SOURCE QUALITY CONTROL

### **PART 3 EXECUTION**

- 3.01 INSTALLERS
- 3.02 EXAMINATION
- 3.03 PREPARATION
- 3.04 ERECTION
- 3.05 INSTALLATION
- 3.06 APPLICATION
- 3.07 CONSTRUCTION
- 3.08 REPAIR/RESTORATION
- 3.09 RE-INSTALLATION
- 3.10 FIELD QUALITY CONTROL
- 3.11 ADJUSTING
- 3.12 CLEANING
  - A. Cleaning of Materials and Equipment
    - 1. Provide required personnel, equipment, and materials needed to maintain the specified standard of cleanliness.
  - B. Compatibility
    - 1. Use only the cleaning materials and equipment which are compatible with the surface being cleaned, as recommended by the manufacturer of the material.
  - C. Progress Cleaning
    - Retain stored items in an orderly arrangement allowing maximum access, not impeding traffic or drainage, and providing required protection of materials.
    - 2. So not allow accumulation of scrap, debris, waste material, and other items not required for construction of this work.
    - 3. At least twice each month, and more often if necessary, completely remove all scrap, debris, and waste material from the job site.
    - 4. Provide adequate storage for all items awaiting removal from the job site, observing requirements for fire protection and protection of the ecology.
    - 5. Site
      - a. Clean daily, and more often if necessary, inspect the site and pick up all scrap, debris, and waste material. Remove such items to the place designated for their storage.
      - b. Weekly, and more often if necessary, inspect all arrangements of materials stored on the site. Restack, tidy, or otherwise service arrangements as needed.
      - c. Maintain the site in a neat and orderly condition at all times.
    - 6. Structures
      - Weekly, and more often if necessary, inspect the structures and pick up all scrap, debris, and waste material. Remove such items to the place designated for their storage.
      - b. Weekly, and more often if necessary, sweep interior spaces clean. "Clean" for the purpose of this subparagraph, shall be interpreted as meaning free from dust and other material capable of being removed by use of reasonable effort and a hand-held broom.
      - c. As required preparatory to installation of succeeding materials, clean the structures or pertinent portions hereof to the degree of cleanliness recommended by the

- manufacturer of the succeeding material, using equipment and materials required to achieve the necessary cleanliness.
- d. Following the installation of finish floor materials, clean the finish floor daily (and more often if necessary) at all times while work is being performed in the space in which finish materials are installed. "Clean" for the purpose of this subparagraph, shall be interpreted as meaning free from foreign material which, in the opinion of the ARCHITECT, may be injurious to the finish floor material.

## D. Final Cleaning

- "Clean" for the purpose of this article, and except as may be specifically provided otherwise, shall be interpreted as meaning the level of cleanliness generally provided by skilled cleaners using commercial quality building maintenance equipment and materials.
- 2. Prior to completion of the work, remove from the job site all tools, surplus materials, equipment, scrap, debris, and waste.
- 3. Site
  - a. Broom clean paved areas on the site and public paved areas adjacent to the site.
  - b. Completely remove resultant debris.
- 4. Structures
  - a. Exterior
    - Visually inspect exterior surfaces and remove all traces of soil, waste materials, smudges, and other foreign matter.
    - 2. Remove all traces of splashed materials from adjacent surfaces.
    - 3. If necessary to achieve a uniform degree of cleanliness, hose down the exterior of the structure.
    - In the event of stubborn stains not removable with water, the architect may require light sandblasting or other cleaning at no additional cost to the OWNER.
  - b. Interior
    - Visually inspect interior surfaces and remove all traces of soil, waste materials, smudges, and other foreign matter.
    - 2. Remove all traces of splashed material from adjacent surfaces.
    - 3. Remove paint droppings, spots, stains, and dirt from finished surfaces.
  - c. Glass
    - 1. Clean inside and outside.
  - d. Polished surfaces
    - 1. To surfaces requiring routine application of buffed polish, apply the polish recommended by the manufacturer of the material being polished.
  - e. Schedule final cleaning as approved by the architect to enable the OWNER to accept a completely clean work.
- E. Cleaning During Owner's Occupancy
  - Should the OWNER occupy the work or any portion hereof prior to its completion by the contractor and acceptance by the OWNER, responsibilities for interim and final cleaning shall be as determined

by the ARCHITECT in accordance with the General Conditions of the contract.

