## City of San Diego

<b>CONTRACTOR'S</b>	NAME:
ADDRESS:	
TELEPHONE NO.:	FAX NO.:
CITY CONTACT:	Clementina Giordano - Contract Specialist, Email: CGiordano@sandiego.gov
	Phone No. (619) 533-3481, Fax No. (619) 533-3633
_	MRamirez/BDoringo/ls

## CONTRACT DOCUMENTS

## **FOR**



## SKYLINE TEMPORARY FIRE STATION

VOLUME 1 OF 2

BID NO.:	L-15-6374-DBB-2	
SAP NO. (WBS/IO/CC):	S-00687	
CLIENT DEPARTMENT:	1912	
COUNCIL DISTRICT:	4	
PROJECT TYPE:	BC	

#### THIS CONTRACT IS SUBJECT TO THE FOLLOWING:

- ➤ THE CITY'S SUBCONTRACTING PARTICIPATION REQUIREMENTS FOR SLBE PROGRAM.
- ➤ COMPETITION RESTRICTED TO: SLBE-ELBE 🖂 or ELBE FIRMS ONLY ...
- ➤ PREVAILING WAGE RATES: STATE ☐ FEDERAL ☐
- > APPRENTICESHIP.

### **BID DUE DATE:**

1:30 PM JANUARY 15, 2015 CITY OF SAN DIEGO PUBLIC WORKS CONTRACTS 1010 SECOND AVENUE, 14<sup>th</sup> FLOOR, MS 614C SAN DIEGO, CA 92101

## **ENGINEER OF WORK**

The engineering Specifications and Special Provisions contained herein have been prepared by or under the direction of the following Registered Engineer:

For City Engineer

\2/22/14 Seal:



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#### CITY OF SAN DIEGO, CALIFORNIA

#### NOTICE INVITING BIDS

- **LIMITED COMPETITION:** This contract may only be bid by the Contractors on the City's approved SLBE-ELBE Construction Contractors List in accordance with the designation stated on the cover page hereof. For information regarding the SLBE-ELBE Construction Program and registration visit the City's web site: <a href="http://www.sandiego.gov">http://www.sandiego.gov</a>.
- 2. **RECEIPT AND OPENING OF BIDS:** Bids will be received at the Public Works Contracts at the location, time, and date shown on the cover of these specifications for performing work on **Skyline Temporary Fire Station** (Project).
- **3. SUMMARY OF WORK:** The Work involves furnishing all labor, materials, equipment, services, and other incidental works and appurtenances for the construction of the Project as described in ATTACHMENT A.
- 4. BIDS ARE PUBLIC RECORDS: Upon receipt by the City, Bids shall become public records subject to public disclosure. It is the responsibility of the respondent to clearly identify any confidential, proprietary, trade secret or otherwise legally privileged information contained within the Bid. General references to sections of the California Public Records Act (PRA) will not suffice. If the Contractor does not provide applicable case law that clearly establishes that the requested information is exempt from the disclosure requirements of the PRA, the City shall be free to release the information when required in accordance with the PRA, pursuant to any other applicable law, or by order of any court or government agency, and the Contractor will hold the City harmless for release of this information.

#### 5. SUBCONTRACTING PARTICIPATION PERCENTAGES:

- **5.1.** The City has incorporated voluntary subcontractor participation percentage to enhance competition and maximize subcontracting opportunities as follows.
- 5.2. The following voluntary subcontractor participation percentage for DBE, DVBE, WBE, MBE, SLBE, and ELBE certified Subcontractors shall apply to this contract:

Total voluntary subcontractor participation percentage for this project is 15.3 %.

**5.3.** For additional Equal Opportunity Contracting Program requirements, see Attachment C.

#### 6. PRE-BID MEETING:

- **6.1.** There will be a Pre-Bid Meeting to discuss the scope of the Project, bidding requirements, pre-qualification process, and Equal Opportunity Contracting Program requirements and reporting procedures in the Public Works Contracts, Conference Room at 1010 Second Avenue, 14<sup>th</sup> Floor, San Diego, CA 92101 at **10:00 A.M.**, on **JANUARY 6<sup>th</sup>**, **2015.**
- **6.2.** All potential bidders are **encouraged** to attend.
- **6.3.** To request a copy of the agenda on an alternative format, or to request a sign language or oral interpreter for this meeting, call the Public Works Contracts at (619) 533-3450 at least 5 Working Days prior to the Pre-Bid Meeting to ensure availability.

#### 7. CONTRACTOR REGISTRATION AND ELECTRONIC REPORTING SYSTEM:

**7.1. Prior** to the Award of the Contract or each Task Order, you and your Subcontractors and Suppliers must register with the City's web-based vendor registration and bid management system, BidsOnlineTM hosted by PlanetBids System. For additional information go to:

http://www.sandiego.gov/purchasing/bids-contracts/vendorreg.shtml.

- **7.2.** The City may not award the contract until registration of all subcontractors and suppliers is complete. In the event this requirement is not met within the time frame specified in the Notice of Intent to Award letter, the City reserves the right to rescind the Notice of Award / Intent to Award and to make the award to the next responsive and responsible bidder / proposer.
- **8. PRE-BID SITE VISIT:** The prospective Bidders are encouraged to visit the Work Site with the Engineer. The purpose of the Site visit is to acquaint Bidders with the Site conditions. To request a sign language or oral interpreter for this visit, call the Public Works Contracts at (619) 533-3450 at least 5 Working Days prior to the meeting to ensure availability. A Pre-Bid Site Visit is offered when the details are provided as follows:

Time: 11:00 AM

Date: January 6, 2015

Location: 7180 Skyline Dr., San Diego, CA 92114

- 9. **JOINT VENTURE CONTRACTORS:** Provide a copy of the Joint Venture agreement and the Joint Venture license to the City within 10 Working Days after receiving the Contract forms. See 2-1.1.2, "Joint Venture Contractors" in The WHITEBOOK for details.
- 10. PREVAILING WAGE RATES: Pursuant to San Diego Municipal Code section 22.3019, construction, alteration, demolition, repair and maintenance work performed under this Contract is subject to State prevailing wage laws. For construction work performed under this Contract cumulatively exceeding \$25,000 and for alteration, demolition, repair and maintenance work performed under this Contract cumulatively exceeding \$15,000, the Contractor and its subcontractors shall comply with State prevailing wage laws including, but not limited to, the requirements listed below.

- through 1861 of the California Labor Code, the Contractor and its subcontractors shall ensure that all workers who perform work under this Contract are paid not less than the prevailing rate of per diem wages as determined by the Director of the California Department of Industrial Relations (DIR). This includes work performed during the design and preconstruction phases of construction including, but not limited to, inspection and land surveying work.
- 10.2. Copies of such prevailing rate of per diem wages are on file at the City and are available for inspection to any interested party on request. Copies of the prevailing rate of per diem wages also may be found at <a href="http://www.dir.ca.gov/OPRL/DPreWageDetermination.htm">http://www.dir.ca.gov/OPRL/DPreWageDetermination.htm</a>. Contractor and its subcontractors shall post a copy of the prevailing rate of per diem wages determination at each job site and shall make them available to any interested party upon request.
- The wage rates determined by the DIR refer to expiration dates. If the published wage rate does not refer to a predetermined wage rate to be paid after the expiration date, then the published rate of wage shall be in effect for the life of this Contract. If the published wage rate refers to a predetermined wage rate to become effective upon expiration of the published wage rate and the predetermined wage rate is on file with the DIR, such predetermined wage rate shall become effective on the date following the expiration date and shall apply to this Contract in the same manner as if it had been published in said publication. If the predetermined wage rate refers to one or more additional expiration dates with additional predetermined wage rates, which expiration dates occur during the life of this Contract, each successive predetermined wage rate shall apply to this Contract on the date following the expiration date of the previous wage rate. If the last of such predetermined wage rates expires during the life of this Contract, such wage rate shall apply to the balance of the Contract.
- **10.4. Penalties for Violations.** Contractor and its subcontractors shall comply with California Labor Code section 1775 in the event a worker is paid less than the prevailing wage rate for the work or craft in which the worker is employed.
- 10.5. Payroll Records. Contractor and its subcontractors shall comply with California Labor Code section 1776, which generally requires keeping accurate payroll records, verifying and certifying payroll records, and making them available for inspection. Contractor shall require its subcontractors to also comply with section 1776. Contractor and its subcontractors shall submit weekly certified payroll records online via the City's web-based Labor Compliance Program. Contractor is responsible for ensuring its subcontractors submit certified payroll records to the City.
- **10.6. Apprentices.** Contractor and its subcontractors shall comply with California Labor Code sections 1777.5, 1777.6 and 1777.7 concerning the employment and wages of apprentices. Contractor shall be held responsible for the compliance of their subcontractors with sections 1777.5, 1777.6 and 1777.7.

- Working Hours. Contractor and subcontractors shall comply with California Labor Code sections 1810 through 1815, including but not limited to: (i) restrict working hours on public works contracts to eight hours a day and forty hours a week, unless all hours worked in excess of 8 hours per day are compensated at not less than 1½ times the basic rate of pay; and (ii) specify penalties to be imposed on design professionals and subcontractors of \$25 per worker per day for each day the worker works more than 8 hours per day and 40 hours per week in violation of California Labor Code sections1810 through 1815.
- **10.8. Required Provisions for Subcontracts.** Contractor shall include at a minimum a copy of the following provisions in any contract they enter into with a subcontractor: California Labor Code sections 1771, 1775, 1776, 1777.5, 1810, 1813, 1815, 1860 and 1861.
- **Labor Code Section 1861 Certification.** Contractor in accordance with California Labor Code section 3700 is required to secure the payment of compensation of its employees and by signing this Contract, Contractor certifies that "I am aware of the provisions of Section 3700 of the California Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this Contract."
- **10.10. Labor Compliance Program.** The City has its own Labor Compliance Program as authorized by the DIR. The City will withhold contract payments when payroll records are delinquent or deemed inadequate by the City or other governmental entity, or it has been established after an investigation by the City or other governmental entity that underpayment(s) have occurred.
- 11. BIDDERS MUST REGISTER WITH THE CALIFORNIA DEPARTMENT OF INDUSTRIAL RELATIONS (DIR): Pursuant to Labor Code section 1725.5 (with limited exceptions under Labor Code section 1771.1(a)):
  - **11.1.** No contractor or subcontractor may be listed on a bid proposal for a public works project submitted on or after March 1, 2015 unless registered with the Department of Industrial Relations.
  - **11.2.** No contractor or subcontractor may be awarded a contract for public work on a public works project awarded on or after April 1, 2015 unless registered with the Department of Industrial
  - **11.3.** This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

#### 12. INSURANCE REQUIREMENTS:

- **12.1.** All certificates of insurance and endorsements required by the contract are to be provided upon issuance of the City's Notice of Intent to Award letter.
- **12.2.** Refer to sections 7-3, "LIABILITY INSURANCE", and 7-4, "WORKERS' COMPENSATION INSURANCE" of the Supplementary Special Provisions (SSP) for the insurance requirements which must be met.

#### 13. PREQUALIFICATION OF CONTRACTORS:

**13.1.** Contractors submitting Bid must be pre-qualified for the total amount proposed, inclusive of all alternate items prior to the date of submittal. Bids from contractors who have not been pre-qualified as applicable and Bids that exceed the maximum dollar amount at which contractors are pre-qualified will be deemed **non-responsive** and ineligible for award. Complete information and prequalification questionnaires are available at:

http://www.sandiego.gov/cip/bidopps/prequalification.shtml

- **13.2.** The completed questionnaire, financial statement, and bond letter or a copy of the contractor's SLBE-ELBE certification and bond letter, must be submitted no later than 2 weeks prior to the bid opening to the Public Works Contracts, Prequalification Program, 1010 Second Avenue, 14<sup>th</sup> Floor, San Diego, CA 92101. For additional information or the answer to questions about the prequalification program, contact David Stucky at 619-533-3474 or <a href="mailto:dstucky@sandiego.gov">dstucky@sandiego.gov</a>.
- **14. REFERENCE STANDARDS:** Except as otherwise noted or specified, the Work shall be completed in accordance with the following standards:

Title	Edition	Document Number
Standard Specifications for Public Works Construction ("The GREENBOOK")	2012	PITS070112-01
City of San Diego Standard Specifications for Public Works Construction ("The WHITEBOOK")*	2012	PITS070112-02
City of San Diego Standard Drawings*	2012	PITS070112-03
Caltrans Standard Specifications	2010	PITS070112-04
Caltrans Standard Plans	2010	PITS070112-05
California MUTCD	2012	PITS070112-06
City Standard Drawings - Updates Approved For Use (when specified)*	Varies	Varies
Standard Federal Equal Employment Opportunity Construction Contract Specifications and the Equal Opportunity Clause Dated 09-11-84	1984	769023
NOTE: *Available online under Engineering <a href="http://www.sandiego.gov/publicworks/ed">http://www.sandiego.gov/publicworks/ed</a>		

15. CITY'S RESPONSES AND ADDENDA: The City at its option, may respond to any or all questions submitted in writing, via letter, or FAX in the form of an addendum. No oral comment shall be of any force or effect with respect to this solicitation. The changes to the Contract Documents through addendum are made effective as though originally issued with the Bid. The Bidders shall acknowledge the receipt of Addenda on the form provided for this purpose in the Bid.

- 16. CITY'S RIGHTS RESERVED: The City reserves the right to cancel the Notice Inviting Bids at any time, and further reserves the right to reject submitted Bids, without giving any reason for such action, at its sole discretion and without liability. Costs incurred by the Bidder(s) as a result of preparing Bids under the Notice Inviting Bids shall be the sole responsibility of each bidder. The Notice Inviting Bids creates or imposes no obligation upon the City to enter a contract.
- **17. CONTRACT PRICING FORMAT:** This solicitation is for a Lump Sum contract with Unit Price provisions as set forth in the Bid Proposal Form(s), Volume 2.
- **18. SUBMITTAL OF "OR EQUAL" ITEMS:** See Section 4-1.6, "Trade Names or Equals" in The WHITEBOOK and as amended in the SSP.

#### 19. AWARD PROCESS:

- **19.1.** The Award of this contract is contingent upon the Contractor's compliance with all conditions precedent to Award.
- **19.2.** Upon acceptance of a Bid, the City will prepare contract documents for execution within approximately 21 days of the date of the Bid opening and award the Contract approximately within 7 days of receipt of properly executed Contract, bonds, and insurance documents.
- **19.3.** This contract will be deemed executed, and effective, only upon the signing of the Contract by the Mayor or designee of the City.
- **20. SUBCONTRACT LIMITATIONS**: The Bidder's attention is directed to Standard Specifications for Public Works Construction, Section 2-3, "SUBCONTRACTS" in The GREENBOOK and as amended in the SSP which requires the Contractor to self-perform not less than the specified amount. Failure to comply with this requirement shall render the bid **non-responsive** and ineligible for award.
- 21. AVAILABILITY OF PLANS AND SPECIFICATIONS: Contract Documents may be obtained by visiting the City's website: <a href="http://www.sandiego.gov/cip/">http://www.sandiego.gov/cip/</a>. Plans and Specifications for this contract are also available for review in the office of the City Clerk or Public Works Contracts.

#### 22. SUBMISSION OF QUESTIONS:

**22.1.** The Director (or designee), of the Public Works Department is the officer responsible for opening, examining, and evaluating the competitive Bids submitted to the City for the acquisition, construction and completion of any public improvement except when otherwise set forth in these documents. All questions related to this solicitation shall be submitted to:

Public Works Contracts
1010 Second Avenue, 14<sup>th</sup> Floor
San Diego, California, 92101
Attention: [Contract Specialist listed on the front cover hereof]
OR:

Email address of the Contract Specialist listed on the front cover hereof.

- **22.2.** Questions received less than 14 days prior to the date for opening of Bids may not be considered.
- **22.3.** Clarifications deemed by the City to be material shall be issued by Addenda and uploaded to the City's online bidding service.
- **22.4.** Only questions answered by formal written addenda will be binding. Oral and other interpretations or clarifications will be without legal effect. It is the Bidder's responsibility to become informed of any Addenda that have been issued and to include all such information in its Bid.
- **23. ELIGIBLE BIDDERS:** No person, firm, or corporation shall be allowed to make, file, or be interested in more than one (1) Bid for the same work unless alternate Bids are called for. A person, firm or corporation who has submitted a sub-proposal to a Bidder, or who has quoted prices on materials to a Bidder, is not hereby disqualified from submitting a sub-proposal or quoting prices to other Bidders or from submitting a Bid in its own behalf. Any Bidder who submits more than one bid will result in the rejection of all bids submitted.
- 24. SAN DIEGO BUSINESS TAX CERTIFICATE: The Contractor and Subcontractors, not already having a City of San Diego Business Tax Certificate for the work contemplated shall secure the appropriate certificate from the City Treasurer, Civic Center Plaza, first floor and submit to the Contract Specialist upon request or as specified in the Contract Documents. Tax Identification numbers for both the Bidder and the listed Subcontractors must be submitted on the City provided forms with the Notice Inviting Bids and Contract forms.
- **25. PROPOSAL FORMS:** Bid shall be made only upon the Bidding Documents i.e., Proposal form attached to and forming a part of the specifications. The signature of each person signing shall be in longhand.
  - **25.1.** Bidder shall complete and submit all pages in the "Bidding Document" Section (see Volume 2) as their Bid per the schedule given under "Required Documents Schedule," (see Volume 1). Bidder is requested to retain for their reference other portions of the Contract Documents that are not required to be submitted with the Bid. The entire specifications for the bid package do not need to be submitted with the bid.
  - **25.2.** The City may require any Bidder to furnish a statement of experience, financial responsibility, technical ability, equipment, and references.
  - **25.3.** Bids and certain other forms and documents as specified in the Volume 2 of 2 of the Contract Documents shall be enclosed in a sealed envelope and shall bear the title of the work and name of the Bidder and the appropriate State Contractors License designation which the Bidder holds.
  - **25.4.** Bids may be withdrawn by the Bidder prior to, but not after, the time fixed for opening of Bids.

#### 26. BIDDER'S GUARANTEE OF GOOD FAITH (BID SECURITY):

- **26.1.** With the exception of the contracts valued \$5,000 or less, JOC and Design-Build contracts, and contracts subject to the Small and Local Business Program of \$250,000 or less e.g., ELBE contracts, each Bidder shall accompany its Bid with either a cashier's check upon some responsible bank, or a check upon such bank properly certified or an approved corporate surety bond payable to the City of San Diego, for an amount of not less than 10% of the aggregate sum of the Bid, which check or bond, and the monies represented thereby shall be held by the City as a guarantee that the Bidder, if awarded the contract, will in good faith enter into such contract and furnish the required final bonds.
- **26.2.** The Bidder agrees that in case of Bidder's refusal or failure to execute this contract and give required final bonds, the money represented by a cashier's or certified check shall remain the property of the City, and if the Bidder shall fail to execute this contract, the Surety agrees that it will pay to the City damages which the City may suffer by reason of such failure, not exceeding the sum of 10% of the amount of the Bid.
- **26.3.** A Bid received without the specified bid security will be rejected as being **non-responsive**.

#### 27. AWARD OF CONTRACT OR REJECTION OF BIDS:

- **27.1.** This contract may be awarded to the lowest responsible and reliable Bidder.
- **27.2.** Bidders shall complete the entire Bid schedule (also referred to as "schedule of prices" or Proposal form). Incomplete price schedules will be rejected as being non-responsive.
- **27.3.** The City reserves the right to reject any or all Bids, and to waive any informality or technicality in Bids received and any requirements of these specifications as to bidding procedure.
- **27.4.** Bidders will not be released on account of their errors of judgment. Bidders may be released only upon receipt by the City from the Bidder within 3 Working Days, excluding Saturdays, Sundays, and state holidays, after the opening of Bids, of written notice which includes proof of honest, credible, clerical error of material nature, free from fraud or fraudulent intent, and of evidence that reasonable care was observed in the preparation of the Bid.
- 27.5. A non-selected Bidder may protest award of the Contract to the selected Bidder by submitting a written "Notice of Intent to Protest" including supporting documentation which shall be received by Public Works Contracts no later than 10 days after the City's announcement of the selected Bidder or no later than 10 days from the date that the City issues notice of designation of a Bidder as non-responsible in accordance with San Diego Municipal Code Chapter 2, § 22.3029, "Protests of Contract Award."

- **27.6.** The City of San Diego will not discriminate with regard to race, religious creed, color, national origin, ancestry, physical handicap, marital status, sex or age, in the award of contracts.
- **27.7.** Each Bid package properly executed as required by these specifications shall constitute a firm offer, which may be accepted by the City within the time specified in the Proposal.
- **27.8.** The City reserves the right to evaluate all Bids and determine the lowest Bidder on the basis of any proposed alternates, additive items or options, at its discretion that will be disclosed in the Volume 2 of 2.

#### 28. BID RESULTS:

- **28.1.** The Bid opening by the City shall constitute the public announcement of the Apparent Low Bidder. In the event that the Apparent Low Bidder is subsequently deemed non-responsive or non-responsible, a public announcement will be posted in the City's web page <a href="http://www.sandiego.gov/cip/index.shtml">http://www.sandiego.gov/cip/index.shtml</a>, with the name of the newly designated Apparent Low Bidder.
- **28.2.** To obtain Bid results, either attend Bid opening, review the results on the City's web site, or provide a self-addressed, stamped envelope, referencing Bid number, and Bid tabulation will be mailed to you upon verification of extensions. Bid results cannot be given over the telephone.

#### 29. THE CONTRACT:

- **29.1.** The Bidder to whom award is made shall execute a written contract with the City of San Diego and furnish good and approved bonds and insurance certificates specified by the City within 14 days after receipt by Bidder of a form of contract for execution unless an extension of time is granted to the Bidder in writing.
- **29.2.** If the Bidder takes longer than 14 days to fulfill these requirements, then the additional time taken shall be added to the Bid guarantee. The Contract shall be made in the form adopted by the City, which includes the provision that no claim or suit whatsoever shall be made or brought by Contractor against any officer, agent, or employee of the City for or on account of anything done or omitted to be done in connection with this contract, nor shall any such officer, agent, or employee be liable hereunder.
- **29.3.** If the Bidder to whom the award is made fails to enter into the contract as herein provided, the award may be annulled and the Bidder's Guarantee of Good Faith will be subject to forfeiture. An award may be made to the next lowest responsible and reliable Bidder who shall fulfill every stipulation embraced herein as if it were the party to whom the first award was made.
- 29.4. Pursuant to the San Diego City Charter section 94, the City may only award a public works contract to the lowest responsible and reliable Bidder. The City will require the Apparent Low Bidder to (i) submit information to determine the Bidder's responsibility and reliability, (ii) execute the Contract in form provided by the City, and (iii) furnish good and approved bonds and insurance certificates specified by the City within 14 Days, unless otherwise approved by the City, in writing after the Bidder receives notification from the City, designating the Bidder as the Apparent Low Bidder and formally requesting the above mentioned items.

- 29.5. The award of the Contract is contingent upon the satisfactory completion of the above mentioned items and becomes effective upon the signing of the Contract by the Mayor or designee. If the Apparent Low Bidder does not execute the Contract or submit required documents and information, the City may award the Contract to the next lowest responsible and reliable Bidder who shall fulfill every condition precedent to award. A corporation designated as the Apparent Low Bidder shall furnish evidence of its corporate existence and evidence that the officer signing the Contract and bond for the corporation is duly authorized to do so.
- **SEXAMINATION OF PLANS, SPECIFICATIONS, AND SITE OF WORK:** The Bidder shall examine carefully the Project Site, the Plans and Specifications, other materials as described in the Special Provisions, Section 2-7, and the proposal forms (e.g., Bidding Documents). The submission of a Bid shall be conclusive evidence that the Bidder has investigated and is satisfied as to the conditions to be encountered, as to the character, quality, and scope of Work, the quantities of materials to be furnished, and as to the requirements of the Bidding Documents Proposal, Plans, and Specifications.
- **31. CITY STANDARD PROVISIONS:** This contract is subject to the following standard provisions. See The WHITEBOOK for details.
  - **31.1.** The City of San Diego Resolution No. R-277952 adopted on May 20, 1991 for a Drug-Free Workplace.
  - **31.2.** The City of San Diego Resolution No. R-282153 adopted on June 14, 1993 related to the Americans with Disabilities Act.
  - **31.3.** The City of San Diego Municipal Code §22.3004 for Pledge of Compliance.
  - **31.4.** The City of San Diego's Labor Compliance Program and the State of California Labor Code §§1771.5(b) and 1776.
  - **31.5.** Sections 1777.5, 1777.6, and 1777.7 of the State of California Labor Code concerning the employment of apprentices by contractors and subcontractors performing public works contracts.
  - **31.6.** The City's Equal Benefits Ordinance (EBO), Chapter 2, Article 2, Division 43 of The San Diego Municipal Code (SDMC).
  - **31.7.** The City's Information Security Policy (ISP) as defined in the City's Administrative Regulation 90.63.

#### 32. PRE-AWARD ACTIVITIES:

- **32.1.** The selected contractor by the City to execute a contract for this Work shall provide the information required within the time specified in "Required Documents," of this bid package. Failure to provide the information within the time specified may result in the Bid being rejected as **non-responsive.**
- **32.2.** If the Bid is rejected as non-responsive, the selected contractor by the City to execute a contract for this Work shall forfeit the required Bid. The decision that the selected contractor by the City to execute a contract for this Work is non-responsive for failure to provide the information required within the time specified shall be at the sole discretion of the City.

#### 33. REQUIRED DOCUMENT SCHEDULE:

- **33.1.** The Bidder's attention is directed to the City's Municipal Code §22.0807(e), (3)-(5) for important information regarding grounds for debarment for failure to submit required documentation.
- **33.2.** The specified Equal Opportunity Contracting Program (EOCP) forms are available for download from the City's web site at:

http://www.sandiego.gov/eoc/forms/index.shtml

ITEM	WHEN DUE	FROM	DOCUMENT TO BE SUBMITTED
1.	BID SUBMITTAL DATE/TIME	ALL BIDDERS	Bid
2.	BID SUBMITTAL DATE/TIME	ALL BIDDERS	Bid Bond
3.	BID SUBMITTAL DATE/TIME	ALL BIDDERS	Non-collusion Affidavit to be Executed By Bidder and Submitted with Bid under 23 USC 112 and PCC 7106
4.	BID SUBMITTAL DATE/TIME	ALL BIDDERS	Contractors Certification of Pending Actions
5.	BID SUBMITTAL DATE/TIME	ALL BIDDERS	Equal Benefits Ordinance Certification of Compliance
6.	BID SUBMITTAL DATE/TIME	ALL BIDDERS	Form AA35 - List of Subcontractors
7.	BID SUBMITTAL DATE/TIME	ALL BIDDERS	Form AA40 - Named Equipment/Material Supplier List
8.	WITHIN 10 WORKING DAYS AFTER RECEIPT BY BIDDER OF CONTRACT FORMS	APPARENT LOW BIDDER	Names of the principal individual owners of the Apparent Low Bidder
9.	WITHIN 10 WORKING DAYS AFTER RECEIPT BY BIDDER OF CONTRACT FORMS	APPARENT LOW BIDDER	If the Contractor is a Joint Venture:  • Joint Venture Agreement  • Joint Venture License
10.	WITHIN 10 WORKING DAYS AFTER RECEIPT BY BIDDER OF CONTRACT FORMS	APPARENT LOW BIDDER	Form BB05 - Work Force Report
11.	WITHIN 10 WORKING DAYS AFTER RECEIPT BY BIDDER OF CONTRACT FORMS	APPARENT LOW BIDDER	Contract Forms - Agreement

ITEM	WHEN DUE	FROM	DOCUMENT TO BE SUBMITTED
12.	WITHIN 10 WORKING DAYS AFTER RECEIPT BY BIDDER OF CONTRACT FORMS	APPARENT LOW BIDDER	Contract Forms - Payment and Performance Bond
13.	WITHIN 10 WORKING DAYS AFTER RECEIPT BY BIDDER OF CONTRACT FORMS	APPARENT LOW BIDDER	Certificates of Insurance and Endorsements
14.	WITHIN 10 WORKING DAYS AFTER RECEIPT BY BIDDER OF CONTRACT FORMS	APPARENT LOW BIDDER	Contractor Certification - Drug-Free Workplace
15.	WITHIN 10 WORKING DAYS AFTER RECEIPT BY BIDDER OF CONTRACT FORMS	APPARENT LOW BIDDER	Contractor Certification - American with Disabilities Act
16.	WITHIN 10 WORKING DAYS AFTER RECEIPT BY BIDDER OF CONTRACT FORMS	APPARENT LOW BIDDER	Contractors Standards - Pledge of Compliance

# CONTRACT FORMS AGREEMENT

#### **CONTRACT FORMS**

#### **CONSTRUCTION CONTRACT**

This contract is made and entered into between THE CITY OF SAN DIEGO, a municipal corporation, herein called "City", and Montgomery Construction , herein called "Contractor" for construction of Skyline Temporary Fire Station; Bid No. L-15-6374-DBB-2, in the amount of Three Hundred Sixty-One Thousand Nine Hundred Seventy Dollars and .22/100 (\$361,970.22), which is comprised of the Base Bid only.

IN CONSIDERATION of the payments to be made hereunder and the mutual undertakings of the parties hereto, City and Contractor agree as follows:

- 1. The following are incorporated into this contract as though fully set forth herein:
  - (a) The attached Faithful Performance and Payment Bonds.
  - (b) The attached Proposal included in the Bid documents by the Contractor.
  - (c) Reference Standards listed in the Notice Inviting Bids and the Supplementary Special Provisions (SSP).
  - (d) That certain documents entitled **Skyline Temporary Fire Station**, on file in the office of the Public Works Department as Document No. **S-00687**, as well as all matters referenced therein.
- 2. The Contractor shall perform and be bound by all the terms and conditions of this contract and in strict conformity therewith shall perform and complete in a good and workmanlike manner **Skyline Temporary Fire Station**, Bid Number **L-15-6374-DBB-2**, San Diego, California.
- 3. For such performances, the City shall pay to Contractor the amounts set forth at the times and in the manner and with such additions or deductions as are provided for in this contract, and the Contractor shall accept such payment in full satisfaction of all claims incident to such performances.
- 4. No claim or suit whatsoever shall be made or brought by Contractor against any officer, agent, or employee of the City for or on account of anything done or omitted to be done in connection with this contract, nor shall any such officer, agent, or employee be liable hereunder.
- 5. This contract is effective as of the date that the Mayor or designee signs the agreement.

### **CONTRACT FORMS (continued)**

IN WITNESS WHEREOF, this Agreement is signed by the City of San Diego, acting by and through its Mayor or designee, pursuant to Municipal Code 22.3107 authorizing such execution.

THE CITY OF SAN DIEGO	APPROVED AS TO FORM
By Styker Carne	Jan I. Goldsmith, City Attorney  By Chikh Mad Red
Print Name: <u>Stephen Samara</u> Senior Contract Specialist	Print Name: <u>Onistina L. Rae</u> Deputy City Attorney
Date: 2-4-15	Date: 3 9 15
CONTRACTOR	
By Offord K. Montgome.	→ !
Print Name: Clifford K. Montgomer	-y
Title: President	
Date: Jan. 29, 2015	
City of San Diego License No.: <b>B30 1/0 10</b> 99	74

State Contractor's License No.: 938118

# CONTRACT FORMS ATTACHMENTS

"EXECUTED IN TRIPLICATES"

Bond No: 10021094 Premium: \$7,239.00

## CONTRACT FORMS ATTACHMENTS PERFORMANCE BOND AND LABOR AND MATERIALMEN'S BOND

#### FAITHFUL PERFORMANCE BOND AND LABOR AND MATERIALMEN'S BOND:

Montgomery Construction Services, Inc.	. a	corporation	. as	principal,	and
Hudson Insurance Company		corporation		• •	
business in the State of California, as Surety, hereby obliga					
assigns, jointly and severally, to The City of San Diego a r \$361,970.22	nuni	cipal corpora	ation	in the sur	m of
	_ for	the faithful	perfo	rmance o	f the
annexed contract, and in the sum of \$\_\$361,970.22				for	the
benefit of laborers and materialmen designated below.					

#### **Conditions:**

If the Principal shall faithfully perform the annexed contract **Skyline Temporary Fire Station**; Bid Number **L-15-6374-DBB-2**, San Diego, California then the obligation herein with respect to a faithful performance shall be void; otherwise it shall remain in full force.

If the Principal shall promptly pay all persons, firms and corporations furnishing materials for or performing labor in the execution of this contract, and shall pay all amounts due under the California Unemployment Insurance Act then the obligation herein with respect to laborers and materialmen shall be void; otherwise it shall remain in full force.

The obligation herein with respect to laborers and materialmen shall inure to the benefit of all persons, firms and corporations entitled to file claims under the provisions of Chapter 3 of Division 5 of Title I of the Government Code of the State of California or under the provisions of Section 3082 et seq. of the Civil Code of the State of California.

Changes in the terms of the annexed contract or specifications accompanying same or referred to therein shall not affect the Surety's obligation on this bond, and the Surety hereby waives notice of same.

#### "EXECUTED IN TRIPLICATES"

## CONTRACT FORMS ATTACHMENTS (continued) PERFORMANCE BOND AND LABOR AND MATERIALMEN'S BOND

The Surety shall pay reasonable attorney's fees should suit be brought to enforce the provisions of this bond.

Dated_February 12th, 2015	
Approved as to Form	Montgomery Construction Services, Inc. Principal
	By Clifford K. Martyomer
	Clifford Montgomery, president Printed Name of Person Signing for Principal
Jan I. Goldsmith, City Attorney	
Deputy City Attorney	Hudson Insurance Company  Surety
3 19113	By
Approved:	23901 Calabasas Rd Suite 1085
Approved.	Local Address of Surety
By: Stok -	Calabasas, CA 91302
Stephen Samara Senior Contract Specialist	Local Address (City, State) of Surety
Public Works Contracting Group	818-449-3111
	Local Telephone No. of Surety
	Premium \$\$7,239.00
	Bond No. 10021094

A notary public or other officer completing this certificate document to which this certificate is attached, and not the t	
State of California )	
County of Los Angeles )	
•	er Allen Notary Dublic
On restore me, reach	Here Insert Name and Title of the Officer
on February 12,2015 before me, Heath Date personally appeared Canacy Hi	Nere insert Name and Title of the Officer
personally appeared Canaca (+1	Name(s) of Signer(s)
	Name(s) of Signer(s)
who proved to me on the basis of satisfactory ex- subscribed to the within instrument and acknowled his/her/their authorized capacity(jes), and that by his/h or the entity upon behalf of which the person(s) acted	ged to me that he/she/they executed the same in ne/their signature(s) on the instrument the person(s);
of	ertify under PENALTY OF PERJURY under the laws the State of California that the foregoing paragraph true and correct.
1 Commission # 2024052 WI	TNESS my hand and official seal.
Notary Public - California Los Angeles County My Comm. Expires May 11, 2017 Signature	gnature Gleater Den
	Signature of Notary Public
Place Notary Seal Above	ONAI
Though this section is optional, completing this in fraudulent reattachment of this fo	formation can deter alteration of the document or
Description of Attached Document	
Title or Type of Document:	Document Date:
Number of Pages: Signer(s) Other Than I	Named Above:
Capacity(ies) Claimed by Signer(s)	
Signer's Name:	Signer's Name:
☐ Corporate Officer — Title(s):	☐ Corporate Officer — Title(s): ☐ Partner — ☐ Limited ☐ General
<ul><li>□ Partner — □ Limited □ General</li><li>□ Individual □ Attorney in Fact</li></ul>	☐ Individual ☐ Attorney in Fact
☐ Trustee ☐ Guardian or Conservator	☐ Trustee ☐ Guardian or Conservator
□ Other:	☐ Other:
Signer Is Representing:	Signer Is Representing:

Bond Number: 10021094



#### POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That HUDSON INSURANCE COMPANY, a corporation of the State of Delaware, with offices at 100 William Street, New York, New York, 10038, has made, constituted and appointed, and by these presents, does make, constitute and appoint

#### Canaan Hillery

#### of the State of CA

its true and lawful Attorney(s)-in-Fact, at New York, New York, each of them alone to have full power to act without the other or others, to make, execute and deliver on its behalf, as Surety, bonds and undertakings given for any and all purposes, also to execute and deliver on its behalf as aforesaid renewals, extensions, agreements, waivers, consents or stipulations relating to such bonds or undertakings provided, however, that no single bond or undertaking shall obligate said Company for any portion of the penal sum thereof in excess of the sum of

Three Hundred Sixty One Thousand Nine Hundred Seventy Dollars and Twenty Two Cents (\$361,970.20)

Such bonds and undertakings when duly executed by said Attorney(s)-in-Fact, shall be binding upon said Company as fully and to the same extent as if signed by the President of said Company under its corporate seal attested by its Secretary.

In Witness Whereof, HUDSON INSURANCE COMPANY has caused these presents to be of its Executive Vice President thereunto duly \_\_\_\_\_, 20 13 at New York, New York. authorized, on this 31st day of October

SEAL askalakel 1918

Corporate Secretary

STATE OF NEW YORK COUNTY OF NEW YORK.

HUDSON INSURANCE COMPANY

Christopher T. Suarez **Executive Vice President** 

On the 31st day of October , 2013 before me personally came Christopher T. Suarez to me known, who being by me duly sworn did depose and say that he is an Executive Vice President of HUDSON INSURANCE COMPANY, the corporation described herein and which executed the above instrument, that he knows the seal of said Corporation, that the seal affixed to said instrument is such corporate seal, that it was so affixed by order of the Board of

Directors of said Corporation, and that he signed his name thereto by like order.

(Notarial Seal) #01MU6067553

Notary Public, State of New York No. 01MU6067553

Qualified in Nassau County

Commission Expires December 10, 2017

CERTIFICATION

STATE OF NEW YORK COUNTY OF NEW YORK

The undersigned Dina Daskalakis hereby certifies:

That the original resolution, of which the following is a true and correct copy, was duly adopted by unanimous written consent of the Board of Directors of Hudson Insurance Company dated July 27th, 2007, and has not since been revoked, amended or modified:

"RESOLVED, that the President, the Executive Vice Presidents, the Senior Vice Presidents and the Vice Presidents shall have the authority and discretion, to appoint such agent or agents, or attorney or attorneys-in-fact, for the purpose of carrying on this Company's surety business, and to empower such agent or agents, or attorney or attorneys-in-fact, to execute and deliver, under this Company's seal or otherwise, bonds obligations, and recognizances, whether made by this Company as surety thereon or otherwise, indemnity contracts, contracts and certificates, and any and all other contracts and undertakings made in the course of this Company's surety business, and renewals, extensions, agreements, waivers, consents or stipulations regarding undertakings so made; and

FURTHER RESOVLED, that the signature of any such Officer of the Company and the Company's seal may be affixed by facsimile to any power of attorney or certification given for the execution of any bond, undertaking, recognizance, contract of indemnity or other written obligation in the nature thereof or related thereto, such signature and seal when so used whether heretofore or hereafter, being hereby adopted by the Company as the original signature of such officer and the original seal of the Company, to be valid and binding upon the Company with the same force and effect as though manually affixed."

THAT the above and foregoing is a full, true and correct copy of Power of Attorney issued by said Company, and of the whole of the original and that the said Power of Attorney is still in full force and effect and has not been revoked, and furthermore that the Resolution of the Board of Directors, set forth in the said Power of Attorney is now in force. 11th

Witness the hand of the undersigned and the seal of said Corporation this

February

Dina Daskalakts, Corporate Secretar

Form Pars (10 8 2010 (v1)

#### **CONTRACTOR CERTIFICATION**

### DRUG-FREE WORKPLACE

PROJECT TITLE:	Skyline Temporary Fire Station
•	umiliar with the requirements of San Diego City Council Policy No. 100-17 kplace as outlined in the WHITEBOOK, Section 7-13.3, "Drug-Free specifications, and that;
Montgamery	Construction Services, Inc. (Name under which business is conducted)
subcontract agreement fo	orkplace program that complies with said policy. I further certify that each rethis project contains language which indicates the subcontractor's provisions of subdivisions a) through c) of the policy as outlined.
	Signed Clifford K. Montgomery
	Printed Name Clifford K. Montgonery
	Title President

#### **CONTRACTOR CERTIFICATION**

## AMERICAN WITH DISABILITIES ACT (ADA) COMPLIANCE CERTIFICATION

PROJECT TITLE:	Skyline Temporary Fire Station
regarding the American With	niliar with the requirements of San Diego City Council Policy No. 100-4 Disabilities Act (ADA) outlined in the WHITEBOOK, Section 7-13.2, Act", of the project specifications, and that;
Mantgom	(Name under which business is conducted)
	am that complies with said policy. I further certify that each subcontract ntains language which indicates the subcontractor's agreement to abide y as outlined.
	Signed Clifford K. Montgomery
production of the second	Printed Name President) Cliford K. Montgomer X
	Title President

#### **CONTRACTOR CERTIFICATION**

#### CONTRACTOR STANDARDS – PLEDGE OF COMPLIANCE

Skyline Temporary Fire Station

I declare under penal	ty of perjury that I am authorized to make this certification on behalf of
outlined in the WF	of San Diego Municipal Code § 22.3224 regarding Contractor Standards as HITEBOOK, Section 7-13.4, ("Contractor Standards"), of the project to Contractor has complied with those requirements.
\$50,000 in value has c	each of the Contractor's subcontractors whose subcontracts are greater than completed a Pledge of Compliance attesting under penalty of perjury of having San Diego Municipal Code § 22.3224.
Dated this 29 The	Day of <b>Jan.</b> , <b>2015</b>
•	Signed Clifford K. Montgomens
general and the second	Printed Name Clifford K. Montgomery
	Title President

PROJECT TITLE:\_\_\_\_

## **AFFIDAVIT OF DISPOSAL**

WHEREAS, on the	DAY OF		the
		th the City of San Diego, a municip	al corporation,
	Skyline Tempora	ry Fire Station	
	(Name of		
SAP No. (WBS/IO/CC) S Contractor to affirm that	<b>5-00687</b> and <b>WHEREAS</b> "all brush, trash, debris, legal manner"; and <b>WHI</b>	d identified as Bid No. <b>L-15</b> S, the specification of said contract and surplus materials resulting from EREAS, said contract has been contract has been contract.	ct requires the om this project
Contractor under the term	s of said contract, the un	nal payment by the City of San dersigned Contractor, does hereby been disposed of at the following lo	affirm that all
and that they have been dis	sposed of according to all	applicable laws and regulations.	
Dated this D	AY OF		
	Contractor		
by			
ATTEST:			
State of			
and for said County and St	ate, duly commissioned a	, before the undersigned, a Nondamorn, personally appearedthe	
named in the foregoing Re said Contractor executed the	lease, and whose name is	thesubscribed thereto, and acknowled	ged to me that
Notary Public in and for sa	id County and State		
Skyline Temporary Fire Stati	on		<b>25</b>   Page

Affidavit of Disposal Volume 1 of 2 (Rev. Dec. 2014)

### **ATTACHMENTS**

# ATTACHMENT A SCOPE OF WORK

#### SCOPE OF WORK

- **SCOPE OF WORK:** The scope of work includes setting up / assembles a sprung structure and a Modular unit to accommodate four fire crews.
  - **1.1.** The Work shall be performed in accordance with:
    - **1.1.1.** The Notice Inviting Bids and Plans numbered **38317-01-D** through **38317-40-D**, inclusive.
- 2. CONSTRUCTION COST: The City's estimated construction cost for this contract is \$325,000.
- **3. LOCATION OF WORK:** 7180 Skyline Drive, San Diego, CA 92114.
- **4. CONTRACT TIME:** The Contract Time for completion of the Work shall be **45 Working Days**.
- 5. CONTRACTOR'S LICENSE CLASSIFICATION: In accordance with the provisions of California Law, the Contractor shall possess valid appropriate license(s) at the time that the Bid is submitted. Failure to possess the specified license(s) shall render the Bid as non-responsive and shall act as a bar to award of the Contract to any Bidder not possessing required license(s) at the time of Bid.
  - **5.1.** The City has determined the following licensing classification for this contract:

CLASS B

## ATTACHMENT B

### INTENTIONALLY LEFT BLANK

# ATTACHMENT C EQUAL OPPORTUNITY CONTRACTING PROGRAM

#### EQUAL OPPORTUNITY CONTRACTING PROGRAM REQUIREMENTS

1. To The WHITEBOOK, Chapter 10, Sections D and E, DELETE each in its entirety, and SUBSTITUTE with the following:

#### D. CITY'S EQUAL OPPORTUNITY COMMITMENT.

#### 1. Nondiscrimination in Contracting Ordinance.

1. The Contractor, Subcontractors and Suppliers shall comply with requirements of the City's Nondiscrimination in Contracting Ordinance, San Diego Municipal Code §§22.3501 through 22.3517.