- 3.13 DEMONSTRATION
- 3.14 PROTECTION
- 3.15 SCHEDULES

**END OF SECTION** 

# SECTION 01 77 00 CLOSEOUT PROCEDURES

#### **PART 1 GENERAL**

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- A. Section Includes
  - 1. Closeout procedures
  - 2. Adjusting
  - 3. Project record documents
  - 4. Operation and maintenance data
  - 5. Warranties and Guarantees
  - 6. Spare parts and maintenance materials
  - 7. Instructions to OWNER'S personnel
- B. Products Supplied But Not Installed Under This Section
- C. Products Installed But Not Supplied Under This Section
- D. Related Sections
  - 1. 01 20 00 Price and Payment Procedures
  - 2. 01 32 16 Construction Progress Schedule
- E. Allowances
- F. Unit Prices
- G. Measurement Procedures
- H. Payment Procedures
- I. Alternates
- 1.02 REFERENCES
- 1.03 DEFINITIONS
- 1.04 SYSTEM DESCRIPTIONS
  - A. Closeout Procedures
    - Partial Occupancy and Substantial Completion:
      - a. Conform to General Conditions for Closeout Procedures.
      - b. Prepare a list of items to be completed or corrected, aka 'Punch List'. List may be developed by areas, when approved by the ARCHITECT.
      - c. Within a reasonable time after receipt of the list, the ARCHITECT will inspect to determine status of completion.
      - d. Should the ARCHITECT determine that Work is not substantially complete:
        - The ARCHITECT will promptly notify the OWNER and CONTRACTOR in writing, giving the reasons for his determination.
        - 2. CONTRACTOR shall remedy the deficiencies and notify the ARCHITECT when Work is ready for reinspection.
        - 3. The ARCHITECT will re-inspect the Work.
      - e. When the ARCHITECT concurs that work is substantially complete:
        - The ARCHITECT will prepare a "Certificate of Substantial Completion" on AIA Form G704, accompanied by the CONTRACTOR'S list of items to be completed or corrected as verified by the ARCHITECT.

2. The ARCHITECT will submit the Certificate to the OWNER and to the CONTRACTOR for their written acceptance of the responsibilities assigned to them in the Certificate.

#### 2. Final Completion:

- a. Prepare and submit a notice that Work is ready for final inspection and acceptance.
- b. Verify the Work is complete.
- c. Certify that:
  - 1. Work has been inspected by all governing agencies and is in compliance with Contract Documents.
  - Work has been inspected for compliance with the Contract Documents.
  - 3. Work has been completed in accordance with the Contract Documents.
  - 4. Equipment and systems have been tested as required and are operational.
  - 5. Work is completed and ready for final inspection.
- d. The ARCHITECT will make an inspection to verify status of completion.
- e. Should the ARCHITECT determine the Work is incomplete or defective:
  - The ARCHITECT will promptly notify the OWNER and CONTRACTOR in writing, listing incomplete or defective work.
  - 2. CONTRACTOR shall remedy the deficiencies promptly and notify the ARCHITECT when ready for reinspection.
- f. When the ARCHITECT determines the Work is acceptable under the Contract Documents, he will request the CONTRACTOR to make closeout submittals.
- 3. Closeout submittals include, but are not necessarily limited to:
  - a. Project Record Documents.
  - b. Operation and maintenance data for items so listed in pertinent Sections of these Specifications and for other items when so approved by the ARCHITECT.
  - c. Warranties and Guarantees.
  - d. Keys and keying schedule.
  - e. Spare parts, materials, extra stock to be turned over to the OWNER.
  - f. Evidence of payment and release of liens.
  - g. List of subcontractors, service organizations and principal vendors, including names, addresses and telephone numbers, where they may be contacted for emergency service at all times, including nights, weekends and holidays.
- 4. Final Payment:
  - a. Submit a Final Payment Request, showing all adjustments to the Contract Sum.
  - Retention will be released no sooner than thirty-five (35)
    days and not later than sixty (60) days after Notice of
    Completion has been recorded with the County Recorder's
    Office.