The Contractor shall not discriminate on the basis of race, gender, religion, national origin, ethnicity, sexual orientation, age, or disability in the solicitation, selection, hiring, or treatment of subcontractors, vendors, or suppliers. The Contractor shall provide equal opportunity for subcontractors to participate in subcontracting opportunities. The Contractor understands and agrees that violation of this clause shall be considered a material breach of the contract and may result in contract termination, debarment, or other sanctions.

The Contractor shall include the foregoing clause in all contracts between the Contractor and Subcontractors and Suppliers.

- 2. Disclosure of Discrimination Complaints. As part of its Bid or Proposal, the Bidder shall provide to the City a list of all instances within the past 10 years where a complaint was filed or pending against Bidder in a legal or administrative proceeding alleging that Bidder discriminated against its employees, subcontractors, vendors, or suppliers, and a description of the status or resolution of that complaint, including any remedial action taken.
- 3. Upon the City's request, the Contractor agrees to provide to the City, within 60 days, a truthful and complete list of the names of all Subcontractors and Suppliers that the Contractor has used in the past 5 years on any of its contracts that were undertaken within San Diego County, including the total dollar amount paid by the Contractor for each subcontract or supply contract.
- 4. The Contractor further agrees to fully cooperate in any investigation conducted by the City pursuant to the City's Nondiscrimination in Contracting Ordinance, Municipal Code §§22.3501 through 22.3517. The Contractor understands and agrees that violation of this clause shall be considered a material breach of the Contract and may result in remedies being ordered against the Contractor up to and including contract termination, debarment and other sanctions for violation of the provisions of the Nondiscrimination in Contracting Ordinance. The Contractor further understands and agrees that the procedures, remedies and sanctions provided for in the Nondiscrimination in Contracting Ordinance apply only to violations of the Ordinance.

#### E. EQUAL EMPLOYMENT OPPORTUNITY OUTREACH PROGRAM.

1. The Contractor, Subcontractors and Suppliers shall comply with the City's Equal Employment Opportunity Outreach Program, San Diego Municipal Code §\$22.2701 through 22.2707.

The Contractor shall not discriminate against any employee or applicant for employment on any basis prohibited by law. Contractor shall provide equal opportunity in all employment practices. Prime Contractor shall ensure their subcontractors comply with this program. Nothing in this section shall be interpreted to hold a prime contractor liable for any discriminatory practice of its subcontractors.

The Contractor shall include the foregoing clause in all contracts between the Contractor and Subcontractors and Suppliers.

- 2. If the Contract is competitively solicited, the selected Bidder shall submit a Work Force Report (Form BB05), within 10 Working Days after receipt by the Bidder of Contract forms to the City for approval as specified in the Notice of Intent to Award letter from the City.
- 3. If a Work Force Report is submitted, and the City determines there are underrepresentations when compared to County Labor Force Availability data, the selected Bidder shall submit an Equal Employment Opportunity Plan.
- 4. If the selected Bidder submits an Equal Employment Opportunity Plan, it shall include the following assurances:
  - 1. The Contractor shall maintain a working environment free of discrimination, harassment, intimidation and coercion at all sites and in all facilities at which the Contractor's employees are assigned to work.
  - 2. The Contractor reviews its EEO Policy, at least annually, with all on-site supervisors involved in employment decisions.
  - 3. The Contractor disseminates and reviews its EEO Policy with all employees at least once a year, posts the policy statement and EEO posters on all company bulletin boards and job sites, and documents every dissemination, review and posting with a written record to identify the time, place, employees present, subject matter, and disposition of meetings.
  - 4. The Contractor reviews, at least annually, all supervisors' adherence to and performance under the EEO Policy and maintains written documentation of these reviews.
  - 5. The Contractor discusses its EEO Policy Statement with subcontractors with whom it anticipates doing business, includes the EEO Policy Statement in its subcontracts, and provides such documentation to the City upon request.

- 6. The Contractor documents and maintains a record of all bid solicitations and outreach efforts to and from subcontractors, contractor associations and other business associations.
- 7. The Contractor disseminates its EEO Policy externally through various media, including the media of people of color and women, in advertisements to recruit, maintains files documenting these efforts, and provides copies of these advertisements to the City upon request.
- 8. The Contractor disseminates its EEO Policy to union and community organizations.
- 9. The Contractor provides immediate written notification to the City when any union referral process has impeded the Contractor's efforts to maintain its EEO Policy.
- 10. The Contractor maintains a current list of recruitment sources, including those outreaching to people of color and women, and provides written notification of employment opportunities to these recruitment sources with a record of the organizations' responses.
- 11. The Contractor maintains a current file of names, addresses and phone numbers of each walk-in applicant, including people of color and women, and referrals from unions, recruitment sources, or community organizations with a description of the employment action taken.
- 12. The Contractor encourages all present employees, including people of color and women employees, to recruit others.
- 13. The Contractor maintains all employment selection process information with records of all tests and other selection criteria.
- 14. The Contractor develops and maintains documentation for on-the-job training opportunities, participates in training programs, or both for all of its employees, including people of color and women, and establishes apprenticeship, trainee, and upgrade programs relevant to the Contractor's employment needs.
- 15. The Contractor conducts, at least annually, an inventory and evaluation of all employees for promotional opportunities and encourages all employees to seek and prepare appropriately for such opportunities.
- 16. The Contractor ensures the company's working environment and activities are non-segregated except for providing separate or single-user toilets and necessary changing facilities to assure privacy between the sexes.

# ATTACHMENT D INTENTIONALLY LEFT BLANK

# ATTACHMENT E

# SUPPLEMENTARY SPECIAL PROVISIONS

# SUPPLEMENTARY SPECIAL PROVISIONS

The following Supplementary Special Provisions (SSP) modifies the following documents:

- 1) Standard Specifications for Public Works Construction (The GREENBOOK) currently in effect.
- 2) The City of San Diego Standard Specifications for Public Works Construction (The WHITEBOOK).

\_\_\_\_\_\_

# **SECTION 2 - SCOPE AND CONTROL OF WORK**

- **2-3.2 Self Performance.** DELETE in its entirety and SUBSTITUTE with the following:
  - 1. The self performance percentage requirement will be waived for contracts when a "B" License is required or allowed.
- **2-5.3.1 General.** To the City Supplement, ADD the following
  - 7. For products for which an AML is available, products listed in the AML shall be used. A submittal review will be conducted for products not identified on an AML on a case-by-case basis when:
    - a) The product type or category is not in the AML.
    - b) The AML does not list at least two available manufacturers of the product.
    - c) The material or manufacturer listed in the AML is no longer available. Documentation to substantiate the product is no longer available or in production is required as part of the submittal.

In the case of conducting a submittal review when required by the Plans or Special Provisions, or when requested by the Engineer, all submittals shall be accompanied by the City's submittal form.

The Product Submittal Form is available for download at:

http://www.sandiego.gov/publicworks/edocref/index.shtml

**2-9.2 Survey Service.** DELETE in its entirety and SUBSTITUTE with the following:

The Contractor shall be responsible for all surveying services or as may be specified in these special provisions.

The payment for survey services shall be included in the various Bid items unless a Bid item for Survey Service has been provided.

# **SECTION 4 - CONTROL OF MATERIALS**

# **4-1.3.6 Preapproved Materials.** To the City Supplement, ADD the following:

3. You shall submit in writing a list of all products to be incorporated in the Work that are on the AML.

# **4-1.6 Trade Names or Equals.** ADD the following:

You must submit your list of proposed substitutions for "an equal" ("or equal") item(s) no later than 10 Working Days after the determination of the Apparent Low Bidder and on the City's Product Submittal Form available at.

http://www.sandiego.gov/publicworks/edocref/index.shtml

# SECTION 6 - PROSECUTION, PROGRESS AND ACCEPTANCE OF WORK

# **6-7.1 General.** To the City Supplement, ADD the following:

- 5. For Water projects where shutdowns of 16 inch and larger pipes are required, there is a shutdown moratorium from May until October. Contractor shall plan and schedule work accordingly. No additional payment or working days will be granted for delays due to this moratorium.
- 6. 30 Working days for full depth asphalt final mill and resurfacing work required per SDG-107.

#### SECTION 7 - RESPONSIBILITIES OF THE CONTRACTOR

**7-3 LIABILITY INSURANCE.** DELETE in its entirety and SUBSTITUTE with the following:

The insurance provisions herein must not be construed to limit your indemnity obligations contained in the Contract.

#### 7-3.1 Policies and Procedures.

- 1. You must procure the insurance described below, at its sole cost and expense, to provide coverage against claims for loss including injuries to persons or damage to property, which may arise out of or in connection with the performance of the Work by you, your agents, representatives, officers, employees or Subcontractors.
- 2. Insurance coverage for property damage resulting from your operations is on a replacement cost valuation. The market value will not be accepted.
- 3. You must maintain this insurance for the duration of this contract and at all times thereafter when you are correcting, removing, or replacing Work in accordance with this contract. Your liabilities under the Contract, e.g., your indemnity

- obligations, is not deemed limited to the insurance coverage required by this contract.
- 4. Payment for insurance is included in the various items of Work as bid by you, and except as specifically agreed to by the City in writing, you are not entitled to any additional payment. Do not begin any work under this contract until you have provided and the City has approved all required insurance.
- 5. Policies of insurance must provide that the City is entitled to 30 days (10 days for cancellation due to non-payment of premium) prior written notice of cancellation or non-renewal of the policy. Maintenance of specified insurance coverage is a material element of the Contract. Your failure to maintain or renew coverage or to provide evidence of renewal during the term of the Contract may be treated by the City as a material breach of the Contract.

# 7-3.2 Types of Insurance.

# 7-3.2.1 Commercial General Liability Insurance.

- 1. Commercial General Liability Insurance must be written on the current version of the ISO Occurrence form CG 00 01 07 98 or an equivalent form providing coverage at least as broad.
- 2. The policy must cover liability arising from premises and operations, XCU (explosions, underground, and collapse), independent contractors, products/completed operations, personal injury and advertising injury, bodily injury, property damage, and liability assumed under an insured's contract (including the tort liability of another assumed in a business contract).
- 3. There must be no endorsement or modification limiting the scope of coverage for either "insured vs. insured" claims or contractual liability. You must maintain the same or equivalent insurance for at least 10 years following completion of the Work.
- 4. All costs of defense must be outside the policy limits. Policy coverage must be in liability limits of not less than the following:

General Annual Aggregate Limit	Limits of Liability
Other than Products/Completed Operations	\$2,000,000
Products/Completed Operations Aggregate Limit	\$2,000,000
Personal Injury Limit	\$1,000,000
Each Occurrence	\$1,000,000

# 7-3.2.2 Commercial Automobile Liability Insurance.

- 1. You must provide a policy or policies of Commercial Automobile Liability Insurance written on the current version of the ISO form CA 00 01 12 90 or later version or equivalent form providing coverage at least as broad in the amount of \$1,000,000 combined single limit per accident, covering bodily injury and property damage for owned, non-owned, and hired automobiles ("Any Auto").
- 2. All costs of defense must be outside the limits of the policy.

# 7-3.2.5 Contractors Builders Risk Property Insurance.

- 1. You must provide at its expense, and maintain until Final Acceptance of the Work, a Special Form Builders Risk Policy or Policies. This insurance must be in an amount equal to the replacement cost of the completed Work (without deduction for depreciation) including the cost of excavations, grading, and filling. The policy or policies limits must be 100% of this contract value of the Work plus15% to cover administrative costs, design costs, and the costs of inspections and construction management.
- 2. Insured property must include material or portions of the Work located away from the Site but intended for use at the Site, and must cover material or portions of the Work in transit. The policy or policies must include as insured property scaffolding, falsework, and temporary buildings located at the Site. The policy or policies must cover the cost of removing debris, including demolition.
- 3. The policy or policies must provide that all proceeds thereunder must be payable to the City as Trustee for the insured, and must name the City, the Contractor, Subcontractors, and Suppliers of all tiers as named insured. We as Trustee will collect, adjust, and receive all monies which may become due and payable under the policy or policies, may compromise any and all claims thereunder, and will apply the proceeds of such insurance to the repair, reconstruction, or replacement of the Work.
- 4. Any deductible applicable to the insurance must be identified in the policy or policies documents and responsibility for paying the part of any loss not covered because of the application of such deductibles must be apportioned among the parties except for the City as follows: if there is more than one claimant for a single occurrence, then each claimant must pay a pro-rata share of the per occurrence deductible based upon the percentage of their paid claim to the total paid for insured. The City must be entitled to 100% of its loss. The Contractor must pay the City any portion of that loss not covered because of a deductible, at the same time the proceeds of the insurance are paid to the City as trustee.
- 5. Any insured, other than the City, making claim to which a deductible applies must be responsible for 100% of the loss not insured because of the deductible. Except as provided for under California law, the policy or policies must

provide that the City is entitled to 30 days prior written notice (10 days for cancellation due to non-payment of premium) of cancellation or non-renewal of the policy or policies.

- **Rating Requirements.** Except for the State Compensation Insurance Fund, all insurance required by this contract as described herein must be carried only by responsible insurance companies with a rating of, or equivalent to, at least "A-, VI" by A.M. Best Company, that are authorized by the California Insurance Commissioner to do business in the State, and that have been approved by the City.
- **7-3.3.1 Non-Admitted Carriers.** The City will accept insurance provided by non-admitted, "surplus lines" carriers only if the carrier is authorized to do business in the State and is included on the List of Approved Surplus Lines Insurers (LASLI list).

All policies of insurance carried by non-admitted carriers must be subject to all of the requirements for policies of insurance provided by admitted carriers described herein.

- **7-3.4 Evidence of Insurance.** Furnish to the City documents e.g., certificates of insurance and endorsements evidencing the insurance required herein, and furnish renewal documentation prior to expiration of this insurance. Each required document must be signed by the insurer or a person authorized by the insurer to bind coverage on its behalf. We reserve the right to require complete, certified copies of all insurance policies required herein.
- 7-3.5 Policy Endorsements.

# 7-3.5.1 Commercial General Liability Insurance

# 7-3.5.1.1 Additional Insured.

- a) You must provide at your expense policy endorsement written on the current version of the ISO Occurrence form CG 20 10 11 85 or an equivalent form providing coverage at least as broad.
- b) To the fullest extent allowed by law e.g., California Insurance Code §11580.04, the policy must be endorsed to include the City and its respective elected officials, officers, employees, agents, and representatives as additional insured.
- c) The additional insured coverage for projects for which the Engineer's Estimate is \$1,000,000 or more must include liability arising out of: (a) Ongoing operations performed by you or on your behalf, (b) your products, (c) your work, e.g., your completed operations performed by you or on your behalf, or (d) premises owned, leased, controlled, or used by you.
- d) The additional insured coverage for projects for which the Engineer's Estimate is less than \$1,000,000 must include liability arising out of: (a) Ongoing operations performed by you or on your behalf, (b) your products, or (c) premises owned, leased, controlled, or used by you.

- **7-3.5.1.2 Primary and Non-Contributory Coverage.** The policy must be endorsed to provide that the coverage with respect to operations, including the completed operations, if appropriate, of the Named Insured is primary to any insurance or self-insurance of the City and its elected officials, officers, employees, agents and representatives. Further, it must provide that any insurance maintained by the City and its elected officials, officers, employees, agents and representatives must be in excess of your insurance and must not contribute to it.
- **7-3.5.1.3 Project General Aggregate Limit.** The policy or policies must be endorsed to provide a Designated Construction Project General Aggregate Limit that will apply only to the Work. Only claims payments which arise from the Work must reduce the Designated Construction Project General Aggregate Limit. The Designated Construction Project General Aggregate Limit must be in addition to the aggregate limit provided for the products-completed operations hazard.
- 7-3.5.2 Commercial Automobile Liability Insurance.
- **Additional Insured.** Unless the policy or policies of Commercial Auto Liability Insurance are written on an ISO form CA 00 01 12 90 or a later version of this form or equivalent form providing coverage at least as broad, the policy must be endorsed to include the City and its respective elected officials, officers, employees, agents, and representatives as additional insured, with respect to liability arising out of automobiles owned, leased, hired or borrowed by you or on your behalf. This endorsement is limited to the obligations permitted by California Insurance Code §11580.04.
- 7-3.5.5 Builders Risk Endorsements.
- **7-3.5.5.1 Waiver of Subrogation.** The policy or policies must be endorsed to provide that the insurer will waive all rights of subrogation against the City, and its respective elected officials, officers, employees, agents, and representatives for losses paid under the terms of the policy or policies and which arise from work performed by the Named Insured for the City.
- **7-3.5.5.2 Builders Risk Partial Utilization.** If the City desire to occupy or use a portion or portions of the Work prior to Acceptance in accordance with this contract, the City will notify you and you must immediately notify your Builder's Risk insurer and obtain an endorsement that the policy or policies must not be cancelled or lapse on account of any such partial use or occupancy. You must obtain the endorsement prior to our occupation and use.
- **7-3.6 Deductibles and Self-Insured Retentions.** You must pay for all deductibles and self-insured retentions. You must disclose deductibles and self-insured retentions to the City at the time the evidence of insurance is provided.
- **Reservation of Rights.** The City reserves the right, from time to time, to review your insurance coverage, limits, deductibles and self-insured retentions to determine if they are acceptable to the City. The City will reimburse you, without overhead,

profit, or any other markup, for the cost of additional premium for any coverage requested by the Engineer but not required by this contract.

- **7-3.8 Notice of Changes to Insurance.** You must notify the City 30 days prior to any material change to the policies of insurance provided under this contract.
- **7-3.9 Excess Insurance.** Policies providing excess coverage must follow the form of the primary policy or policies e.g., all endorsements.
- **7-4 WORKERS' COMPENSATION INSURANCE.** DELETE in its entirety and SUBSTITUTE with the following:
- 7-4.1 Workers' Compensation Insurance and Employers Liability Insurance.
  - 1. In accordance with the provisions of §3700 of the California Labor Code, you must provide at your expense Workers' Compensation Insurance and Employers Liability Insurance to protect you against all claims under applicable state workers compensation laws. The City, its elected officials, and employees will not be responsible for any claims in law or equity occasioned by your failure to comply with the requirements of this section.
  - 2. Limits for this insurance must be not less than the following:

Workers' Compensation	Statutory Employers Liability
Bodily Injury by Accident	\$1,000,000 each accident
Bodily Injury by Disease	\$1,000,000 each employee
Bodily Injury by Disease	\$1,000,000 policy limit

- 3. By signing and returning the Contract you certify that you are aware of the provisions of §3700 of the Labor Code which require every employer to be insured against liability for worker's compensation or to undertake self-insurance in accordance with the provisions of that code and you must comply with such provisions before commencing the Work as required by §1861 of the California Labor Code.
- **7-4.1.1 Waiver of Subrogation.** The policy or policies must be endorsed to provide that the insurer will waive all rights of subrogation against the City, and its respective elected officials, officers, employees, agents, and representatives for losses paid under the terms of the policy or policies and which arise from work performed by the Named Insured for the City.
- **7-10.5.3 Steel Plate Covers.** Table 7-10.5.3(A), REVISE the plate thickness for 5'-3" trench width to read 1 34".

7-15 INDEMNIFICATION AND HOLD HARMLESS AGREEMENT. To the City Supplement, fourth paragraph, last sentence, DELETE in its entirety and SUBSTITUTE with the following:

Your duty to indemnify and hold harmless does not include any claims or liability arising from the established active or sole negligence, or willful misconduct of the City, its officers, or employees.

**7-16 COMMUNITY LIAISON.** To the City Supplement, DELETE in its entirety and SUSBTITUTE with the following:

ADD:

# 7-16 COMMUNITY OUTREACH.

# **7-16.1** General.

- 1. To ensure consistency with the City's community outreach plan for the project, the City will work with the Contractor to inform the public (which includes, but is not limited to, property owners, renters, homeowners, business owners, recreational users, and other community members and stakeholders) of construction impacts. Efforts by the Contractor to mitigate construction impacts by communicating with the public require close coordination and cooperation with the City.
- 2. The Contractor will perform the community outreach activities required throughout the Contract Time.
- 3. The Contractor shall closely coordinate the Work with the businesses, institutions, residents and property owners impacted by the Project. Example duties of the Contractor include notification to the businesses, institutions and residents of the commencement of construction activities not less than 5 days in advance, coordination of access for vehicular and pedestrian traffic to businesses, institutions and residences impacted by the Project, reporting of Contractor activities at all Project progress meetings scheduled by the Engineer, attendance to the Project Pre-construction Meeting, attendance at 2 community meetings, response to community questions and complaints related to Contractor activities, and written documentation including logging in all inquiries and complaints received into the City's Public Contact Log located on the City's SDShare site:

# http://sdshare/forums/ecp/PITS/picr/Lists/Public%20Contact%20Log/AllItems.aspx.

- 4. The Contractor shall execute the Information Security Policy Acknowledgement Form For Non-City Employees within 15 days of the award of the Contract if:
  - a) The contact information for the Contractor is made available on any outreach materials or;
  - b) The Contractor will be the primary point of contact to resolve project related inquiries and complaints.

# 5. Electronic Communication.

All inquiries and complaints will be logged in to the City's SDShare site within 24 hours of receipt of inquiries and complaints.

Any updates or a resolution of inquiries, and complaints shall be documented in the City's SDShare site within 24 hours.

Copies of email communications shall be saved on to the City's SDShare site as individually as an Outlook Message Format (\*.msg).

All graphics, photos, and other electronic files associated with the inquiries and or complaints shall be saved into the individual record.

6. **When specified**, present your Exclusive Community Liaison to the Engineer, in writing, within 15 days of the award of the Contract.

#### 7-16.2 Submittals.

- 1. The Contractor shall submit to the Resident Engineer, for review and approval, all drafts of letters, notices, postcards, door hangers, signs, mailing lists, proposed addresses for hand-delivery, and any other notices and letters that are to be mailed and or distributed to the public.
  - a. Prior to distributing or mailing, the Contractor shall submit final drafts of letters, notices, postcards, door hangers, signs, and any other notices and letters to the Resident Engineer for final review and approval.
  - b. After distributing or mailing, the Contractor shall submit verification of delivery and any copies of returned notices to the Resident Engineer.
- 2. The Contractor will use the City's SDShare site to identify and summarize communications (via phone, in person, and email) with the public the within 24 hours of receipt, even if the Contractor's response to the individual is still incomplete. The Contractor will upload to the City's SDShare site copies of all written, electronic, and verbal communications and conversations with the public.

# 7-16.3 Public Notice by Contractor.

- 1. Furnish and distribute public notices in the form of door hangers using the City's format to all occupants and/or property owners along streets where Work is to be performed at least 5 days before starting the Work as directed by the Resident Engineer.
- 2. For all Work on private property, contact each owner and occupant individually a minimum of 15 days prior to the Work. If the Work has been delayed, re-notify owners and occupants of the new Work schedule, as directed by the Resident Engineer.

# 7-16.4 **Quality Assurance.**

- 1. During the course of community outreach, the Contractor shall ensure the character of all persons that conduct community outreach (distributing door hangers, attending community meetings, interacting with the public, etc.), on behalf of the Contractor:
  - a. Have the ability to speak and comprehend English and/or Spanish, as appropriate for the community or public they are informing,
  - b. Possess and display easily verifiable and readable personal identification that identifies the person as an employee of the Contractor,
  - c. Have the interpersonal skills to effectively, professionally, and tactfully represent the project, Contractor, and City to the public.

#### 7-16.5 Communications with the Public.

- 1. The Contractor shall provide updates on construction impacts to the Resident Engineer. The Contractor shall notify the Resident Engineer in advance about time-sensitive construction impacts and may be required to distribute construction impact notices to the public on short notice.
- 2. The Contractor shall incorporate community outreach activities related to construction impacts in the baseline schedule and update the Resident Engineer with each week's submittal of the Three-Week Look Ahead Schedule.
- 3. At the request of the Resident Engineer, the Contractor shall attend and participate in project briefings at community meetings.
- 4. The Contractor shall coordinate with the Resident Engineer on all responses and actions taken to address public inquiries and complaints within 24-hours that they are received.

# 7-16.6 Communications with Media.

- 1. The City may allow members of the media access to its construction site(s) on a case-by-case basis only.
- 2. Occasionally, members of the media may show up at construction sites, uninvited. Members of the media (including, but not limited to newspaper, magazine, radio, television, bloggers, and videographers) do not have the legal right to be in the construction site without the City's permission.
- 3. In the event media representatives arrive near or on the construction site(s), the Contractor shall keep them off the site(s), in a courteous and professional manner, until a Public Information Officer is available to meet them at an approved location.

- 4. The Contractor shall report all members of the media visits to the Resident Engineer as quickly as possible, so that the City's Public Information Officer can meet with the members of the media at the construction site(s).
- 5. If the City allows members of the media to access a construction site, the Contractor shall allow the City to escort the media representatives while they are on the construction site and shall ensure their safety.
- 6. The Contractor shall require media representatives to sign in and out of the Site Visitor Log and to use Personal Protective Equipment.
- 7. The Contractor has a right to speak to members of the media about its company and its role on the project. All other questions shall be referred to the City.

# 7-16.7 Exclusive Community Liaison Services.

If directed to conduct Exclusive Community Liaison Services, the Contractor shall retain an Exclusive Community Liaison for the Project whose sole responsibilities will be as follows:

- 1. Develop a contact list of community, tenants, property owners, and agencies with a stake in the project.
- 2. Notify businesses, institutions, property owners, and residents of the commencement of construction activities and utility service interruptions not less than 5 days in advance.
- 3. Coordinate access for vehicular and pedestrian traffic to businesses, institutions and residences impacted by the Project.
- 4. Prepare and present of materials in coordination with the Resident Engineer (the City's standards and guidelines for the communication materials are available for review by Bidders by sending a request to the Contract Specialist).
- 5. Respond to community questions and complaints related to Contractor activities.
- 6. Write, edit, update, or produce brochures, pamphlets and news releases.
- 7. Provide standard telephone inquiries and e-mail responses:
  - a) Respond to telephone calls and e-mails from the public.
  - b) Record calls and e-mails on the City's SDShare site.
- 8. Report Exclusive Community Liaison activities at all progress meetings scheduled by the Resident Engineer.
- 9. Attendance at pre-construction, community and stakeholders meetings.

- **7-16.7.1 Exclusive Community Liaison Work Plan.** The Work plan for the Exclusive Community Liaison shall address the items of Work specified in these specifications. Present your Exclusive Community Liaison and submit your exclusive community outreach plan (in writing) **as specified** within 15 days of the Award of the Contract.
- **7-16.8 Payment.** The Payment for the community outreach and public notices is included in the various Bid items. The payment for exclusive community liaison is in the bid item for "Exclusive Community Liaison Services."
- **7-20 ELECTRONIC COMMUNICATION.** ADD the following:

Virtual Project Manager will be used on this contract.

# **SECTION 8 - FACILITIES FOR AGENCY PERSONNEL**

**8-2 FIELD OFFICE FACILITIES.** To the City Supplement, DELETE in its entirety.

# **SECTION 9 - MEASUREMENT AND PAYMENT**

- **9-3.2.5 Withholding of Payment.** To the City Supplement, item i), DELETE in its entirety and SUBSTITUTE with the following:
  - i) Your failure to comply with 7-2.3, "PAYROLL RECORDS" and 2-16, "CONTRACTOR REGISTRATION AND ELECTRONIC REPORTING SYSTEM."

#### ADD:

**9-3.7 Compensation Adjustments for Price Index Fluctuations.** This Contract is not subject to the provisions of The WHITEBOOK for Compensation Adjustments for Price Index Fluctuations for the paving asphalt.

# **SECTION 203 – BITUMINOUS MATERIALS**

**RUBBER POLYMER MODIFIED SLURRY (RPMS).** To the City Supplement, CORRECT section numbering as follows:

OLD SECTION NUMBER	TITLE	NEW SECTION NUMBER
203-15	RUBBER POLYMER MODIFIED SLURRY (RPMS)	203-16
203-15.1	General	203-16.1
203-15.2	Materials	203-16.2
203-15.3	Composition and Grading	203-16.3
203-15.4	Mix Design	203-16.4

ADD the following:

RPMS shall be used on this contract.

# SECTION 209 – STREET LIGHTING AND TRAFFIC SIGNAL MATERIALS

**209-6.4 Induction Cobra Head Luminaire.** To the City Supplement, CORRECT certain section numbering as follows:

OLD SECTION NUMBER	TITLE	NEW SECTION NUMBER
209-6.4.7	<b>Luminaire Identification</b>	209-6.4.8
209-6.4.8	<b>Photometric Documentation</b>	209-6.4.9
209-6.4.9	Quality Assurance	209-6.4.10

# **SECTION 212 - LANDSCAPE AND IRRIGATION MATERIALS**

#### ADD:

- **Trench Marker Tape.** To the City Supplement, DELETE in its entirety and SUBSTITUTE with the following:
  - a) Trench marker tape shall be 6" wide and consist of a minimum 5.0 mil, five-ply 100% virgin polyethylene which is acid, alkaline and corrosion resistant. Elongation properties and tensile strength of not less than 7,800 psi shall be in accordance with ASTM D882-80A. The trench marker tape for water lines shall have a minimum 20 gauge solid aluminum foil core, adhered to a 2.55 mil polyethylene backing.
  - b) Tape color and legend shall be placed beneath the top protective layer subject to the following:
    - 1. Blue with "Caution Potable Water Line Buried Below" for Water mainlines and over pipe sleeves.
    - 2. Purple with "Caution Recycled/Reclaimed Water Line Buried Below" for recycled water irrigation mainlines.
    - 3. Red with "Caution Electric Line Buried Below" for electrical lines servicing the irrigation system, including, but not limited to, 110/220v power to irrigation controllers and pumps, communication cables and irrigation direct burial control wires to remote control valves.
    - 4. Green with "Caution Sewer Line Buried Below" for Sewer mainlines and over pipe sleeves.

# **SECTION 300 – EARTHWORK**

- **Payment.** To the City Supplement, paragraph (2), DELETE in its entirety and SUBSTITUTE with the following:
  - 2. Payment for existing pavement removal and disposal of up to 12" thick, within the excavation e.g., trench limits, shall be included in the Bid item for installation of the mains or the Work item that requires pavement removal.

#### **SECTION 302 – ROADWAY SURFACING**

**PREPARATORY REPAIR WORK.** To the City Supplement, DELETE in its entirety and SUBSTITUTE with the following:

# 302-3 PREPARATORY REPAIR WORK.

- 1. Prior to roadway resurfacing or the application of slurry, the Contractor shall complete all necessary preparation and repair work to the road segment e.g., tree trimming, weed spray, weed abatement, crack sealing, asphalt repair, hump removal, miscellaneous asphalt patching, removal of raised pavement markers, removal of pavement markings, etc. and as specified in the Special Provisions.
- 2. Preparatory work shall include, but not be limited to, tree trimming, weed spray, weed abatement, crack sealing, asphalt repair i.e., mill and pave, hump removal, miscellaneous asphalt patching, removal of raised pavement markers, removal of pavement markings, etc.
- 3. The Contractor shall repair areas of distressed asphalt concrete pavement by milling or removing damaged areas of pavement to a minimum depth of 2" for Residential streets, and a minimum depth of 3" for all others to expose firm and unyielding pavement. The Contractor shall prepare subgrade as needed and install a minimum of 2" for residential streets, and a minimum of 3" for all others, of compacted asphalt concrete pavement over compacted native material as directed by the Engineer.
- 4. If, in order to achieve the minimum specified depth, the base material is exposed, the material shall be compacted to 95% relative compaction to a depth 10" below the finished grade (dig out). Compaction tests shall be made to ensure compliance with the specifications. The Engineer will determine when and where the test will occur. The City will pay for the soils testing required by the Engineer, which meets the required compaction. The Contractor shall reimburse the City for the cost of retesting failing compaction tests. If additional base material is required, the Contractor shall use Class 2 Aggregate Base in accordance with 200-2.2, "Crushed Aggregate Base."
- 5. Recycled base material shall conform to Crushed Miscellaneous Base Material in accordance with 200-2.4, "Crushed Miscellaneous Aggregate Base."

- 6. Prior to replacing asphalt, the area shall be cleaned by removing all loose and damaged material, moisture, dirt, and other foreign matter and shall be tack coated in accordance with 302-5.4 "Tack Coat."
- 7. The Contractor shall install new asphalt within the repair area or for patches in accordance with 302-5, "ASPHALT CONCRETE PAVEMENT." Asphalt concrete shall be C2-PG 64-10 in compliance with 400-4, "ASPHALT CONCRETE."
- 8. No preparatory asphalt work shall be done when the atmospheric temperature is below 50 °F or during unsuitable weather.
- 9. Following the asphalt placement, the Contractor shall roll the entire area of new asphalt in both directions at least twice. The finished patch shall be level and smooth in compliance with 302-5.6.2 "Density and Smoothness." After placement and compaction of the asphalt patch, the Contractor shall seal all finished edges with a 4" wide continuous band of SS-1H.
- 10. The minimum dimension for each individual repair shall be 4' x 4' and shall be subject to the following conditions:
  - a) If the base material is exposed to achieve the required minimum removal thickness, the base material shall be prepared conforming to 301-1, "SUBGRADE PREPARATION."
  - b) When additional base material is required, then the contractor shall use Class 2 Aggregate Base in accordance with 200-2.2, "Crushed Aggregate Base." Recycled base material shall conform to Crushed Miscellaneous Base Material in accordance with 200-2.4, "Crushed Miscellaneous Base."
  - c) The Contractor may use grinding as a method for removal of deteriorated pavement when the areas indicated for removal are large enough (a minimum of the machine drum width) and when approved by the Engineer.
  - d) For both scheduled and unscheduled base repairs, failed areas may be removed by milling or by excavation provided that the edges are cut cleanly with a saw. The areas shall be cleaned and tack coated in accordance with 302-5.4, "Tack Coat" before replacing the asphalt. The areas for scheduled repairs have been marked on the street.

# 302-3.1 Asphalt Patching.

- 1. Asphalt patching shall consist of patching potholes, gutter-line erosion, and other low spots in the pavement that are deeper than ½" per 302-5.6.2, "Density and Smoothness." These areas are generally smaller and more isolated than those areas in need of mill and pave.
- 2. The areas requiring patching have been identified in the Contract Documents, marked on the streets, or as directed by the Engineer. The Contractor shall identify any new areas that may require patching prior to slurry work to ensure the smoothness and quality of the finished product.

- 3. The Contractor shall identify and repair any areas that may require patching, prior to the placement of slurry seal for smooth finished product.
- 4. Asphalt overlay shall not be applied over deteriorated pavement. Preparatory asphalt work shall be completed and approved by the Engineer before proceeding with asphalt overlay.
- 5. The Contractor shall remove distressed asphalt pavement either by saw cutting or milling, to expose firm and unyielding pavement; prepare subgrade (as needed); and install compacted asphalt concrete pavement over compacted native material as directed by the Engineer.
- 6. Prior to replacing asphalt, the area shall be cleaned and tack coated per 302-5.4, "Tack Coat".
- 7. Following the asphalt placement, the Contractor shall roll the entire patch in both directions covering the patch at least twice.
- 8. After placement and compaction of the asphalt patch, the Contractor shall seal all finished edges with a 4" wide continuous band of SS-1H.
- 9. Base repairs shall not exceed 20% RAP in content.

# 302-3.2 Payment.

- 1. Payment for replacement of existing pavement when required shall be included in the unit bid price for Asphalt Pavement repair for the total area replaced and no additional payment shall be made regardless of the number of replacements completed. No payment shall be made for areas of over excavation or outside trench areas in utility works unless previously approved by the Engineer. No payment for pavement replacement will be made when the damage is due to the Contractor's failure to protect existing improvements. The Contractor shall reimburse the City for the cost of retesting all failing compaction tests.
- 2. The areas and quantities shown on the road segments and in appendices are given only for the Contractor's aid in planning the Work and preparing Bids. The Engineer will designate the limits to be removed and these designated areas shall be considered to take precedent over the area shown in an Appendix to the Contract Documents. The quantities shown in the appendices are based on a street assessment survey and may vary.
- 3. At the end of each day, the Contractor shall submit to the Engineer an itemized list of the asphalt pavement repair work completed. The list shall include the location of the work and the exact square footage of the repair.
- 4. Preparatory repair work and tack coating will be paid at the Contract unit price per ton for Asphalt Pavement Repair. No payment shall be made for areas of over excavation unless previously approved by the Engineer.
- 5. Milling shall be included in the Bid item for Asphalt Pavement Repair unless separate Bid item has been provided.

- 6. Payment for miscellaneous asphalt patching shall be included in the Contract unit price for slurry and no additional payment shall be made therefore.
- **Damaged AC Pavement Replacement.** To the City Supplement, DELETE in its entirety.
- **302-5.1.2 Measurement and Payment.** To the City Supplement, DELETE in its entirety.
- **Measurement and Payment.** To the City Supplement, item c), ADD the following: Imported Subgrade material shall be paid per bid item "Imported Backfill".

# SECTION 306 – UNDERGROUND CONDUIT CONSTRUCTION

**OPEN TRENCH OPERATIONS.** To the City Supplement, CORRECT certain section numbering as follows:

OLD SECTION NUMBER	TITLE	NEW SECTION NUMBER
306-1.8	House Connection Sewer (Laterals) and Cleanouts	306-1.9
306-1.7.1	Payment	306-1.9.1
306-1.7.2	Sewer Lateral with Private Replumbing	306-1.9.2
306-1.7.2.1	Location	306-1.9.2.1
306-1.7.2.2	Permits	306-1.9.2.2
306-1.7.2.3	Submittals	306-1.9.2.3
306-1.7.2.4	<b>Trenchless Construction</b>	306-1.9.2.4
306-1.7.2.5	Payment	306-1.9.2.5
306-1.7.3.6	Private Pump Installation	306-1.9.2.6
306-1.7.3.7	Payment	306-1.9.2.7

# **Basis of Payment for Open Trench Installations.** ADD the following:

Payment for imported backfill when the Contractor elects to import material from a source outside the project limits and when authorized by the Engineer shall be included in the Bid unit price for Imported Backfill. The price shall include the removal and disposal of unsuitable materials.

- **306-1.8.3 Polyurethane Lining.** To the City Supplement, item 5, DELETE in its entirety
- **PAYMENT.** To the City Supplement, DELETE in its entirety.

# **SECTION 705 – WATER DISCHARGES**

- **705-2.6.1 General.** Paragraph (3), CORRECT reference to Section 803 to read "Section 703."
- **Community Health and Safety Plan.** To the City Supplement, DELETE in its entirety and SUBSTITUTE with the following:
- **Community Health and Safety Plan.** See 703-2, "Community Health and Safety Plan."

# **SECTION 707 – RESOURCE DISCOVERIES**

# ADD:

**Environmental Document.** The City of San Diego Environmental Analysis Section (EAS) of the Development Services Department has prepared **Notice of Exemption** for **Skyline Temporary Fire Station**, DEP No. **2112**, as referenced in the Contract Appendix. You must comply with all requirements of the **Notice of Exemption** as set forth in the Contract Appendix D.

Compliance with the City's environmental document is included in the various Bid items, unless a bid item has been provided.

END OF SUPPLEMENTARY SPECIAL PROVISIONS (SSP)

# **TECHNICALS**

# **Project Manual**

For

# **Skyline Temporary Fire Station**

7180 Skyline Drive, San Diego, California 92114
Parcel ID No. 581-290-11-00

August 25, 2014

**Architect** 

# NADEL STUDIO ONE, INC

4445 Eastgate Mall Suite 407 San Diego, CA 92121 2 619.232.8424

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Nadel Studio One, Inc. August 25, 2014

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#### **Davison Associates**

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# **DIVISION 22 - PLUMBING**

NOT APPLICABLE

# **DIVISION 23 - HEATING VENTILATING AND AIR CONDITIONING**

**NOT APPLICABLE** 

# **DIVISION 25 - INTEGRATED AUTOMATION**

NOT APPLICABLE

# **DIVISION 26 - ELECTRICAL**

**NOT APPLICABLE** 

# **DIVISION 27 - COMMUNICATIONS**

**NOT APPLICABLE** 

# **DIVISION 28 - ELECTRONIC SAFETY AND SECURITY**

**NOT APPLICABLE** 

# **DIVISION 31 - EARTHWORK**

311000 Site Clearing 313116 Termite Control

# **DIVISION 32 - EXTERIOR IMPROVEMENTS**

321713 Parking Bumpers
321723 Pavement Markings
321726 Tactile Warning Surfacing
323113 Chain Link Fences and Gates

# **DIVISION 33 - UTILITIES**

NOT APPLICABLE

# **END OF TABLE OF CONTENTS**

Nadel Studio One, Inc. August 25, 2014

000110-2

Skyline Temporary Fire Station Table of Contents

#### **SECTION 024116**

#### STRUCTURE DEMOLITION

#### **PART 1 - GENERAL**

#### 1.1 SUMMARY

- A. Section Includes:
  - 1. Removing below-grade construction.
  - 2. Disconnecting, capping or sealing, and abandoning in-place site utilities.

#### 1.2 MATERIALS OWNERSHIP

A. Unless otherwise indicated, demolition waste becomes property of Contractor.

#### 1.3 PREINSTALLATION MEETINGS

A. Predemolition Conference: Conduct conference at Project site.

# 1.4 INFORMATIONAL SUBMITTALS

- A. Engineering Survey: Submit engineering survey of condition of building.
- B. Proposed Protection Measures: Submit report, including Drawings, that indicates the measures proposed for protecting individuals and property, for environmental protection, and for dust control. Indicate proposed locations and construction of barriers.
- C. Predemolition photographs or video.
- D. Statement of Refrigerant Recovery: Signed by refrigerant recovery technician.

#### 1.5 CLOSEOUT SUBMITTALS

A. Inventory of items that have been removed and salvaged.

# 1.6 QUALITY ASSURANCE

A. Refrigerant Recovery Technician Qualifications: Certified by EPA-approved certification program.

#### 1.7 FIELD CONDITIONS

- A. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
- B. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.
  - 1. Hazardous materials will be removed by Owner before start of the Work.
  - If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Hazardous materials will be removed by Owner under a separate contract.
- C. On-site storage or sale of removed items or materials is not permitted.

# **PART 2 - PRODUCTS**

#### 2.1 PERFORMANCE REQUIREMENTS

- A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- B. Standards: Comply with ASSE A10.6 and NFPA 241.

#### **PART 3 - EXECUTION**

#### 3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped before starting demolition operations.
- B. Perform an engineering survey of condition of building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures during building demolition operations.
- C. Inventory and record the condition of items to be removed and salvaged.

# 3.2 PREPARATION

A. Refrigerant: Before starting demolition, remove refrigerant from mechanical equipment according to 40 CFR 82 and regulations of authorities having jurisdiction.

# 3.3 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Existing Utilities to be Disconnected: Locate, identify, disconnect, and seal or cap off utilities serving buildings and structures to be demolished.
  - 1. Owner will arrange to shut off utilities when requested by Contractor.
  - 2. If removal, relocation, or abandonment of utility services will affect adjacent occupied buildings, then provide temporary utilities that bypass buildings and structures to be demolished and that maintain continuity of service to other buildings and structures.
  - 3. Cut off pipe or conduit a minimum of 24 inches below grade. Cap, valve, or plug and seal remaining portion of pipe or conduit after bypassing according to requirements of authorities having jurisdiction.
  - 4. Do not start demolition work until utility disconnecting and sealing have been completed and verified in writing.

# 3.4 PROTECTION

- A. Existing Facilities: Protect adjacent walkways, loading docks, building entries, and other building facilities during demolition operations. Maintain exits from existing buildings.
- B. Temporary Shoring: Provide and maintain interior and exterior shoring, bracing, or structural support to preserve stability and prevent unexpected movement or collapse of construction being demolished.
- C. Existing Utilities to Remain: Maintain utility services to remain and protect from damage during demolition operations. Do not interrupt existing utilities serving adjacent occupied or operating facilities unless authorized in writing by Owner and authorities having jurisdiction.
- D. Temporary Protection: Erect temporary protection, such as walks, fences, railings, canopies, and covered passageways, where required by authorities having jurisdiction and as indicated.

- 1. Protect adjacent buildings and facilities from damage due to demolition activities.
- 2. Protect existing site improvements, appurtenances, and landscaping to remain.
- 3. Erect a plainly visible fence around drip line of individual trees or around perimeter drip line of groups of trees to remain.
- 4. Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
- 5. Provide protection to ensure safe passage of people around building demolition area and to and from occupied portions of adjacent buildings and structures.
- 6. Protect walls, windows, roofs, and other adjacent exterior construction that are to remain and that are exposed to building demolition operations.
- 7. Erect and maintain dustproof partitions and temporary enclosures to limit dust, noise, and dirt migration to occupied portions of adjacent buildings.
- E. Remove temporary barriers and protections where hazards no longer exist. Where open excavations or other hazardous conditions remain, leave temporary barriers and protections in place.

# 3.5 DEMOLITION

- A. General: Demolish indicated buildings and site improvements completely as indicated on Demolition Drawings. Use methods required to complete the Work within limitations of governing regulations and as follows:
  - 1. Do not use cutting torches until work area is cleared of flammable materials. Maintain portable fire-suppression devices during flame-cutting operations.
  - 2. Maintain fire watch during and for at least 2 hours after flame-cutting operations.
  - 3. Maintain adequate ventilation when using cutting torches.
  - 4. Locate building demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
- B. Site Access and Temporary Controls: Conduct building demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
  - Do not close or obstruct streets, walks, walkways, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction. Provide alternate routes around closed or obstructed trafficways if required by authorities having jurisdiction.
  - 2. Use water mist and other suitable methods to limit spread of dust and dirt. Comply with governing environmental-protection regulations.
- C. Explosives: Use of explosives is not permitted.
- D. Proceed with demolition of structural framing members systematically, from higher to lower level. Complete building demolition operations above each floor or tier before disturbing supporting members on the next lower level.
- E. Demolish foundation walls and other below-grade construction.
  - 1. Remove below-grade construction, including foundation walls and footings, completely.
- F. Existing Utilities: Abandon existing utilities and below-grade utility structures that are within 5 feet outside footprint indicated for new construction. Abandon utilities outside this area.
- G. Below-Grade Areas: Completely fill below-grade areas and voids resulting from building demolition operations with satisfactory soil materials according to backfill requirements.

H. Site Grading: Uniformly rough grade area of demolished construction to a smooth surface, free from irregular surface changes. Provide a smooth transition between adjacent existing grades and new grades.

# 3.6 CLEANING

- A. Remove demolition waste materials from Project site and dispose of them in an EPA-approved construction and demolition waste landfill acceptable to authorities having jurisdiction.
- B. Do not burn demolished materials.
- C. Clean adjacent improvements of dust, dirt, and debris caused by building demolition operations. Return adjacent areas to condition existing before building demolition operations began.

# **END OF SECTION**

#### **SECTION 055000**

#### **METAL FABRICATIONS**

#### **PART 1 - GENERAL**

- 1.1 SUMMARY
  - A. Section Includes: Metal bollards.
- 1.2 ACTION SUBMITTALS
  - A. Shop Drawings: Show fabrication and installation details.

# **PART 2 - PRODUCTS**

- 2.1 METALS
  - A. Metal Surfaces, General: Provide materials with smooth, flat surfaces unless otherwise indicated. For metal fabrications exposed to view in the completed Work, provide materials without seam marks, roller marks, rolled trade names, or blemishes.
  - B. Steel Pipe: ASTM A 53/A 53M, Standard Weight (Schedule 40) unless otherwise indicated.
- 2.2 MISCELLANEOUS MATERIALS
  - A. Shop Primers: Provide primers that comply with Section 099113 "Exterior Painting."
  - B. Nonshrink, Nonmetallic Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107/C 1107M. Provide grout specifically recommended by manufacturer for interior and exterior applications.
  - C. Concrete: Comply with requirements for normal-weight, air-entrained, concrete with a minimum 28-day compressive strength of 3000 psi.
- 2.3 FABRICATION, GENERAL
  - A. Shop Assembly: Preassemble items in the shop to greatest extent possible. Use connections that maintain structural value of joined pieces.
  - B. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges. Remove sharp or rough areas on exposed surfaces.
  - C. Fabricate seams and other connections that are exposed to weather in a manner to exclude water. Provide weep holes where water may accumulate.
- 2.4 METAL BOLLARDS
  - A. Fabricate metal bollards from Schedule 40 steel pipe.
- 2.5 FINISHES, GENERAL
  - A. Finish metal fabrications after assembly.

# 2.6 STEEL AND IRON FINISHES

- A. Shop prime steel items except portions to be embedded in concrete.
- B. Preparation for Shop Priming: Prepare surfaces to comply with SSPC-SP 6/NACE No. 3, "Commercial Blast Cleaning."

# **PART 3 - EXECUTION**

# 3.1 INSTALLATION, GENERAL

A. Placement: Set metal fabrications accurately in location, alignment, and elevation; with edges and surfaces level, plumb, and true; and measured from established lines and levels.

# 3.2 INSTALLING METAL BOLLARDS

- A. Anchor bollards in place with concrete footings. Place concrete and vibrate or tamp for consolidation. Support and brace bollards in position until concrete has cured.
- B. Fill bollards solidly with concrete, mounding top surface to shed water.

# 3.3 ADJUSTING AND CLEANING

A. Touchup Painting: Immediately after erection, clean field welds, bolted connections, and abraded areas. Paint uncoated and abraded areas with the same material as used for shop painting to comply with SSPC-PA 1 for touching up shop-painted surfaces.

#### **END OF SECTION**

#### **SECTION 099113**

#### **EXTERIOR PAINTING**

#### **PART 1 - GENERAL**

#### 1.1 SUMMARY

- A. Section includes surface preparation and the application of paint systems on the following exterior substrates:
  - 1. Steel.
  - 2. Galvanized metal.
- B. Surface preparation and field painting of exposed items and surfaces.
  - 1. Surface preparation, priming, and finish coats specified in this Section are in addition to shop priming and surface treatment specified in other Sections.
  - 2. Field finish coating of shop or factory primed and prefinished items. Refer to individual Sections for priming requirements.
  - 3. Finish coatings schedule.
  - 4. Preparation work and coatings specified in this Section are in addition to shop and factory applied finishes and surface treatment specified in other Sections.
  - 5. Paint all other items unless specifically indicated not to be painted.
  - 6. Color schedule.
- C. Paint exposed surfaces, except where these Specifications indicate that the surface or material is not to be painted or is to remain natural. If an item or a surface is not specifically mentioned, paint the item or surface the same as similar adjacent materials or surfaces. If a color of finish is not indicated, Architect will select from standard colors and finishes available.
  - 1. Painting includes field painting of exposed bare and covered pipes and ducts (including color coding), hangers, exposed steel and iron supports, and surfaces of mechanical and electrical equipment that do not have a factory-applied final finish.

# 1.2 DEFINITIONS

- A. Conform to PDCA Glossary for interpretation of terms used in this Section except as modified below
- B. Exposed Surfaces: Surfaces of products, assemblies, and components visible from any angle after final installation. Includes internal surfaces visible when operable doors, panels or drawers are open, and surfaces visible behind registers, grilles, or louvers.
- C. Concealed Surfaces: Surfaces permanently hidden from view in finished construction and which are only visible after removal or disassembly of part or all of product or assembly.

#### D. Gloss Levels

- Gloss Level 1: Not more than 5 units at 60 degrees and 10 units at 85 degrees, according to ASTM D 523.
- 2. Gloss Level 2: Not more than 10 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D 523.
- 3. Gloss Level 3: 10 to 25 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D 523.
- 4. Gloss Level 4: 20 to 35 units at 60 degrees and not less than 35 units at 85 degrees, according to ASTM D 523.
- 5. Gloss Level 5: 35 to 70 units at 60 degrees, according to ASTM D 523.

- 6. Gloss Level 6: 70 to 85 units at 60 degrees, according to ASTM D 523.
- 7. Gloss Level 7: More than 85 units at 60 degrees, according to ASTM D 523.
- E. System DFT: Dry film thickness of entire coating system unless otherwise noted.

#### 1.3 ACTION SUBMITTALS

- A. Product Data: For each paint system indicated. Include block fillers and primers.
  - 1. Material List: An inclusive list of required coating materials. Indicate each material and cross-reference specific coating, finish system, and application. Identify each material by manufacturer's catalog number and general classification.
  - 2. Manufacturer's Information: Manufacturer's technical information, including label analysis and instructions for handling, storing, and applying each coating material.
- B. Samples for Initial Selection: For each type of topcoat product.
- C. Samples for Verification: For each type of paint system and each color and gloss of topcoat.
  - 1. Submit Samples on rigid backing, 8 inches square.
  - 2. Step coats on Samples to show each coat required for system.
  - 3. Label each coat of each Sample.
  - 4. Label each Sample for location and application area.
- D. Product List: For each product indicated, include the following:
  - Cross-reference to paint system and locations of application areas. Use same designations indicated on Drawings and in schedules.
  - 2. Printout of current "MPI Approved Products List" for each product category specified, with the proposed product highlighted.
  - 3. VOC content.

#### 1.4 INFORMATIONAL SUBMITTALS

- A. Certifications specified in Quality Assurance article.
- B. Qualification Data: Applicator's qualification data.
- C. Manufacturer's instructions.

#### 1.5 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials, from the same product run, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
  - 1. Paint: 5 percent, but not less than 1 gal. of each material and color applied.

# 1.6 QUALITY ASSURANCE

- A. Field Samples: Apply field samples of each paint system indicated and each color and finish selected to verify preliminary selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
  - 1. Architect will select one surface to represent surfaces and conditions for application of each paint system specified in Part 3.
    - a. Vertical and Horizontal Surfaces: Provide samples of at least 100 sq. ft..
    - b. Other Items: Architect will designate items or areas required.
  - 2. Final approval of color selections will be based on field samples.
    - a. If preliminary color selections are not approved, apply additional mockups of additional colors selected by Architect at no added cost to Owner.

- 3. Approval of field samples does not constitute approval of deviations from the Contract Documents contained in field samples unless Architect specifically approves such deviations in writing.
- 4. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

# 1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to Project site in manufacturer's original, unopened packages and containers bearing manufacturer's name and label and the following information:
  - 1. Add other requirements to suit Project.
  - 2. Product name or title of material.
  - 3. Product description (generic classification or binder type).
  - 4. Manufacturer's stock number and date of manufacture.
  - 5. Contents by volume, for pigment and vehicle constituents.
  - 6. Thinning instructions.
  - 7. Application instructions.
  - 8. Color name and number.
  - 9. VOC content.
- B. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45 deg F. Maintain storage containers in a clean condition, free of foreign materials and residue.
  - 1. Protect from freezing. Keep storage area neat and orderly. Remove oily rags and waste daily.

# 1.8 FIELD CONDITIONS

- A. Environmental Conditions: Comply with more restrictive of following or manufacturer's requirements under which systems can be applied.
  - 1. Provide illumination of not less than 80 footcandles measured mid-height at substrate surface during application of coatings.
  - 2. Apply water reducible coatings only when ambient and surface temperatures are between 50 degrees F and 90 degrees F.
  - 3. Apply solvent reducible coatings only when ambient and surface temperatures are between 45 degrees F and 90 degrees F.
  - 4. Do not apply coatings under any of following conditions:
    - a. When surfaces are damp or wet.
    - b. Duringrain, fog, or mist.
    - c. When relative humidity is less than 20 percent or exceeds 85 percent.
    - d. When temperature is less than 5 degrees F above dew point.
    - e. When dust may be generated before coatings have dried.
    - f. In direct sunlight.
    - g. When wind velocity is above 20 mph.
  - Application of coatings may continue during inclement weather provided work areas and surfaces to be coated are enclosed and specified environmental conditions are maintained.

# 1.9 WARRANTY

- A. Warrant installation to be free from defects in material and workmanship for 5 years.
- B. Repair or replace defects occurring during warranty period.
  - 1. Defects include but are not limited to pinholes, crazing or cracking, loss of adhesion to substrate, deficient thickness, improper materials and workmanship.

# **PART 2 - PRODUCTS**

#### 2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - 1. Benjamin Moore & Co.
  - 2. Dunn-Edwards Corporation.
  - 3. Frazee Paint; Comex Group.
  - 4. Glidden Professional.
  - 5. Kelly-Moore Paint Company Inc.
  - 6. PPG Industries
  - 7. Sherwin-Williams Company (The).
  - 8. Tnemec.
  - 9. Vista Paint.

# 2.2 PAINT, GENERAL

# A. Material Compatibility:

- Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
- 2. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.
- B. Material Quality: Provide manufacturer's best-quality paint material of the various coating types specified that are factory formulated and recommended by manufacturer for application indicated. Paint-material containers not displaying manufacturer's product identification will not be acceptable.
- C. Coatings:
  - 1. Ready-mixed, factory tinted, best professional grade produced by manufacturer.
  - 2. Use manufacturer's appropriate base materials to achieve required colors.
  - 3. Fully grind pigments to maintain soft paste consistency in vehicle.
  - 4. Capable of being dispersed into uniform, homogeneous mixture.
  - 5. Possess good flowing and brushing properties.
  - 6. Capable of drying or curing free of streaks or sags, and yielding specified finish.
- D. VOC Content: Provide materials that comply with VOC limits of authorities having jurisdiction.
- E. Low-Emitting Materials: Interior paints and coatings shall comply with the testing and product requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."
- F. Paint Maximum Product Emissions Limits: Top coat and primer interior paints must meet or not exceed the VOC (Volatile Organic Compounds) limits of the current requirements of Green Seal Standards GS-11 Paints in the building, and Cal-GREEN Table 5.504.4.3 for VOC Content Limits for Architectural Coatings.
- G. Cal-GREEN Requirements for typical paint coatings:
  - 1. Primers, Sealers, and Undercoaters: 100 grams per liter of product minus water
  - 2. Flats: 50 grams per liter of product minus water
  - 3. Non-flats: 100 grams per liter of product minus water
  - 4. Non-flat High Gloss: 150 grams per liter of product minus water

- 5. Dry-Fog Coatings: 150 g/L.
- 6. Anticorrosive and Antirust Paints Applied to Ferrous Metals: 250 g/L.
- 7. Zinc-Rich Industrial Maintenance Primers: 340 g/L.
- 8. Floor Coatings: 100 g/L.
- 9. Shellacs, Clear: 730 g/L.
- 10. Shellacs, Pigmented: 550 g/L.

# 2.3 PRIMERS/SEALERS

- A. Exterior Ferrous-Metal Primer: Factory-formulated rust-inhibitive metal primer for exterior application.
  - 1. Benjamin Moore and Company: Super Spec HP Acrylic Metal Primer #P04. Applied at a dry film thickness of not less than 1.7 mil.
  - 2. Dunn-Edwards Corporation; BRPR00-1 Bloc-Rust Premium, Interior / Exterior, Red Oxide or White, Waterborne Alkyd Rust Preventative Metal Primer: Applied at a dry film thickness of not less than 2.0 mils
  - 3. Frazee Industries; C309 Ultratech Universal Acrlylic Metal Primer: Applied at a dry film thickness of not less than 1.5 mils.
  - 4. Glidden Professional; 4160-XXXX Devguard Multi-Purpose Tank & Structural Primer. Applied at a dry film thickness of not less than 2.0 mils.
  - 5. Kelly-Moore; 1711 Kel-Guard Alkyd White Rust Inhibitive Primer: Applied at a dry film thickness of not less than 2.0 mils.
  - 6. PPG Industries; Speedhide Alkyd Metal Primer 6-208. Applied at a dry film thickness of not less than 2.3 mils or Water Based option; Pitt Tech Plus DTM Acrylic Primer 90-912 Applied at a dry film thickness of not less than 2.0 mils.
  - 7. Sherwin-Williams; Kem Kromik Universal Metal Primer B50NZ6/B50WZ1: Applied at a dry film thickness of not less than 3.0 mils If a waterbased primer is desired, use S-W Pro Industrial ProCryl Universal Acrylic Primer, B66W310. Applied at a dry film thickness of not less than 3.0 mils.
  - 8. Tnemec; Series 115 Uni-Bond DF. Applied at a dry film thickness rate of not less than 3.0 mils DFT.
  - 9. Vista Paint Corporation: 4600 Uniprime II at a dry film thickness of not less than 2.0 mil.
- B. Exterior Galvanized Metal Primer: Factory-formulated galvanized metal primer for exterior application.
  - 1. Benjamin Moore and Company: Super Spec HP Acrylic Metal Primer #P04. Applied at a dry film thickness of not less than 1.7 mil.
  - Dunn-Edwards Corporation; UGPR00-1 Ultra-Grip Premium, Ultra-Low VOC, Interior / Exterior Acrylic Multi-Surface Primer: Applied at a dry film thickness of not less than 1.5 mils
  - 3. Frazee Industries; C309 Ultratech Universal Acrylic Metal Primer: Applied at a dry film thickness of not less than 1.7 mils.
  - 4. Glidden Professional; 4020-XXXX Devflex DTM Flat Interior/Exterior Waterborne Primer & Finish: Applied at a dry film thickness of not less than 2.2 mils.
  - 5. Glidden Professional; 4160-XXXX Devguard Multi-Purpose Tank & Structural Primer: Applied at a dry film thickness of not less than 2.0 mils.
  - 6. Kelly-Moore; 1722 Kel-Guard Acrylic Galvanized Iron Primer: Applied at a dry film thickness of not less than 1.8 mils.
  - 7. Kelly-Moore; 5725 DTM-Acrylic Metal Primer: Applied at a dry film thickness of not less than 1.8 mils.
  - 8. PPG Industries; Pitt Tech Plus DTM Acrylic Primer 90-912 Applied at a dry film thickness of not less than 2.0 mils.
  - 9. Sherwin-Williams recommends using primer below under full-gloss acrylic-enamel and full-gloss alkyd-enamel finishes.
  - 10. Sherwin-Williams; S-W Pro Industrial ProCryl Universal Acrylic Primer, B66W310. Applied at a dry film thickness of not less than 3.0 mils.

# 11. Tnemec:

- Under Acrylics: Series 115 Uni-Bond DF; Applied at a dry film thickness rate of not less than 3.0 mils.
- b. Under Urethane: Series L69 H.B. Epoxoline II; Applied at a dry film thickness rate of not less than 3.0 mils.
- 12. Vista Paint Corporation: 4600 Uniprime II at a dry film thickness of not less than 2.0 mil.

# 2.4 WATER-BASED PAINTS

- A. Exterior Semigloss Acrylic Enamel: Factory-formulated semigloss waterborne acrylic-latex enamel for exterior application.
  - 1. Benjamin Moore and Company: Ultra Spec EXT Gloss Finish N449. Applied at a dry film thickness of not less than 1.5 mil.
  - 2. Dunn-Edwards Corporation; SSHL50 Spartashield Exterior, Ultra-Low, 100% Acrylic Semi-Gloss Paint: Applied at a dry film thickness of not less than 1.5 mils.
  - 3. Frazee Industries; 124 Mirro Glide Semi-Gloss Interior/Exterior Acrylic Finish: Applied at a dry film thickness of not less than 1.5 mils.
  - 4. Glidden Professional; 2416-XXXX Ultra Hide 150 Exterior 100 Percent Acrylic Semi-Gloss Finish: Applied at a dry film thickness of not less than 1.6 mils.
  - 5. Kelly-Moore; 1250 Acry-Lustre Exterior Semi-Gloss Acrylic Finish: Applied at a dry film thickness of not less than 1.6 mils.
  - 6. PPG Industries; Speedhide Exterior 100% Acrylic Semi-Gloss Latex 6-900XI Series. Applied at a dry film thickness of not less than 1.5 mils.
  - 7. Sherwin-Williams; A-100 Latex Gloss A8 Series: Applied at a dry film thickness of not less than 1.3 mils.
  - 8. Tnemec; Series 1029 Enduratone; Applied at a dry film thickness rate of not less that 2.0 mils.
  - 9. Vista Paint Corporation: 4600 Uniprime II at a dry film thickness of not less than 2.0 mil.

# 2.5 SOURCE QUALITY CONTROL

- A. Testing of Paint Materials: Owner reserves the right to invoke the following procedure:
  - 1. Owner will engage the services of a qualified testing agency to sample paint materials. Contractor will be notified in advance and may be present when samples are taken. If paint materials have already been delivered to Project site, samples may be taken at Project site. Samples will be identified, sealed, and certified by testing agency.
  - 2. Testing agency will perform tests for compliance with product requirements.
  - 3. Owner may direct Contractor to stop applying paints if test results show materials being used do not comply with product requirements. Contractor shall remove noncomplying paint materials from Project site, pay for testing, and repaint surfaces painted with rejected materials. Contractor will be required to remove rejected materials from previously painted surfaces if, on repainting with complying materials, the two paints are incompatible.

#### **PART 3 - EXECUTION**

# 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Applicator present, for compliance with requirements for paint application. Comply with procedures specified in PDCA P4.
  - 1. Proceed with paint application only after unsatisfactory conditions have been corrected and surfaces receiving paint are thoroughly dry.
  - 2. Start of painting will be construed as Applicator's acceptance of surfaces and conditions within a particular area.

- B. Coordination of Work: Review other Sections in which primers are provided to ensure compatibility of the total system for various substrates. On request, furnish information on characteristics of finish materials to ensure use of compatible primers.
  - 1. Notify Architect about anticipated problems when using the materials specified over substrates primed by others.
- C. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.
- D. Proceed with coating application only after unsatisfactory conditions have been corrected.
  - 1. Application of coating indicates acceptance of surfaces and conditions.

# 3.2 PREPARATION

- A. Comply with manufacturer's written instructions and recommendations in "MPI Manual" applicable to substrates and paint systems indicated.
- B. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.
  - 1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection.
- C. Clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and incompatible paints and encapsulants.
  - Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce paint systems indicated.
- D. Steel Substrates: Remove rust, loose mill scale, and shop primer if any. Clean using methods recommended in writing by paint manufacturer.
- E. Shop-Primed Steel Substrates: Clean field welds, bolted connections, and abraded areas of shop paint, and paint exposed areas with the same material as used for shop priming to comply with SSPC-PA 1 for touching up shop-primed surfaces.
- F. Galvanized-Metal Substrates: Remove grease and oil residue from galvanized sheet metal by mechanical methods to produce clean, lightly etched surfaces that promote adhesion of subsequently applied paints.
- G. Plastic Trim Fabrication Substrates: Remove dust, dirt, and other foreign material that might impair bond of paints to substrates.

# 3.3 APPLICATION

- A. Apply paints according to manufacturer's written instructions and recommendations in "MPI Manual."
  - 1. Use applicators and techniques suited for paint and substrate indicated.
  - 2. Paint surfaces behind movable items same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed items with prime coat only.
  - 3. Primers specified in painting schedules may be omitted on items that are factory primed or factory finished if acceptable to topcoat manufacturers.
- B. Tint undercoats same color as topcoat, but tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of same material are to be applied. Provide sufficient difference in shade of undercoats to distinguish each separate coat.

- C. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.
- D. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.

#### 3.4 FIELD QUALITY CONTROL

- A. Dry Film Thickness Testing: Owner may engage the services of a qualified testing and inspecting agency to inspect and test paint for dry film thickness.
  - 1. Contractor shall touch up and restore painted surfaces damaged by testing.
  - 2. If test results show that dry film thickness of applied paint does not comply with paint manufacturer's written recommendations, Contractor shall pay for testing and apply additional coats as needed to provide dry film thickness that complies with paint manufacturer's written recommendations.

#### 3.5 FIELD QUALITY CONTROL

- A. Dry Film Thickness Testing: Owner may engage the services of a qualified testing and inspecting agency to inspect and test paint for dry film thickness.
  - 1. Contractor shall touch up and restore painted surfaces damaged by testing.
  - 2. If test results show that dry film thickness of applied paint does not comply with paint manufacturer's written recommendations, Contractor shall pay for testing and apply additional coats as needed to provide dry film thickness that complies with paint manufacturer's written recommendations.

#### 3.6 CLEANING AND PROTECTION

- A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.
- B. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
- C. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.
- D. Provide "Wet Paint" signs and other methods to protect newly coated surfaces. Remove when directed or when no longer needed.
- E. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

#### 3.7 EXTERIOR PAINTING SCHEDULE

- A. Steel Substrates:
  - 1. High-Performance Architectural Latex System:
    - a. Prime Coat: Primer, alkyd, anti-corrosive, for metal.
    - b. Prime Coat: Shop primer specified in Section where substrate is specified.
    - c. Intermediate Coat: Latex, interior, high performance architectural, matching topcoat.
    - d. Topcoat: Latex, interior, high performance architectural, (Gloss Level 3).

- В. Galvanized-Metal Substrates:
  - Latex System:
    - a.
    - Prime Coat: Primer, galvanized, water based.
      Intermediate Coat: Latex, exterior, matching topcoat. b.
    - Topcoat: Latex, exterior, low sheen (Gloss Level 3-4). C.

#### TRAFFIC SIGNAGE

#### **PART 1 - GENERAL**

#### 1.1 SUMMARY

A. Section Includes: Metal traffic signs.

#### 1.2 ACTION SUBMITTALS

- A. Shop Drawings: For panel signs.
  - 1. Include fabrication and installation details and attachments to other work.
  - 2. Show sign mounting heights, locations of supplementary supports to be provided by others, and accessories.
  - 3. Show message list, typestyles, graphic elements, and layout for each sign at least quarter size.
- B. Sign Schedule: Use same designations specified or indicated on Drawings or in a sign schedule.

#### 1.3 QUALITY ASSURANCE

A. Provide traffic signs complying with the "Manual on Uniform Traffic Control Devices."

#### **PART 2 - PRODUCTS**

## 2.1 SIGNS

- A. Panel Sign: Sign with smooth, uniform surfaces; with message and characters having uniform faces, sharp corners, and precisely formed lines and profiles; and as follows:
  - 1. Solid-Sheet Sign: Aluminum sheet with finish specified in "Painted Finish and Graphics" Subparagraph below and as follows:
    - a. Thickness: 0.080 inch.
    - b. Surface-Applied Graphics: Applied paint.
  - 2. Sign-Panel Perimeter: Finish edges smooth.
    - a. Corner Condition in Elevation: Rounded.
  - 3. Mounting: Post mounted.
  - 4. Painted Finish and Graphics: Manufacturer's standard, factory-applied exterior-grade sign paint.

#### 2.2 PANEL-SIGN MATERIALS

- A. Aluminum Sheet and Plate: ASTM B 209, alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated.
- B. Paints and Coatings for Sheet Materials: Inks, dyes, and paints that are recommended by manufacturer for optimum adherence to surface and are UV and water resistant for colors and exposure indicated.

#### 2.3 ACCESSORIES

- A. Pipe: ASTM A 53/A 53M, Type F or Type S, Grade A, Standard Weight (Schedule 40), unless another grade and weight are required by structural loads.
  - 1. Provide galvanized finish.

#### 2.4 GENERAL FINISH REQUIREMENTS

- A. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- B. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

#### **PART 3 - EXECUTION**

#### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of signage work.
- B. Verify that sign-support surfaces are within tolerances to accommodate signs without gaps or irregularities between backs of signs and support surfaces unless otherwise indicated.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

#### 3.2 INSTALLATION

- A. General: Install signs using mounting methods indicated and according to manufacturer's written instructions.
  - 1. Install signs level, plumb, true to line, and at locations and heights indicated, with sign surfaces free of distortion and other defects in appearance.
  - 2. Install signs so they do not protrude or obstruct according to the accessibility standard.
  - 3. Before installation, verify that sign surfaces are clean and free of materials or debris that would impair installation.
  - 4. Corrosion Protection: Coat concealed surfaces of exterior aluminum in contact with grout, concrete, masonry, wood, or dissimilar metals, with a heavy coat of bituminous paint.
- B. Post Mounting: Anchor posts in place with concrete footings. Center and align posts in holes 3 inches above bottom of excavation. Place concrete and vibrate or tamp for consolidation. Support and brace bollards in position until concrete has cured.

#### 3.3 ADJUSTING AND CLEANING

- A. Remove and replace damaged or deformed signs and signs that do not comply with specified requirements. Replace signs with damaged or deteriorated finishes or components that cannot be successfully repaired by finish touchup or similar minor repair procedures.
- B. On completion of installation, clean exposed surfaces of signs according to manufacturer's written instructions, and touch up minor nicks and abrasions in finish. Maintain signs in a clean condition during construction and protect from damage until acceptance by Owner.

#### SITE CLEARING

#### **PART 1 - GENERAL**

#### 1.1 SUMMARY

- A. Section Includes:
  - Protecting existing vegetation to remain.
  - 2. Removing existing vegetation.
  - 3. Clearing and grubbing.
  - 4. Stripping and stockpiling topsoil.
  - 5. Temporary erosion and sedimentation control.

#### 1.2 MATERIAL OWNERSHIP

A. Except for materials indicated to be stockpiled or otherwise remain Owner's property, cleared materials shall become Contractor's property and shall be removed from Project site.

#### 1.3 FIELD CONDITIONS

- A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during site-clearing operations.
  - Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
  - 2. Provide alternate routes around closed or obstructed trafficways if required by Owner or authorities having jurisdiction.
- B. Do not commence site clearing operations until temporary erosion- and sedimentation-control measures are in place.

#### **PART 2 - PRODUCTS**

#### 2.1 MATERIALS

A. Satisfactory Soil Material: Obtain approved borrow soil material off-site when satisfactory soil material is not available on-site.

## **PART 3 - EXECUTION**

#### 3.1 PREPARATION

- A. Protect and maintain benchmarks and survey control points from disturbance during construction.
- B. Verify that trees, shrubs, and other vegetation to remain or to be relocated have been flagged and that protection zones have been identified and enclosed according to requirements in Section 015639 "Temporary Tree and Plant Protection."
- C. Protect existing site improvements to remain from damage during construction.
  - 1. Restore damaged improvements to their original condition, as acceptable to Owner.

## 3.2 TEMPORARY EROSION AND SEDIMENTATION CONTROL

- A. Provide temporary erosion- and sedimentation-control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways, according to erosion- and sedimentation-control Drawings and requirements of authorities having jurisdiction.
- B. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross protection zones.
- C. Inspect, maintain, and repair erosion- and sedimentation-control measures during construction until permanent vegetation has been established.
- Remove erosion and sedimentation controls, and restore and stabilize areas disturbed during removal.

#### 3.3 CLEARING AND GRUBBING

- A. Remove obstructions, trees, shrubs, and other vegetation to permit installation of new construction.
  - 1. Grind down stumps and remove roots larger than 3 inches in diameter, obstructions, and debris to a depth of 18 inches below exposed subgrade.
  - 2. Use only hand methods or air spade for grubbing within protection zones.
- B. Fill depressions caused by clearing and grubbing operations with satisfactory soil material unless further excavation or earthwork is indicated.
  - 1. Place fill material in horizontal layers not exceeding a loose depth of 8 inches, and compact each layer to a density equal to adjacent original ground.

#### 3.4 TOPSOIL STRIPPING

- A. Remove sod and grass before stripping topsoil.
- B. Strip topsoil to depth of 6 inches in a manner to prevent intermingling with underlying subsoil or other waste materials.
- C. Stockpile topsoil away from edge of excavations without intermixing with subsoil or other materials. Grade and shape stockpiles to drain surface water. Cover to prevent windblown dust and erosion by water.

## 3.5 DISPOSAL OF SURPLUS AND WASTE MATERIALS

A. Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials including trash and debris, and legally dispose of them off Owner's property.

#### **TERMITE CONTROL**

#### **PART 1 - GENERAL**

- 1.1 SUMMARY
  - A. Section Includes: Soil treatment.
- 1.2 ACTION SUBMITTALS
  - A. Product Data: For each type of product. Include the EPA-Registered Label for termiticide products.
- 1.3 INFORMATIONAL SUBMITTALS
  - A. Product certificates.
  - B. Soil Treatment Application Report: Include the following:
    - 1. Date and time of application.
    - 2. Moisture content of soil before application.
    - 3. Termiticide brand name and manufacturer.
    - 4. Quantity of undiluted termiticide used.
    - 5. Dilutions, methods, volumes used, and rates of application.
    - 6. Areas of application.
    - 7. Water source for application.
  - C. Sample Warranties: For special warranties.

#### 1.4 WARRANTY

- A. Soil Treatment Special Warranty: Manufacturer's standard form, signed by Applicator and Contractor, certifying that termite control work consisting of applied soil termiticide treatment will prevent infestation of subterranean termites. If subterranean termite activity or damage is discovered during warranty period, re-treat soil and repair or replace damage caused by termite infestation.
  - 1. Warranty Period: Five years from date of Substantial Completion.

## **PART 2 - PRODUCTS**

- 2.1 SOIL TREATMENT
  - A. Termiticide: EPA-Registered termiticide acceptable to authorities having jurisdiction, in an aqueous solution formulated to prevent termite infestation.
    - 1. Service Life of Treatment: Soil treatment termiticide that is effective for not less than five years against infestation of subterranean termites.

#### **PART 3 - EXECUTION**

#### 3.1 PREPARATION

- A. Remove extraneous sources of wood cellulose and other edible materials, such as wood debris, tree stumps and roots, stakes, formwork, and construction waste wood from soil within and around foundations.
- B. Soil Treatment Preparation: Remove foreign matter and impermeable soil materials that could decrease treatment effectiveness on areas to be treated.

#### 3.2 APPLYING SOIL TREATMENT

- A. Application: Mix soil treatment termiticide solution to a uniform consistency. Distribute treatment uniformly. Apply treatment at the product's EPA-Registered Label volume and rate for maximum specified concentration of termiticide to the following so that a continuous horizontal and vertical termiticidal barrier or treated zone is established around and under building construction.
  - Slabs-on-Grade and Basement Slabs: Under ground-supported slab construction, including footings, building slabs, and attached slabs as an overall treatment. Treat soil materials before concrete footings and slabs are placed.
  - 2. Foundations: Soil adjacent to and along the entire inside perimeter of foundation walls; along both sides of interior partition walls; around plumbing pipes and electric conduit penetrating the slab; around interior column footers, piers, and chimney bases; and along the entire outside perimeter, from grade to bottom of footing.
  - 3. Penetrations: At expansion joints, control joints, and areas where slabs and below-grade walls will be penetrated.
- B. Post warning signs in areas of application.
- C. Reapply soil treatment solution to areas disturbed by subsequent excavation, grading, landscaping, or other construction activities following application.

#### PARKING BUMPERS

#### **PART 1 - GENERAL**

- 1.1 SUMMARY
  - A. Section includes wheel stops.
- 1.2 ACTION SUBMITTALS
  - A. Product Data: For each type of product.

#### **PART 2 - PRODUCTS**

#### 2.1 PARKING BUMPERS

A. Concrete Wheel Stops: Precast, steel-reinforced, air-entrained concrete, 4000-psi minimum compressive strength. Provide chamfered corners and a minimum of two factory-formed or drilled vertical holes through wheel stop for anchoring to substrate.

## 2.2 ACCESSORY MATERIALS

- A. Mounting Hardware: Galvanized-steel spike or dowel, 1/2-inch diameter, 10-inch minimum length.
- B. Adhesive: Standard epoxy construction adhesive suitable for bonding concrete to asphalt and concrete surfaces.
  - Comply with VOC and chemical component limits of SCAQMD Rule No. 1168 and CALGreen Table 5.504.4.1 Adhesive VOC Limit requirements.

#### **PART 3 - EXECUTION**

## 3.1 INSTALLATION

- A. General: Install wheel stops according to manufacturer's written instructions unless otherwise indicated.
- B. Install wheel stops in bed of adhesive before anchoring.
- C. Securely anchor wheel stops to pavement with hardware in each preformed vertical hole in wheel stop as recommended in writing by manufacturer.

#### **PAVEMENT MARKINGS**

#### **PART 1 - GENERAL**

- 1.1 SUMMARY
  - A. Section includes painted markings applied to asphalt and concrete pavement.
- 1.2 ACTION SUBMITTALS
  - A. Product Data: For each type of product.

#### **PART 2 - PRODUCTS**

- 2.1 PAVEMENT-MARKING PAINT
  - A. Pavement-Marking Paint: MPI #32, alkyd traffic-marking paint.
    - 1. Colors: As indicated.
  - B. Paint Maximum Product Emissions Limits: Top coat and primer interior paints must meet current requirements for VOC limits of SCAQMD Rule No. 1113 and CALGreen Table 5.504.4.3 for VOC Content Limits for Architectural Coatings.
    - 1. CALGreen Requirements for typical paint coatings:
      - a. Primers, Sealers, and Undercoaters: 100 grams per liter of product minus water.
      - b. Flats: 50 grams per liter of product minus water.
      - c. Non-flats: 100 grams per liter of product minus water.
      - d. Non-flat High Gloss: 150 grams per liter of product minus water.

#### **PART 3 - EXECUTION**

- 3.1 PAVEMENT MARKING
  - A. Do not apply pavement-marking paint until layout, colors, and placement have been verified with Architect.
  - B. Allow paving to age for a minimum of 30 days before starting pavement marking.
  - C. Sweep and clean surface to eliminate loose material and dust.
  - D. Apply paint with mechanical equipment to produce pavement markings, of dimensions indicated, with uniform, straight edges. Apply at manufacturer's recommended rates to provide a minimum wet film thickness of 15 mils.
    - 1. Apply graphic symbols and lettering with paint-resistant, die-cut stencils. Apply paint so that it cannot run beneath the stencil.

#### **TACTILE WARNING SURFACING**

#### **PART 1 - GENERAL**

- 1.1 SUMMARY
  - A. Section Includes: Cast-in-place detectable warning tiles.
- 1.2 ACTION SUBMITTALS
  - A. Product Data: For each type of product.

#### **PART 2 - PRODUCTS**

- 2.1 TACTILE WARNING SURFACING, GENERAL
  - A. Accessibility Requirements: Comply with applicable provisions in Title 24 and and the "2010 ADA Standards" for tactile warning surfaces.
- 2.2 DETECTABLE WARNING TILES
  - A. Cast-in-Place Detectable Warning Tiles: Accessible truncated-dome detectable warning tiles configured for setting flush in new concrete walkway surfaces, with slip-resistant surface treatment on domes and field of tile.
    - 1. Material: Stainless steel, cast-fiber-reinforced polymer, or molded glass- and carbon-fiber-reinforced polyester.
    - 2. Color: As indicated on Drawings.
    - 3. Dome Spacing and Configuration: 2.35-inch spacing, in square pattern.
    - 4. Mounting:
      - a. Permanently embedded detectable warning tile wet-set into freshly poured concrete.

#### **PART 3 - EXECUTION**

- 3.1 INSTALLATION OF TACTILE WARNING SURFACING
  - A. General: Prepare substrate and install tactile warning surfacing according to manufacturer's written instructions unless otherwise indicated.
  - B. Place tactile warning surfacing units in dimensions and orientation indicated. Comply with location requirements of AASHTO MP 12.
  - C. Cast-in-Place Detectable Warning Tiles: Set each detectable warning tile accurately and firmly in place and completely seat tile back and embedments in wet concrete by tamping or vibrating. Set surface of tile flush with surrounding concrete and adjacent tiles. Remove concrete from tile surfaces and clean using methods recommended in writing by manufacturer.
  - D. Remove and replace tactile warning surfacing that is broken or damaged or does not comply with requirements in this Section. Remove in complete sections from joint to joint unless otherwise approved by Architect. Replace using tactile warning surfacing installation methods acceptable to Architect.

E. Protect tactile warning surfacing from damage and maintain free of stains, discoloration, dirt, and other foreign material.

#### CHAIN LINK FENCES AND GATES

#### **PART 1 - GENERAL**

#### 1.1 SUMMARY

- A. Section Includes:
  - Chain-link fences.
  - 2. Gates: Manual swing.
  - 3. Gates: Motor operated, horizontal slide.
  - 4. Gates: Manual, swing.
- B. Related Sections:
  - 1. Section 033000 "Cast-in-Place Concrete" for cast-in-place concrete.

#### 1.2 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Design chain-link fences and gates, including comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.
- B. Structural Performance: Chain-link fence and gate framework shall withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated according to ASCE/SEI 7:
  - 1. Minimum Post Size: Determine according to ASTM F 1043 for framework up to 12 feet high, and post spacing not to exceed 10 feet.
  - 2. Minimum Post Size and Maximum Spacing: Determine according to CLFMI WLG 2445, based on mesh size and pattern specified and on the following:
    - a. Fence Height: As indicated on Drawings.
    - b. Material Group: IA, ASTM F 1043, Schedule 40 steel pipe.
- C. Lightning Protection System: Maximum grounding-resistance value of 25 ohms under normal dry conditions.

#### 1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for chain-link fences and gates.
  - 1. Fence and gate posts, rails, and fittings.
  - 2. Chain-link fabric, reinforcements, and attachments.
  - 3. Accessories: Privacy slats.
  - 4. Gates and hardware.
  - 5. Gate operators, including operating instructions.
  - 6. Motors: Show nameplate data, ratings, characteristics, and mounting arrangements.
- B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work. Show accessories, hardware, gate operation, and operational clearances.
  - 1. Gate Operator: Show locations and details for installing operator components, switches, and controls. Indicate motor size, electrical characteristics, drive arrangement, mounting, and grounding provisions.
  - 2. Wiring Diagrams: For power, signal, and control wiring.

- C. Samples for Initial Selection: For components with factory-applied color finishes.
- D. Samples for Verification: Prepared on Samples of size indicated below:
  - Polymer-Coated Components: In 6-inch lengths for components and on full-sized units for accessories.
- E. Delegated-Design Submittal: For chain-link fences and gate framework indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

#### 1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified professional engineer.
- B. Product Certificates: For each type of chain-link fence, and gate, from manufacturer.
- C. Product Test Reports: For framing strength according to ASTM F 1043.
- D. Field quality-control reports.
- E. Warranty: Sample of special warranty.

#### 1.5 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: For the following to include in emergency, operation, and maintenance manuals:
  - 1. Polymer finishes.
  - 2. Gate hardware.
  - 3. Gate operator.