#### 1.05 SUBMITTALS

- A. Product Data
- B. Shop Drawings
- C. Samples
- D. Quality Assurance/Control Submittals
- E. Closeout Submittals
  - 1. Project Record Documents
    - OWNER will provide one (1) set of drawings and one (1) copy of the Project Manual for use during construction to record changes made during construction manually.
       CONTRACTORS installing underground utilities shall provide electronic as-built documentation.
    - b. Record in concise and neat manner and on a weekly basis all actual revisions to the work:
      - 1. Changes made on the Drawings, including Clarification Drawings.
      - 2. Changes made to the Specifications.
      - 3. Changes made by Addenda.
      - 4. Changes made by Change Directive.
      - 5. Change Orders or other authorized Modifications to the Contract.
      - 6. Revisions made to shop drawings, product data and samples.
    - c. Store Record Documents separate from documents used for construction. Replace soiled or illegible documents.
    - d. Record information concurrent with construction progress.
    - e. Specifications: Legibly mark and record at each Product section description of actual Products installed, including the following:
      - Manufacturer's name, trade name, product model and number and supplier.
      - 2. Authorized product substitutions or alternates utilized.
      - Changes made by Addenda and Modifications.
    - f. Record Documents and Shop Drawings: Legibly mark each item to record actual construction including:
      - 1. Measured depths of foundations in relation to finish first floor datum.
      - 2. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements. Identify drains and sewers by invert elevation.
      - Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work. Identify ducts, dampers, valves, access doors and control equipment wiring.
      - 4. Field changes of dimension and detail.
      - Details not on original Drawings.
    - g. The OWNER will require the preparation of a final reproducible "RECORD SET" of drawings that incorporate all changes made during the construction process to include

incorporation of all change orders, addenda, field orders and "As Installed" conditions noted on the CONTRACTOR prepared record documents. The preparation and printing cost of the "RECORD SET" is part of the contract.

- 2. Operation And Maintenance Data
  - Submit three (3) sets prior to final inspection, bound in 8½ x
     11 inch text pages, in binders with durable covers, tabbed by specification section and/or other organizing heading.
  - b. Deliver to OWNER, itemized and inventoried on transmittal.
- 3. Warranties and Guarantees
  - a. Submit three (3) wet-signed originals separate from Operation and Maintenance data.
  - b. Manufacturer's warranties and guarantees notwithstanding, warrant entire Work against defects in materials and workmanship for twelve (12) months from date of Substantial Completion. Warranties and guarantees between CONTRACTOR and manufacturers and CONTRACTOR and suppliers shall not affect warranties or guarantees between CONTRACTOR and OWNER.
  - c. Execute and assemble documents from subcontractors, suppliers and manufacturers.
  - d. For items of Work delayed beyond date of Substantial Completion, provide updated submittal within ten (10) days after acceptance, listing date of acceptance as start of warranty period.
  - e. Deliver to OWNER, itemized and inventoried on transmittal.
- 4. Underground Wet Utility Video
  - a. Upon completion of the storm drain system, the CONTRACTOR shall fully flush the storm drain system and confirm proper functionality. Additionally, the CONTRACTOR shall provide all services necessary to electronically view and record (video) the improvements to the storm drain system. The CONTRACTOR shall turn-over two (2) copies of the documented review (DVD or media of the OWNER'S choice) of the storm drain system at the completion of the project.
  - b. Upon completion of the sewer system, the CONTRACTOR shall fully flush the sewer system and confirm proper functionality. Additionally, the CONTRACTOR shall provide all services necessary to electronically view and record (video) the improvements to the sewer system at all interior clean outs and main lines and all exterior building P.O.C./cleanout out to the public system P.O.C. The CONTRACTOR shall turn-over two (2) copies of the documented review (DVD or media of the OWNER'S choice) of the sewer system at the completion of the project.
  - c. Deliver to OWNER, itemized and inventoried on transmittal.
- 5. Instructions to OWNER'S Personnel
  - a. Instruct the OWNER'S personnel in proper operation and maintenance of all systems, equipment and similar items, which were provided as part of the work. Provide maintenance and inspection schedules that conform to manufacturer's recommendations.