#### 1.6 QUALITY ASSURANCE

- A. Testing Agency Qualifications: For testing fence grounding. Member company of NETA or an NRTL.
  - 1. Testing Agency's Field Supervisor: Currently certified by NETA to supervise on-site testing.
- B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- C. Emergency Access Requirements: Comply with requirements of authorities having jurisdiction for gates with automatic gate operators serving as a required means of access.
- D. Mockups: Build mockups to set quality standards for fabrication and installation.
  - Include 10-foot length of fence and gate.
- E. Preinstallation Conference: Conduct conference at Project site.
  - 1. Inspect and discuss electrical roughing-in, equipment bases, and other preparatory work specified elsewhere.
  - 2. Review sequence of operation for each type of gate operator.
  - 3. Review coordination of interlocked equipment specified in this Section and elsewhere.
  - 4. Review required testing, inspecting, and certifying procedures.

#### 1.7 PROJECT CONDITIONS

A. Field Measurements: Verify layout information for chain-link fences and gates shown on Drawings in relation to property survey and existing structures. Verify dimensions by field measurements.

#### 1.8 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer and installer agrees to repair or replace components of chain-link fences and gates that fail in materials or workmanship within specified warranty period.
  - 1. Failures include, but are not limited to, the following:
    - a. Faulty operation of gate operators and controls.
    - b. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
  - 2. Warranty Period: Five years from date of Substantial Completion.

#### **PART 2 - PRODUCTS**

#### 2.1 MANUFACTURER

A. Basis-of-Design Product: San Diego Fence Company or a prior approved equal.

#### 2.2 CHAIN-LINK FENCE FABRIC

- A. General: Provide fabric in one-piece heights measured between top and bottom of outer edge of selvage knuckle or twist. Comply with CLFMI Product Manual and with requirements indicated below:
  - 1. Fabric Height: As indicated on Drawings.
  - 2. Steel Wire Fabric: Wire with a diameter of 0.148 inch.
    - a. Mesh Size: 1-3/4 inches.
    - b. Polymer-Coated Fabric: ASTM F 668, Class 2b over zinc-coated steel wire.
      - Color: As selected by Architect from manufacturer's full range, complying with ASTM F 934.
  - 3. Selvage: Twisted top and knuckled bottom.

## 2.3 FENCE FRAMING

- A. Posts and Rails: Comply with ASTM F 1043 for framing, including rails, braces, and line; terminal; and corner posts. Provide members with minimum dimensions and wall thickness according to ASTM F 1043 based on the following:
  - 1. Fence Height: As indicated on Drawings.
  - 2. Heavy Industrial Strength: Material Group IA, round steel pipe, Schedule 40.
    - a. Line Post: As required to meet design requirements.
    - b. End, Corner and Pull Post: As required to meet design requirements.
  - 3. Horizontal Framework Members: top and bottom rails complying with ASTM F 1043.
    - a. Top Rail: As required to meet design requirements.
  - 4. Brace Rails: Comply with ASTM F 1043.
  - 5. Metallic Coating for Steel Framing:
    - a. Type A, consisting of not less than minimum 2.0-oz./sq. ft. average zinc coating per ASTM A 123/A 123M or 4.0-oz./sq. ft. zinc coating per ASTM A 653/A 653M.
  - 6. Polymer coating over metallic coating.
    - a. Color: Match chain-link fabric, complying with ASTM F 934.

#### 2.4 SWING GATES

- A. General: Comply with ASTM F 900 for gate posts and single swing gate types.
  - 1. Gate Leaf Width: As indicated.
  - 2. Gate Fabric Height: As indicated.
- B. Pipe and Tubing:
  - Zinc-Coated Steel: Comply with ASTM F 1043 and ASTM F 1083; protective coating and finish to match fence framing.
  - 2. Gate Posts: Round tubular steel.
  - 3. Gate Frames and Bracing: Round tubular steel.
- C. Frame Corner Construction: Welded or assembled with corner fittings.
- D. Hardware:
  - 1. Hinges: 180-degree inward swing.
  - 2. Latches permitting operation from both sides of gate with provision for padlocking accessible from both sides of gate.

#### 2.5 HORIZONTAL-SLIDE GATES

- A. General: Comply with ASTM F 1184 for gate posts and single sliding gate types. Provide automated vehicular gates that comply with ASTM F 2200, as indicated on Drawings.
  - 1. Classification: Type I Overhead Slide.
    - a. Gate Leaf Width: As indicated.
    - b. Gate Fabric Height: As indicated.
- B. Pipe and Tubing:
  - 1. Zinc-Coated Steel: Protective coating and finish to match fence framing.
  - 2. Gate Posts: Comply with ASTM F 1184. Provide round tubular steel posts.
  - 3. Gate Frames and Bracing: Round tubular steel.
- C. Frame Corner Construction: Welded.
- D. Hardware:
  - 1. Latches permitting operation from both sides of gate with provision for padlocking accessible from both sides of gate.
  - 2. Hangers, roller assemblies, and stops fabricated from galvanized steel.

#### 2.6 FITTINGS

- A. General: Comply with ASTM F 626.
- B. Post Caps: Provide for each post.
  - 1. Provide line post caps with loop to receive top rail.
- C. Rail and Brace Ends: For each gate, corner, pull, and end post.
- D. Rail Fittings: Provide the following:
  - 1. Top Rail Sleeves: Pressed-steel or round-steel tubing not less than 6 inches long.
  - 2. Rail Clamps: Line and corner boulevard clamps for connecting bottom rails in the fence line-to-line posts.
- E. Tension and Brace Bands: Pressed steel.

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- F. Truss Rod Assemblies: Steel, hot-dip galvanized after threading rod and turnbuckle or other means of adjustment.
- G. Tie Wires, Clips, and Fasteners: According to ASTM F 626.
  - Standard Round Wire Ties: For attaching chain-link fabric to posts, rails, and frames, complying with the following:
    - a. Hot-Dip Galvanized Steel: 0.106-inch- diameter wire; galvanized coating thickness matching coating thickness of chain-link fence fabric.
- H. Finish:
  - 1. Metallic Coating for Pressed Steel or Cast Iron: Not less than 1.2 oz. /sq. ft. zinc.
    - Polymer coating over metallic coating.

## 2.7 PRIVACY SLATS

- Material: PVC, UV-light stabilized, not less than 0.023 inch thick; sized to fit mesh specified for direction indicated.
- B. Color: As selected by Architect from manufacturer's full range.

#### 2.8 GATE OPERATORS

- A. General: Provide factory-assembled automatic operating system designed for gate size, type, weight, and operation frequency. Provide operation control system with characteristics suitable for Project conditions, with remote-control stations, safety devices, and weatherproof enclosures; coordinate electrical requirements with building electrical system.
  - 1. Provide operator designed so motor may be removed without disturbing limit-switch adjustment and without affecting auxiliary emergency operator.
  - 2. Provide operator with UL approval.
  - 3. Provide electronic components with built-in troubleshooting diagnostic feature.
  - 4. Provide unit designed and wired for both right-hand/left-hand opening, permitting universal installation.
- B. Comply with NFPA 70.
- C. UL Standard: Fabricate and label gate operators to comply with UL 325.
- D. Motor Characteristics: Sufficient to start, accelerate, and operate connected loads at designated speeds, within installed environment, with indicated operating sequence, and without exceeding nameplate rating or considering service factor. Comply with NEMA MG 1 and the following:
  - 1. Voltage: 120 V.
  - 2. Horsepower: 3/4.
  - 3. Enclosure: Totally enclosed.
  - 4. Duty: Continuous duty at ambient temperature of 105 deg F and at altitude of 3300 feet above sea level.
  - 5. Service Factor: 1.15 for open dripproof motors; 1.0 for totally enclosed motors.
  - 6. Phase: One.
- E. Gate Operators: Equipment base/pad mounted and as follows:
  - 1. Mechanical Slide Gate Operators:
    - a. Duty: Heavy duty, commercial/industrial.
    - b. Gate Speed: Minimum 60 feet per minute.
    - c. Maximum Gate Weight: 800 lb.
    - d. Frequency of Use: 25 cycles per hour.
    - e. Operating Type: Roller chain, with manual release.

- f. Drive Type: Enclosed worm gear and chain-and-sprocket reducers, roller-chain drive.
- F. Remote Controls: Electric controls separated from gate and motor and drive mechanism, with NEMA ICS 6, Type 1 enclosure for equipment base/pad mounting and with space for additional optional equipment. Provide the following remote-control device(s):
  - 1. Control Station: Momentary-contact, three-button-operated; located remotely from gate. Key switch to lock out open and close buttons.
    - a. Function: Open, stop, and close.
  - 2. Radio Control: Digital system consisting of code-compatible universal receiver for each gate, located where indicated, with remote antenna with coaxial cable and mounting brackets designed to operate gates. Provide two programmable transmitter(s) with multiple-code capability permitting validating or voiding of not less than 1000 codes per channel configured for the following functions:
    - a. Transmitters: Single-button operated, with open function.
    - b. Channel Settings: Four independent channel settings controlling separate receivers for operating more than one gate from each transmitter.
  - 3. Vehicle Loop Detector: System including automatic closing timer with adjustable time delay before closing, timer cut-off switch, and loop detector designed to open and close gate hold gate open until traffic clears. Provide electronic detector with adjustable detection patterns, adjustable sensitivity and frequency settings, and panel indicator light designed to detect presence or transit of a vehicle over an embedded loop of wire and to emit a signal activating the gate operator. Provide number of loops consisting of multiple strands of wire, number of turns, loop size, and method of placement at location shown on Drawings, as recommended in writing by detection system manufacturer for function indicated.
    - Loop: Wire, in size indicated for field assembly, for saw-cut with epoxy-grouted installation.
  - 4. Vehicle Presence Detector: System including automatic closing timer with adjustable time delay before closing, timer cut-off switch, and presence detector designed to open and close gate, hold gate open until traffic clears. Provide emitter/receiver detector with adjustable detection zone pattern and sensitivity, designed to detect the presence or transit of a vehicle in gate pathway when infrared beam in zone pattern is interrupted, and to emit a signal activating the gate operator.
- G. Obstruction Detection Devices: Provide each motorized gate with automatic safety sensor(s). Activation of sensor(s) causes operator to immediately function as follows:
  - 1. Action: Reverse gate in both opening and closing cycles and hold until clear of obstruction.
  - 2. Photoelectric/Infrared Sensor System: Designed to detect an obstruction in gate's path when infrared beam in the zone pattern is interrupted.
- H. Limit Switches: Adjustable switches, interlocked with motor controls and set to automatically stop gate at fully retracted and fully extended positions.
  - 1. Type: Integral fail-safe release, allowing gate to be pushed open without mechanical devices, keys, cranks, or special knowledge.
- I. Operating Features:
  - 1. Digital Microprocessor Control: Electronic programmable means for setting, changing, and adjusting control features with capability for monitoring and auditing gate activity. Provide unit that is isolated from voltage spikes and surges.
  - 2. System Integration: With controlling circuit board capable of accepting any type of input from external devices.
  - 3. Automatic Closing Timer: With adjustable time delay before closing and timer cut-off switch.
  - 4. Open Override Circuit: Designed to override closing commands.

- 5. Reversal Time Delay: Designed to protect gate system from shock load on reversal in both directions.
- 6. Maximum Run Timer: Designed to prevent damage to gate system by shutting down system if normal time to open gate is exceeded.
- 7. Clock Timer: 24-hour programmable for regular events.

#### J. Accessories:

- 1. Backup System: Connect gate to backup electrical system.
- 2. Instructional, Safety, and Warning Labels and Signs: According to UL 325.
- 3. Equipment Bases/Pads: Cast-in-place or precast concrete, 6 to 12 inches below frost line or detail on Drawings, dimensioned and reinforced according to gate-operator component manufacturer's written instructions and as indicated on Drawings.

#### 2.9 GROUT AND ANCHORING CEMENT

- A. Nonshrink, Nonmetallic Grout: Premixed, factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107. Provide grout, recommended in writing by manufacturer, for exterior applications.
- B. Erosion-Resistant Anchoring Cement: Factory-packaged, nonshrink, nonstaining, hydraulic-controlled expansion cement formulation for mixing with potable water at Project site to create pourable anchoring, patching, and grouting compound. Provide formulation that is resistant to erosion from water exposure without needing protection by a sealer or waterproof coating and that is recommended in writing by manufacturer, for exterior applications.

#### 2.10 FENCE GROUNDING

- A. Conductors: Bare, solid wire for No. 6 AWG and smaller; stranded wire for No. 4 AWG and larger.
  - 1. Material above Finished Grade: Copper.
  - 2. Material on or below Finished Grade: Copper.
  - 3. Bonding Jumpers: Braided copper tape, 1 inch wide, woven of No. 30 AWG bare copper wire, terminated with copper ferrules.
- B. Connectors and Grounding Rods: Comply with UL 467.
  - 1. Connectors for Below-Grade Use: Exothermic welded type.
  - 2. Grounding Rods: Copper-clad steel, 5/8 by 96 inches.

## **PART 3 - EXECUTION**

#### 3.1 EXAMINATION

- A. Examine areas and conditions, with Installer present, for compliance with requirements for a verified survey of property lines and legal boundaries, site clearing, earthwork, pavement work, and other conditions affecting performance of the Work.
  - 1. Do not begin installation before final grading is completed unless otherwise permitted by Architect.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

## 3.2 PREPARATION

A. Stake locations of fence lines, gates, and terminal posts. Do not exceed intervals of 500 feet or line of sight between stakes. Indicate locations of utilities, lawn sprinkler system, underground structures, benchmarks, and property monuments.

## 3.3 INSTALLATION, GENERAL

A. Install chain-link fencing to comply with ASTM F 567 and more stringent requirements indicated.
1. Install fencing on established boundary lines inside property line.

#### 3.4 CHAIN-LINK FENCE INSTALLATION

- A. Post Excavation: Drill or hand-excavate holes for posts to diameters and spacings indicated, in firm, undisturbed soil.
- B. Post Setting: Set posts in concrete at indicated spacing into firm, undisturbed soil.
  - 1. Verify that posts are set plumb, aligned, and at correct height and spacing, and hold in position during setting with concrete or mechanical devices.
  - 2. Concrete Fill: Place concrete around posts to dimensions indicated and vibrate or tamp for consolidation. Protect aboveground portion of posts from concrete splatter.
    - Concealed Concrete: Top 2 inches below grade to allow covering with surface material.
- C. Terminal Posts: Locate terminal end, corner, and gate posts per ASTM F 567 and terminal pull posts at changes in horizontal or vertical alignment of as indicated on Drawings.
- D. Line Posts: Space line posts uniformly as indicated on Drawings.
- E. Post Bracing and Intermediate Rails: Install according to ASTM F 567, maintaining plumb position and alignment of fencing. Diagonally brace terminal posts to adjacent line posts with truss rods and turnbuckles. Install braces at end and gate posts and at both sides of corner and pull posts.
  - 1. Locate horizontal braces at midheight of fabric 72 inches or higher, on fences with top rail and at two-third fabric height on fences without top rail. Install so posts are plumb when diagonal rod is under proper tension.
- F. Top Rail: Install according to ASTM F 567, maintaining plumb position and alignment of fencing. Run rail continuously through line post caps, bending to radius for curved runs and terminating into rail end attached to posts or post caps fabricated to receive rail at terminal posts. Provide expansion couplings as recommended in writing by fencing manufacturer.
- G. Bottom Rails: Install and secure to posts with fittings.
- H. Chain-Link Fabric: Apply fabric to outside of enclosing framework. Leave 1 inch between finish grade or surface and bottom selvage unless otherwise indicated. Pull fabric taut and tie to posts, rails, and tension wires. Anchor to framework so fabric remains under tension after pulling force is released.
- I. Tension or Stretcher Bars: Thread through fabric and secure to end, corner, pull, and gate posts with tension bands spaced not more than 15 inches o.c.
- J. Tie Wires: Use wire of proper length to firmly secure fabric to line posts and rails. Attach wire at one end to chain-link fabric, wrap wire around post a minimum of 180 degrees, and attach other end to chain-link fabric per ASTM F 626. Bend ends of wire to minimize hazard to individuals and clothing.
  - 1. Maximum Spacing: Tie fabric to line posts at 12 inches o.c. and to braces at 24 inches o.c.
- K. Fasteners: Install nuts for tension bands and carriage bolts on the side of the fence opposite the fabric side. Peen ends of bolts or score threads to prevent removal of nuts.

- L. Privacy Slats: Install slats in direction indicated, securely locked in place.
  - 1. Vertically, for privacy factor of 70 to 75.

#### 3.5 GATE INSTALLATION

A. Install gates according to manufacturer's written instructions, level, plumb, and secure for full opening without interference. Attach fabric as for fencing. Attach hardware using tamper-resistant or concealed means. Install ground-set items in concrete for anchorage. Adjust hardware for smooth operation and lubricate where necessary.

#### 3.6 GATE OPERATOR INSTALLATION

- A. General: Install gate operators according to manufacturer's written instructions, aligned and true to fence line and grade.
- B. Excavation for Equipment Bases/Pads: Hand-excavate holes for bases/pads, in firm, undisturbed soil to dimensions and depths and at locations as required by gate-operator component manufacturer's written instructions and as indicated.
- C. Vehicle Loop Detector System: Cut grooves in pavement and bury and seal wire loop according to manufacturer's written instructions. Connect to equipment operated by detector.
- D. Comply with NFPA 70 and manufacturer's written instructions for grounding of electric-powered motors, controls, and other devices.

## 3.7 GROUNDING AND BONDING

- A. Fence Grounding: Install at maximum intervals of 1500 feet except as follows:
  - 1. Fences within 100 Feet of Buildings, Structures, Walkways, and Roadways: Ground at maximum intervals of 750 feet.
    - Gates and Other Fence Openings: Ground fence on each side of opening.
      - Bond metal gates to gate posts.
- B. Protection at Crossings of Overhead Electrical Power Lines: Ground fence at location of crossing and at a maximum distance of 150 feet on each side of crossing.
- C. Grounding Method: At each grounding location, drive a grounding rod vertically until the top is 6 inches below finished grade. Connect rod to fence with No. 6 AWG conductor. Connect conductor to each fence component at the grounding location, including the following:
  - 1. Make grounding connections to each barbed wire strand with wire-to-wire connectors designed for this purpose.
  - 2. Make grounding connections to each barbed tape coil with connectors designed for this purpose.
- D. Bonding Method for Gates: Connect bonding jumper between gate post and gate frame.
- E. Connections: Make connections to minimize possibility of galvanic action or electrolysis. Select connectors, connection hardware, conductors, and connection methods so metals in direct contact will be galvanically compatible.
  - 1. Use electroplated or hot-tin-coated materials to ensure high conductivity and to make contact points closer in order of galvanic series.
  - 2. Make connections with clean, bare metal at points of contact.
  - 3. Coat and seal connections having dissimilar metals with inert material to prevent future penetration of moisture to contact surfaces.

F. Bonding to Lightning Protection System: If fence terminates at lightning-protected building or structure, ground the fence and bond the fence grounding conductor to lightning protection down conductor or lightning protection grounding conductor complying with NFPA 780.

#### 3.8 FIELD QUALITY CONTROL

- A. Grounding-Resistance Testing: Owner will engage a qualified testing agency to perform tests and inspections.
  - Grounding-Resistance Tests: Subject completed grounding system to a megger test at each grounding location. Measure grounding resistance no fewer than two full days after last trace of precipitation, without soil having been moistened by any means other than natural drainage or seepage and without chemical treatment or other artificial means of reducing natural grounding resistance. Perform tests by two-point method according to IEEE 81.
  - 2. Excessive Grounding Resistance: If resistance to grounding exceeds specified value, notify Architect promptly. Include recommendations for reducing grounding resistance and a proposal to accomplish recommended work.
  - 3. Report: Prepare test reports certified by a testing agency of grounding resistance at each test location. Include observations of weather and other phenomena that may affect test results.

#### 3.9 ADJUSTING

- A. Gates: Adjust gates to operate smoothly, easily, and quietly, free of binding, warp, excessive deflection, distortion, nonalignment, misplacement, disruption, or malfunction, throughout entire operational range. Confirm that latches and locks engage accurately and securely without forcing or binding.
- B. Automatic Gate Operator: Energize circuits to electrical equipment and devices. Adjust operators, controls, safety devices, and limit switches.
  - 1. Hydraulic Operator: Purge operating system, adjust pressure and fluid levels, and check for leaks.
  - 2. Operational Test: After electrical circuitry has been energized, start units to confirm proper motor rotation and unit operation.
  - 3. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- C. Lubricate hardware, gate operator, and other moving parts.

#### 3.10 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's personnel to adjust, operate, and maintain chain-link fences and gates.

# SUPPLEMENTARY SPECIAL PROVISIONS APPENDICES

## APPENDIX A

## FIRE HYDRANT METER PROGRAM

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## 1. **PURPOSE**

1.1 To establish a Departmental policy and procedure for issuance, proper usage and charges for fire hydrant meters.

## 2. <u>AUTHORITY</u>

- 2.1 All authorities and references shall be current versions and revisions.
- 2.2 San Diego Municipal Code (NC) Chapter VI, Article 7, Sections 67.14 and 67.15
- 2.3 Code of Federal Regulations, Safe Drinking Water Act of 1986
- 2.4 California Code of Regulations, Titles 17 and 22
- 2.5 California State Penal Code, Section 498B.0
- 2.6 State of California Water Code, Section 110, 500-6, and 520-23
- 2.7 Water Department Director

## Reference

- 2.8 State of California Guidance Manual for Cross Connection Programs
- 2.9 American Water Works Association Manual M-14, Recommended Practice for Backflow Prevention
- 2.10 American Water Works Association Standards for Water Meters
- 2.11 U.S.C. Foundation for Cross Connection Control and Hydraulic Research Manual

## 3. **DEFINITIONS**

3.1 **Fire Hydrant Meter:** A portable water meter which is connected to a fire hydrant for the purpose of temporary use. (These meters are sometimes referred to as Construction Meters.)

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- 3.2 **Temporary Water Use:** Water provided to the customer for no longer than twelve (12) months.
- 3.3 **Backflow Preventor:** A Reduced Pressure Principal Assembly connected to the outlet side of a Fire Hydrant Meter.

## 4. **POLICY**

- 4.1 The Water Department shall collect a deposit from every customer requiring a fire hydrant meter and appurtenances prior to providing the meter and appurtenances (see Section 7.1 regarding the Fees and Deposit Schedule). The deposit is refundable upon the termination of use and return of equipment and appurtenances in good working condition.
- 4.2 Fire hydrant meters will have a 2 ½" swivel connection between the meter and fire hydrant. The meter shall not be connected to the 4" port on the hydrant. All Fire Hydrant Meters issued shall have a Reduced Pressure Principle Assembly (RP) as part of the installation. Spanner wrenches are the only tool allowed to turn on water at the fire hydrant.
- 4.3 The use of private hydrant meters on City hydrants is prohibited, with exceptions as noted below. All private fire hydrant meters are to be phased out of the City of San Diego. All customers who wish to continue to use their own fire hydrant meters must adhere to the following conditions:
  - a. Meters shall meet all City specifications and American Water Works Association (AWWA) standards.
  - b. Customers currently using private fire hydrant meters in the City of San Diego water system will be allowed to continue using the meter under the following conditions:
    - 1. The customer must submit a current certificate of accuracy and calibration results for private meters and private backflows annually to the City of San Diego, Water Department, Meter Shop.

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- 2. The meter must be properly identifiable with a clearly labeled serial number on the body of the fire hydrant meter. The serial number shall be plainly stamped on the register lid and the main casing. Serial numbers shall be visible from the top of the meter casing and the numbers shall be stamped on the top of the inlet casing flange.
- 3. All meters shall be locked to the fire hydrant by the Water Department, Meter Section (see Section 4.7).
- 4. All meters shall be read by the Water Department, Meter Section (see Section 4.7).
- 5. All meters shall be relocated by the Water Department, Meter Section (see Section 4.7).
- 6. These meters shall be tested on the anniversary of the original test date and proof of testing will be submitted to the Water Department, Meter Shop, on a yearly basis. If not tested, the meter will not be allowed for use in the City of San Diego.
- 7. All private fire hydrant meters shall have backflow devices attached when installed.
- 8. The customer must maintain and repair their own private meters and private backflows.
- 9. The customer must provide current test and calibration results to the Water Department, Meter Shop after any repairs.
- 10. When private meters are damaged beyond repair, these private meters will be replaced by City owned fire hydrant meters.

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- 11. When a private meter malfunctions, the customer will be notified and the meter will be removed by the City and returned to the customer for repairs. Testing and calibration results shall be given to the City prior to any reinstallation.
- 12. The register shall be hermetically sealed straight reading and shall be readable from the inlet side. Registration shall be in hundred cubic feet.
- 13. The outlet shall have a 2 ½ "National Standards Tested (NST) fire hydrant male coupling.
- 14. Private fire hydrant meters shall not be transferable from one contracting company to another (i.e. if a company goes out of business or is bought out by another company).
- 4.4 All fire hydrant meters and appurtenances shall be installed, relocated and removed by the City of San Diego, Water Department. All City owned fire hydrant meters and appurtenances shall be maintained by the City of San Diego, Water Department, Meter Services.
- 4.5 If any fire hydrant meter is used in violation of this Department Instruction, the violation will be reported to the Code Compliance Section for investigation and appropriate action. Any customer using a fire hydrant meter in violation of the requirements set forth above is subject to fines or penalties pursuant to the Municipal Code, Section 67.15 and Section 67.37.

## 4.6 Conditions and Processes for Issuance of a Fire Hydrant Meter

## Process for Issuance

- a. Fire hydrant meters shall only be used for the following purposes:
  - 1. Temporary irrigation purposes not to exceed one year.

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- 2. Construction and maintenance related activities (see Tab 2).
- b. No customer inside or outside the boundaries of the City of San Diego Water Department shall resell any portion of the water delivered through a fire hydrant by the City of San Diego Water Department.
- c. The City of San Diego allows for the issuance of a temporary fire hydrant meter for a period not to exceed 12 months (365 days). An extension can only be granted in writing from the Water Department Director for up to 90 additional days. A written request for an extension by the consumer must be submitted at least 30 days prior to the 12 month period ending. No extension shall be granted to any customer with a delinquent account with the Water Department. No further extensions shall be granted.
- d. Any customer requesting the issuance of a fire hydrant meter shall file an application with the Meter Section. The customer must complete a "Fire Hydrant Meter Application" (Tab 1) which includes the name of the company, the party responsible for payment, Social Security number and/or California ID, requested location of the meter (a detailed map signifying an exact location), local contact person, local phone number, a contractor's license (or a business license), description of specific water use, duration of use at the site and full name and address of the person responsible for payment.
- e. At the time of the application the customer will pay their fees according to the schedule set forth in the Rate Book of Fees and Charges, located in the City Clerk's Office. All fees must be paid by check, money order or cashiers check, made payable to the City Treasurer. Cash will not be accepted.
- f. No fire hydrant meters shall be furnished or relocated for any customer with a delinquent account with the Water Department.
- g. After the fees have been paid and an account has been created, the

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meter shall be installed within 48 hours (by the second business day). For an additional fee, at overtime rates, meters can be installed within 24 hours (within one business day).

## 4.7 Relocation of Existing Fire Hydrant Meters

- a. The customer shall call the Fire Hydrant Meter Hotline (herein referred to as "Hotline"), a minimum of 24 hours in advance, to request the relocation of a meter. A fee will be charged to the existing account, which must be current before a work order is generated for the meter's relocation.
- b. The customer will supply in writing the address where the meter is to be relocated (map page, cross street, etc). The customer must update the original Fire Hydrant Meter Application with any changes as it applies to the new location.
- c. Fire hydrant meters shall be read on a monthly basis. While fire hydrant meters and backflow devices are in service, commodity, base fee and damage charges, if applicable, will be billed to the customer on a monthly basis. If the account becomes delinquent, the meter will be removed.

## 4.8 **Disconnection of Fire Hydrant Meter**

- a. After ten (10) months a "Notice of Discontinuation of Service" (Tab 3) will be issued to the site and the address of record to notify the customer of the date of discontinuance of service. An extension can only be granted in writing from the Water Department Director for up to 90 additional days (as stated in Section 4.6C) and a copy of the extension shall be forwarded to the Meter Shop Supervisor. If an extension has not been approved, the meter will be removed after twelve (12) months of use.
- b. Upon completion of the project the customer will notify the Meter Services office via the Hotline to request the removal of the fire hydrant meter and appurtenances. A work order will be generated

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for removal of the meter.

- c. Meter Section staff will remove the meter and backflow prevention assembly and return it to the Meter Shop. Once returned to the Meter Shop the meter and backflow will be tested for accuracy and functionality.
- d. Meter Section Staff will contact and notify Customer Services of the final read and any charges resulting from damages to the meter and backflow or its appurtenance. These charges will be added on the customer's final bill and will be sent to the address of record. Any customer who has an outstanding balance will not receive additional meters.
- e. Outstanding balances due may be deducted from deposits and any balances refunded to the customer. Any outstanding balances will be turned over to the City Treasurer for collection. Outstanding balances may also be transferred to any other existing accounts.

## 5. **EXCEPTIONS**

5.1 Any request for exceptions to this policy shall be presented, in writing, to the Customer Support Deputy Director, or his/her designee for consideration.

## 6. **MOBILE METER**

- 6.1 Mobile meters will be allowed on a case by case basis. All mobile meters will be protected by an approved backflow assembly and the minimum requirement will be a Reduced Pressure Principal Assembly. The two types of Mobile Meters are vehicle mounted and floating meters. Each style of meters has separate guidelines that shall be followed for the customer to retain service and are described below:
  - a) **Vehicle Mounted Meters**: Customer applies for and receives a City owned Fire Hydrant Meter from the Meter Shop. The customer mounts the meter on the vehicle and brings it to the Meter Shop for

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inspection. After installation is approved by the Meter Shop the vehicle and meter shall be brought to the Meter Shop on a monthly basis for meter reading and on a quarterly basis for testing of the backflow assembly. Meters mounted at the owner's expense shall have the one year contract expiration waived and shall have meter or backflow changed if either fails.

- b) Floating Meters: Floating Meters are meters that are not mounted to a vehicle. (Note: All floating meters shall have an approved backflow assembly attached.) The customer shall submit an application and a letter explaining the need for a floating meter to the Meter Shop. The Fire Hydrant Meter Administrator, after a thorough review of the needs of the customer, (i.e. number of jobsites per day, City contract work, lack of mounting area on work vehicle, etc.), may issue a floating meter. At the time of issue, it will be necessary for the customer to complete and sign the "Floating Fire Hydrant Meter Agreement" which states the following:
  - 1) The meter will be brought to the Meter Shop at 2797 Caminito Chollas, San Diego on the third week of each month for the monthly read by Meter Shop personnel.
  - 2) Every other month the meter will be read and the backflow will be tested. This date will be determined by the start date of the agreement.

If any of the conditions stated above are not met the Meter Shop has the right to cancel the contract for floating meter use and close the account associated with the meter. The Meter Shop will also exercise the right to refuse the issuance of another floating meter to the company in question.

Any Fire Hydrant Meter using reclaimed water shall not be allowed use again with any potable water supply. The customer shall incur the cost of replacing the meter and backflow device in this instance.

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## 7. FEE AND DEPOSIT SCHEDULES

7.1 **Fees and Deposit Schedules:** The fees and deposits, as listed in the Rate Book of Fees and Charges, on file with the Office of the City Clerk, are based on actual reimbursement of costs of services performed, equipment and materials. Theses deposits and fees will be amended, as needed, based on actual costs. Deposits, will be refunded at the end of the use of the fire hydrant meter, upon return of equipment in good working condition and all outstanding balances on account are paid. Deposits can also be used to cover outstanding balances.

All fees for equipment, installation, testing, relocation and other costs related to this program are subject to change without prior notification. The Mayor and Council will be notified of any future changes.

## 8. <u>UNAUTHORIZED USE OF WATER FROM A HYDRANT</u>

- 8.1 Use of water from any fire hydrant without a properly issued and installed fire hydrant meter is theft of City property. Customers who use water for unauthorized purposes or without a City of San Diego issued meter will be prosecuted.
- 8.2 If any unauthorized connection, disconnection or relocation of a fire hydrant meter, or other connection device is made by anyone other than authorized Water Department personnel, the person making the connection will be prosecuted for a violation of San Diego Municipal Code, Section 67.15. In the case of a second offense, the customer's fire hydrant meter shall be confiscated and/or the deposit will be forfeited.
- 8.3 Unauthorized water use shall be billed to the responsible party. Water use charges shall be based on meter readings, or estimates when meter readings are not available.
- 8.4 In case of unauthorized water use, the customer shall be billed for all applicable charges as if proper authorization for the water use had been obtained, including but not limited to bi-monthly service charges, installation charges and removal charges.

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8.5 If damage occurs to Water Department property (i.e. fire hydrant meter, backflow, various appurtenances), the cost of repairs or replacements will be charged to the customer of record (applicant).

## **Water Department Director**

Tabs: 1. Fire Hydrant Meter Application

2. Construction & Maintenance Related Activities With No Return

To Sewer

3. Notice of Discontinuation of Service

## **APPENDIX**

**Administering Division:** Customer Support Division

**Subject Index:** Construction Meters

Fire Hydrant

Fire Hydrant Meter Program

Meters, Floating or Vehicle Mounted

Mobile Meter

Program, Fire Hydrant Meter

**Distribution:** DI Manual Holders



## Application for Fire (EXHIBIT A) **Hydrant Meter**

(For Office Use Only)

NS REQ	FAC#	
DATE	ВУ	

METER SHOP (619) 527-7449

Motor	Informatio	nn
IVICEC	mnomnati	<i>J</i> I I

Meter Information	(015) 327		Application Date	Re	equested Install	Date:	
Fire Hydrant Location: (Attach Detailed Map//Thomas Bros. Map Location or Construction drawing.) <u>Zip:</u>					<u>B.</u>	G.B. (CITY USE)	
Specific Use of Water:				•			
Any Return to Sewer or Storm Drain, If so , explain:						The second secon	
Estimated Duration of Meter Use:				Ch	eck Box if Recla	imed Water	
Company Information		***************************************					
Company Name:			*				
Mailing Address:						a.	
City:	State:		Zip:	Phone:	( )	1	
*Business license#		*Con	*Contractor license#				
A Copy of the Contractor's license OR Bu	siness License i	s requ	ired at the time of	meter is	suance.		
Name and Title of Billing Agent: (PERSON IN ACCOUNTS PAYABLE)					( )		
Site Contact Name and Title:					Phone: ( )		
Responsible Party Name:					Title:		
Cal ID#					Phone: ( )		
Signature: Date:							
Guarantees Payment of all Charges Resulting from the use of this Meter. Insures that employees of this Organization understand the proper use of Fire Hydrant Meter							
		5 <sub>2</sub>					
Fire Hydrant Meter Removal F	Request		Requested Rem	noval Date	e:	ű.	
Provide Current Meter Location if Different from Abov	/e:						
Signature:			Title:		Date:		
Phone: ( )		Pager:	( )			2	

City Meter	Private Meter			
Contract Acct #:	1	Deposit Amount: \$ 936.00	Fees Amount: \$ 62.00	
Meter Serial #		Meter Size: 05	Meter Make and Style: 6-7	
Backflow #		Backflow Size:	Backflow Make and Style:	
Name:		Signature:	Date:	

## WATER USES WITHOUT ANTICIPATED CHARGES FOR RETURN TO SEWER

Auto Detailing

Backfilling

Combination Cleaners (Vactors)

Compaction

Concrete Cutters

**Construction Trailers** 

**Cross Connection Testing** 

**Dust Control** 

Flushing Water Mains

Hydro Blasting

Hydro Seeing

Irrigation (for establishing irrigation only; not continuing irrigation)

Mixing Concrete

Mobile Car Washing

Special Events

Street Sweeping

Water Tanks

Water Trucks

Window Washing

#### Note:

1. If there is any return to sewer or storm drain, then sewer and/or storm drain fees will be charges.

Date
Name of Responsible Party Company Name and Address Account Number:
Subject: Discontinuation of Fire Hydrant Meter Service
Dear Water Department Customer:
The authorization for use of Fire Hydrant Meter #
City of San Diego Water Department Attention: Meter Services 2797 Caminito Chollas San Diego, CA 92105-5097
Should you have any questions regarding this matter, please call the Fire Hydrant Hotline at (619)
Sincerely,
Water Department

# APPENDIX B

# MATERIALS TYPICALLY ACCEPTED BY CERTIFICATE OF COMPLIANCE

# **Materials Typically Accepted by Certificate of Compliance**

- 1. Soil amendment
- 2. Fiber mulch
- 3. PVC or PE pipe up to 16 inch diameter
- 4. Stabilizing emulsion
- 5. Lime
- 6. Preformed elastomeric joint seal
- 7. Plain and fabric reinforced elastomeric bearing pads
- 8. Steel reinforced elastomeric bearing pads
- 9. Waterstops (Special Condition)
- 10. Epoxy coated bar reinforcement
- 11. Plain and reinforcing steel
- 12. Structural steel
- 13. Structural timber and lumber
- 14. Treated timber and lumber
- 15. Lumber and timber
- 16. Aluminum pipe and aluminum pipe arch
- 17. Corrugated steel pipe and corrugated steel pipe arch
- 18. Structural metal plate pipe arches and pipe arches
- 19. Perforated steel pipe
- 20. Aluminum underdrain pipe
- 21. Aluminum or steel entrance tapers, pipe downdrains, reducers, coupling bands and slip joints
- 22. Metal target plates
- 23. Paint (traffic striping)
- 24. Conductors
- 25. Painting of electrical equipment
- 26. Electrical components
- 27. Engineering fabric
- 28. Portland Cement
- 29. PCC admixtures
- 30. Minor concrete, asphalt
- 31. Asphalt (oil)
- 32. Liquid asphalt emulsion
- 33. Epoxy

# APPENDIX C

# SAMPLE CITY INVOICE

City of San Diego, Field Engineering Div., 9485 Aero Drive, SD CA 92123				Contractor's Name:							
Project Name:				Contractor's Address:							
SAP No. (WBS/IO/CC):				COMMINGEN DIAMER CODE							
City Purchase Order No. :				Contractor's Phone #: Invoice No.							
, ,					or's Fax #:			Invoice Date:			
							D.III. D				
RE Pho	one#:	RE Fax#:	C	-4 A 41 4	Contact Na		Name: Billing Positions Estimate This Estimate		Totals to Date		
Item # Item Description -		Unit		ct Authorizat Price	Extension	%/QTY		% / QTY		% / QTY	
1	2 Parallel 4" PVC C900	LF	<b>Qty</b> 1,380			70/Q11	Amount	76 / Q11	Amount	70 / Q11	Amount
2	48" Primary Steel Casing	LF	500	\$1,000.00							
3	2 Parallel 12" Secondary Steel	LF	1,120	\$53.00	\$59,360.00						
			-,	70000	φε>,εσσισσ						
4	Construction and Rehab of PS 49	LS	1	\$150,000.00	\$150,000.00						
5	Demo	LS	1	\$14,000.00	\$14,000.00						
6	Install 6' High Chain Link Fence	LS	1	\$5,600.00							
7	General Site Restoration	LS	1	\$3,700.00	\$3,700.00						
8	10" Gravity Sewer	LF	10	\$292.00	\$2,920.00						
9	4" Blow Off Valves	EA	2	\$9,800.00	\$19,600.00						
10	Bonds	LS	1	\$16,000.00	\$16,000.00						
11	Field Orders	AL	1	80,000	\$80,000.00						
11.1	Field Order 1	LS	5,500	\$1.00	\$5,500.00						
11.2	Field Order 2	LS	7,500	\$1.00	\$7,500.00						
11.3	Field Order 3	LS	10,000	\$1.00	\$10,000.00						
11.4	Field Order 4	LS	6,500	\$1.00							
12	Certified Payroll	LS	1	\$1,400.00	\$1,400.00						
	CHANGE ORDERS										
Change	Order 1	4,890									
Items 1		,			\$11,250.00						
Item 5-	Deduct Bid Item 3	LF	120	-\$53.00	(\$6,360.00)						
	e Order 2	160,480									
Items 1	-3				\$95,000.00						
	Deduct Bid Item 1	LF	380	-\$340.00							
	Encrease bid Item 9	LF	8	\$9,800.00	\$78,400.00						
	e Order 3 (Close Out)	-121,500									
	Deduct Bid Item 3		53	-500.00	(\$26,500.00)						
	Deduct Bid Item 4	LS	-1	45,000.00			-	ļ			
Items 3	<u>-y</u>		1	-50,500.00	(\$50,500.00)		1	Total			
	SUMMARY							This	\$ -	Total Billed	\$0.00
A. Orig	ginal Contract Amount						Ret	tention and	d/or Escro	w Payment Sche	dule
B. App	roved Change Order 1 Thru 3						Total Rete	ntion Requ	ired as of	this billing	
C. Tota	al Authorized Amount (A+B)						Previous F	Retention V	Vithheld in	PO or in Escrow	
D. Total Billed to Date							Add'l Amt to Withhold in PO/Transfer in Escrow:			<b>':</b>	
E. Less Total Retention (5% of D)							Amt to Re	lease to Co	ntractor fr	om PO/Escrow:	
	Total Previous Payments										
	ment Due Less Retention					Contract	or Signatu	re and Dat	te:		
	naining Authorized Amount						3				

Skyline Temporary Fire Station Appendix C - Sample City Invoice Volume 1 of 2 (Rev. Dec. 2014)

# APPENDIX D

# NOTICE OF EXEMPTION

1600 PACIFIC HWY, ROOM 260 SAN DIEGO, CA 92101-2422  OFFICE OF PLANNING AND RESEARCH 1400 TENTH STREET, ROOM 121 SACRAMENTO, CA 95814  PROJECT NO.: S-00687.02.06  PROJECT LOCATION-SPECIFIC: 7180 Skyline Drive at the intersection of Sychar Road  PROJECT LOCATION-CITY/COUNTY: San Diego/San Diego  DESCRIPTION OF NATURE AND PURPOSE OF THE PROJECT: The temporary facility will replace an abandoned gas static include a 1,440 square-foot state approved coach; 1,350 square-foot apparatus structure; and staff parking and other imp to serve the facility including fencing, concrete driveway, utility connections, new communications, mechanical and elec equipment.  NAME OF PUBLIC AGENCY APPROVING PROJECT: City of San Diego  NAME OF PERSON OR AGENCY CARRYING OUT PROJECT: City of San Diego, Public Works Contact: Rowaida Jadan 325 B Street, Suite 750 (MS 908A) San Diego, CA 92101  (619) 533-6655  EXEMPT STATUS: () MINISTERIAL (SEC. 21080(b)(1); 15268); () DECLARED EMERGENCY (SEC. 21080(b)(3); 15269(a)); () EMERGENCY PROJECT (SEC. 21080(b)(4); 15269 (b)(c) (X) CATEGORICAL EXEMPTION: 15303 NEW CONSTRUCTION OR CONVERSION OF SMALL STRUCTURES  REASONS WHY PROJECT IS EXEMPT: The City of San Diego conducted an environmental review which determin this project meets the categorical exemption criteria set forth in CEQA State Guidelines Section 15303, New CONSTRUCTION OR CONVERSION OF SMALL STRUCTURES  REASONS WHY PROJECT IS EXEMPT: The City of San Diego conducted an environmental review which determin this project meets the categorical exemption criteria set forth in CEQA State Guidelines Section 15303, New CONSTRUCTION OR CONVERSION OF SMALL STRUCTURES  REASONS WHY PROJECT IS EXEMPT: The City of San Diego conducted an environmental review which determin this project meets the categorical exemption criteria set forth in CEQA State Guidelines Section 15303, New CONSTRUCTION OR CONVERSION OF SMALL STRUCTURES  REASONS WHY PROJECT IS EXEMPT: The City of San Diego conducted an environmental review which determin this project meets the categor	NO	TICE OF EXEMPTION
PROJECT No.: S-00687.02.06  PROJECT LOCATION-SPECIFIC: 7180 Skyline Drive at the intersection of Sychar Road  PROJECT LOCATION-CITY/COUNTY: San Diego/San Diego  DESCRIPTION OF NATURE AND PURPOSE OF THE PROJECT: The temporary facility will replace an abandoned gas static include a 1,440 square-foot state approved coach; 1,350 square-foot apparatus structure; and staff parking and other imp to serve the facility including fencing, concrete driveway, utility connections, new communications, mechanical and elec equipment.  NAME OF PUBLIC AGENCY APPROVING PROJECT: City of San Diego  NAME OF PERSON OR AGENCY CARRYING OUT PROJECT: City of San Diego, Public Works Contact: Rowaida Jadan 525 B Street, Suite 750 (MS 908A) San Diego, CA 92101  (619) 533-6655  EXEMPT STATUS:  ( ) MINISTERIAL (Sec. 21080(b)(1); 15268); ( ) DECLARED EMERGENCY (Sec. 21080(b)(3); 15269(a)); ( ) EMERGENCY PROJECT (Sec. 21080(b)(4); 15269 (b)(c) ( ) CATEGORICAL EXEMPTION: 15303 NEW CONSTRUCTION OR CONVERSION OF SMALL STRUCTURES  REASONS WHY PROJECT IS EXEMPT: The City of San Diego conducted an environmental review which determing this project meets the categorical exemption criteria set forth in CEQA State Guidelines Section 15303, New Construction or Conversion of Small Structures, which allows for the construction of a limited number small and equipment and the exceptions listed in CEQA Section 15300.2 would not apply.  LEAD AGENCY CONTACT PERSON: M. BLAKE  TELEPHONE: 619-446-5375  IF FILED BY APPLICANT:  1. ATTACH CERTIFIED DOCUMENT OF EXEMPTION FINDING.  2. HAS A NOTICE OF EXEMPTION BEEN FILED BY THE PUBLIC AGENCY APPROVING THE PROJECT?  ( ) YES ( ) NO  IT IS HERREBY CERTIFIED THAT THE CITY OF SAN DIEGO HAS DETERMINED THE ABOVE ACTIVITY TO BE EXEMPT FROM September 25, 2014	P.O. Box 1750, MS A-33 1600 Pacific Hwy, Room 260 San Diego, CA 92101-2422 Office of Planning and Resea	DEVELOPMENT SERVICES DEPARTMENT 1222 FIRST AVENUE, MS 501 SAN DIEGO, CA 92101
PROJECT LOCATION-SPECIFIC: 7180 Skyline Drive at the intersection of Sychar Road  PROJECT LOCATION-CITY/COUNTY: San Diego/San Diego  DESCRIPTION OF NATURE AND PURPOSE OF THE PROJECT: The temporary facility will replace an abandoned gas static include a 1,440 square-foot state approved coach; 1,350 square-foot apparatus structure; and staff parking and other imp to serve the facility including fencing, concrete driveway, utility connections, new communications, mechanical and elec equipment.  NAME OF PUBLIC AGENCY APPROVING PROJECT: City of San Diego  NAME OF PUBLIC AGENCY CARRYING OUT PROJECT: City of San Diego, Public Works Contact: Rowaida Jadan 525 B Street, Suite 750 (MS 908A) 8an Diego, CA 92101 (619) 533-6655  EXEMPT STATUS:  ( ) MINISTERIAL (Sec. 21080(b)(1); 15268); ( ) DECLARED EMERGENCY (Sec. 21080(b)(3); 15269(a)); ( ) EMERGENCY PROJECT (Sec. 21080(b)(4); 15269 (b)(c)  (x) CATEGORICAL EXEMPTION: 15303 NEW CONSTRUCTION OR CONVERSION OF SMALL STRUCTURES  REASONS WHY PROJECT IS EXEMPT: The City of San Diego conducted an environmental review which determine this project meets the categorical exemption criteria set forth in CEQA State Guidelines Section 15303, New Construction or Conversion of Small Structures, which allows for the construction of a limited number small and equipment and the exceptions listed in CEQA Section 15300.2 would not apply.  LEAD AGENCY CONTACT PERSON: M. BLAKE  TELEPHONE: 619-446-5375  IF FILED BY APPLICANT:  1. ATTACH CERTIFIED DOCUMENT OF EXEMPTION FINDING.  2. HAS A NOTICE OF EXEMPTION BEEN FILED BY THE PUBLIC AGENCY APPROVING THE PROJECT?  ( ) YES ( ) NO  IT IS HEREBY CERTIFIED THAT THE CITY OF SAN DIEGO HAS DETERMINED THE ABOVE ACTIVITY TO BE EXEMPT FROM MARCH AND	기가 열면 시간에 가지하게 되었어 살려지 않아가게 하는 때 생기에 있다면 살아 없다.	
DESCRIPTION OF NATURE AND PURPOSE OF THE PROJECT: The temporary facility will replace an abandoned gas static include a 1,440 square-foot state approved coach; 1,350 square-foot apparatus structure; and staff parking and other imp to serve the facility including fencing, concrete driveway, utility connections, new communications, mechanical and elect equipment.  NAME OF PUBLIC AGENCY APPROVING PROJECT: City of San Diego  NAME OF PUBLIC AGENCY CARRYING OUT PROJECT: City of San Diego, Public Works  Contact: Rowaida Jadan 525 B Street, Suite 750 (MS 908A) San Diego, CA 92101 (619) 533-6655  EXEMPT STATUS:  ( ) MINISTERIAL (Sec. 21080(b)(1); 15268); ( ) DECLARED EMERGENCY (Sec. 21080(b)(4); 15269 (a)); ( ) EMERGENCY PROJECT (Sec. 21080(b)(4); 15269 (b)(c) ( X) CATEGORICAL EXEMPTION: 15303 New CONSTRUCTION OR CONVERSION OF SMALL STRUCTURES  REASONS WHY PROJECT IS EXEMPT: The City of San Diego conducted an environmental review which determit this project meets the categorical exemption criteria set forth in CEQA State Guidelines Section 15303, New Construction or Conversion of Small Structures, which allows for the construction of a limited number small and equipment and the exceptions listed in CEQA Section 15300.2 would not apply.  LEAD AGENCY CONTACT PERSON: M. BLAKE  TELEPHONE: 619-446-5375  IF FILED BY APPLICANT:  1. ATTACH CERTIFIED DOCUMENT OF EXEMPTION FINDING.  2. HAS A NOTICE OF EXEMPTION BEEN FILED BY THE PUBLIC AGENCY APPROVING THE PROJECT?  ( ) YES ( ) NO  IT IS HEREBY CERTIFIED THAT THE CITY OF SAN DIEGO HAS DETERMINED THE ABOVE ACTIVITY TO BE EXEMPT FROM MINISTERIC PROJECT, 25, 2014.	PROJECT NO.: S-00687.02.06	PROJECT TITLE: Skyline Fire Station - Temporary Facility
DESCRIPTION OF NATURE AND PURPOSE OF THE PROJECT: The temporary facility will replace an abandoned gas static include a 1,440 square-foot state approved coach; 1,350 square-foot apparatus structure; and staff parking and other imp to serve the facility including fencing, concrete driveway, utility connections, new communications, mechanical and elec equipment.  NAME OF PUBLIC AGENCY APPROVING PROJECT: City of San Diego  NAME OF PERSON OR AGENCY CARRYING OUT PROJECT: City of San Diego, Public Works  Contact: Rowaida Jadan 525 B Street, Suite 750 (MS 908A) San Diego, CA 92101 (619) 533-6655  EXEMPT STATUS: ( ) MINISTERIAL (SEC. 21080(b)(1); 15268); ( ) DECLARED EMERGENCY (SEC. 21080(b)(3); 15269(a)); ( ) EMERGENCY PROJECT (SEC. 21080(b)(4); 15269 (b)(c) (X) CATEGORICAL EXEMPTION: 15303 NEW CONSTRUCTION OR CONVERSION OF SMALL STRUCTURES  REASONS WHY PROJECT IS EXEMPT: The City of San Diego conducted an environmental review which determit this project meets the categorical exemption criteria set forth in CEQA State Guidelines Section 15303, New Construction or Conversion of Small Structures, which allows for the construction of a limited number small and equipment and the exceptions listed in CEQA Section 15300.2 would not apply.  LEAD AGENCY CONTACT PERSON: M. BLAKE  Telephone: 619-446-5375  IF FILED BY APPLICANT:  1. ATTACH CERTIFIED DOCUMENT OF EXEMPTION FINDING.  2. HAS A NOTICE OF EXEMPTION BEEN FILED BY THE PUBLIC AGENCY APPROVING THE PROJECT? ( ) YES ( ) NO  IT IS HEREBY CERTIFIED THAT THE CITY OF SAN DIEGO HAS DETERMINED THE ABOVE ACTIVITY TO BE EXEMPT FROM MICH.  September 25, 2014	PROJECT LOCATION-SPECIFIC: 7180 Skyline Drive	at the intersection of Sychar Road
include a 1,440 square-foot state approved coach; 1,350 square-foot apparatus structure; and staff parking and other imp to serve the facility including fencing, concrete driveway, utility connections, new communications, mechanical and electequipment.  NAME OF PUBLIC AGENCY APPROVING PROJECT: City of San Diego  NAME OF PERSON OR AGENCY CARRYING OUT PROJECT: City of San Diego, Public Works  Contact: Rowaida Jadan 525 B Street, Suite 750 (MS 908A) San Diego, CA 92101 (619) 533-6655  EXEMPT STATUS: ( ) MINISTERIAL (Sec. 21080(b)(1); 15268); ( ) DECLARED EMERGENCY (Sec. 21080(b)(4); 15269 (b)(c) (X) CATEGORICAL EXEMPTION: 15303 NEW CONSTRUCTION OR CONVERSION OF SMALL STRUCTURES  REASONS WHY PROJECT IS EXEMPT: The City of San Diego conducted an environmental review which determing this project meets the categorical exemption criteria set forth in CEQA State Guidelines Section 15303, New Construction or Conversion of Small Structures, which allows for the construction of a limited number small and equipment and the exceptions listed in CEQA Section 15300.2 would not apply.  LEAD AGENCY CONTACT PERSON: M. BLAKE  Telephone: 619-446-5375  IF FILED BY APPLICANT:  1. ATTACH CERTIFIED DOCUMENT OF EXEMPTION FINDING. 2. HAS A NOTICE OF EXEMPTION BEEN FILED BY THE PUBLIC AGENCY APPROVING THE PROJECT? ( ) YES ( ) NO  It is hereby certified that the City of San Diego has determined the above activity to be exempt from Many and Many and Many and Many and Many and Activity to Be exempt from Many and	PROJECT LOCATION-CITY/COUNTY: San Diego/San	n Diego
NAME OF PERSON OR AGENCY CARRYING OUT PROJECT: City of San Diego, Public Works Contact: Rowarida Jadan 525 B Street, Suite 750 (MS 908A) San Diego, CA 92101 (619) 533-6655  EXEMPT STATUS:  ( ) MINISTERIAL (Sec. 21080(b)(1); 15268); ( ) DECLARED EMERGENCY (Sec. 21080(b)(3); 15269(a)); ( ) EMERGENCY PROJECT (Sec. 21080(b)(4); 15269 (b)(c) (X) CATEGORICAL EXEMPTION: 15303 New Construction or conversion of small structures  REASONS WHY PROJECT IS EXEMPT: The City of San Diego conducted an environmental review which determine this project meets the categorical exemption criteria set forth in CEQA State Guidelines Section 15303, New Construction or Conversion of Small Structures, which allows for the construction of a limited number small and equipment and the exceptions listed in CEQA Section 15300.2 would not apply.  LEAD AGENCY CONTACT PERSON: M. BLAKE  Telephone: 619-446-5375  IF FILED BY APPLICANT:  1. ATTACH CERTIFIED DOCUMENT OF EXEMPTION FINDING. 2. HAS A NOTICE OF EXEMPTION BEEN FILED BY THE PUBLIC AGENCY APPROVING THE PROJECT? ( ) YES ( ) NO  IT IS HEREBY CERTIFIED THAT THE CITY OF SAN DIEGO HAS DETERMINED THE ABOVE ACTIVITY TO BE EXEMPT FROM	include a 1,440 square-foot state approved coach; 1,3 to serve the facility including fencing, concrete drive	50 square-foot apparatus structure; and staff parking and other improvements
Contact: Rowaida Jadan 525 B Street, Suite 750 (MS 908A) San Diego, CA 92101 (619) 533-6655  EXEMPT STATUS:  ( ) MINISTERIAL (Sec. 21080(b)(1); 15268); ( ) DECLARED EMERGENCY (Sec. 21080(b)(3); 15269(a)); ( ) EMERGENCY PROJECT (Sec. 21080(b)(4); 15269 (b)(c) ( X) CATEGORICAL EXEMPTION: 15303 New Construction or conversion of small structures  REASONS WHY PROJECT IS EXEMPT: The City of San Diego conducted an environmental review which determin this project meets the categorical exemption criteria set forth in CEQA State Guidelines Section 15303, New Construction or Conversion of Small Structures, which allows for the construction of a limited number small and equipment and the exceptions listed in CEQA Section 15300.2 would not apply.  LEAD AGENCY CONTACT PERSON: M. BLAKE  TELEPHONE: 619-446-5375  IF FILED BY APPLICANT:  1. ATTACH CERTIFIED DOCUMENT OF EXEMPTION FINDING. 2. HAS A NOTICE OF EXEMPTION BEEN FILED BY THE PUBLIC AGENCY APPROVING THE PROJECT? ( ) YES ( ) NO  IT IS HEREBY CERTIFIED THAT THE CITY OF SAN DIEGO HAS DETERMINED THE ABOVE ACTIVITY TO BE EXEMPT FROM	NAME OF PUBLIC AGENCY APPROVING PROJECT:	City of San Diego
( ) MINISTERIAL (SEC. 21080(b)(1); 15268); ( ) DECLARED EMERGENCY (SEC. 21080(b)(3); 15269(a)); ( ) EMERGENCY PROJECT (SEC. 21080(b)(4); 15269 (b)(c) ( X) CATEGORICAL EXEMPTION: 15303 NEW CONSTRUCTION OR CONVERSION OF SMALL STRUCTURES  REASONS WHY PROJECT IS EXEMPT: The City of San Diego conducted an environmental review which determin this project meets the categorical exemption criteria set forth in CEQA State Guidelines Section 15303, New Construction or Conversion of Small Structures, which allows for the construction of a limited number small and equipment and the exceptions listed in CEQA Section 15300.2 would not apply.  LEAD AGENCY CONTACT PERSON: M. BLAKE  TELEPHONE: 619-446-5375  IF FILED BY APPLICANT:  1. ATTACH CERTIFIED DOCUMENT OF EXEMPTION FINDING. 2. HAS A NOTICE OF EXEMPTION BEEN FILED BY THE PUBLIC AGENCY APPROVING THE PROJECT? ( ) YES ( ) NO  IT IS HEREBY CERTIFIED THAT THE CITY OF SAN DIEGO HAS DETERMINED THE ABOVE ACTIVITY TO BE EXEMPT FROM	NAME OF PERSON OR AGENCY CARRYING OUT PRO	Contact: Rowaida Jadan 525 B Street, Suite 750 (MS 908A) San Diego, CA 92101
this project meets the categorical exemption criteria set forth in CEQA State Guidelines Section 15303, New Construction or Conversion of Small Structures, which allows for the construction of a limited number small and equipment and the exceptions listed in CEQA Section 15300.2 would not apply.  LEAD AGENCY CONTACT PERSON: M. BLAKE  TELEPHONE: 619-446-5375  IF FILED BY APPLICANT:  1. ATTACH CERTIFIED DOCUMENT OF EXEMPTION FINDING. 2. HAS A NOTICE OF EXEMPTION BEEN FILED BY THE PUBLIC AGENCY APPROVING THE PROJECT? ( ) YES ( ) NO  IT IS HEREBY CERTIFIED THAT THE CITY OF SAN DIEGO HAS DETERMINED THE ABOVE ACTIVITY TO BE EXEMPT FROM September 25, 2014	( ) MINISTERIAL (SEC. 21080(b)(1); 15268): ( ) DECLARED EMERGENCY (SEC. 21080(b)( ( ) EMERGENCY PROJECT (SEC. 21080(b)(4	(3); 15269(a)); ); 15269 (b)(c)
IF FILED BY APPLICANT:  1. ATTACH CERTIFIED DOCUMENT OF EXEMPTION FINDING.  2. HAS A NOTICE OF EXEMPTION BEEN FILED BY THE PUBLIC AGENCY APPROVING THE PROJECT?  ( ) YES ( ) NO  IT IS HEREBY CERTIFIED THAT THE CITY OF SAN DIEGO HAS DETERMINED THE ABOVE ACTIVITY TO BE EXEMPT FROM  September 25, 2014	this project meets the categorical exemption crite Construction or Conversion of Small Structures,	eria set forth in CEQA State Guidelines Section 15303, New which allows for the construction of a limited number small structures
ATTACH CERTIFIED DOCUMENT OF EXEMPTION FINDING.     HAS A NOTICE OF EXEMPTION BEEN FILED BY THE PUBLIC AGENCY APPROVING THE PROJECT?     ( ) YES ( ) NO  IT IS HEREBY CERTIFIED THAT THE CITY OF SAN DIEGO HAS DETERMINED THE ABOVE ACTIVITY TO BE EXEMPT FROM	LEAD AGENCY CONTACT PERSON: M. BLAKE	TELEPHONE: 619-446-5375
Mat 199 September 25, 2014	ATTACH CERTIFIED DOCUMENT OF EXEMI     HAS A NOTICE OF EXEMPTION BEEN FILED     ( ) YES    ( ) NO	BY THE PUBLIC AGENCY APPROVING THE PROJECT?
	IT IS HEREBY CERTIFIED THAT THE CITY OF SAN DI	EGO HAS DETERMINED THE ABOVE ACTIVITY TO BE EXEMPT FROM CEQA
SIGNATURE/SENIOR PLANNER	SIGNATURE/SENIOR PLANNER	September 25, 2014 DATE

DATE RECEIVED FOR FILING WITH COUNTY CLERK OR OPR:

CHECK ONE:

(X) SIGNED BY LEAD AGENCY
( ) SIGNED BY APPLICANT

# ATTACHMENT F INTENTIONALLY LEFT BLANK



Purchasing and Contracting Department Contracting Division 1200 Third Avenue, Suite 200 San Diego, CA 92101 (619) 236-6000

#### THE CITY OF SAN DIEGO

# FAX TRANSMITTAL

Date: January 20, 2015

The following 4 pages (including this cover) are intended for:

To:

Estimator

From:

Celia Navarro

Company:

**Montgomery Construction** 

Division:

**Contracting Group** 

Email#

cliffordi@montcsi.com

FAX#

619-533-3633

Phone #

(619) 578-2538

Phone #

619-533-3431

**RE:** Bid # L-15-6374-DBB-2 – Skyline Temporary Fire Station COMMENTS:

In tabulating the bid results of subject project, we have found that the ESTIMATED TOTAL BASE BID is \$361,970.22 NOT \$361,990.36 as per your bid.

Clifford K, Montgomen

Please FAX or Email acknowledgement/concurrence of the correct amount, by 4:00pm today.

If there are any problems with receiving this FAX transmission (such as missing pages), please contact the Sender at the "From" phone number given above.

THIS MESSAGE IS INTENDED ONLY FOR THE USE OF THE INDIVIDUAL OR ENTITY TO WHICH IT IS ADDRESSED, AND MAY CONTAIN INFORMATION THAT IS PRIVILEGED, CONFIDENTIAL AND EXEMPT FROM DISCLOSURE UNDER APPLICABLE LAW, RECEIPT BY AN UNINTENDED RECIPIENT DOES NOT CONSTITUTE A WAIVER OF ANY APPLICABLE PRIVILEGE.

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# City of San Diego

CONTRACTOR'S NAME: Montgomery Construction Services, Inc.

ADDRESS: 7084 Springford Avenue, San Diego, CA 92114

TELEPHONE NO.: (619) 578-2538 FAX NO.: (619) 546-8482

CITY CONTACT: Clementina Giordano - Contract Specialist, Email: CGiordano@sandiego.gov

Phone No. (619) 533-3481, Fax No. (619) 533-3633

M.Ramirez/BDoringo/ls

# CONTRACT DOCUMENTS



# FOR

# SKYLINE TEMPORARY FIRE STATION

VOLUME 2 OF 2

BID NO.:	L-15-6374-DBB-2
SAP NO. (WBS/IO/CC):	S-00687
CLIENT DEPARTMENT:	1912
COUNCIL DISTRICT:	4
PROJECT TYPE:	BC

# THIS CONTRACT IS SUBJECT TO THE FOLLOWING:

- > THE CITY'S SUBCONTRACTING PARTICIPATION REQUIREMENTS FOR SLBE PROGRAM.
- ➤ COMPETITION RESTRICTED TO: SLBE-ELBE 🛛 or ELBE FIRMS ONLY 🗌.
- ➤ PREVAILING WAGE RATES: STATE ☐ FEDERAL ☐
- > APPRENTICESHIP.

THIS BIDDING DOCUMENT TO BE SUBMITTED IN ITS ENTIRETY REFER TO VOLUME 1 COVER PAGE FOR TIME, DATE, AND LOCATION

# DESCRIPTION

#### PAGE NUMBER

# Volume 2 - Bidding Documents

The following forms must be completed in their entirety and submitted with the Bid. Include the form(s) even if the information does not apply. Where the information does not apply write in N/A. Failure to include any of the forms may cause the Bid to be deemed **non-responsive**. If you are uncertain or have any questions about any required information, contact the City no later than 14 days prior to Bid due date.

1.	Bid/Proposal	3
	Bid Bond	
3.	Non-Collusion Affidavit to be executed by Bidder and Submitted with Bid under 23 USC 112 and PCC 7106	
	Contractors Certification of Pending Actions	
5.	Equal Benefits Ordinance Certification of Compliance	9
	Proposal (Bid)	
	Form AA35 - List of Subcontractors	
8.	Form AA40 - Named Equipment/Material Supplier List	15

#### PROPOSAL

#### **Bidder's General Information**

To the City of San Diego:

Pursuant to "Notice Inviting Bids", specifications, and requirements on file with the City Clerk, and subject to all provisions of the Charter and Ordinances of the City of San Diego and applicable laws and regulations of the United States and the State of California, the undersigned hereby proposes to furnish to the City of San Diego, complete at the prices stated herein, the items or services hereinafter mentioned. The undersigned further warrants that this bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and, further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

The undersigned bidder(s) further warrants that bidder(s) has thoroughly examined and understands the entire Contract Documents (plans and specifications) and the Bidding Documents therefore, and that by submitting said Bidding Documents as its bid proposal, bidder(s) acknowledges and is bound by the entire Contract Documents, including any addenda issued thereto, as such Contract Documents incorporated by reference in the Bidding Documents.

# IF A SOLE OWNER OR SOLE CONTRACTOR SIGN HERE:

(1)	Name under which business is conducted		- Marine Mark World Marine Wall Control of the Cont
(2)	Signature (Given and surname) of proprietor		
(3)	Place of Business (Street & Number)		
(4)	City and State		Zip Code
(5)	Telephone No.	Facsimile No	
(6)	Email Address		
<u>IF A P</u>	ARTNERSHIP, SIGN HERE:		
(1)	Name under which business is conducted		

# BIDDING DOCUMENTS (2) Name of each member of partnership, indicate character of each partner, general or special

	(limited):	
(3)	Signature (Note: Signature must be made by a ger	
	Full Name and Character of partner	
(4)	Place of Business (Street & Number)	
(5)	City and State	Zip Code
(6)	Telephone No.	Facsimile No.
(7)	Email Address	

# IF A CORPORATION, SIGN HERE:

- (1) Name under which business is conducted Mantgomery Construction Services, Inc.
- (2) Signature, with official title of officer authorized to sign for the corporation:

Clifford K. Montgomery
(Signature)

Clifford K. Montgomery
(Printed Name)

President
(Title of Officer)

(Impress Corporate Seal Here)

- (3) Incorporated under the laws of the State of <u>California</u>
- (4) Place of Business (Street & Number) <u>7084 Springford Avenue</u>
- (5) City and State San Diego, CA Zip Code 92114
- (6) Telephone No. <u>(619) 578-2538</u> Facsimile No. <u>(619) 546-8482</u>
- (7) Email Address <u>cliffordj@montcsi.com</u>

# THE FOLLOWING SECTIONS MUST BE FILLED IN BY ALL PROPOSERS:

In accordance with the "NOTICE INVITING BIDS", the bidder holds a California State Contractor's license for the following classification(s) to perform the work described in these specifications:
LICENSE CLASSIFICATION A, B, C-12
LICENSE NO. <u>928118</u> EXPIRES <u>01/31/2015</u> ,
This license classification must also be shown on the front of the bid envelope. Failure to show license classification on the bid envelope may cause return of the bid unopened.
TAX IDENTIFICATION NUMBER (TIN):
Email Address: <u>cliffordj@montcsi.com</u>
THIS PROPOSAL MUST BE NOTARIZED BELOW:
I certify, under penalty of perjury, that the representations made herein regarding my State Contractor's license number, classification and expiration date are true and correct.
Signature Clifford K. Montgomery Title President
SUBSCRIBED AND SWORN TO BEFORE ME, THIS <u>15th</u> DAY OF <u>January</u> , <u>2015</u>
Notary Public in and for the County of San Diego, State of CA
Kallylanus
(NOTAR <b>J</b> AL SEAL)
COMM. #2046215 Notary Public · California San Diego County My Comm. Expires Oct. 20, 2017

# CALIFORNIA JURAT WITH AFFIANT STATEMENT

**GOVERNMENT CODE § 8202** 

<ul> <li>☑ See Attached Document (Notary to cross out lines 1–6 below)</li> <li>☐ See Statement Below (Lines 1–6 to be completed only by document signer[s], not Notary)</li> </ul>				
1				
2				
3				
	MAN THE BEST AND THE			
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5	. This was now with the data and can the fact and can this contract and and only into any cast of one can			
6Signature of Document Signer No. 1	Signature of Document Signer No. 2 (if any)			
	icate verifies only the identity of the individual who signed the the truthfulness, accuracy, or validity of that document.			
State of California	Subscribed and sworn to (or affirmed) before me			
County of San Diego	on this 15th day of January, 2015,			
9	by Date Month Year  (1) Clifford Kenneth Montgomero			
KATHY J. DAVIS COMM. #2046215 Notary Public · California	(and (2)), Name(s) of Signer(s)			
San Diego County  My Comm. Expires Oct. 20, 2017	proved to me on the basis of satisfactory evidence to be the person(s) who appeared before me.			
	Signature Kill Maus			
	Signature of Notary Public			
Seal Place Notary Seal Above	DTIONAL			
Though this section is optional, completing th	PTIONAL is information can deter alteration of the document or his form to an unintended document.			
Description of Attached Document				
	Document Date:			
Number of Pages: Signer(s) Other Than N	Named Above:			

# CALIFORNIA JURAT WITH AFFIANT STATEMENT **GOVERNMENT CODE § 8202** See Attached Document (Notary to cross out lines 1-6 below) ☐ See Statement Below (Lines 1–6 to be completed only by document signer[s], not Notary) 1 Signature of Document Signer No. 1 Signature of Document Signer No. 2 (if any) A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document. Subscribed and sworn to (or affirmed) before me State of California-County of (and (2)\_ Name(s) of Signer(s) proved to me on the basis of satisfactory evidence COMM. #2046215 to be the person(s) who appeared before me. Notary Public - California San Diego County Comm. Expires Oct. 20. Signature / Signature of Notary Public Seal Place Notary Seal Above **OPTIONAL** Though this section is optional, completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

Document Date:

Description of Attached Document

Title or Type of Document: \_\_\_\_\_\_

Number of Pages: \_\_\_\_\_ Signer(s) Other Than Named Above: \_\_\_

Bond No: 10021094 Premium: \$0.00

# BIDDING DOCUMENTS

# **BID BOND**

KNOW ALL MEN BY THESE PRESENTS,		
That Montgomery Construction Services, Inc.	as	Principal, and
Hudson Insurance Company		as Surety, are
held and firmly bound unto The City of San Diego h	nereinafter called "OWNER," in the	
OF THE TOTAL BID AMOUNT*for the paymen	nt of which sum, well and truly to	be made, we
bind ourselves, our heirs, executors, administrators	, successors, and assigns, jointly	and severally,
firmly by these presents.		
*Bid amount not to exceed \$500,000.00 WHEREAS, said Principal has submitted a Bid to	said OWNED to perform the Wi	OPK required
under the bidding schedule(s) of the OWNER's Conti		OKK required
under the ording selectate(s) of the O WINDERS Conta	race 1500amonts ontitled	
Skyline Temporary Fire Station project # L-1	5-6374-DBB-2	
of agreement bound with said Contract Documents, and furnishes the required Performance Bond and Fand void, otherwise it shall remain in full force and eby said OWNER and OWNER prevails, said Surety such suit, including a reasonable attorney's fee to be to	Payment Bond, then this obligation offect. In the event suit is brought we shall pay all costs incurred by sain	n shall be null upon this bond
SIGNED AND SEALED, this 13th		
· Handapaganan Andreas	day of January	, 20_15
	day of January  Hudson Insurance Company	
		, 20 <u>15</u> (SEAL)
Montgomery Construction Services, Inc. (SEAL)	Hudson Insurance Company	- Alley data-type of the second
Montgomery Construction Services, Inc. (SEAL) (Principal)	Hudson Insurance Company (Surety)	- Alley gallets to a construction of the const
Montgomery Construction Services, Inc. (SEAL) (Principal)	Hudson Insurance Company (Surety) By:	- Alley gallets to a construction of the const
Montgomery Construction Services, Inc. (SEAL)	Hudson Insurance Company (Surety)	(SEAL)

	KANYONGANANIANIANIANIANIANIANIANIANIANIANIANIAN
A notary public or other officer completing this certificate document to which this certificate is attached, and not the	verifies only the identity of the individual who signed the truthfulness, accuracy, or validity of that document.
State of California )  County of Los Angeles )	
	ner Allen. Notary Public
On Cylicary 13,2015 before me, Heath	Here Insert Name and Title of the Officer
personally appeared Canaan Hille	
polositally appeared	Name(s) of Signer(s)
	,
who proved to me on the basis of satisfactory e subscribed to the within instrument and acknowled his/her/their authorized capacity(ies), and that by his/or the entity upon behalf of which the person(s) acte	dged to me that be/she/they executed the same in her/their signature(s) on the instrument the person(s);
y and the state of	certify under PENALTY OF PERJURY under the laws the State of California that the foregoing paragraph true and correct.
Notary Public - California NA Los Angeles County	ITNESS my hand and official seal. gnature
My Comm. Expires May 11, 2017	Signature of Notary Public
Place Notary Seal Above	
Though this section is optional, completing this in fraudulent reattachment of this fo	formation can deter alteration of the document or
Description of Attached Document	•
Title or Type of Document:	Document Date:
Number of Pages: Signer(s) Other Than	Named Above:
Capacity(ies) Claimed by Signer(s) Signer's Name:	Signer's Name:
☐ Corporate Officer — Title(s):	☐ Corporate Officer — Title(s):
□ Partner — □ Limited □ General	□ Partner — □ Limited □ General
☐ Individual ☐ Attorney in Fact	☐ Individual ☐ Attorney in Fact
☐ Trustee ☐ Guardian or Conservator	☐ Trustee ☐ Guardian or Conservator
☐ Other:Signer Is Representing:	☐ Other:Signer Is Representing:
	g

Bond Number: 10021094



# POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That HUDSON INSURANCE COMPANY, a corporation of the State of Delaware, with offices at 100 William Street, New York, New York, 10038, has made, constituted and appointed, and by these presents, does make, constitute and appoint

#### Canaan Hillery

### of the State of CA

its true and lawful Attorney(s)-in-Fact, at New York, New York, each of them alone to have full power to act without the other or others, to make. execute and deliver on its behalf, as Surety, bonds and undertakings given for any and all purposes, also to execute and deliver on its behalf as aforesaid renewals, extensions, agreements, waivers, consents or stipulations relating to such bonds or undertakings provided, however, that no single bond or undertaking shall obligate said Company for any portion of the penal sum thereof in excess of the sum of

Fifty Thousand Dollars (\$50,000.00)

Such bonds and undertakings when duly executed by said Attorney(s)-in-Fact, shall be binding upon said Company as fully and to the same extent as if signed by the President of said Company under its corporate seal attested by its Secretary.

In Witness Whereof, HUDSON INSURANCE COMPANY has caused these presents to be of its Executive Vice President thereunto duly authorized, on this 31st day of October , 2013 at New York, New York.

estateles 1918

Corporate Secretary

STATE OF NEW YORK COUNTY OF NEW YORK.

HUDSON INSURANCE COMPANY

Christopher T. Suarez Executive Vice President

On the 31st day of October , 2013 before me personally came Christopher T. Suarez to me known, who being by me duly sworn did depose and say that he is an Executive Vice President of HUDSON INSURANCE COMPANY, the comporation described herein and which executed the above instrument, that he knows the seal of said Corporation, that the seal affixed to said instrument is such corporate seal, that it was so affixed by order of the Board of Directors of said Corporation, and that he signed his name thereto by like order.

(Notarial Seal)

(Notarial Seal)

#N1MLI6067553

ANN M. MURPHY Notary Public, State of New York No. 01MU6067553

Qualified in Nassau County

Commission Expires December 10, 2017

CERTIFICATION

STATE OF NEW YORK COUNTY OF NEW YORK

The undersigned Dina Daskalakis hereby certifies:

That the original resolution, of which the following is a true and correct copy, was duly adopted by unanimous written consent of the Board of Directors of Hudson Insurance Company dated July 27th, 2007, and has not since been revoked, amended or modified:

"RESOLVED, that the President, the Executive Vice Presidents, the Senior Vice Presidents and the Vice Presidents shall have the authority and discretion, to appoint such agent or agents, or attorney or attorneys-in-fact, for the purpose of carrying on this Company's surety business, and to empower such agent or agents, or attorney or attorneys-in-fact, to execute and deliver, under this Company's seal or otherwise, bonds obligations, and recognizances, whether made by this Company as surety thereon or otherwise, indemnity contracts, contracts and certificates, and any and all other contracts and undertakings made in the course of this Company's surety business, and renewals, extensions, agreements, waivers, consents or stipulations regarding undertakings so made; and

FURTHER RESOVLED, that the signature of any such Officer of the Company and the Company's seal may be affixed by facsimile to any power of attorney or certification given for the execution of any bond, undertaking, recognizance, contract of indemnity or other written obligation in the nature thereof or related thereto, such signature and seal when so used whether heretofore or hereafter, being hereby adopted by the Company as the original signature of such officer and the original seal of the Company, to be valid and binding upon the Company with the same force and effect as though manually affixed.

THAT the above and foregoing is a full, true and correct copy of Power of Attorney issued by said Company, and of the whole of the original and that the said Power of Attorney is still in full force and effect and has not been revoked, and furthermore that the Resolution of the Board of Directors, set forth in the said Power of Attorney is now in force.

Witness the hand of the undersigned and the seal of said Corporation this

January

2015

Dina Daskalakts, Corporate Secretary

Parfer 10 8 2010 (v1)

# NON-COLLUSION AFFIDAVIT TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID UNDER 23 UNITED STATES CODE 112 AND PUBLIC CONTRACT CODE 7106

State of California	)	
	) ss.	
County of San D	Diego)	
Cliff	ord K. Montgomery	, being first duly sworn, deposes and
says that he or she is	President	of the party making the foregoing
bid that the bid is not n	nade in the interest of, or on be	chalf of, any undisclosed person, partnership,
company, association, o	rganization, or corporation; that	the bid is genuine and not collusive or sham;
that the bidder has not o	firectly or indirectly induced or	solicited any other bidder to put in a false or
sham bid, and has not d	irectly or indirectly colluded, co	onspired, connived, or agreed with any bidder
or anyone else to put in	a sham bid, or that anyone shal	I refrain from bidding; that the bidder has not
in any manner, directly	or indirectly, sought by agre	eement, communication, or conference with
anyone to fix the bid pr	ice of the bidder or any other	pidder, or to fix any overhead, profit, or cost
element of the bid price,	, or of that of any other bidder,	or to secure any advantage against the public
body awarding the cor	ntract of anyone interested in	the proposed contract; that all statements
contained in the bid are	true; and further, that the bidde	r has not, directly or indirectly, submitted his
or her bid price or any	breakdown thereof, or the cont	ents thereof, or divulged information or data
relative thereto, or pai	d, and will not pay, any fee	to any corporation, partnership, company
association, organizatior	n, bid depository, or to any men	nber or agent thereof to effectuate a collusive
or sham bid.		
	Signed: Clyford K, M.	ontgomenn)
	Title: <u>President</u>	
	Subscribed and sworn to before n	ne this <u>15th</u> day of <u>January</u> ,20 <u>15</u>
	Late Maner	
	in Cypra	Notary Public
	•	COURT A TEN

(SEAL)



# CONTRACTORS CERTIFICATION OF PENDING ACTIONS

As part of its bid or proposal (Non-Price Proposal in the case of Design-Build contracts), the Bidder shall provide to the City a list of all instances within the past 10 years where a complaint was filed or pending against the Bidder in a legal or administrative proceeding alleging that Bidder discriminated against its employees, subcontractors, vendors or suppliers, and a description of the status or resolution of that complaint, including any remedial action taken.

CHECK C	ONE BOX ONL	<u>Y.</u>			
X	subject of	signed certifies that within a complaint or pending ac r discriminated against its	tion in a lega	l administr	ative proceeding alleging
	subject of that Bidde A descrip	rsigned certifies that with a complaint or pending ac or discriminated against its tion of the status or resol en and the applicable dates	tion in a lega employees, s ution of that	l administr ubcontract complaint	rative proceeding alleging cors, vendors or suppliers.
DATE OF CLAIM	LOCATION	DESCRIPTION OF CLAIM	LITIGATION (Y/N)	Status	RESOLUTION/REMEDIAL ACTION TAKEN
Contractor	· Name: <u>Montgo</u>	omery Construction Ser	vices, Inc.		
Certified E		Clifford K. Montgomer Name		Title	President
	Cliff	ord V. Montgome Signature	n	Date _	1/15/2015

USE ADDITIONAL FORMS AS NECESSARY

# EQUAL BENEFITS ORDINANCE CERTIFICATION OF COMPLIANCE



For additional information, contact:

CITY OF SAN DIEGO
EQUAL BENEFITS PROGRAM
202 C Street, MS 9A, San Diego, CA 92101
Phone (619) 533-3948 Fax (619) 533-3220

			ANY INFOR	MATION			
Company Name	Montgomery Const	ruction Serv	rices, Inc.		Contact Name:	Clifford Mo	ntgomery
Company Addre	<sup>ss:</sup> 7084 Springford A	venue., San	Diego, CA 92	2114	Contact Phone:	(619) 578-25	38
					Contact Email:	cliffordj@n	nontcsi.com
			RACT INFOR	RMATION			
Contract Title:	<u>Skyline Temporary F</u>	ire Station				Start Date:	
	er (if no number, state loc					End Date:	
	SUMMARY OF						
maintain equal b Contractor s Benefits i travel/rele Any bene Contractor s enrollment Contractor s	fits Ordinance [EBO] requencits as defined in SDMO hall offer equal benefits to nelude health, dental, visio ocation expenses; employed fit not offer an employee whall post notice of firm's operiods.  hall allow City access to rehall submit EBO Certificate mmary is provided for other firm's operioded for other thanks.	E §22.4302 for employees with a insurance; per eassistance provith a spouse, is equal benefits procords, when rection of Complia	the duration of the spouses and emension/401(k) plate grams; credit unit not required to be policy in the worth quested, to confinence, signed under the spouse of the signed under the spouse of the	ne contract. The ployees with ans; bereavem ion membershoe offered to a kplace and numbers are compliances penalty of preserver.	o comply: domestic partner ent, family, pare nip; or any other an employee with otify employees be with EBO requerjury, prior to a	ers.  ental leave; discorbenefit.  In a domestic part at time of hire a uirements.  award of contract	unts, child care; mer. and during open
www.sandiego.go	v/aclministration.						
	CONTRACTO						
Please indicate y	our firm's compliance statu	us with the EBC	D. The City may	request suppo	orting documents	ation.	
X	I affirm compliance with	n the EBO beca	use my firm (cor	ntractor must	select one reaso	in):	
	☐ Provides equal b ☐ Provides no bend ☐ Has no employed ☐ Has collective be expired.	efits to spouses es.	or domestic part	eners.	ary 1, 2011, that	has not been rene	ewed or
口	I request the City's appromade a reasonable effort the availability of a cash every reasonable effort to	but is not able equivalent for	to provide equal benefits available	benefits upor e to spouses b	n contract award out not domestic	. I agree to notify	employees of
	r any contractor to know ne execution, award, amen						
firm understands	perjury under laws of the the requirements of the E cash equivalent if authoriz	qual Benefits C					
	Montgomery/ Preside lame/Title of Signatory	nt	Clifford	K. Mon Sign	lgomenz ature	<u></u>	1/15/2015 Date
Receipt Date:	EBO Analyst:	FOR OFF	CICIAL CITY   Approved		Y proved – Reasor	1:	

Skyline Temporary Fire Station Equal Benefits Ordinance Certification of Compliance Volume 2 of 2 (Rev. Oct. 2014)

(Rev 02/15/2011)

# PROPOSAL (BID)

The Bidder agrees to the construction of **Skyline Temporary Fire Station** for the City of San Diego, in accordance with these contract documents for the prices listed below. The Bidder guarantees the Contract Price for a period of 120 days (90 days for federally funded contracts and contracts valued at \$500,000 or less) from the date of Bid opening to Award of the Contract. The duration of the Contract Price guarantee shall be extended by the number of days required for the City to obtain all items necessary to fulfill all conditions precedent e.g., bond and insurance.