CLOSEOUT PROCEDURES 01 77 00 - 4

- b. CONTRACTOR shall provide a schedule to the OWNER for approval for each of the instruction periods required.
  - Organize the instruction sessions into group sizes and schedule the elapsed time for instruction in a manner to provide complete coverage of the subject matter. Video each session and provide OWNER with two (2) copies on DVD.
- Instruction sessions will be held in a OWNER designated area on the project site and at OWNER'S convenience.
   Amount of time required for each session shall be as specified in individual sections.
- d. Instructors shall be qualified by the product manufacturer in the subject matter presented at each session.
  - Submit names of instructors and qualifications to the ARCHITECT and OWNER for approval thirty (30) days prior to each scheduled session.
  - 2. Substitution of instructors will not be permitted without prior approval of ARCHITECT or OWNER.
- 1.06 QUALITY ASSURANCE
- 1.07 DELIVERY, STORAGE, AND HANDLING
- 1.08 PROJECT CONDITIONS
- 1.09 SEQUENCING
- 1.10 SCHEDULING
- 1.11 WARRANTY
- 1.12 SYSTEM STARTUP
- 1.13 OWNER'S INSTRUCTIONS
- 1.14 COMMISSIONING
- 1.15 MAINTENANCE
  - A. Extra Materials
    - Provide products, spare parts, maintenance and extra materials in quantities specified in individual specification Sections.
  - B. Maintenance Service

#### **PART 2 PRODUCTS**

- 2.01 MANUFACTURERS
- 2.02 EXISTING PRODUCTS
- 2.03 MATERIALS
- 2.04 MANUFACTURED UNITS
- 2.05 EQUIPMENT
- 2.06 COMPONENTS
- 2.07 ACCESSORIES
- 2.08 MIXES
- 2.09 FABRICATION
- 2.10 FINISHES
- 2.11 SOURCE QUALITY CONTROL

## PART 3 EXECUTION

- 3.01 INSTALLERS
- 3.02 EXAMINATION
- 3.03 PREPARATION

3.04 **ERECTION** 3.05 INSTALLATION 3.06 APPLICATION 3.07 CONSTRUCTION 3.08 REPAIR/RESTORATION 3.09 **RE-INSTALLATION** 3.10 FIELD QUALITY CONTROL 3.11 **ADJUSTING** 3.12 CLEANING 3.13 DEMONSTRATION 3.14 PROTECTION 3.15 **SCHEDULES** 