Item	Quantity	Unit	NAICS	Payment Reference	Description	Unit Price	Extension	
					BASE BID			
1	1	LS	238990	9-3.1	Fire Station No. 51 Temporary Facility at 4072 Park Blvd., San Diego CA. 92103		\$ 186,104.52	
2	I	LS	238990	9-3.1	Accessible ADA Ramp		\$ 3,153.65	
3	1440	SF	238990	301-2.4	6-Inch Decomposed Granite on Native	\$ 7.78	\$ <u>11,199.25</u>	11,203,20
4	3880	SF	238990	302-6.8	6-Inch Concrete Pavement w/rebar over Class II Aggregate Base	\$ 8.04	\$ 31,202.57	31,195.20
5	1500	SF	238110	303-1.11	6-Inch Concrete Foundation w/rebar on Crush Rock	\$ 33.92	\$ 50,878.65	20'880 w
6	46	SF	238990	302-6.8	12-Inch Concrete Pavement Over Compacted Native	\$ 93.51		4,301,46
7	9400	SF	238990	302-5.9	3-Inch Asphalt Paving Over 8-Inch Cement Compact Treated Base	\$ 3.71	\$ 34,891.86	34,874.00 QW

Skyline Temporary Fire Station Proposal (BID) Volume 2 of 2 (Rev. Oct. 2014)

# BIDDING DOCUMENTS

Item	Quantity	Unit	NAICS	Payment Reference	Description	Unit Price	Extension
8	l	AL	236220	7-5.3	Building Permits: Mechanical, Plumbing and Electrical and Fees Related to Fuel Tank Permit, Including City of San Diego, Water & Sewer Capacities and Connection Fees-Type I		\$6,000.00
9	1	AL	238210		SDG&E Service Fee, Dry Utilities Connections, Pack Bell, AT&T and Time Warner-Type I		\$2,500.00
10	1	LS	524126	2-4.1	Bond (Payment and Performance)		\$8,239.32
Army	1	AL		9-3.5	Field Orders - Type II Allowance		\$12,000.00
12	n-i	LS	541330	701-13.9.5	Water Pollution Control Program Development		\$ 938.95
13	1	LS	238990	701-13.9.5	Water Pollution Control Program Implementation		\$ 10,579.92

ESTIMATED TOTAL BASE BID: \$ 361,998.36 00 \$ 364,998.36

BIDDING DOCUMENTS
TOTAL BID PRICE FOR BID (Items 1 through 13 inclusive) amount written in words:
THREE HUNDRED SIXTY ONE THOUSAND NINE HUNDRED NINETY DOLLARS THIRTY SIX CENTS
The Bid shall contain an acknowledgment of receipt of all addenda, the numbers of which shall be filled in on the Bid form. If an addendum or addenda has been issued by the City and not noted as being received by the Bidder, this proposal shall be rejected as being <b>non-responsive</b> . The following addenda have been received and are acknowledged in this bid: A
The names of all persons interested in the foregoing proposal as principals are as follows:
Clifford K. Montgomery/President, Patricia A. Montgomery/Corporate Secretary
IMPORTANT NOTICE: If Bidder or other interested person is a corporation, state secretary, treasurer, and manager thereof; if a co-partnership, state true name of firm, also names of all individual co-partners composing firm; if Bidder or other interested person is an individual, state first and last names in full.
Bidder: Montgomery Construction Services, Inc., Clifford K. Montgomery, Patricia A. Montgomery
Title: President, Corporate Secretary
Business Address:7084 Springford Avenue, San Diego, CA 92114
Place of Business:
Place of Residence:
Signatura: Chille O & Markenser

Skyline Temporary Fire Station Proposal (BID) Volume 2 of 2 (Rev. Oct. 2014)

# **BIDDING DOCUMENTS**

#### NOTES:

- A. The low Bid will be determined by the City based on the Base Bid alone.
- B. After the low Bid has been determined, the City may, at its sole discretion, award the Contract for the Base Bid alone or for the Base Bid plus any combination of alternates.
- C. Prices and notations shall be in ink or typewritten. All corrections (which have been initiated by the Bidder using erasures, strike out, line out, or "white-out") shall be typed or written in with ink adjacent thereto, and shall be initiated in ink by the person signing the bid proposal.
- D. Failure to initial all corrections made in the bidding documents may cause the Bid to be rejected as **non-responsive** and ineligible for further consideration.
- E. Blank spaces must be filled in, using figures. Bidder's failure to submit a price for any Bid item that requires the Bidder to submit a price shall render the Bid **non-responsive** and shall be cause for its rejection.
- F. Unit prices shall be entered for all unit price items. Unit prices shall not exceed two (2) decimal places. If the Unit prices entered exceed two (2) decimal places, the City will only use the first two digits after the decimal points without rounding up or down.
- G. All extensions of the unit prices bid will be subject to verification by the City. In the case of inconsistency or conflict between the product of the Quantity x Unit Price and the Extension, the product shall govern.
- H. In the case of inconsistency or conflict, between the sums of the Extensions with the estimated total Bid, the sum of the Extensions shall govern.
- 1. Bids shall not contain any recapitulation of the Work. Conditional Bids will be rejected as being **non-responsive**. Alternative proposals will not be considered unless called for.
- J. Subcontractors' License Number must be filled in. Failure to provide the information specified may deem the bidder **non-responsive**.

#### LIST OF SUBCONTRACTORS

In accordance with the requirements provided in the "Subletting and Subcontracting Fair Practices Act". Division 2, Part 1, Chapter 4 of the Public Contract Code, the Bidder shall list below the name and address of each Subcontractor who will perform work, labor, render services or specially fabricates and installs a portion [type] of the work or improvement, in an amount in excess of 0.5% of the Contractor's total Bid. The Bidder shall also list below the portion of the work which will be done by each subcontractor under this Contract. The Contractor shall list only one Subcontractor for each portion of the Work. The **DOLLAR VALUE** of the total Bid to be performed shall be stated for all subcontractors listed. Failure to comply with this requirement shall result in the Bid being rejected as **non-responsive** and ineligible for award. The Bidder's attention is directed to the Special Provisions - General; Paragraph 2-3 Subcontracts, which stipulates the percent of the Work to be performed with the Bidders' own forces. The Bidder shall list all SLBE, ELBE, DBE, DVBE, MBE, WBE, OBE, SDB, WoSB, HUBZone, and SDVOSB Subcontractors that Bidders are seeking recognition towards achieving any mandatory, voluntary, or both subcontracting participation percentages.

Subcontractors' License Number must be filled in. Failure to provide the information specified may deem the bidder non-responsive.

NAME, ADDRESS AND TELEPHONE NUMBER OF SUBCONTRACTOR	CONSTRUCTOR OR DESIGNER	SUBCONTRACTOR LICENSE NUMBER	TYPE OF WORK	DOLLAR VALUE OF SUBCONTRACT (MUST BE FILLED OUT)	MBE, WBE, DBE, DVBE, OBE, ELBE, SLBE, SDB, WoSB, HUBZone, OR SDVOSB®	WHERE CERTIFIED ②	CHECK IF JOINT VENTURE PARTNERSHIP
Name: RAP Engineering, Inc.  Address: 420 Olive Avenue  City: Vista State: CA  Zip: 92083 Phone: (760) 233-2980  Email:	Constructor	A880956	Paving	\$ 36,754	MBE DBE ELBE SLBE	CALTRANS	
Name: J & B Engineering  Address: 13670 Danielson St. Suite G  City: Poway State: CA  Zip: 92064 Phone: (858) 513-1741  Email: jbsurvey@sbcglobal.net	Designer	RCE 29118	Surveying	\$ 6,750	MBE SBE	CALTRANS	

① As appropriate, Bidder shall identify Subcontractor as one of the following and shall include a valid proof of certification (except for OBE, SLBE and ELBE):

Certified Minority Business Enterprise	MBE	Certified Woman Business Enterprise	WBE
Certified Disadvantaged Business Enterprise	DBE	Certified Disabled Veteran Business Enterprise	DVBE
Other Business Enterprise	OBE	Certified Emerging Local Business Enterprise	ELBE
Certified Small Local Business Enterprise	SLBE	Small Disadvantaged Business	SDB
Woman-Owned Small Business	WoSB	HUBZone Business	HUBZone
Service-Disabled Veteran Owned Small Business	SDVOSB		

② As appropriate, Bidder shall indicate if Subcontractor is certified by:

City of San Diego	CITY	State of California Department of Transportation San Diego Regional Minority Supplier Diversity Council	CALTRANS
California Public Utilities Commission	CPUC		SRMSDC
State of California's Department of General Services	CADoGS	City of Los Angeles U.S. Small Business Administration	LA
State of California	CA		SBA

The Bidder will not receive any subcontracting participation percentages if the Bidder fails to submit the required proof of certification.

### NAMED EQUIPMENT/MATERIAL SUPPLIER LIST

The Bidder seeking the recognition of equipment, materials, or supplies obtained from Suppliers towards achieving any mandatory, voluntary, or both subcontracting participation percentages shall list the Supplier(s) on the Named Equipment/Material Supplier List. The Named Equipment/Material Supplier List, at a minimum, shall have the name, locations (City) and the **DOLLAR VALUE** of the Suppliers. The Bidder will be credited up to 60% of the amount to be paid to the Suppliers for such materials and supplies unless vendor manufactures or substantially alters materials and supplies in which case 100% will be credited. The Bidder is to indicate (Yes/No) whether listed firm is a supplier or manufacturer. In calculating the subcontractor participation percentages, vendors/suppliers will receive 60% credit of the listed **DOLLAR VALUE**, whereas manufacturers will receive 100% credit of the listed **DOLLAR VALUE**, whereas manufacturers will receive 100% credit. If no indication provided, listed firm will be credited at 60% of the listed **DOLLAR VALUE** for purposes of calculating the subcontractor participation percentages.

NAME, ADDRESS AND TELEPHONE NUMBER OF VENDOR/SUPPLIER	MATERIALS OR SUPPLIES	DOLLAR VALUE OF MATERIAL OR SUPPLIES (MUST BE FILLED OUT)	SUPPLIER (Yes/No)	MANUFACTURER (Yes/No)	MBE, WBE, DBE, DVBE, OBE, ELBE, SLBE, SDB, WoSB, HUBZone, OR SDVOSB⊕	WHERE CERTIFIED®
Name:						
Address:						
City: State:		,				
Zip:Phone:						
Email:						
Nama						
Name:						
Address:						
City:         State:           Zip:         Phone:						
i						
Email:						
As appropriate, Bidder shall identify Vendor/Suppl	lier as one of the following	g and shall include a vali	d proof of certif	ication (except for OBE,	SLBE and ELBE):	
Certified Minority Business Enterprise	M	BE Certif	ed Woman Bus	iness Enterprise		WBE
Certified Disadvantaged Business Enterprise				teran Business Enterpris	e	DVBE
Other Business Enterprise				ocal Business Enterprise		ELBE
Certified Small Local Business Enterprise Woman-Owned Small Business	•		Disadvantaged Cone Business	Business	Y YI	SDB UBZone
Service-Disabled Veteran Owned Small Busines		OVOSB HUBZ	one business		П	JBZone
② As appropriate, Bidder shall indicate if Vendor/Sup	pplier is certified by:					
City of San Diego	CI			partment of Transportati		TRANS
California Public Utilities Commission				Ainority Supplier Divers	ity Council Sl	RMSDC
State of California's Department of General Ser			f Los Angeles			LA
State of California	CA	4. U.S. S	mall Business A	Administration		SBA

The Bidder will not receive any subcontracting participation percentages if the Bidder fails to submit the required proof of certification.

# City of San Diego

CITY CONTACT: Clementina Giordano - Contract Specialist, Email: CGiordano@sandiego.gov

Phone No. (619) 533-3481, Fax No. (619) 533-3633

**ADDENDUM "A"** 

**FOR** 



# SKYLINE TEMPORARY FIRE STATION

BID NO.:	L-15-6374-DBB-2
SAP NO. (WBS/IO/CC):	S-00687
CLIENT DEPARTMENT:	1912
COUNCIL DISTRICT:	4
PROJECT TYPE:	BC

# **BID DUE DATE:**

1:30 PM JANUARY 15, 2015 CITY OF SAN DIEGO PUBLIC WORKS CONTRACTS 1010 SECOND AVENUE, 14<sup>th</sup> FLOOR, MS 614C SAN DIEGO, CA 92101

#### A. CHANGES TO CONTRACT DOCUMENTS

The following changes to the Contract Documents are hereby made effective as though originally issued with the bid package. Bidders are reminded that all previous requirements to this solicitation remain in full force and effect.

# **B. BIDDER'S QUESTIONS**

# **Questions pertaining to Scope or Specifications**

- **Q1.** Please clarify extent of utility and pad demolition
- **A1.** The contractor shall demolish the foundation pad of the existing building.

The contractor shall demolish all other items shown on the plans except for:

- Existing building and utilities within the building.
- The City's As-Needed contractor (Miller Environmental) will cap the utilities at the building foundation.
- **Q2.** Please clarify existing facility demolition and abatement Not in Contract
- **A2.** The demolition of the existing facility and the abatement is not a part of this contract. This work will be done by others per separate contract prior to the start of construction of the Temporary Fire Station.
- Q3. Please clarify the 24' x 60' living quarters module will be supplied and installed by others outside of contract we are only to provide hook ups and foundations
- **A3.** Contractor is responsible for constructing the utilities up to the modular unit point of connection and for providing AC paving under the modular living quarters unit.

The modular living quarters unit will be delivered, installed, and final utility connections will be completed by others.

- Q4. Please clarify 30'x45' temporary apparatus shelter to be supplied and installed by this contract. If temporary apparatus shelter procurement exceeds the 45 calendar day allotted for the project, will liquidated damages apply? Once we submit for approval, fabrication and delivery might exceed contract duration.
- **A4.** The temporary apparatus shelter is to be supplied by the City.

Contractor is responsible to deliver existing temporary apparatus shelter to the site (the storage location of the temporary apparatus shelter is within 30 miles of the project site). Contractor is responsible to hire qualified installation contractor to install the temporary apparatus shelter.

- Liquidated damages will be applied if the project goes beyond the 45 working days allotted.
- **Q5.** Temporary apparatus shelter will be under separate permit as stated on Site Plan AS1.0. Will this permit be obtained and paid for by city? Will primary permit be obtained and paid for by city?
- **A5.** Contractor is responsible to obtain and pay for all necessary permits to install the approved temporary apparatus shelter.
  - Contractor is responsible to obtain and pay for primary permit.
- **Q6.** Will existing fence around site remain during our project duration? Can we use that as temp fence and exclude installing our own temp fence?
- **A6**. The existing fence can be used during the duration of construction.
- Q7. Please clarify if work is to be completed in 60 working days or 45 working days?
- **A7**. Contractor needs to complete work in 45 days.
- **Q8.** Well caping is not included in this scope of work?
- **A8**. The wells have been capped by Ninyo and Moore and are not part of this project's scope of work.
- **A9.** Sheet AS1.1: Are privacy slats required in the fencing, if so where?
- **A9.** Privacy slats are required for the entire length of the new fence.
- **Q10.** Sheet A1.0: Will the ramp & stairs be supplied with the living quarters?
- **A10.** Contractor shall supply and install the required ADA ramp and stairs that meet all requirements.
- Q11. Sheet AS1.0: Will the living quarters be installed over the new asphalt?
- **A11.** The contractor shall install the living quarters module over new asphalt.
- **Q12.** Will the gas station foundation, slab, & apron be removed with the building?
- **A12.** The contractor is responsible for the removal of the gas station foundation, slab, & apron.
- **Q13.** On sheet ASD1.0, who is responsible for note 3,5,6,7,8,9,10,14,15,16,17,18,19.
- **A13.** Contractor shall complete items 5, 6, 7, 8, 9, 10, and 15 on sheet ASD1.0 that are part of the scope of work for this project.

January 12, 2015 ADDENDUM "A" Page 3 of 4

The scope of work described with items 3, 14, 16, 17, 18, and 19 on sheet ASD1.0 are **not** to be part of the scope of work for this project.

- **Q14.** Does anything need to be done to the existing well heads to accommodate the site improvements?
- **A14.** The wells have been capped by Ninyo and Moore and are not part of this project's scope of work.

James Nagelvoort, Director Public Works Department

Dated: *January 12, 2015* 

San Diego, California

JN/BD/ls

PROJECT MANAGER

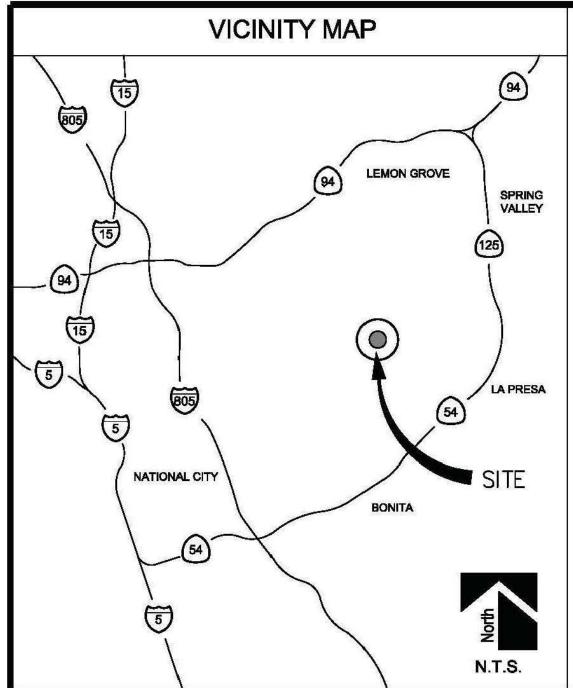
194-1755

CCS27 COORDINATE

CCS83 COORDINATE

38317 - 1 D

DATE COMPLETED



IF THIS BAR DOES

**NOT MEASURE 1"** 

THEN DRAWING IS

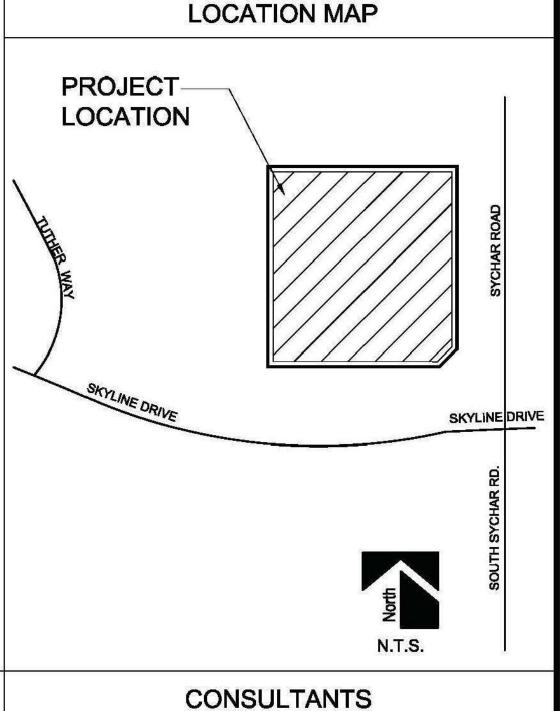
NOT TO SCALE.

PUBLIC WORKS PROJECT

# SKYLINE TEMPORARY FIRE STATION

SAN DIEGO, CALIFORNIA

7180 SKYLINE DRIVE, SAN DIEGO, CALIFORNIA 92114



SAN DIEGO, CA 92121

WWW.NADELARC.COM

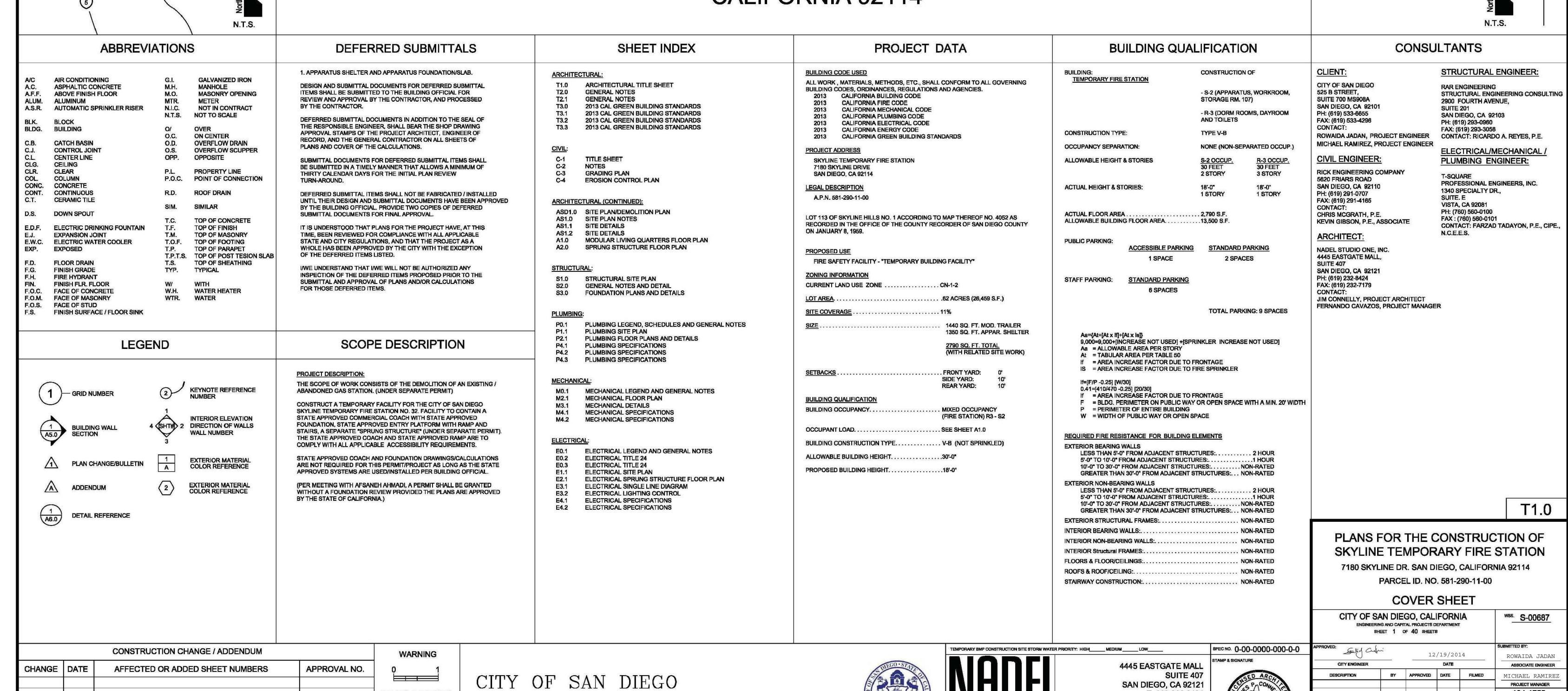
C.I.P. NO.00-000.0

CITY CONTRACT

SPECIAL INSPECTION NO.

T. 619.232.8424

F. 619.232.7179



# **CONTROLS AND OPERATING MECHANISMS**

OPERABLE EQUIPMENT. (Section1117b.6.2)

. CLEAR FLOOR SPACE COMPLYING WITH Section1118B.4 THAT ALLOWS A FORWARD OR PARALLEL APPROACH BY A PERSON USING A WHEELCHAIR SHALL BE PROVIDED AT CONTROLS, DISPENSERS, RECEPTACLES AND OTHER

**MISCELLANEOUS** 

- THE HIGHEST OPERABLE PART OF ALL CONTROLS, DISPENSERS, RECEPTACLES AND OTHER OPERABLE EQUIPMENT SHALL BE PLACED WITHIN AT LEAST ONE OF THE REACH RANGES SPECIFIED IN Section 11188.5 (forward) and 111BB.6 (Side) (Section 11178.6.3)
- 3. ELECTRICAL AND COMMUNICATION SYSTEM RECEPTACLES ON WALLS SHALL BE MOUNTED NO LESS THAN 15 INCHES (381 mm) ABOVE THE FLOOR. (Section 11178.13.5.1 AND 1117BB.5.2 and Section 210-7 of the California Electrical Code)
- 4. CONTROLS AND OPERATING MECHANISF.IS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 POUNDS (22.2N) OF FORCE. (Section 11178.6.4)
- 5. FLUSH SNAP SWITCHES, THAT ARE MOUNTED IN UNDERGROUND METAL BOXES AND LOCATED WITHIN REACH OF CONDUCTING FLOORS OF OTHER CONDUCTING SURFACES, SHALL BE PROVIDED WITH FACE PLATES OF NON-CONDUCTING, NON-COMBUSTIBLE MATERIAL METAL FACE PLATES SHALL BE OF FERROUS METAL NOT LESS THAN 0.030 INCH (0.762 mm) IN THICKNESS OR OF NONFERROUS METAL NOT LESS THAN 0.040 INCH (1.016 mm) IN THICKNESS. FACE PLATES OF INSULATING MATERIAL SHALL BE NONCOMBUSTIBLE AND NOT LESS THAN 0.10 INCH (2.54 mm) IN THICKNESS, BUT THEY SHALL BE PERMITTED TO BE LESS THAN 0 10 INCH (2.54mm) IN THICKNESS IF FORMED OR REINFORCED TO PROVIDE ADEQUATE MECHANICAL STRENGTH. FACE PLATES SHALL BE INSTALLED SO AS TO COMPLETELY COVER THE WALL OPENING AND SEAT AGAINST THE WALL SURFACE. Section 3BD-9, California Electrical Code.
- 8. SHEAR STRESS INDUCED IN A GRAB BAR OR SEAT BY THE APPLICATION OF A 250-LB POINT LOAD SHALL BE LESS THAN THE ALLOWABLE SHEAR STRESS FOR THE MATERIAL OF THE GRAB BAR OR SEAT, AND ITS MOUNTING BRACKET OR OTHER SUPPORT IS CONSIDERED TO BE FULLY RESTRAINED. THEN DIRECT AND TORSIONAL SHEAR STRESSES SHALL NOT EXCEED THE ALLOWABLE SHEAR STRESS. (Sec 1115B.7.2.2)

**GRAB BARS (CONT.)** 

- 9. SHEAR FORCE INDUCED IN FASTENER OR MOUNTING DEVICES FROM THE APPLICATION OF A 250-LB POINT LOAD, SHALL BE LESS THAN THE ALLOWABLE LATERAL LOAD OF EITHER THE FASTENER OR MOUNTING DEVICE OR THE SUPPORTING STRUCTURE, WHICHEVER HAS THE SMALLER ALLOWABLE LOAD. (Sec. 1115B.7.2.3)
- 10.TENSILE FORCE INDUCED IN A FASTENER BY A DIRECT TENSION FORCE OF A 250-LB POINT LOAD, PLUS THE MAXIMUM MOMENT FROM THE APPLICATION OF A 250-LB POINT LOAD, SHALL BE LESS THAN THE ALLOWABLE WIITHDRAWAL LOAD BETWEEN THE FASTENER AND SUPPORTING STRUCTURE. (Sac. 1115B.7.2.4)
- 11. GRAB BARS SHALL NOT ROTATE WITHIN THEIR FITTINGS Sec. 1115B.7.2.5
- 12. FAUCET CONTROLS ARE TO BE OPERABLE WITH ONE HAND AND NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE v.RIST, AND REQUIRE NO MORE THAN 5 LBS. OF FORCE TO ACTIVATE, EXAMPLES OF ACCEPTABLE DESIGNS ARE LEVER-OPERATED AND PUSH-TYPE CONTROLLED MECHANISMS.
- 13. SELF CLOSING VALVES ARE PERMITTED IF FAUCET REMAINS OPEN FOR A MINIMUM OF 10 SECONDS.
- 14.FLUSH VALVES SHALL BE LOCATED 44" MAXIMUM ABOVE THE FLOOR AND THE MAXIMUM REQUIRED FORCE TO ACTIVATE THE FLUSH VALVE SHALL BE 5 LBS.
- 15. WATER CLOSET WASH VALVES SHALL BE OPERABLE BY AN OSCILLATING HANDLE WITH A MAXIMUM FORCE OF 3 LBS. CONTRACTOR SHALL UTILIZE WINDOW PRODUCTS WITH FULL U-VALVE LABELING BY THE WINDOW MANUFACTURES CHOICE OF DEFAULT OR NFRC-U METHOD.

# PARKING / LOADING ZONES

. STAIRWAYS SHALL HAVE HANDRAILS ON EACH SIDE, AND EVERY STAIRWAY REQUIRED TO BE MORE THAN 88" IN WIDTH SHALL BE PROVIDED WITH NOT LESS THAN ONE INTERMEDIATE HANDRAIL FOR EACH 88" OF REQUIRED WIDTH. INTERMEDIATE HANDRAILS SHALL BE SPACED APPROXIMATELY EQUALLY ACROSS THE ENTIRE WIDTH OF THE STAIRWAY. (Sec. 1003.3.6.1a)

**STAIRWAYS** 

- 2. HANDRAILS TO BE 34" TO 38" ABOVE THE NOSING OF THE TREADS. {Sec. 1133B.4.2.1 and Fig. 118-35)
- HANDRAILS SHALL EXTEND A MINIMUM OF 12" BEYOND THE TOP NOSING AND 12" PLUS THE TREAD WIDTH BEYOND THE BOTTOM NOSING. (Sec. 1133B.4.2.2 end Fig
- . THE HANDGRIP PORTION OF HANDRAILS SHALL BE NOT LESS THAN 1-1/4 INCHES NOR MORE THAN 1-1/2 INCHES IN CROSS SECTIONAL NOMINAL DIMENSION OR THE SHAPE SHALL PROVIDE AN EQUIVALENT GRIPPING SURFACE. (Sec. 1133B.4.2.6)
- 5. WHERE STAIRWAYS OCCUR OUTSIDE A BUILDING, THE UPPER APPROACH AND ALL TREADS SHALL BE MARKED BY A STRIP OF CLEARLY CONTRASTING COLOR AT LEAST 2" AND NO MORE THAN 4" WIDE AND PLACED PARALLEL TO AND NOT MORE THAN 1" FROM THE NOSE OF THE STEP OR LANDING TO ALERT THE VISUALLY IMPAIRED. THE STRIP SHALL BE OF A MATERIAL THAT IS AT LEAST AS SUP-RESISTANT AS THE OTHER TREADS OF TI-IE STAIR. A PAINTED STRIP SHALL BE ACCEPTABLE. (Sec. 1133B.4.4 & Fig. 11B-35)
- 3. ALL TREADS SURFACES SHALL BE SLIP-RESISTANT. WEATHER EXPOSED STAIRS AND THEIR APPROACHES SHALL BE DESIGNED SO THAT WATER WILL NOT ACCUMULATE ON WALKING SURFACES. TREADS SHALL HAVE MINIMUM SMOOTH, ROUNDED, OR CHAMFERED, EXPOSED EDGES, AND NO ABRUPT EDGES, AND NO ABRUPT EDGES AT THE NOSING (front edge) (Sec. 113JB.4.5.1) 118. THE NOSING SHALL NOT PROJECT MORE THAN 1-1/2" PAST THE FACE OF THE RISER BELOW. (Sec. 113.4.5.1 & flG. 11b-35)
- 7. WHERE STAIRS OCCUR INSIDE A BUILDING, THE UPPER APPROACH AND LOWEST TREAD ON EACH FLIGHT OR INTERIOR STAIRS SHALL BE MARKED WITH A STRIPE OF CLEARLY CONTRASTING COLOR AT LEAST 2" WIDE AND PARALLEL TO AND NOT MORE THAN 1" FROM THE NOSE OR LANDING. (Sac 113B4.4 & FIG11B-35)

- 1. ALL ENTRANCES AND ALL EXTERIOR GROUND FLOOR EXIT DOORS TO BUILDINGS AND FACILITIES SHALL BE MADE ACCESSIBLE TO PERSONS WITH
- THE WIDTH AND HEIGHT OF DOORWAYS SHALL COMPLY WITH SECTION 100811 EVERY REQUIRED EXIT DOORWAY SHALL BE OF A SIZE AS TO PERMIT THE INSTALLATION OF A DOOR NOT LESS THAN 3 FEET (914 mm) IN WIDTH AND NOT LESS THAN 6 FEET 8 INCHES (2032 mm) IN HEIGHT. WHEN INSTALLED IN EXIT DOORWAYS, EXIT DOORS SHALL BE CAPABLE OF OPENING AT LEAST.
- MOUNTED THAT THE CLEAR WIDTH OF THE EXIT IS NOT LESS THAN 32 INCHES (813 mm) {Sec. 1133B.1.1.1.1. &: 11B.5B)
- 4. FOR HINGED DOORS, THE OPENING WIDTH SHALL BE MEASURED WITH THE DOOR POSITIONED AT AN ANGLE OF 90 DEGREES FROM ITS CLOSED POSITION. (Sec 1133.2.3 &: Fig. 11B-5B(b))
- 5. WHERE A PAIR OF DOORS IS UTILIZED. AT LEAST ONE OF THE DOORS SHALL PROVIDE A CLEAR, UNOBSTRUCTED OPENING WIDTH OF 32" WITH THE LEAF POSITIONED AT AN ANGLE OF 90 DEGREES FROM ITS CLOSED POSITION. (Sec. 1133.2.3.1).
- 6. THERE SHALL BE A LEVEL AND CLEAR FLOOR LANDING ON EACH SIDE OF A DOOR. THE LEVEL AREA SHALL HAVE A LENGTH IN THE DIRECTION OF THE DOOR SWING OF AT LEAST 60" AND THE LENGTH OPPOSITE THE DIRECTION OF DOOR SWING 48" AS MEASURED AT RIGHT ANGLE TO THE PLANE OF THE DOOR IN ITS CLOSED POSITION. (Sec. 1133B.2.4.2 & Figs. 11B-26A & B & C)
- 7. THE WIDTH OF THE LEVEL AREA ON THE SIDE TO WHICH THE DOOR SWINGS SHALL EXTEND A MINIMUM OF 24" PAST THE STRIKE EDGE OF THE DOOR FOR EXTERIOR DOORS AND A MINIMUM OF 18" PAST THE STRIKE EDGE FOR INTERIOR DOORS. ADDITIONAL 12" IS REQUIRED AT THE PUSH SIDE, IF DOOR IS EQUIPPED WITH BOTH LATCH AND CLOSER. (Sac1133B.2.4.3)
- 8. THE SPACE BETWEEN TWO CONSECUTIVE DOOR OPENINGS IS A VESTIBULE, SERVING OTHER THAN A REQUIRED STAIRWAY, SHALL PROVIDE A MINIMUM OF 48" OF CLEAR SPACE FROM ANY DOOR OPENING INTO SUCH VESTIBULE WHEN THE DOOR IS POSITIONED AT AN ANGLE OF 90 DEGREES FROM ITS CLOSED POSITION. DOORS IN A SERIES SHALL SWING EITHER IN THE SAME DIRECTION OR AWAY FROM THE SPACE BETWEEN THE DOORS. See Figures 118-30& 11B-31 for design alternatives. (Sec. 1133B.2.4.4)
- 9. THE BOTTOM 10" OF All. DOORS EXCEPT AUTOMATIC AND SLIDING SHALL HAVE A SMOOTH, UNINTERRUPTED SURFACE TO ALLOW THE DOOR TO BE OPENED BY A WHEELCHAIR FOOTREST WITHOUT CREATING A TRAP OR HAZARDOUS CONDITION. WHERE NARROW FRAME DOORS ARE USED. A 10" HIGH SMOOTH PANEL SHALL BE INSTALLED ON THE PUSH SIDE OF THE DOOR. WHICH WILL ALLOW THE DOOR TO BE OPENED BY A WHEELCHAIR FOOTREST WITHOUT CREATING A TRAP OR HAZARDOUS CONDITION. (Sec. 1133B.2.6 7 Fig.
- 10. MAXIMUM EFFORT TO OPERATE DOORS SHALL NOT EXCEED 5 POUNDS FOR EXTERIOR DOORS, AND 5 POUNDS FOR INTERIOR DOORS, SUCH PULL OR PUSH EFFORT BEING APPLIED AT RIGHT ANGLES TO HINGED DOORS AND AT THE CENTER PLANE OF SLIDING OR FOLDING DOORS. COMPENSATING DEVICES OR AUTOMATIC DOOR OPERATORS MAY BE UTILIZED TO MEET THE ABOVE STANDARDS, WHEN FIRE DOORS ARE REQUIRED. THE MAXIMUM EFFORT TO OPERATE THE DOOR MAY BE INCREASED TO THE MAXIMUM ALLOWABLE BY THE APPROPRIATE ADMINISTRATIVE AUTHORITY, NOT TO EXCEED 15 POUNDS. (Sec. 1133B.2.5) IN BUILDINGS OR PORTIONS OF BUILDINGS REQUIRED TO BE ACCESSIBLE, ACCESSIBLE MEANS OF EGRESS SHALL BE PROVIDED IN THE SAME NUMBER AS REQUIRED FOR EXITS IN CHAPTER 10. (Sec. 1114B.2.1)
- 11. WHEN AN EXIT REQUIRED BY CHAPTER 10 IS NOT ACCESSIBLE, AN AREA FOR EVACUATION ASSISTANCE SHALL BE PROVIDED AND SHALL ADJOIN AN ACCESSIBLE ROUTE OF TRAVEL.

8. WHERE PROVIDED, ONE PASSENGER DROP-OFF AND LOADING ZONE SHALL PROVIDE AND ACCESS AISLE AT LEAST 60" WIDE BY 20' LONG ADJACENT AND PARALLEL TO THE VEHICLE PULL-UP SPACE. SUCH ZONES SHALL BE LOCATED ON A SURFACE WITH A SLOPE NOT EXCEEDING 1 VERTICAL TO 50 HORIZONTAL IF THERE ARE CURBS BETWEEN THE ACCESS AISLE AND THE VEHICLE PULL-UP SPACE, A CURB RAMP SHALL BE PROVIDED.

PARK./LOAD. ZONES (CONT.)

- 8. PROVIDE MINIMUM VERTICAL CLEARANCE OF 8'-2" AT ACCESSIBLE PASSENGER LOADING ZONES AND ALONG AT LEAST ONE VERTICAL ACCESS ROUTE TO SUCH AREAS FROM SITE ENTRANCES AND EXITS (Sec. 1129B.3.3.5)
- 9. ALL ENTRANCES TO AND VERTICAL CLEARANCES OF 8'-2" WHERE REQUIRED FOR ACCESSIBILITY TO ACCESSIBLE PARKING SPACES (Sec. 1129B.3.3.5)

# SANITARY FIXT. AND ACCESS.

- WATER CLOSETS- THE HEIGHT OF ACCESSIBLE WATER CLOSETS SHALL BE A MINIMUM OF 17" AND A MAXIMUM OF 19" MEASURED TO THE TOP OF A MAXIMUM 2" HIGH TOILET SEAT. CONTROLS SHALL BE OPERABLE WITH ONE HAND. AND SHALL. NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST. CONTROLS FOR THE FLUSH VALVES SHALL BE MOUNTED ON THE WIDE SIDE OF THE TOILET AREAS, NO MORE THAN 44" ABOVE THE FLOOR. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NE GREATER THAN 5 LBS. (1502 OF PLUMBING CODE).
- 2. URINALS- WHERE ONE OR MORE URINALS ARE PROVIDED, AT LEAST ONE WITH A RIM PROJECTING A MINIMUM OF 14" FROM THE WALL AND AT A MAXIMUM OF 17" ABOVE THE FLOOR SHALL BE PROVIDED. FLUSH CONTROLS SHALL BE OPERABLE WITH ONE HAND AND SHALL BE MOUNTED NO MORE THAN 44" ABOVE THE FLOOR. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 LBS. (1503 OF PLUMBING CODE) LAVATORIES ADJACENT TO A WALL SHALL BE MOUNTED WITH A MINIMUM DISTANCE OF 18" TO THE CENTER LINE OF THE FIXTURE. ALL ACCESSIBLE LAVATORIES SHALL BE MOUNTED WITH THE RIM OR THE COUNTER SURFACE NO HIGHER THAN 34" ABOVE THE FINISHED FLOOR AND WITH A CLEARANCE OF AT LEAST 29" FROM THE FLOOR TO THE BOTTOM OF THE APRON WITH KNEE CLEARANCE UNDER THE FRONT LIP EXTENDING A MINIMUM OF 30" IN WIDTH 'WITH A MINIMUM DEPTH AT THE TOP. TOE CLEARANCE SHALL BE THE SAME WIDTH AND SHALL BE A MINIMUM OF 9" HIGH FROM THE FLOOR AND A MINIMUM OF 17" DEEP FROM THE FRONT OF THE LAVATORY. HOT WATER AND DRAIN PIPES ACCESSIBLE UNDER LAVATORIES SHALL BE INSULATED OR OTHERWISE COVERED. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER LAVATORIES. FAUCET CONTROLS AND OPERATING MECHANISMS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST THE FORCE TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 LBS. LEVER-OPERATED, PUSH-TYPE AND ELECTRONICALLY CONTROLLED MECHANISMS ARE EXAMPLES OF ACCEPTABLE DESIGNS. SELF-CLOSING VALVES ARE ALLOWED IF THE FAUCET REMAINS OPEN FOR AT LEAST 10 SECONDS. (1504 PLUMBING CODE)
- DRINKING FOUNTAINS- THE DRINKING FOUNTAIN SHALL BE A MINIMUM OF 18" IN DEPTH AND THERE SHALL BE CLEAR AND UNOBSTRUCTED KNEE SPACE UNDER THE DRINKING FOUNTAIN NOT LESS THAT 27" IN HEIGHT AND 8" IN DEPTH. THE DEPTH MEASUREMENTS BEING TAKEN FROM THE FRONT EDGE OF THE FOUNTAIN ADDITIONALILY, THERE SHALL BE TOE CLEARANCE OF 9" IN HEIGHT ABOVE THE FLOOR AND 17" DEPTH FROM THE FRONT EDGE OF THE FOUNTAIN A SIDE APPROACH DRINKING FOUNTAIN IS NOT ACCEPTABLE. THE BUBBLER SHALL BE ACTIVATED BY A CONTROL WITH IS EASILY OPERATED BY A HANDICAPPED PERSON. SUCH AS A HAND-OPERATED LEVER TYPE CONTROL LOCATED WITHIN 6" OF THE FRONT OF THE FOUNTAIN. A PUSH BAR CONTROL ALONG THE FRONT OF THE DRINKING FOUNTAIN, ETC. THE BUBBLER OUTLET ORIFICE SHALL BE LOCATED WITHIN 6" OF THE FRONT OF THE DRINKING FOUNTAIN AND SHALL BE WITHIN 36" OF THE FLOOR. THE WATER STREAM FROM THE BUBBLER SHALL BE SUBSTANTIALLY PARALLEL TO THE FRONT EDGE OF THE DRINKING FOUNTAIN. (1507 PLUMBING CODE)
- 4. HOT WATER AND DRAIN PIPES UNDER LAVATORIES SHALL BE INSULATED OR OTHERWISE COVERED. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER LAVATORIES. (a:>C Sec. 1504.2.2)
- 5. CONTROLS FOR WATER CLOSET FLUSH VALVES SHALL BE MOUNTED ON THE WIDE SIDE OF TOILET AREAS. (Sec. CC 1502.0)
- 6. THE FORCE REQUIRED TO ACTIVATE WATER CLOSET AND URINAL FLUSH VALVE CONTROLS, AND FAUCET AND OPERATING MECHANISM CONTROLS, SHALL BE NO GREATER THAT 5 LBS. (Sec.CPC 1502,1503.2, &: 1504.2.1)
- . MIRRORS SHALL BE MOUNTED WITH THE BOTTOM EDGE NO HIGHER THAN 40" FROM THE FLOOR. (Sec. 1115B.8.1.1)

COIN SLOTS, WITHIN 40" FROM THE FINISHED FLOOR (Sac. 11158.8.3)

- 8. WHERE TOWELS, SANITARY NAPKINS, WASTE RECEPTACLES, AND OTHER SIMILAR DISPENSING AND DISPOSAL FIXTURES ARE PROVIDED, AT LEAST ONE OF EACH TYPE SHALL BE LOCATED WITH ALL OPERABLE PARTS, INCLUDING
- 9. TOILET TISSUE DISPENSERS SHALL BE LOCATED ON THE WALL WITHIN 12" OF THE FRONT EDGE OF THE TOILET SEAT AND NO LOWER THAN 19" FROM THE FLOOR. DISPENSERS THAT CONTROL DELIVERY OF THAT DO NOT PERMIT CONTINUOUS PAPER FLOW SHALL NOT BE USED (Sec. 1115B.8.4 & Fig.11B-1A.)

# **GRAB BARS**

- . GRAB BARS SHALL BE LOCATED ON EACH SIDE, OR ON ONE SIDE AND THE BACK OF THE ACCESSIBLE TOILET STALL OR COMPARTMENT. (Sec. 1115B.7)
- 2. GRAB BARS SHALL BE SECURELY ATTACHED 33" ABOVE AND PARALLEL TO THE FLOOR, EXCEPT THAT WHERE A TANK-TYPE TOILET IS USED WHICH OBSTRUCTS PLACEMENT AT 33", THE GRAB BAR MAY BE AS HIGH AS 36". (Sec.1115B.4.1.3.1 AND 1115B.4.1.J.2)
- 3. DIAMETER OR WIDTH OF THE GRIPPING SURFACE OF A GRAB BAR SHALL BE 1-1/4" TO 1-1/2" OR THE SHAPE SHALL PROVIDE AN EQUIVALENT GRIPPING SURFACE. IF THE GRAB BARS ARE MOUNTED ADJACENT TO A WALL THE SPACE BETWEEN THE WALL AND THE GRAB BARS SHALL BE 1-1/2". (Sec. 1115)
- 4. GRAB BARS AT THE SIDE SHALL BE AT LEAST 42" LONG WITHIN THE FRONT END POSITIONED 24" MIN IN FRONT OF THE WATER CLOSET AND WITH THE BACK END POSITIONED NOT MORE THAN 12" FROM THE REAR WALL. GRAB BARS AT THE REAR SHALL BE NOT LESS THAN 38 LONG AND EXTEND 12" FROM CENTERLINE OF TOILET AND 24" ON THE OTHER SIDE. (Sec. 11158.4.1.3.1 & Sec. 11158.4.1.1.3.2)
- 5. THE STRUCTURAL STRENGTH OF GRAB BARS, TUB AND SHOWER SEATS, FASTENERS, AND MOUNTING DEVICES SHALL MEET THE SPECIFICATIONS OF Sec 1115B.7.2

(Sec 1115B.7.2.1)

6. THE GRAB BAR AND ANY WALL OR OTHER SURFACE ADJACENT TO IT SHALL. BE FREE OF ANY SHARP OR ABRASIVE ELEMENTS. EDGES SHALL HAVE A MINIMUM RADIUS OF 1/8". (Sec. 1115B.7.3)

MOMENT FROM THE APPLICATION OF A 250-LB POINT LOAD SHALL BE LESS

BENDING STRESS IN A GRAB BAR OR SEAT INDUCED BY THE MAXIMUM BENDING

THAN THE ALLOWABLE STRESS FOR THE MATERIAL OF THE GRAB BAR OR SEAT.

- SITE DEVELOPMENT AND ACCESSIBLE ROUTE OF TRAVEL
- SITE DEVELOPMENT AND GRADING SHALL BE DESIGNED TO PROVIDE ACCESS TO ALL ENTRANCES AND EXTERIOR GROUND FLOOR EXITS, AND ACCESS TO NORMAL PATHS OF TRAVEL, AND WHEN NECESSARY TO PROVIDE ACCESS, SHALL INCORPORATE PEDESTRIAN RAMPS, CURB RAMPS, ETC. Sec.1127B.1

**TITLE - 24** 

- 2. AT LEAST ONE ACCESSIBLE ROUTE WITHIN THE BOUNDARY OF THE SITE SHALL BE PROVIDED FROM PUBLIC TRANSPORTATION STOPS, ACCESSIBLE PARKING. ACCESSIBLE PASSENGER LOADING ZONES, AND PUBLIC STREETS OF SIDEWALKS TO THE ACCESSIBLE BUILDING ENTRANCE THEY SERVE. WHEN MORE THAN ONE ROUTE IS PROVIDED, ALL ROUTES SHALL BE ACCESSIBLE. Sec. 1114B.1.2
- WHEN MORE THAN ONE BUILDING OR FACILITY IS LOCATED ON A SITE, ACCESSIBLE ROUTES OF TRAVEL SHALL BE PROVIDED BETWEEN BUILDING AND ACCESSIBLE SITE FACILITIES. Sec. 1114B.1.2 and 1127B.1
- THE ACCESSIBLE ROUTE OF TRAVEL SHALL BE THE MOST PRACTICAL DIRECT ROUTE BETWEEN ACCESSIBLE BUILDING ENTRANCES, ACCESSIBLE SITE FACILITIES, AND THE ACCESSIBLE ENTRANCE TO THE SITE TO MAXIF.IUM EXTENT FEASIBLE, COINCIDING WITH THE ROUTE FOR GENERAL PUBLIC." Sec. 1114B.1.2 end 1127B.1
- 5. PROVIDE SIGNS DISPLAYING THE INTERNATIONAL SYMBOL FOR ACCESSIBILITY AT EVERY PRIMARY PUBLIC ENTRANCE AND AT EVERY MAJOR JUNCTION ALONG OR LEADING TO AN ACCESSIBLE ROUTE OF TRAVEL. SIGNS SHALL INDICATE THE DIRECTION TO ACCESSIBLE BUILDING ENTRANCES AND SHALL COMPLY WITH Section 1117B.5 Sec. 1127B.3
- 6. WALKS AND SIDEWALKS SHALL HAVE A CONTINUOUS COMMON SURFACE, NOT INTERRUPTED BY STEPS OR BY ABRUPT CHANGES IN LEVEL EXCEEDING 1/2", AND SHALL BE A MINIMUM OF 48" IN WIDTH. Sec. 11378.7.1
- . WHEN ABRUPT CHANGES IN LEVEL NOT EXCEEDING 1/2" OCCUR, THEY SHALL BE BEVELED WITH A SLOPE NO GREATER TI-IAN 1:2, EXCEPT AT LEVEL CHANGES NOT EXCEEDING 1/4" MAY BE VERTICAL. Sec. 1133B.7.4 & Fig. 11B-5E (c) and (d).
- 8. ABRUPT CHANGES IN LEVEL ALONG ANY ACCESSIBLE ROUTE EXCEEDING 1/2" SHALL COMPLY WITH THE REQUIREMENTS FOR CURB RAMPS. Sec. 113B.7.3
- 9. WHEN THE SLOPE IN THE DIRECTION OF TRAVEL OF ANY WALK EXCEEDS 1 VERTICAL TO 20 HORIZONTAL, IT SHALL COMPLY WITH THE PROVISIONS OF Section 1133B.5 AS A PEDESTRIAN RAMP. Sec. 11338.7.3
- 10. WALK AND SIDEWALK SURFACE CROSS SLOPES SHALL NOT EXCEED 1/4" PER FOOT. Sec. 1133B.7.1.3
- 11. WALKS SHALL BE PROVIDED WITH A LEVEL AREA NOT LESS THAN 60" BY 60" AT A DOOR OR GATE THAT SWINGS TOWARD THE WALK, AND NOT LESS THAN 48" WIDE BY 44" DEEP AT A DOOR OR GATE THAT SWINGS AWAY FROM THE WALK. Sec.1133B.7.5
- 12. WALKS SHALL EXTEND A MINIMUM OF 24" TO THE SIDE OF THE STRIKE EDGE OF A DOOR OR GATE THAT SWINGS TOWARD THE WALK. Sec. 1133.B.7.5
- 13. ALL WALKS WITH CONTINUOUS GRADIENTS SHALL HAVE LEVEL AREAS AT LEAST 5' IN LENGTH AT INTERVALS OF AT LEAST EVERY 400'. Sec. 1133B.7.6
- 14. WALK AND SIDEWALK SURFACES WITH A SLOPE OF LESS THAN 6% GRADIENT SHALL BE AT LEAST AS SLIP-RESISTANT AS THAT DESCRIBED AS A MEDIUM SALTED FINISH. Sec. 1133B.7.1.1
- 15. WALK AND SIDEWALK SURFACES WITH A SLOPE OF 6% OR MORE GRADIENT SHALL BE AT LEAST AS SUP-RESISTANT. Sec. 1133B7.1.2
- 16. WALKS, SIDEWALKS, AND PEDESTRIAN WAYS SHALL BE FREE OF GRATINGS WHENEVER POSSIBLE. FOR GRATINGS LOCATED IN THE SURFACE OF ANY OF THESE AREAS, GRID OPENINGS IN GRATINGS SHALL BE NO GREATER THAN 1/2" WIDE IN ONE DIRECTION. IF GRATINGS HAVE ELONGATED OPENINGS. THEY SHALL BE PLACED SO THAT THE LONG DIMENSION IS PERPENDICULAR TO THE DOMINANT DIRECTION OF TRAVEL. (Sac. 1023.2 & Fig. 11B-7B (a))

# PARKING / LOADING ZONES

- EACH PARKING SPACE RESERVED FOR PERSONS WITH PHYSICAL DISABILITIES SHALL BE IDENTIFIED BY A REFLECTORIZED SIGN PERMANENTLY POSTED. IMMEDIATELY ADJACENT TO AND VISIBLE FROM EACH STALL OR SPACE. CONSISTING OF A PROFILE VIEW OF A WHEELCHAIR WITH OCCUPANT IN WHITE ON DARK BLUE BACKGROUND. SIGN SHALL NOT BE SMALLER THAN 70 SQUARE INCHES IN AREA AND WHEN IN A PATH OF TRAVEL SHALL BE POSTED AT A MINIMUM HEIGHT OF 80" FROM THE BOTTOM OF THE SIGN TO THE PARKING SPACE FINISHED GRADE. SIGNS MAY ALSO BE CENTERED ON THE WALL AT THE INTERIOR END OF THE PARKING SPACE AT A MINIMUM HEIGHT OF 36" FROM THE PARKING SPACE FINISHED GRADE. GROUND OR SIDEWALK. VAN ACCESSIBLE SPACES SHALL HAVE AN ADDITIONAL SIGN STATING "VAN ACCESSIBLE" OPERABLE EQUIPMENT. (Section 1117B.6.2)
- 2. AN ADDITIONAL SIGN SHALL ALSO BE POSTED IN A CONSPICUOUS PLACE AT EACH ENTRANCE TO OFF-STREET PARKING FACILITIES, OR IMMEDIATELY ADJACENT TO AND VISIBLE FROM EACH STALL OR SPACE. THE SIGN SHALL NOT BE LESS THAT 17"X22" IN SIZE WITH LETTERING NOT LESS THAN 1" IN HEIGHT, WHICH CLEARLY AND CONSPICUOUSLY STATES THE FOLLOWING" "UNAUTHORIZED VEHICLES PARKED IN DESIGNATED ACCESSIBLE SPACES NOT DISPLAYING PLACARDS OR LICENSE PLATES ISSUED FOR PERSONS WITH DISABILITIES WILL BE TOWED AWAY AT OWNER'S EXPENSE. TOWED VEHICLES MAY BE RECLAIMED AT ", OR BY TELEPHONING." " NOTE: "BLANK SPACES" ARE TO BE FILLED IN WITH APPROPRIATE INFORMATION AS A PERMANENT PART OF THE SIGN. PER SPECIFIC CITY/COUNTY JURISDICTION. IN ADDITION TO THE ABOVE REQUIREMENTS, THE SURFACE OF EACH ACCESSIBLE PARKING SPACE OR STALL SHALL HAVE A SURFACE IDENTIFICATION DUPLICATING EITHER OF THE FOLLOWING:
- A. BY MOUNTING OR PAINTING THE STALL OR SPACE IN BLUE AND OUTLINING ON THE GROUND IN THE STALL OR SPACE IN WHITE OR SUITABLE CONTRASTING COLOR A PROFILE VIEW DEPICTING A WHEELCHAIR WITH OCCUPANT; OR
- B. BY OUTLINING A PROFILE VIEW OF A WHEELCHAIR WITH OCCUPANT IN WHITE ON BLUE BACKGROUND. THE PROFILE VIEW SHALL BE LOCATED SO THAT IT IS VISIBLE TO A TRAFFIC ENFORCEMENT OFFICER WHEN A VEHICLE IS PROPERLY PARKED I THE SPACE AND SHALL BE 36"X36". (Fig11B-1BA. 18B, AND 18C)
- 3. SLOPE OF PARKING SPACE. SURFACE SLOPES FOR ACCESSIBLE PARKING SPACES SHALL BE THE MINIMUM POSSIBLE AND SHALL NOT EXCEED 1/4" PER FOOT IN DIRECTION. (Sec 1129B4.4)
- 4. PASSENGER DROP-OFF AND LOADING ZONES- WI-IEN PROVIDED. PASSENGER DROP-OFF AND LOADING ZONES SHALL BE LOCATED ON ACCESSIBLE ROUTE TO TRAVEL. PAINT "NO PARKING" ON THE GROUND W1THIN EACH ACCESS AISLE -USE 12" HIGH WHITE LETTERS (Fig 11B-18B Sec.1129B.3.1)
- 5. ACCESSIBLE PARKING SPACES SERVING A PARTICULAR BUILDING SHALL. BE LOCATED ON THE SHORTEST ACCESSIBLE ROUTE OF TRAVEL FROM ADJACENT PARKING TO PRIMARY ENTRANCE (Sec. 1114B.1.2)
- 6. ONE IN EVERY EIGHT ACCESSIBLE SPACES, BUT NOT LESS THAN ONE, SHALL BE SERVED BY AND ACCESS AISLE 8' WIDE MINIMUM AND SHALL BE DESIGNATED VAN ACCESSIBLE. ALL SUCH SPACES MAY BE POURED ON ONE LEVEL OF A PARKING STRUCTURE. (Sec. 1129.3.2)
- SURFACE SLOPES OF ACCESSIBLE PARKING SPACES AND ACCESS AISLES SHALL. BE THE MINIMUM POSSIBLE AND SHALL NOT EXCEED 2% IN ANY DIRECTION. (Sec. 1129.3.3.1)

. LOCATIONS AND CLASSIFICATIONS OF EXTINGUISHERS SHALL BE IN ACCORDANCE WITH CFC 906 AND CALIFORNIA CODE OF REGULATIONS (CCR),

**FIRE NOTES** 

DURING CONSTRUCTION, AT LEAST ONE EXTINGUISHER SHALL BE PROVIDED ON EACH FLOOR LEVEL AT EACH STAIRWAY, IN ALL STORAGE AND CONSTRUCTION SHEDS, IN LOCATIONS WHERE FLAMMABLE OR

COMBUSTIBLE LIQUIDS ARE STORED OR USED, AND WHERE OTHER SPECIAL

IN BUILDING FOUR STORIES OR MORE IN HEIGHT, STANDPIPES SHALL BE PROVIDED DURING CONSTRUCTION WHEN THE HEIGHT REACHES 40 FEET ABOVE THE LOWEST LEVEL OF FIRE DEPARTMENT ACCESS. A FIRE DEPARTMENT CONNECTION SHALL BE NO MORE THAN 100 FEET FROM AVAILABLE FIRE DEPARTMENT VEHICLE ACCESS ROADWAYS, CFC 1410.1413.

HAZARDS ARE PRESENT PER CFC 1415.1.

- BUILDINGS UNDERGOING CONSTRUCTION, ALTERATION, OR DEMOLITION SHALL CONFORM TO CFC CHAPTER 14. WELDING, CUTTING, AND OTHER HOT WORK SHALL BE IN CONFORMANCE WITH CFC CHAPTER 26.
- ADDRESS IDENTIFICATION SHALL BE PROVIDED FOR ALL NEW AND EXISTING BUILDINGS IN LOCATION THAT IS PLAINLY VISIBLE AND LEGIBLE FROM THE STREET OR ROAD FRONTING THE PROPERTY. WHERE ACCESS IS BY WAY OF A PRIVATE ROAD AND BUILDING ADDRESS CANNOT BE VIEWED FROM THE PUBLIC WAY, AND APPROVED SIGN OR MEANS SHALL BE USED TO IDENTIFY THE STRUCTURE. PREMISES IDENTIFICATION SHALL CONFORM TO SECTION 96.0209 OF THE SAN DIEGO MUNICIPAL CODE AND CBC 501.2.
- WALL, FLOOR AND CEILING FINISHES AND MATERIALS SHALL NOT EXCEED THE INTERIOR FINISH CLASSIFICATIONS IN CBC TABLE 803.3 AND SHALL MEET THE FLAME PROPAGATION PERFORMANCE CRITERIA OF THE CALIFORNIA CODE OF REGULATIONS, TITLE 19 DIVISION 1. DECORATIVE MATERIALS SHALL BE PROPERLY TREATED BY A PRODUCT OR PROCESS APPROVED BY THE STATE FIRE MARSHAL WITH APPROPRIATE DOCUMENTATION PROVIDED TO THE CITY OF SAN DIEGO.
- DUMPSTER AND TRASH CONTAINERS EXCEEDING 1.5 CUBIC YARDS SHALL NOT BE STORED IN BUILDING OR PLACED WITHIN 5 FEET OF COMBUSTIBLE ROOF EAVE LINES UNLESS PROTECTED BY AN APPROVED SPRINKLER SYSTEM OR LOCATED IN A TYPE I OR IIA STRUCTURE SEPARATED BY 10 FEET FROM OTHER STRUCTURES. CONTAINERS LARGER THAN 1 CUBIC YARD SHALL BE OF NON-OR LIMITED-COMBUSTIBLE MATERIALS OR SIMILARLY PROTECTED OR SEPARATED. CFC 304.3.
- EXITS, EXIT SIGNS, FIRE ALARM PANELS, HOSE CABINETS, FIRE EXTINGUISHER LOCATIONS, AND STANDPIPE CONNECTIONS SHALL NOT BE CONCEALED BY CURTAINS, MIRRORS, OR OTHER DECORATIVE MATERIAL.
- OPEN FLAMES, FIRE AND BURNING ON ALL PREMISES IS PROHIBITED EXCEPT AS SPECIFICALLY PERMITTED BY THE CITY OF SAN DIEGO AND CFC 308.
- AT ALL TIMES. NO STORAGE IS PERMITTED IN ANY EGRESS PATHS.

10. THE EGRESS PATH SHALL REMAIN FREE AND CLEAR OF ALL OBSTRUCTIONS

- 11. COMPLETE PLANS AND SPECIFICATIONS FOR FIRE ALARM SYSTEMS SHALL BE SUBMITTED TO THE CITY OF SAN DIEGO DEVELOPMENT SERVICES FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION (CFC 907.1.1).
- 12. COMPLETE PLANS AND SPECIFICATIONS FOR FIRE ALARM SYSTEMS SHALL BE SUBMITTED TO THE CITY OF SAN DIEGO DEVELOPMENT DEPT.
- 13. AT LEAST ONE 2A:10B:C FIRE EXTINGUISHER SHALL BE PROVIDED SO THAT THE TRAVEL DISTANCE FROM ANYWHERE IN THE BUILDING DOES NOT EXCEED 75 FEET TO AN EXTINGUISHER. EXTINGUISHERS SHALL BE LOCATED ALONG THE NORMAL PATH OF TRAVEL AND IN A READILY VISIBLE AND ACCESSIBLE LOCATION, WITH THE BOTTOM OF THE EXTINGUISHER AT LEAST 4 INCHES ABOVE THE FLOOR.
- 14. STORAGE, DISPENSING OR USE OF ANY HAZARDOUS MATERIAL SHALL COMPLY WITH CBC 414 AND CFC REGULATIONS. THE STORAGE AND USE OF HAZARDOUS MATERIALS SHALL BE REVIEWED AND APPROVED BY THE CITY OF SAN DIEGO PRIOR TO SUCH MATERIALS BEING BROUGHT ON SITE
- 15. HAZARDOUS PROCESSES AND EQUIPMENT (E.G., STORAGE TANKS, BATTERY SYSTEMS, REFRIGERATION, VAPOR RECOVERY, SPRAY BOOTHS AND DRYING ROOMS, DIP TANKS, INDUSTRIAL OVENS, DUST COLLECTION SYSTEMS, MEDICAL/INDUSTRIAL GAS SYSTEMS, ETC.) SHALL BE REVIEWED AND APPROVED BY THE CITY OF SAN DIEGO PRIOR TO INSTALLATION, SUCH EQUIPMENT AND PROCESSES MAY REQUIRE ADDITIONAL BUILDING FEATURES AND PROTECTION.
- 16. HIGH-PILED COMBUSTIBLE STORAGE SHALL BE IN ACCORDANCE WITH CFC CHAPTER 23.

ALL WORK, MATERIALS, METHODS, ETC., SHALL CONFORM TO ALL GOVERNING BUILDING CODES, ORDINANCES, REGULATIONS AND AGENCIES.

**GENERAL NOTES** 

- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND CONDITIONS THEREON BEFORE COMMENCING THE WORK. REPORT ANY DISCREPANCIES AND / OR POTENTIAL PROBLEMS TO THE
- GOVERNING CODES AND FIRE DEPARTMENT FIELD INSPECTORS SHALL DICTATE SIZE, TYPE, QUANTITY AND LOCATIONS OF BOTH TEMPORARY AND PERMANENT PORTABLE FIRE EXTINGUISHERS. (N.I.C.)

ARCHITECT, PRIOR TO PROCEEDING.

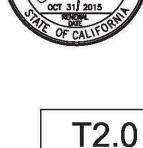
- I. THE GENERAL CONTRACTOR SHALL PROVIDE ALL NECESSARY CEILING OR WALL ACCESS PANELS ( OR ACCESS DOORS ) AS REQUIRED BY GOVERNING AGENCIES FOR AIR CONDITIONING. PLUMBING FIRE SPRINKLER AND ELECTRICAL SYSTEMS, PROVIDE APPROVED ASSEMBLIES WITH SELF -CLOSING DEVICES IN ONE (1) HOUR RATED CONSTRUCTION.
- THE GENERAL CONTRACTOR SHALL PROVIDE ALL NECESSARY SHORING REQUIRED TO COMPLETE THE SCOPE OF WORK
- ALL PENETRATIONS AT FIRE RESISTIVE CONSTRUCTION SHALL BE PROTECTED WITH APPROVED FIRE ASSEMBLIES.
- THE GENERAL CONTRACTOR SHALL PROVIDE PEDESTRIAN OR VEHICULAR PROTECTION BARRICADES, TEMPORARY GUARD RAILS, AND/ OR CANOPIES AS REQUIRED BY THE LOCAL AUTHORITIES OR AS NECESSARY FOR PEDESTRIAN AND VEHICULAR SAFETY.
- ALL WOOD STUDS ARE 2 x 4 AT 16" O.C., EXCEPT STUDS EXCEEDING 14'-0" HIGH, WHICH ARE TO BE 2 x 6 OR UNLESS OTHERWISE NOTED ON PLAN. NOTE: ALL EXTERIOR WOOD STUDS SHALL BE 2 x 6 AT 16" O.C.
- ALL EXPOSED ELECTRICAL EQUIPMENT, CONDUITS, PLUMBING LINES, ETC... SHALL BE PAINTED WITH MIN.(2) COATS OF PAINT TO MATCH THE ADJACENT SURFACES.
- 10. CONTRACTOR SHALL COORDINATE ALL SLEEVING FOR IRRIGATION LINES AND CONDUITS UNDER SIDEWALKS, DRIVEWAYS, ETC., PRIOR TO POURING CONCRETE OR LAYING ASPHALT PAVING.
- THE GENERAL CONTRACTOR SHALL PROVIDE AND INSTALL THE ADDRESS AND / OR SUITE UNIT NUMBERS PER CITY AND FIRE DEPT. REQUIREMENTS.
- 12. THE CONTRACTOR SHALL PROVIDE TEMPORARY OR PERMANENT PORTABLE FIRE EXTINGUISHERS. GOVERNING CODES AND FIRE DEPARTMENT FIELD INSPECTORS SHALL DICTATE SIZE, TYPE, QUANTITY AND LOCATIONS OF BOTH TEMPORARY AND PERMANENT PORTABLE FIRE EXTINGUISHERS. (N.I.C.)
- 13. A CHEMICAL CLASSIFICATION AND HAZARDOUS MATERIALS COMPLIANCE PLAN SHALL BE APPROVED BY THE CITY OF SAN DIEGO FIRE DEPARTMENT PRIOR TO ANY HAZARDOUS MATERIALS BEING STORED OR USED ON SITE.
- THE GENERAL CONTRACTOR SHALL PROVIDE AND INSTALL THE ADDRESS AND / OR SUITE UNIT NUMBERS PER CITY AND FIRE DEPT. REQUIREMENTS, VERIFY SIZE, COLOR AND LOCATIONS PRIOR TO PROCEEDING.
- CONTRACTOR SHALL COMPLY WITH AND PROVIDE VERIFICATION OF COMPLIANCE WITH CALGREEN NON-RESIDENTIAL MANDATORY MEASURES SEE SHEETS T3.0, T3.1, T3.2 AND T3.3.
- STREET TREES AND SITE LANDSCAPING SHALL BE PROVIDED UNDER BUILDING PERMIT FOR FUTURE PERMANENT FACILITY. LANDSCAPING AND IRRIGATION PLANS TO BE PREPARED WITH PERMANENT FACILITY SUBMITTAL

# SANITARY FACILITIES

- DOORWAYS LEADING TO MEN'S SANITARY FACILITIES SHALL BE IDENTIFIED BY AN EQUILATERAL TRIANGLE 1/4" THICK WITH EDGES 12" LONG AND A VERTEX POINTING UPWARDS. WOMEN'S SANITARY FACILITIES SHALL BE IDENTIFIED BY A CIRCLE 1/4" THICK AND 12" IN DIAMETER. (Sec 1115B.6)
- 2. GEOMETRIC (CIRCLE AND TRIANGLE) SYMBOLS ON SANITARY FACILITY DOORS SHALL BE CENTERED ON THE DOOR AT A HEIGHT 60" AND THEIR COLOR AND CONTRAST SHALL BE DISTINCTLY DIFFERENT FROM THE COLOR AND CONTRAST OF THE DOOR (Sec. 1115B.6)
- ADDITIONAL SIGNAGE REQUIREMENTS: RAISED LETTERS SHALL BE PROVIDED AND SHALL BE ACCOMPANIED BY BRAILLE IN CONFORMANCE WITH SECTION 1117B.5.6. THAT SHALL BE INSTALLED ON THE WALL ADJACENT TO THE LATCH SIDE, INCLUDING AS DOUBLE LEAF DOORS SIGNS.
- . WATER CLOSET COMPARTMENTS SHALL BE EQUIPPED WITH A DOOR THAT HAS AN AUTOMATIC-CLOSING DEVICE, AND SHALL HAVE A CLEAR, UNOBSTRUCTED OPENING 'OF 32" 'MINIMUM LOCATED AT THE END AND 34" WHEN LOCATED AT THE SIDE WITH THE DOOR POSITIONED AT AN ANGLE OF 90 DEGREES FROM ITS CLOSED POSITION (Sec. 1115b.4.1)
- 5. THE INSIDE AND OUTSIDE OF THE COMPARTMENT DOOR SHALL BE EQUIPPED WITH A LOOP OR U-SHAPED HANDLE IMMEDIATELY BELOW THE LATCH. THE LATCH SHALL FLIP-OVER STYLE, SLIDING, OR OTHER HARDWARE NOT REQUIRING THE USER TO GRASP OR TWIST. (Sec. 1115B.3.1.4.5)

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PLANS FOR THE CONSTRUCTION OF SKYLINE TEMPORARY FIRE STATION

7180 SKYLINE DR. SAN DIEGO, CALIFORNIA 92114

WWW.NADELARC.COM

F. 619.232.7179

PARCEL ID. NO. 581-290-11-00 SHEET TITLE SHEET NO. **GENERAL NOTES** 

	RING AND CAP	EGO, CAL PITAL PROJECTS D OF 40 SHEET	DEPARTMENT		ws. S-00687
APPROVED: Sely and	<b>/~</b> :	12	/19/20:	14	SUBMITTED BY:  ROWAIDA JADAN
CITY ENGINEER		N1	DATE		ASSOCIATE ENGINEER
DESCRIPTION	BY	APPROVED	DATE	FILMED	MICHAEL RAMIREZ
GENERAL NOTES					PROJECT MANAGER
					194-1755 CCS27 COORDINATE
					1834-6315
CONTRACTORINSPECTOR		DATE STARTE	S	I .	38317 - 2 D

SHEET NO.

WBS. S-00687

ROWAIDA JADAN

MICHAEL RAMIREZ

PROJECT MANAGER 194-1755 CCS27 COORDINATE 1834-6315 CCS83 COORDINATE

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ASSOCIATE ENGINEER

SUBMITTED BY:

DATE STARTED

DATE COMPLETED

**DEMOLITION NOTES** 

**DEMOLITION NOTES (CONT.)** 

#### 29. FOR DEMOLITION OF CASEWORK: WHERE NECESSARY AND/OR INDICATED IN 12. THE CONTRACTOR SHALL VERIFY THAT THE REMOVAL OF EXISTING BUILDING ALL WORK, MATERIALS, METHODS, ETC. SHALL CONFORM TO ALL APPLICABLE VISTA ENVIRONMENTAL COMPONENT(S) DOES NOT REQUIRE SHORING AND/OR BRACING, SHORING OF PLANS, THE CONTRACTOR SHALL REMOVE ALL EXISTING CASEWORK, BASE LAWS, GOVERNING BUILDING CODES, ORDINANCES, REGULATIONS AND CABINETS, COUNTERTOPS, WALL CABINETS, STORAGE UNITS, AND WALL STRUCTURAL FOUNDATIONS, STRUCTURES, AND/OR TRENCHING REQUIRED AGENCIES HAVING JURISDICTION OVER THIS PROJECT. IT SHALL BE THE CONTRACTOR'S AND HIS EMPLOYEE'S RESPONSIBILITY TO BE FAMILIAR WITH MOUNTED SHELVING INCLUDING THE REMOVAL OF ALL ANCHORAGE AND TO COMPLETE THE WORK DESCRIBED IN THE CONSTRUCTION DOCUMENTS IS ALL CODES AND ORDINANCES, CITY OR STATE, AS REQUIRED FOR THE SUPPORT ITEMS RELATED TO INSTALLATION. DISCONNECT ALL ELECTRICAL CONSIDERED A METHOD OR TECHNIQUE AND IS THE SOLE RESPONSIBILITY OF WIRING, CONDUITS, AND CONTROLS . REPAIR ADJACENT SURFACES, AS THE CONTRACTOR. IF A REGULATORY AGENCY REQUIRES A LICENSED CONSTRUCTION OF THIS PROJECT. WHERE ANY CONFLICTS OCCUR BETWEEN July 17, 2014 REQUIRED. TO MATCH THE EXISTING ADJACENT CONSTRUCTION AND FINISH. ENGINEER OR ARCHITECT TO SUPERVISE. APPROVE. AND/OR PROVIDE FEDERAL, STATE AND LOCAL LAWS, CODES, ORDINANCES, AND REGULATIONS, PROVIDE CLEAN LEVEL SURFACES READY FOR NEW CONSTRUCTION. DRAWINGS FOR SHORING OF STRUCTURAL FOUNDATIONS, STRUCTURES, THE MOST STRINGENT SHALL GOVERN. Fernando Cavazos WHERE PARTIAL DEMOLITION OF CASEWORK OCCURS FINISH NEW EDGE TO AND/OR TRENCHING, THEN IT IS THE SOLE RESPONSIBILITY OF THE Nadel Architecture + Planning CONTRACTOR SHALL DISPOSE OF OR RECYCLE WASTE MATERIALS IN AN CONTRACTOR WILL PROVIDE THIS WORK AS A PART OF THE BASE CONTRACT. MATCH EXISTING ADJACENT CASEWORK CONSTRUCTION AND FINISH. 4445 Eastgate Mall, Suite 407 APPROVED MANNER (CONSULT CITY/COUNTY AS REQUIRED). San Diego, CA 92802 30. FOR DEMOLITION OF OPENINGS: WHERE NECESSARY AND/OR INDICATED IN 13. DEMOLITION WORK TO OCCUR ONLY IN THE AREA(S) INVOLVED IN THE PLANS . THE CONTRACTOR SHALL PROVIDE AN OPENING. THE CONTRACTOR CURRENT PHASE OF CONSTRUCTION. WORK IN EACH PHASE MUST BE THE CONTRACTOR SHALL FIELD VERIFY AND COMPARE ALL EXISTING SUBJECT: CITY OF SAN DIEGO SKYLINE FIRE STATION NO. 51 NOISE COMPLETED BEFORE WORK CAN BEGIN IN THE NEXT PHASE. CONDITIONS WITH THE CONTRACT DOCUMENTS, INCLUDING BUT NOT LIMITED SHALL PROVIDE METHOD OF BRACING AND SUPPORT OF EXISTING CONFORMITY ANALYSIS WITH CALGREEN SECTION 5.507.4. STRUCTURE AS REQUIRED TO IMPLEMENT THE REQUIRED OPENING. TO STRUCTURE, MECHANICAL, PLUMBING, ELECTRICAL, EQUIPMENT, UTILITY 14. CONTRACTOR SHALL PROVIDE A TEMPORARY DUST PARTITION TO PREVENT SIZE AND LOCATION, UTILITY POINTS OF CONNECTIONS, AND ALL OTHER Dear Mr. Cavazos: FOR DEMOLITION OF MISCELLANEOUS EQUIPMENT: WHERE NECESSARY DUST AND DEBRIS FROM SETTLING ON ADJACENT AREAS NOT UNDER EXISTING SYSTEMS AND NOTIFY THE ARCHITECT IMMEDIATELY IN WRITING OF AND/OR INDICATED IN PLANS, THE CONTRACTOR SHALL REMOVE ALL DEMOLITION AND AS DIRECTED, REVIEWED AND APPROVED BY THE OWNER ALL DISCREPANCIES OR CONFLICTS. DO NOT PROCEED WITH WORK IN THE Vista Environmental has analyzed the plans for the construction of Skyline Fire Station No. REPRESENTATIVE. AREA OF DISCREPANCY OR CONFLICT UNTIL DIRECTION IS GIVEN BY MISCELLANEOUS EQUIPMENT ATTACHED TO WALLS, FLOOR OR CEILINGS INCLUDING MOUNTING BRACKETS, ANCHORAGE, AND OTHER ITEMS RELATED ARCHITECT. IF CONTRACTOR PROCEEDS WITHOUT DIRECTION FROM THE which is anticipated to be located on the northwest corner of the intersection of Skyline Drive 15. CONTRACTOR SHALL PROVIDE PEDESTRIAN OR VEHICULAR PROTECTION TO THE EQUIPMENT INSTILLATION. REPAIR ADJACENT SURFACES, AS ARCHITECT, IT SHALL BE AT CONTRACTORS RISK, AND CONTRACTOR SHALL BE and Sychar Road, in order to determine if the proposed structures meet the acoustical REQUIRED, TO MATCH THE EXISTING ADJACENT CONSTRUCTION AND FINISH. BARRICADES, TEMPORARY GUARD RAILS, AND/ OR CANOPIES AS REQUIRED RESPONSIBLE FOR ALL REQUIRED CORRECTIVE ACTION. VERIFICATION OF requirements provided in California 2013 Green Building Standards Code (CALGreen) Section 5.507.4. Acoustical Control. The proposed structures include: BY THE LOCAL AUTHORITIES OR AS NECESSARY FOR PEDESTRIAN AND PROVIDE CLEAN LEVEL SURFACES READY FOR NEW CONSTRUCTION. EXISTING CONDITIONS SHALL BE MADE FROM SOURCES AVAILABLE TO THE CONTRACTOR, SUCH AS BUT NOT LIMITED TO, UTILITY COMPANIES, CONTRACT VEHICULAR SAFETY. 32. IN ADDITION TO DEMOLITION SHOWN, CUT, MOVE OR REMOVE ITEMS AS DOCUMENTS, THE OWNER, SITE INVESTIGATION REPORTS, ETC. IN NO WAY 1. A 24-foot by 60-foot living quarters structure; and, NECESSARY TO PROVIDE ACCESS OR TO ALLOW DEMOLITION WORK TO 16. CONTRACTOR SHALL EXECUTE THE DEMOLITION WORK AND REMOVE ALL SHALL ANY DOCUMENTATION RECEIVED BY THE CONTRACTOR RELIEVE HIM OF PROCEED. INCLUDE SUCH ITEMS AS: REMOVAL OF ABANDONED PIPING. DEBRIS WITHOUT DAMAGING OR SOILING EXISTING ADJACENT EQUIPMENT. THE RESPONSIBILITY OF PERFORMING HIS OWN FIELD INVESTIGATION. 2. A 30-foot by 45-foot apparatus shelter structure. CONDUIT, AND WIRING. ALL OPENINGS AND VOIDS LEFT SHALL BE REPAIRED. STRUCTURES, AND FINISHES THAT ARE TO REMAIN. ALL ADJACENT STRUCTURES AND FINISHES THAT ARE DAMAGED OR SOILED DUE TO AS REQUIRED, TO MATCH THE EXISTING ADJACENT CONSTRUCTION AND THIS PLAN SHOWS GENERAL DEMOLITION WORK TO BE PERFORMED AND CALGreen Section 5.507.4.1 states the following: DOES NOT RELIEVE THE CONTRACTOR FROM OTHER DEMOLITION WORK DEMOLITION, THE REMOVAL OF DEBRIS, OR NEW CONSTRUCTION SHALL BE REPAIRED AS PART OF THIS GENERAL CONTRACT. REQUIRED TO PRODUCE THE BUILDING MODIFICATIONS SHOWN ON THE Wall and roof-ceiling assemblies exposed to the noise source making up the IN ADDITION TO DEMOLITION SHOWN, CUT, MOVE OR REMOVE ITEMS AS REMAINING CONTRACT DOCUMENTS. THE CONTRACTOR SHALL CONDUCT building or addition envelope or altered envelope shall meet a composite STC rating NECESSARY TO PROVIDE ACCESS OR TO VERIFY EXISTING UTILITY 17. CONTRACTOR SHALL EXECUTE THE DEMOLITION WORK BY METHODS TO ON-SITE VISIT TO VERIFY INVENTORY AND IDENTIFY ALL GENERAL of at least 50 or a composite OITC rating of no less than 40, with exterior windows CONNECTIONS, AS WELL AS, EXISTING STRUCTURAL, MECHANICAL AVOID IMPACTING THE NEW CONSTRUCTION. ALL NEW CONSTRUCTION THAT CONSTRUCTION (CONTRACTOR SALVAGE) TO BE DEMOLISHED AS SHOWN ON of a minimum STC 40 or OITC of 30 in the following locations: IS DAMAGED DUE TO DEMOLITION WORK SHALL BE REPAIRED AS PART OF THIS ELECTRICAL, AND PLUMBING CONDITIONS. ALL OPENINGS AND VOIDS LEFT CONTRACT DOCUMENTS PRIOR TO BIDDING. SHALL BE REPAIRED, AS REQUIRED, TO MATCH THE EXISTING ADJACENT GENERAL CONTRACT. 1. Within the 65 CNEL noise contour of an airport CONSTRUCTION AND FINISH. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK, USING THE 18. WHERE NECESSARY CONTRACTOR SHALL CUT, MOVE, OR REMOVE ITEMS TO CONTRACTOR'S BEST SKILL AND ATTENTION. THE CONTRACTOR SHALL BE 2. Within the 65 CNEL or Ldn noise contour of a freeway or expressway, railroad, PROVIDE ACCESS FOR DEMOLITION WORK AND NEW CONSTRUCTION. SUCH industrial source or fixed-guideway source as determined by the Noise Element | 34. ALL OPENINGS AND VOIDS LEFT BY THE REMOVAL OF EXISTING RESPONSIBLE FOR AND HAVE CONTROL OVER CONSTRUCTION MEANS, CONSTRUCTION, EQUIPMENT, PIPING, DUCTS, ETC, SHALL BE PROPERLY ITEMS INCLUDE BUT ARE NOT LIMITED TO FURNISHINGS, EQUIPMENT, METHODS, TECHNIQUES, SEQUENCES, (UNLESS A SEQUENCE IS SPECIFIED BY of the General Plan. SEALED TO MAINTAIN PROPER FIRE RATINGS. UTILITIES, AND DEBRIS. THE OWNER OR CONTRACT DOCUMENTS) AND PROCEDURES, AND FOR The nearest airport is San Diego International Airport, which is located approximately 7.8 COORDINATING ALL PORTIONS OF THE WORK. miles west of the proposed structures. The San Diego International Airport Part 150 Update 35. CONTRACTOR SHALL EXECUTE ALL NEW WORK REQUIRED IN EXISTING 19. CONTRACTOR SHALL PATCH AND REPAIR ALL EXISTING REMAINING CONSTRUCTION IN SUCH A MANNER AS TO FULLY CONCEAL ALL THE SURROUNDING SURFACES AS REQUIRED TO MATCH NEW/OR EXISTING WORK REFER TO ASBESTOS SURVEY REPORT PREPARED BY THE ENVIRONMENTAL Noise Exposure Maps, August 2009, shows that the 65 dBA CNEL noise contour extends up EFFECTS OF INTEGRATING NEW MATERIALS WITH EXISTING SIMILAR CONSULTANT FOR POTENTIAL DISTURBANCE OF ASBESTOS CONTAINING to 3 miles to the east of the Airport. Therefore, the proposed structures are outside of the 65 20. FOR DEMOLITION OF PIPING AND RELATED ITEMS FOR PLUMBING: WHERE MATERIALS . PROVIDE NEW CONSTRUCTION THAT BLENDS WITH EXISTING BUILDING MATERIALS AFFECTED BY DEMOLITION WORK. ASBESTOS REMOVAL CNEL noise contour of this or any other airports. ADJACENT OR ABUTTING SURFACES WITHOUT OBVIOUS BREAKS JOINTS OR NECESSARY AND/OR INDICATED IN PLANS CONTRACTOR SHALL REMOVE ALL (IF ANY) IS A PART OF THE BASE CONTRACT. EXISTING PLUMBING FIXTURES, ALL RELATED FITTINGS AND PIPING CHANGES OF SURFACE APPEARANCE UNLESS SPECIFICALLY SHOWN The nearest freeway or expressway to the proposed project is State Route 54, which is as CONNECTIONS. CUT OFF AND CAP PIPING AS REQUIRED TO BE FLUSH WITH REFER TO LEAD BASED PAINT SURVEY REPORT (IF PROVIDED) PREPARED BY OTHERWISE. WHEN EXISTING SURFACE FINISH CANNOT BE MATCHED, near as 1.6 miles (8,450 feet) south and east of the proposed structures. The City of San REFINISH ENTIRE SURFACE TO NEAREST INTERSECTION. THE ADJACENT SURFACE. WHERE PIPES ARE TO BE REMOVED BELOW FLOOR, THE ENVIRONMENTAL CONSULTANT FOR POTENTIAL DISTURBANCE OF LEAD Diego General Plan does not provide noise contours for State Route 54, however the County BASED PAINT CONTAINING BUILDING MATERIALS AFFECTED BY DEMOLITION REPAIR OPENING LEFT IN FLOOR, AS REQUIRED, TO MATCH THE EXISTING of Riverside General Plan provides generic noise contours for freeways and shows that the CONTRACTOR SHALL EXECUTE ALL NEW WORK REQUIRED IN EXISTING ADJACENT CONSTRUCTION AND FINISH. PROVIDE CLEAN LEVEL SURFACES WORK. LEAD BASED PAINT REMOVAL (IF ANY) IS A PART OF THE BASE 65 dBA CNEL CONSTRUCTION BY BONDING, LAPPING, MECHANICAL TIES, ANCHORING, OR READY FOR NEW CONSTRUCTION. REFER TO PLUMBING DEMOLITION SHEETS CONTRACT. OTHER EFFECTIVE MEANS THAT WILL PREVENT CRACKS. AND NOTES FOR MORE IN FORMATION OF DEMOLITION OF ASSOCIATED ITEMS. IF CONTRACTOR ENCOUNTERS ANY HAZARDOUS MATERIALS DURING 37. CONTRACTOR SHALL PROVIDE PROPER SURFACES TO RECEIVE 21. FOR DEMOLITION OF DUCTWORK AND RELATED ITEMS FOR MECHANICAL: DEMOLITION AND CONSTRUCTION, HE SHALL IMMEDIATELY SUSPEND WORK INSTALLATION OF NEW CONSTRUCTION OR REPAIRS IN SUCH A MANNER AS WHERE NECESSARY AND/OR INDICATED IN PLANS CONTRACTOR SHALL AND NOTIFY THE OWNER AND ARCHITECT BEFORE PROCEEDING. TO FULLY CONCEAL ALL THE EFFECTS OF DEMOLITION AND PATCHING REMOVE ALL EXISTING H.V.A.C. EQUIPMENT INCLUDING DUCT WORK, VISTA ENVIRONMENTAL HANGERS, GRILLS, DIFFUSERS, THERMOSTATS AND CONTROLS. REMOVE AS 1021 DIDRIKSON WAY REQUIRED TO BE FLUSH WITH THE ADJACENT SURFACE. CUT OFF AND CAP CONTRACTOR SHALL EXECUTE THE DEMOLITION WORK AND SHALL REMOVE LAGUNA BEACH CALIFORNIA 92651 DUCTING AS REQUIRED TO BE FLUSH WITH THE ADJACENT SURFACE. REPAIR ALL DEBRIS BY METHODS TO AVOID IMPACTING THE OPERATION OF THE PHONE 949 510 5355 ADJACENT SURFACES TO MATCH THE EXISTING ADJACENT CONSTRUCTION FACILITY. PRIOR TO BEGINNING OF DEMOLITION, THE CONTRACTOR SHALL **FACSIMILE 949 715 3629** NOTIFY THE OWNER IN ADVANCE AND OBTAIN PERMISSION FROM THE OWNER AND FINISH. PROVIDE CLEAN LEVEL SURFACES READY FOR NEW **ELECTRONIC GREG@VISTALB.COM** TO COMMENCE WORKING IN A SPECIFIC AREA. Page 1 OF 2 CONSTRUCTION. REFER TO MECHANICAL DEMOLITION SHEETS AND NOTES FOR MORE IN FORMATION OF DEMOLITION OF ASSOCIATED ITEMS. 10. CONTRACTOR SHALL COORDINATE ALL NON-ATTACHED ITEMS, SUCH AS FURNISHINGS, MOBILE EQUIPMENT, DESKS, TABLES, CHAIRS, ETC., WITH THE 22. FOR DEMOLITION OF EXISTING CONSTRUCTION AND STRUCTURE: WHERE OWNER OR OWNER'S REPRESENTATIVE PRIOR TO THE COMMENCEMENT OR NECESSARY AND/OR INDICATED IN PLANS CONTRACTOR SHALL REMOVE ALL noise contours on the busiest freeways extend up to 815 feet from the freeway. Therefore, EXISTING CONSTRUCTION, STRUCTURE, FASTENERS, AND ANCHORAGE. WORK. ARTICLES HAVING VALUE INCLUDING FURNISHINGS, FIXTURES, since the proposed structures are outside the 65 dBA CNEL noise contours of any freeway or EQUIPMENT, ETC. SHALL BE RETURNED TO THE OWNER OR OWNER'S REMOVE AS REQUIRED TO BE FLUSH WITH THE ADJACENT SURFACE. REPAIR ADJACENT SURFACES, AS REQUIRED, TO MATCH THE EXISTING ADJACENT REPRESENTATIVE FOR DISPOSITION. CONSTRUCTION, FIRE RATING, AND FINISH. PROVIDE CLEAN LEVEL SURFACES The nearest railroad is the Union Pacific Railroad located as near as 0.7 miles (3,700 feet) READY FOR NEW CONSTRUCTION. REFER TO STRUCTURAL DEMOLITION north of the project site and runs adjacent to Imperial Avenue to Gillespie Field and is SHEETS AND NOTES FOR MORE IN FORMATION OF DEMOLITION OF CONTRACTOR SALVAGE ITEMS SHALL BE DISPOSED OF PROPERLY OFF-SITE considered a local line with limited rail traffic. The City of San Diego General Plan does not ASSOCIATED ITEMS. AND IN AN EXPEDITIOUS MANNER. provide noise contours for railroads, however the County of Riverside General Plan provides generic noise contours for railroads and shows that the 65 dBA CNEL noise contours on the 23. FOR DEMOLITION OF WIRING AND RELATED ITEMS FOR ELECTRICAL: WHERE busiest railroads extend up to 650 feet from the railroad. Therefore, the proposed structures NECESSARY AND/OR INDICATED IN PLANS CONTRACTOR SHALL REMOVE ALL are outside the 65 dBA CNEL noise contours of any railroad. EXISTING ELECTRICAL EQUIPMENT INCLUDING CONDUIT, BOXES, WIRE CABLE. SUPPORTS, WIRING DEVICES, SAFETY SWITCHES, FIRE ALARM EQUIPMENT. There are currently no fixed-guideways in the City of San Diego, however according to San SPEAKERS, TELEPHONE OUTLETS, AND LIGHTING FIXTURES. REMOVE AS Diego North Bay & Beach Area Guideway Project, there are preliminary plans for a guideway REQUIRED TO BE FLUSH WITH THE ADJACENT SURFACE. REPAIR ADJACENT system in the North Bay area, which is approximately 10 miles northwest of the project site... SURFACES, AS REQUIRED, TO MATCH THE EXISTING ADJACENT Therefore, due to the distance of the proposed guideway systems, the proposed structures CONSTRUCTION AND FINISH. PROVIDE CLEAN LEVEL SURFACES READY FOR are outside of the 65 CNEL noise contours of any existing or proposed fixed-guideways. NEW CONSTRUCTION. ALL ABANDONED WIRING AND CONDUIT TO REMOVED TO THE POWER SOURCE. TURN ALL LIGHTING FIXTURES AND FIRE ALARM Since the proposed structures are outside the 65 CNEL noise contours for all of the noise EQUIPMENT OVER TO OWNER OR OWNER'S REPRESENTATIVE FOR sources listed in CALGreen Section 5.507.4.1, the proposed structures are exempt from DISPOSITION. EXISTING WIRING, CONDUIT, ETC, OR PORTIONS THEREOF being required to be designed to meet the Sound Transmission Class (STC) or REMOVED DURING DEMOLITION. SHALL NOT BE REUSED UNLESS SHOWN Outdoor-Indoor Sound Transmission Class (OITC) requirements as detailed in Section OTHERWISE. REFER TO ELECTRICAL DEMOLITION SHEETS AND NOTES FOR 5.507.4. Given these facts no further acoustical analysis is required of the proposed MORE IN FORMATION OF DEMOLITION OF ASSOCIATED ITEMS. structures. Please call me at (949) 510-5355 if you have any questions related to the above. 24. FOR DEMOLITION OF PARTITIONS: WHERE NECESSARY AND/OR INDICATED IN PLANS, THE CONTRACTOR SHALL REMOVE EXISTING PARTITION, INCLUDING ALL ELECTRICAL EQUIPMENT, CONDUIT, BOXES, WIRE CABLE, SUPPORTS, By Touleand WIRING DEVICES, SAFETY SWITCHES, FIRE ALARM EQUIPMENT, SPEAKERS, OUTLETS, H.V.A.C CONTROLS, PIPING, VENTING, ANCHOR BOLTS, ETC. REPAIR Greg Tonkovich, INCE NADEL STUDIO ONE INC ADJACENT WALLS, FLOOR, AND CEILINGS AS REQUIRED TO MATCH THE Senior Noise Analyst EXISTING ADJACENT CONSTRUCTION AND FINISH. PROVIDE CLEAN LEVEL Vista Environmental 4445 EASTGATE MALL SURFACES READY FOR NEW CONSTRUCTION. SUITE 407 25. FOR DEMOLITION OF DOOR ASSEMBLIES: WHERE NECESSARY AND/OR SAN DIEGO, CA 92121 INDICATED IN PLANS, THE CONTRACTOR SHALL REMOVE EXISTING DOOR T. 619.232.8424 ASSEMBLIES INCLUDING ANY AND/OR ALL FRAMES, TRIM, STRAPS, ANCHORS, HARDWARE, GLAZING, AND THRESHOLDS. REPAIR ADJACENT WALLS AND F. 619.232.7179 FLOORS AS REQUIRED TO MATCH THE EXISTING ADJACENT CONSTRUCTION WWW.NADELARC.COM AND FINISH. PROVIDE CLEAN LEVEL SURFACES READY FOR NEW CONSTRUCTION. VISTA ENVIRONMENTAL PLANS FOR THE CONSTRUCTION OF 1021 DIDRIKSON WAY 26. FOR DEMOLITION OF FLOOR AND WALL CERAMIC TILE: WHERE NECESSARY **LAGUNA BEACH CALIFORNIA 92651** SKYLINE TEMPORARY FIRE STATION AND/OR INDICATED IN PLANS. THE CONTRACTOR SHALL REMOVE EXISTING PHONE 949 510 5355 FLOOR AND WALL CERAMIC TILES. REMOVE SETTING BEDS AS REQUIRED TO FACSIMILE 949 715 3629 BE FLUSH WITH THE ADJACENT SURFACE. REPAIR ADJACENT SURFACES, AS ELECTRONIC GREG@VISTALB.COM 7180 SKYLINE DR. SAN DIEGO, CALIFORNIA 92114 Page 2 OF 2 REQUIRED, TO MATCH THE EXISTING ADJACENT CONSTRUCTION AND FINISH. PROVIDE CLEAN LEVEL SURFACES READY FOR NEW CONSTRUCTION. PARCEL ID. NO. 581-290-11-00 27. FOR DEMOLITION OF FLOOR COVERINGS: WHERE NECESSARY AND/OR INDICATED IN PLANS, THE CONTRACTOR SHALL REMOVE FLOOR COVERINGS SHEET TITLE AND WALL BASE INCLUDING ADHESIVES, GROUTING BEDS, FASTENERS, **GENERAL NOTES** TRANSITION STRIPS, ETC., REPAIR ADJACENT SURFACES, AS REQUIRED, TO MATCH THE EXISTING ADJACENT CONSTRUCTION AND FINISH. PROVIDE CLEAN LEVEL SURFACES READY FOR NEW CONSTRUCTION. 28. FOR DEMOLITION OF CEILINGS: WHERE NECESSARY AND/OR INDICATED IN CITY OF SAN DIEGO, CALIFORNIA PLANS. THE CONTRACTOR SHALL REMOVE EXISTING ACOUSTICAL TILES OR ENGINEERING AND CAPITAL PROJECTS DEPARTMENT GYP. BOARD CEILINGS, CEILING SUPPORT SYSTEMS, LIGHT FIXTURES, SHEET 3 OF 40 SHEETS GRILLES, DIFFUSERS, EXIT SIGNS, ELECTRICAL COMMUNICATIONS DEVICES, AND OTHER CEILING APPURTENANCES . PREPARE ROOM FOR NEW CEILING ASSEMBLY. REPAIR ADJACENT SURFACES, AS REQUIRED, TO MATCH THE 12/19/2014 EXISTING ADJACENT CONSTRUCTION AND FINISH. PROVIDE CLEAN LEVEL CITY ENGINEER SURFACES READY FOR NEW CONSTRUCTION. DESCRIPTION BY APPROVED DATE FILMED SENERAL NOTES