**END OF SECTION** 

# SECTION 01 78 30 WARRANTIES AND BONDS

#### **PART 1 GENERAL**

#### 1.01 SUMMARY

- A. Section Includes
  - 1. Preparation and submittal
  - 2. Time and schedule of submittals
  - 3. Guarantee Form
  - 4. Contractor's Certificate Regarding Asbestos Material Form
- B. Products Supplied But Not Installed Under This Section
- C. Products Installed But Not Supplied Under This Section
- D. Related Sections
- E. Allowances
- F. Unit Prices
- G. Measurement Procedures
- H. Payment Procedures
- I. Alternates
- 1.02 REFERENCES
- 1.03 DEFINITIONS
- 1.04 SYSTEM DESCRIPTIONS
- 1.05 SUBMITTALS
  - A. Form of Submittals
    - 1. Bind in commercial quality, 8½ x 11 inch, three-ring side binders with hardback, cleanable, plastic covers.
    - Label cover of each binder with typed or printed title WARRANTIES AND BONDS, with title of Project; name, address and telephone number of CONTRACTOR and equipment supplier; and name of responsible principal.
    - 3. Table of Contents: Neatly typed, in the sequence of the Table of Contents of the Project Manual, with each item identified with the number and title of the specification section in which specified and the name of the product or work item.
    - 4. Separate each warranty or bond with index tab sheets keyed to the Table of Contents listing. Provide full information, using separate typed sheets as necessary. List subcontractor, supplier and manufacturer, with name, address and telephone number of responsible principal.
  - B. Preparation of Submittals
    - Obtain warranties and bonds, executed in duplicate by responsible Subcontractors, suppliers and manufacturers, within ten (10) days after completion of the applicable item or work. Except for items put into use with OWNER'S permission, leave date of beginning of time of warranty until the Date of Substantial Completion is determined.
    - 2. Verify that documents are in proper form, contain full information and are notarized.
    - 3. Co-execute submittals when required.
    - 4. Retain warranties and bonds until time specified for submittal.
  - C. Time of Submittals

- 1. For equipment or component parts of equipment put into service during construction with OWNER'S permission, submit documents within ten (10) days after acceptance.
- 2. Make other submittals within ten (10) days after Date of Substantial Completion, prior to final Application for Payment.
- 3. For items of Work when acceptance is delayed beyond Date of Substantial Completion, submit within ten (10) days after acceptance, listing the date of acceptance as the beginning of the warranty period.
- 1.06 QUALITY ASSURANCE
- 1.07 DELIVERY, STORAGE, AND HANDLING
- 1.08 PROJECT CONDITIONS
- 1.09 SEQUENCING
- 1.10 SCHEDULING
- 1.11 WARRANTY
- 1.12 SYSTEM STARTUP
- 1.13 OWNER'S INSTRUCTIONS
- 1.14 COMMISSIONING
- 1.15 MAINTENANCE

#### **PART 2 PRODUCTS**

- 2.01 MANUFACTURERS
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- 2.10 FINISHES
- 2.11 SOURCE QUALITY CONTROL

#### PART 3 EXECUTION

- 3.01 INSTALLERS
- 3.02 EXAMINATION
- 3.03 PREPARATION
- 3.04 ERECTION
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- 3.10 FIELD QUALITY CONTROL
- 3.11 ADJUSTING
- 3.12 CLEANING
- 3.13 DEMONSTRATION
- 3.14 PROTECTION
- 3.15 SCHEDULES

# **GUARANTEE**

We hereby guarantee that the	
	, (Item/Equipment)
which we have installed for	
	(Owner)
at	
	,(Project name)
has been performed in accordance with the requirent that the work as installed will fulfill the requiren	
The undersigned agrees to repair or replace any defective in workmanship or material together valid displaced in connection with such replacement of from the date of acceptance of the above-ment	with any other adjacent work which may be within a minimum period of ONE (1) YEAR
	, (Owner) ordinary wear and tear and
unusual abuse or neglect excepted.	,
In the event of the undersigned's failure to comp within a reasonable period of time, as determine (10) working days after being notified in writing authorizes the OWNER to proceed to have said of expense of the undersigned, which will pay the o	ed by the OWNER, but not later than ten by the OWNER, the undersigned defects repaired and made good at the
	(Contractor)
	(Signed)
	(Printed Name)
Representatives to be contacted for service subj	ect to terms of contract.
	(Name)
	(Address)
	(Email)
	(Phone Number)

# CONTRACTOR'S CERTIFICATE REGARDING ASBESTOS MATERIAL

This form is to be submitted at the time final billing is provided.

"I certify that all the materials and supplies asbestos-containing materials."	"I certify that all the materials and supplies installed under this contract are free of asbestos-containing materials."						
	(Name of Contract)						
	(Date)						
	(Official Name of CONTRACTOR)						
	(By)						
	(Title)						
	(Signature)						

**END OF SECTION**