**DEMOLITION NOTES (CONT.)** 

NOISE CONFORMITY LETTER

# T3.0

	MANDATORY FEATURE	OR MEASURE		COMPLIANCE
EQ.		ITION PREVENTION: Idditions which disturb less than or in the construction activities throug		CONTRACTOR SHALL PROVIDE STORMWATER POLLUTION PREVENTION PER LOCAL CITY
	5.106.1.1 Local ordinance: Comply with a lawfully enacted st	tormwater management and/or ero	sion control ordinance.	ORDINANCE OR PER 5.106.1.2
	5.106.1.2 Best management pra Prevent the loss of soil through w erosion and sediment control and	rind or water erosion by implement	ing an effective combination of	
	<ol> <li>Soil loss BMP that should be dinclude, but are not limited to, the a. Scheduling construction activity.</li> <li>Preservation of natural feature c. Drainage swales or lined ditched. Mulching or hydroseeding to si</li> </ol>	y. s, vegetation and soil. es to control stormwater flow.	ppropriate for each project	
	<ul> <li>e. Erosion control to protect slope</li> <li>f. Protection of storm drain inlets</li> <li>g. Perimeter sediment control (pe</li> <li>h. Sediment trap or sediment bas</li> <li>i. Stabilized construction exits.</li> <li>j. Wind erosion control.</li> <li>k. Other soil loss BMP acceptable</li> </ul>	(gravel bags or catch basin inserts erimeter silt fence, fiber rolls). sin to retain sediment on site.	).	
	be considered for implementation following:  a. Material handling and waste mb. Building materials stockpile mac. Management of washout areas d. Control of vehicle/equipment fie. Vehicle and equipment cleaning. Spill prevention and control.	anagement. s (concrete, paints, stucco, etc.). ueling to con- tractor's staging area ng performed off site.	clude, but are not limited to, the	
	g. Other housekeeping BMP acco	eptable to the enforcing agency.		
EQ.	visitor traffic, provide per of the visitors' entrance, in visitor motorized vehicle one two-bike capacity rad Exception: Additions or	ddition or alteration is anti manently anchored bicycloreadily visible to passers-b parking spaces being add	e racks within 200 feet by, for 5 percent of new ed, with a minimum of	SEE BICYCLE PARKING CALCULATION AND LOCATION OF BICYCLE RACKS ON SHEET A0.2
	parking spaces.			
	tenant vehicular parking spaces, vehicular parking spaces being a	nant-occupants or for additions or provide secure bicycle parking for dded, with a minimum of one spac	5 percent of the tenant	EXTERIOR BUILDING AND SITE UPGRADES ONLY.
	Covered, lockable enclosures a     Lockable bicycle rooms with personal control of the cont	et and shall meet one of the following with permanently anchored racks for ermanently anchored racks; or ed bicycle lockers.	ng: or bicycles;	TENANT OCCUPANCY CALCULATIONS ARE PART OF TENANT IMPROVEMENT DRAWINGS UNDER A SEPARATE PERMIT.
EQ.	Covered, lockable enclosures at 2. Lockable bicycle rooms with possible and a common section of the common section.  Note: Additional information on respect to the common section of the common section.  5.106.5.2 DESIGNATED PARKII In new projects or additions or all.	et and shall meet one of the following with permanently anchored racks for ermanently anchored racks; or ed bicycle lockers.  ecommended bicycle accommodates.	ng: or bicycles; ions may be obtained from ular parking spaces, provide	CALCULATIONS ARE PART OF TENANT IMPROVEMENT DRAWINGS UNDER A SEPARATE PERMIT.  SEE PARKING CALCULATION PARTIAL SITE PLAN SHEET AND PARKING SPACE
EQ.	1. Covered, lockable enclosures of 2. Lockable bicycle rooms with possible and a second seco	et and shall meet one of the following with permanently anchored racks for the ermanently anchored racks; or the ed bicycle lockers.  Becommended bicycle accommodation attes.	ng: or bicycles; ions may be obtained from ular parking spaces, provide	CALCULATIONS ARE PART OF TENANT IMPROVEMENT DRAWINGS UNDER A SEPARATE PERMIT.  SEE PARKING CALCULATION PARTIAL SITE PLAN SHEET AND
EQ.	1. Covered, lockable enclosures of 2. Lockable bicycle rooms with possible and the second se	with permanently anchored racks for the ermanently anchored racks; or the ermanently anchored racks for the ermanently anchored racks; or the ermanently anchored racks; or the ermanently anchored racks for the ermanently anchored racks; or the	ng: or bicycles; ions may be obtained from ular parking spaces, provide	CALCULATIONS ARE PART OF TENANT IMPROVEMENT DRAWINGS UNDER A SEPARATE PERMIT.  SEE PARKING CALCULATION PARTIAL SITE PLAN SHEET AND PARKING SPACE LOCATION ON SITE PLAN
EQ.	1. Covered, lockable enclosures of 2. Lockable bicycle rooms with possible and the second se	with permanently anchored racks for the ermanently anchored racks; or ed bicycle lockers.  ecommended bicycle accommodations.  NG: erations that add 10 or more vehiclination of low-emitting, fuel-efficient NUMBER OF REQUIRED SPACES	ng: or bicycles; ions may be obtained from ular parking spaces, provide	CALCULATIONS ARE PART OF TENANT IMPROVEMENT DRAWINGS UNDER A SEPARATE PERMIT.  SEE PARKING CALCULATION PARTIAL SITE PLAN SHEET AND PARKING SPACE LOCATION ON SITE PLAN
EQ.	1. Covered, lockable enclosures of 2. Lockable bicycle rooms with possible and the second se	with permanently anchored racks for the ermanently anchored racks; or ed bicycle lockers.  ecommended bicycle accommodations.  NG: erations that add 10 or more vehiclination of low-emitting, fuel-efficient NUMBER OF REQUIRED SPACES	ng: or bicycles; ions may be obtained from ular parking spaces, provide	CALCULATIONS ARE PART OF TENANT IMPROVEMENT DRAWINGS UNDER A SEPARATE PERMIT.  SEE PARKING CALCULATION PARTIAL SITE PLAN SHEET AND PARKING SPACE LOCATION ON SITE PLAN
EQ.	1. Covered, lockable enclosures of 2. Lockable bicycle rooms with possible and the second se	et and shall meet one of the following with permanently anchored racks for the ermanently anchored racks; or the ed bicycle lockers.  Secommended bicycle accommodate attes.  NG: Terrations that add 10 or more vehical ination of low-emitting, fuel-efficient in the edge of the edge o	ng: or bicycles; ions may be obtained from ular parking spaces, provide	CALCULATIONS ARE PART OF TENANT IMPROVEMENT DRAWINGS UNDER A SEPARATE PERMIT.  SEE PARKING CALCULATION PARTIAL SITE PLAN SHEET AND PARKING SPACE LOCATION ON SITE PLAN
EQ.	1. Covered, lockable enclosures of 2. Lockable bicycle rooms with possible and the second se	with permanently anchored racks for ermanently anchored racks; or ed bicycle lockers.  ecommended bicycle accommodate ates.  NG: errations that add 10 or more vehiclination of low-emitting, fuel-efficient NUMBER OF REQUIRED SPACES  0  1	ng: or bicycles; ions may be obtained from ular parking spaces, provide	CALCULATIONS ARE PART OF TENANT IMPROVEMENT DRAWINGS UNDER A SEPARATE PERMIT.  SEE PARKING CALCULATION PARTIAL SITE PLAN SHEET AND PARKING SPACE LOCATION ON SITE PLAN
EQ.	1. Covered, lockable enclosures of 2. Lockable bicycle rooms with possible and the second se	with permanently anchored racks for ermanently anchored racks; or ed bicycle lockers.  ecommended bicycle accommodate ates.  NG: rerations that add 10 or more vehical ination of low-emitting, fuel-efficient NUMBER OF REQUIRED SPACES  0  1  3  6	ng: or bicycles; ions may be obtained from ular parking spaces, provide	CALCULATIONS ARE PART OF TENANT IMPROVEMENT DRAWINGS UNDER A SEPARATE PERMIT.  SEE PARKING CALCULATION PARTIAL SITE PLAN SHEET AND PARKING SPACE LOCATION ON SITE PLAN
EQ.	1. Covered, lockable enclosures of 2. Lockable bicycle rooms with possible and the second sec	with permanently anchored racks for ermanently anchored racks; or ed bicycle lockers.  ecommended bicycle accommodate ates.  NG: errations that add 10 or more vehic ination of low-emitting, fuel-efficient NUMBER OF REQUIRED SPACES  0  1  3  6	ng: or bicycles; ions may be obtained from ular parking spaces, provide	CALCULATIONS ARE PART OF TENANT IMPROVEMENT DRAWINGS UNDER A SEPARATE PERMIT.  SEE PARKING CALCULATION PARTIAL SITE PLAN SHEET AND PARKING SPACE LOCATION ON SITE PLAN
EQ.	1. Covered, lockable enclosures 2. Lockable bicycle rooms with posts.  3. Lockable, permanently anchor Note: Additional information on resource Additional i	with permanently anchored racks for ermanently anchored racks; or ed bicycle lockers.  ecommended bicycle accommodations.  NG: errations that add 10 or more vehicination of low-emitting, fuel-efficient NUMBER OF REQUIRED SPACES  0  1  3  6  8  11	ng: or bicycles; ions may be obtained from ular parking spaces, provide	CALCULATIONS ARE PART OF TENANT IMPROVEMENT DRAWINGS UNDER A SEPARATE PERMIT.  SEE PARKING CALCULATION PARTIAL SITE PLAN SHEET AND PARKING SPACE LOCATION ON SITE PLAN
EQ.	1. Covered, lockable enclosures of 2. Lockable bicycle rooms with process of 3. Lockable, permanently anchor in the sacramento Area Bicycle Advocation on the sacramento Area Bicycle Advocation of th	with permanently anchored racks for ermanently anchored racks; or ed bicycle lockers.  ecommended bicycle accommodate ates.  NG: erations that add 10 or more vehic ination of low-emitting, fuel-efficient and a second at a second and a second and a second	ions may be obtained from  ular parking spaces, provide and carpool/van pool vehicles  with the following: ing zones 1-4 as defined in  5-11; and	CALCULATIONS ARE PART OF TENANT IMPROVEMENT DRAWINGS UNDER A SEPARATE PERMIT.  SEE PARKING CALCULATION PARTIAL SITE PLAN SHEET AND PARKING SPACE LOCATION ON SITE PLAN
QUIR	1. Covered, lockable enclosures of 2. Lockable bicycle rooms with process of 3. Lockable, permanently anchor in the sacramento Area Bicycle Advocation of th	with permanently anchored racks for ermanently anchored racks; or ed bicycle lockers.  ecommended bicycle accommodate ates.  NG: erations that add 10 or more vehic ination of low-emitting, fuel-efficient and a second at a second and a second and a second	or bicycles;  ions may be obtained from  ular parking spaces, provide and carpool/van pool vehicles  with the following: ing zones 1-4 as defined in 5-11; and B, or comply with a local	CALCULATIONS ARE PART OF TENANT IMPROVEMENT DRAWINGS UNDER A SEPARATE PERMIT.  SEE PARKING CALCULATION PARTIAL SITE PLAN SHEET AND PARKING SPACE LOCATION ON SITE PLAN SHEET A0.2  SEE SHEET E0.2 TITLE 24 SHEETS AND LIGHTING FIXTURE SCHEDULE/CUT

# **ENERGY EFFICIENCY**

PROJ. REQ.	MANDATORY FEATURE OR MEASURE		THE PROJECT INCLUDES EXTERIOR BUILDING AND SITE UPGRADES ONLY AND UTILIZES THE EXISTING BUILDING ENERGY CAPACITY ONLY.		
N.A.	SECTION 5.201.1 CALIFORNIA ENERGY CODE - FOR THE PURPOSES OF ENERGY EFFICIENCY STANDARDS IN THIS CODE, THE CALIFORNIA EN COMMISSION WILL CONTINUE TO ADOPT MANDATORY BUILDING STANDARD: IT IS THE INTENT OF THIS CODE TO ENCOURAGE BUILDINGS TO EXEMPLARY PERFORMANCE IN THE AREA OF ENERGY EFFICIENCY. FOR ENERGY EFFICIENCY STANDARDS, THE CALIFORNIA ENERGY CONSPECIFICALLY, A GREEN BUILDING SHOULD ACHIEVE AT LEAST A 15 IN REDUCTION IN ENERGY	OSES			
TAB	LE 5.106.8 [N] MAXIMUM ALLOWABLE BACKLIGHT, UPL	LIGHT AND	GLARE	(BUG) RATIN	IGS <sup>1 2</sup>
	ALLOWABLE RATING	LIGHTING ZONE 1	LIGHTIN ZONE 2	IG LIGHTING 2 ZONE 3	LIGHTING ZONE 4
MAXIMU	JM ALLOWABLE BACKLIGHT RATING 3				
LUMINAIR	E GREATER THAN 2 MOUNTING HEIGHTS (MH) FROM PROPERTY LINE	NO LIMIT	NO LIMIT	NO LIMIT	NO LIMIT
LUMINAIRE BACK HEMISPHERE IS 1 - 2 MH FROM PROPERTY LINE			В3	B4	B4
LUMINAIRI	E BACK HEMISPHERE IS 0.5 - 1 MH FROM PROPERTY LINE	B1	B2	В3	В3
LUMINAIR	E BACK HEMISPHERE IS LESS THAN 0.5 MH FROM PROPERTY LINE	В0	В0	B1	B2
MAXIMUM	ALLOWABLE UPLIGHT RATING			· ·	l.
FOR AREA	LIGHTING 4	UO	uo	uo	UO
FOR ALL OTHER OUTDOOR LIGHTING, INCLUDING DECORATIVE LUMINARIES			U2	U3	U4
MAXIMUM	ALLOWABLE GLARE RATING 5			· ·	
LUMINAIRI	E GREATER THAN 2 MH FROM PROPERTY LINE	G1	G2	G3	G4
LUMINAIR	E FRONT HEMISPHERE IS 1 - 2 MH FROM PROPERTY LINE	G0	G1	G1	G2
LUMINAIRI	E FRONT HEMISPHERE IS 0.5 - 1 MH FROM PROPERTY LINE	G0	G0	G1	G1
	E BACK HEMISPHERE IS LESS THAN 0.5 MH FROM PROPERTY LINE	G0	G0	G0	G1

2. For property lines that abut public walkways, bikeways, plazas and parking lots, the property line may be considered to be 5 feet beyond the actual property line for purpose of determining compliance with this section. For property lines that abut public roadways and public transit corridors, the property line may be considered to be the centerline of the public roadway or public transit corridor for the purpose of determining compliance with this section. 3. If the nearest property line is less than or equal to two mounting heights from the back hemisphere of the luminaire distribution, the applicable reduced

4. General lighting luminaires in areas such as outdoor parking, sales or storage lots shall meet these reduced ratings. Decorative luminaires located in these areas shall meet U-value limits for "all other outdoor lighting." 5. If the nearest property line is less than or equal to two mounting heights from the front hemisphere of the luminaire distribution, the applicable reduced Glare rating shall be met.

# WATER EFFICIENCY AND CONSERVATION

	PROJ. REQ.	MANDATORY FEATURE OR MEASURE	COMPLIANCE	
	N.A.	SECTION 5.303.1.1 WATER METERS: FOR BUILDINGS IN EXCESS OF 50,000 SQUARE FEET. SEPARATE SUB-METERS SHALL BE INSTALLED AS FOLLOWS:	BUILDINGS ARE LESS THAN 50,000 SQUARE FEET	
		1. FOR EACH INDIVIDUAL LEASED, RENTED, OR OTHER TENANT SPACE WITHIN THE BUILDING PROJECTED TO CONSUME MORE THAN 100 GAL/DAY (380 L/DAY), INCLUDING, BUT NOT LIMITED TO, SPACES USED FOR LAUNDRY OR CLEANERS, RESTAURANT OR FOOD SERVICE, MEDICAL OR DENTAL OFFICE, LABORATORY, OR BEAUTY SALON OR BARBER SHOP.		
		2. WHERE SEPARATE SUB-METERS FOR INDIVIDUAL BUILDING TENANTS ARE UNFEASIBLE, FOR WATER SUPPLIED TO THE FOLLOWING SUBSYSTEMS:		
		A. MAKEUP WATER FOR COOLING TOWERS WHERE FLOW THROUGH IS GREATER THAN 500 GPM		
		B. MAKEUP WATER FOR EVAPORATIVE COOLERS GREATER THAN 6 GPM		
		1. C. STEAM AND HOT-WATER BOILERS WITH ENERGY INPUT MORE THAN 500,000 BTU/H DESCRIBED IN SECTION A5.304		
A W		SECTION 5.303.1.2 WATER METERS: A SEPARATE SUBMETER OR METERING DEVICE SHALL BE PROVIDED FOR ANY TENANT WITH A NEW BUILDING OR WIN AND ADDITION THAT IS PROJECTED TO CONSUME MORE THAN 1,000 GAL/DAY (3800 L/DAY).	THE PROJECT INCLUDES EXTERIOR BUILDING AND SITE UPGRADES ONLY WATER CONSUMPTION CALCULATIONS ARE PART OF TENANT IMPROVEMENT DRAWINGS UNDER A SEPARATE PERMIT.	
	N.A.	5.303.2 WATER REDUCTION. PLUMBING FIXTURES SHALL MEET THE MAXIMUM FLOW RATE VALUES SHOWN IN TABLE 5.303.2.3.	INCLUDES EXTERIOR BUILDING AND SITE UPGRADES ONLY. THE SCOPE DOES NOT	
		EXCEPTION: BUILDINGS THAT DEMONSTRATE 20-PERCENT OVERALL WATER USE REDUCTION. IN THIS CASE, A CALCULATION DEMONSTRATING A 20-PERCENT REDUCTION IN THE BUILDING "WATER USE BASELINE," AS ESTABLISHED IN TABLE 5.303.2.2, SHALL BE PROVIDED.	INCLUDE ANY PLUMBING FIXTURES	
		5.303.2.1 AREAS OF ADDITION OR ALTERATION. FOR THOSE OCCUPANCIES WITHIN THE AUTHORITY OF THE CALIFORNIA BUILDING STANDARDS COMMISSION AS SPECIFIED IN SECTION 103, THE PROVISIONS OF SECTION 5.303.2 AND SECTION 5.303.3 SHALL APPLY TO NEW FIXTURES IN ADDITIONS OR AREAS OF ALTERATION TO THE BUILDING.		

# WATER EFFICIENCY AND CONSERVATION (CONT.)

PROJ. REQ.	MANDATORY FEATURE OR MEASURE		COMPLIANCE	
N.A.	5.303.4 WASTEWATER REDUCTION. EACH BUILDING SHALL REDUCE BY 20 PERCENT VER FOLLOWING METHODS:  1. THE INSTALLATION OF WATER-CONSERVING FIX MEETING THE CRITERIA ESTABLISHED IN SECTION 2. UTILIZING NONPOTABLE WATER SYSTEMS [CAI AND MUNICIPALLY TREATED WASTEWATER (RECYCURRENT EDITION OF THE CALIFORNIA PLUMBING DESCRIBED IN SECTION A5.304	XTURES (WATER CLOSETS, URINALS) N 5.303.2 OR 5.303.3. PTURED RAINWATER, GRAYWATER, YCLED WATER) COMPLYING WITH THE	THE PROJECT INCLUDES EXTERIOR BUILDING AND SITE UPGRADES ONLY. THE SCOPE DOES NOT INCLUDE ANY PLUMBING FIXTURES	
	TABLE 5.303.2.3 WATER RE	3		
	FIXTURE TYPE	TURE TYPE BASELINE FLOW RATE		
Kitchei	n faucets	2.0 gpm @ 80 psi		
Wash	fountains	0.5 gpm @ 60 psi		
Meterii	ng faucets	2.2 gpm @ 60 psi		
Meterii	ng faucets for wash fountains	2.2 gpm @ 60 psi		

# TABLE 5.303.2.2 WATER USE BASELINE 3

FIXTURE TYPE	BASELINE FLOW RATE	DURATION	DAILY USES	OCCUPANT <sup>2</sup>	
SHOWERHEADS (SINGLE AND MULTIPLE)	2.0 gpm @ 80 psi	.5 min.	1	X <sup>2a</sup>	
LAVATORY FAUCETS, NONRESIDENTIAL	0.5 gpm @ 60 psi	.25 min.	3	х	
KITCHEN FAUCETS	2.2 gpm @ 60 psi	4 min.	1	X 2 b	
REPLACEMENT AERATORS	2.2 gpm @ 60 psi			х	
WASH FOUNTAINS	2.2 [rim space (in.)/20 gpm @ 60 psi]		x		
METERING FAUCETS	.25 [rim space (in.)/20 gpm @ 60 psi]	.25 min.	3	х	
METERING FAUCETS FOR WASH FOUNTAINS	1.28 gallons/flush	.25 min.		х	
GRAVITY TANK-TYPE WATER CLOSETS	1.28 gallons/flush	1 FLUSH	1 MALE <sup>1</sup> 3 FEMALE	х	
FLUSHOMETER TANK WATER CLOSETS	1.28 gallons/flush	1 FLUSH	1 MALE <sup>1</sup> 3 FEMALE	х	
FLUSHOMETER VALVE WATER CLOSETS	1.28 gallons/flush 1 FLUSH		1 MALE <sup>1</sup> 3 FEMALE	х	
ELECTROMECHANICAL HYDRAULIC WATER CLOSETS	1.28 gallons/flush	1 FLUSH	1 MALE <sup>1</sup> 3 FEMALE	х	
URINALS	0.5 gallons/flush	1 FLUSH	2 MALE	x	

FIXTURE "WATER USE" = FLOW RATE × DURATION × OCCUPANTS × DAILY USES

1. THE DAILY USE NUMBER SHALL BE INCREASED TO THREE IF URINALS ARE NOT INSTALLED IN THE ROOM.

2. REFER TO TABLE A, CHAPTER 4, CALIFORNIA PLUMBING CODE, FOR OCCUPANT LOAD FACTORS.

A. SHOWER USE BY OCCUPANTS DEPENDS ON THE TYPE OF USE OF A BUILDING OR PORTION OF A BUILDING, E.G., TOTAL OCCUPANT LOAD FOR A HEALTH CLUB, BUT ONLY A FRACTION OF THE OCCUPANTS IN AN OFFICE BUILDING AS DETERMINED BY THE ANTICIPATED NUMBER OF USERS.

B. NONRESIDENTIAL KITCHEN FAUCET USE IS DETERMINED BY THE OCCUPANT LOAD OF THE AREA SERVED BY THE FIXTURE.

3. USE WORKSHEET WS-1 TO CALCULATE BASELINE WATER USE.

4. KITCHEN FAUCET WILL NOT EXCEED 1.8 GALLONS/MINUTE.

5. FAUCET WILL NOT EXCEED 1.5 GALLONS/MINUTE.



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# PLANS FOR THE CONSTRUCTION OF SKYLINE TEMPORARY FIRE STATION

7180 SKYLINE DR. SAN DIEGO, CALIFORNIA 92114 PARCEL ID. NO. 581-290-11-00

SHEET TITLE					T3.0	
CALIFORNIA GREEN BUILDING STANDARD NOTES						
CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS DEPARTMENT SHEET 4 OF 40 SHEETS					wbs. S-00687	
APPROVED:	~	12/19/2014 			SUBMITTED BY:  ROWAIDA JADAN  ASSOCIATE ENGINEER	
DESCRIPTION  CAL. GREEN	BY	APPROVED	DATE	FILMED	MICHAEL RAMIREZ  PROJECT MANAGER	
OAL. GREEN					194-1755 CCS27 COORDINATE	
					1834-6315 CCS83 COORDINATE	
CONTRACTOR		DATE STARTED			38317 - 4 D	

DATE COMPLETED \_\_\_\_

# **OUTDOOR WATER USE**

PROJ. REQ.	MANDATORY FEATURE OR MEASURE	COMPLIANCE
REQ.	SECTION 5.304.1WATER BUDGET: A WATER BUDGET SHALL BE DEVELOPED FOR LANDSCAPE IRRIGATION USE THAT INSTALLED IN CONJUNCTION WITH A NEW BUILDING OR AN ADDITION OR ALTERATION CONFORMS TO THE LOCAL WATER EFFICIENT LANDSCAPE ORDINANCE OR TO THE CALIFORNIA DEPARTMENT OF WATER RESOURCES MODEL WATER EFFICIENT LANDSCAPE ORDINANCE WHERE NO LOCAL ORDINANCE IS APPLICABLE.	SEE LANDSCAPE
REQ.	SECTION 5.304.2 OUTDOOR POTABLE WATER USE: FOR NEW WATER SERVICE OR FOR ADDITION OR ALTERATION REQUIRING UPGRADED WATER SERVICE FOR LANDSCAPED AREAS OF AT LEAST 1,000 SQUARE FEET BUT NOT MORE THAN 5,000 SQUARE FEET (THE LEVEL AT WHICH WATER CODE §535 APPLIES), SEPARATE SUBMETERS OR METERING DEVICES SHALL BE INSTALLED FOR OUTDOOR POTABLE WATER USE.	SEE LANDSCAPE
REQ.	SECTION 5.304.3 IRRIGATION DESIGN - IN NEW NONRESIDENTIAL CONSTRUCTION WITH AT LEAST 1,000 BUT NOT MORE THAN 2,500 SQUARE FEET OF LANDSCAPED AREA (THE LEVEL AT WHICH THE MLO APPLIES), INSTALL IRRIGATION CONTROLLERS AND SENSORS WHICH INCLUDE THE FOLLOWING CRITERIA, AND MEET MANUFACTURER'S RECOMMENDATIONS. AUTOMATIC IRRIGATION SYSTEM CONTROLLERS INSTALLED AT THE TIME OF FINAL INSPECTION SHALL COMPLY WITH THE FOLLOWING:  CONTROLLERS SHALL BE WEATHER-OR SOIL MOISTURE-BASED CONTROLLERS THAT AUTOMATICALLY ADJUST IRRIGATION IN RESPONSE TO CHANGES IN PLANTS' NEEDS AS WEATHER CONDITIONS CHANGE.  WEATHER-BASED CONTROLLERS WITHOUT INTEGRAL RAIN SENSORS OR COMMUNICATION SYSTEMS THAT ACCOUNT FOR LOCAL RAINFALL SHALL HAVE A SEPARATE WIRED OR WIRELESS RAIN SENSOR WHICH CONNECTS OR COMMUNICATES WITH THE CONTROLLER(S). SOIL MOISTURE-BASED CONTROLLERS ARE NOT REQUIRED TO HAVE RAIN SENSOR INPUT.	SEE LANDSCAPE

# WATER RESISTANCE AND MOISTER MANAGEMENT

PROJ. REQ.	MANDATORY FEATURE OR MEASURE	COMPLIANCE
	SECTION 5.407.1 WEATHER PROTECTION  PROVIDE A WEATHER-RESISTANT EXTERIOR WALL AND FOUNDATION ENVELOPE AS REQUIRED BY CALIFORNIA BUILDING CODE SECTION 1403.2 (WEATHER PROTECTION) AND CALIFORNIA ENERGY CODE SECTION 150, (MANDATORY FEATURES AND DEVICES), MANUFACTURER'S INSTALLATION INSTRUCTIONS OR LOCAL ORDINANCE, WHICHEVER IS MORE STRINGENT.	SEE BUILDING ASSEMBLY DETAILS
	SECTION 5.407.2.1 SPRINKLERS: DESIGN AND MAINTAIN LANDSCAPE IRRIGATION SYSTEMS TO PREVENT SPRAY ON STRUCTURES.	
	SECTION 5.407.2.2 ENTRIES AND OPENINGS:  DESIGN EXTERIOR ENTRIES AND/OR OPENINGS SUBJECT TO FOOT TRAFFIC OR WIND-DRIVEN RAIN TO PREVENT WATER INTRUSION INTO BUILDINGS. PRIMARY EXTERIOR ENTRIES SHALL BE COVERED TO PREVENT WATER INTRUSION BY USING NONABSORBENT FLOOR AND WALL FINISHES WITHIN AT LEAST 2 FEET AROUND AND PERPENDICULAR TO SUCH OPENINGS PLUS AT LEAST ONE OF THE FOLLOWING:  1. AN INSTALLED AWNING AT LEAST 4 FEET IN DEPTH.  2. THE DOOR IS PROTECTED BY A ROOF OVERHANG AT LEAST 4 FEET IN DEPTH.  3. THE DOOR IS RECESSED AT LEAST 4 FEET.	SEE ARCHITECTURAL PLANS AND SECTIONS. PROPOSED TOWER ADDITIONS PROVIDE ADDITIONAL ROOF OVERHANG PROTECTION ABOVE EXISTING ADJACENT ENTRIES

# CONSTRUCTION WASTE REDUCTION, DISPOSAL, AND RECYCLING

PROJ. REQ.	MANDATORY FEATURE OR MEASURE	COMPLIANCE
REQ.	SECTION 5.408.1 CONSTRUCTION WASTE MANAGEMENT: RECYCLE AND/OR SALVAGE FOR REUSE A MINIMUM OF 50 PERCENT OF THE NON-HAZARDOUS CONSTRUCTION WASTE IN ACCORDANCE WITH SECTION 5.408.1.1, 5.408.1.2 OR 5.408.1.3; OR MEET A LOCAL CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT ORDINANCE, WHICHEVER IS MORE STRINGENT. WHERE A LOCAL JURISDICTION DOES NOT HAVE A CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT ORDINANCE THAT IS MORE STRINGENT, SUBMIT A CONSTRUCTION WASTE MANAGEMENT PLAN THAT:  1. IDENTIFIES THE CONSTRUCTION AND DEMOLITION WASTE MATERIALS TO BE DIVERTED FROM DISPOSAL BY EFFICIENT USAGE, RECYCLING, REUSE ON THE PROJECT OR SALVAGE FOR FUTURE USE OR SALE.  2. DETERMINES IF CONSTRUCTION AND DEMOLITION WASTE MATERIALS WILL BE SORTED ON-SITE (SOURCE-SEPARATED) OR BULK MIXED (SINGLE STREAM)  3. IDENTIFIES DIVERSION FACILITIES WHERE CONSTRUCTION AND DEMOLITION WASTE MATERIAL COLLECTED WILL BE TAKEN.  4. SPECIFIES THAT THE AMOUNT OF CONSTRUCTION AND DEMOLITION WASTE MATERIALS DIVERTED SHALL BE CALCULATED BY WEIGHT OR VOLUME, BUT NOT BY BOTH  WASTE STREAM REDUCTION ALTERNATIVE: THE COMBINED WEIGHT OF NEW CONSTRUCTION DISPOSAL THAT DOES NOT EXCEED TWO POUNDS PER SQUARE FOOT OF BUILDING AREA MAY BE DEEMED TO MEET THE 50 PERCENT MINIMUM REQUIREMENT AS APPROVED BY THE ENFORCING AGENCY.  DOCUMENTATION SHALL BE PROVIDED TO THE ENFORCING AGENCY WHICH DEMONSTRATES COMPLIANCE. THE WASTE MANAGEMENT PLAN SHALL BE UPDATED AS NECESSARY AND SHALL BE ACCESSIBLE DURING CONSTRUCTION FOR EXAMINATION BY THE ENFORCING AGENCY.	CONTRACTOR SHALL BE RESPONSIBLE FOR RECYCLING AND OR SALVAGING FOR REUSE NON-HAZARDOUS CONSTRUCTION WASTE. SEE GENERAL NOTE 15/T1.0. CONTRACTOR SHALL PROVIDE VERIFICATION OF COMPLIANCE AS REQUESTED BY THE ENFORCING AGENCY OR COMMISSIONING AGENT.
REQ.	SECTION 5.408.3 EXCAVATED SOIL AND LAND CLEARING DEBRIS:  100 PERCENT OF TREES, STUMPS, ROCKS, ASSOCIATED VEGETATION AND SOILS RESULTING PRIMARILY FROM LAND CLEARING SHALL BE REUSED OR RECYCLED. FOR A PHASED PROJECT, SUCH MATERIAL MAY BE STOCKPILED ON SITE UNTIL THE STORAGE SITE IS DEVELOPED.  EXCEPTION: REUSE, EITHER ON-OR OFF-SITE, OF VEGETATION OR SOIL CONTAMINATED BY DISEASE OR PEST INFESTATION. IF CONTAMINATION BY DISEASE OR PEST INFESTATION IS SUSPECTED, RECYCLING OR DISPOSAL OF THE MATERIAL AS REQUIRED BY GOVERNING AGENCY	CONTRACTOR SHALL BE RESPONSIBLE FOR THE REUSE OR RECYCLING 100 PERCENT OF TREES, STUMPS, ROCKS, ASSOCIATED VEGETATION AND SOILS RESULTING PRIMARILY FROM LAND CLEARING. CONTRACTOR SHALL PROVIDE VERIFICATION OF COMPLIANCE AS REQUESTED BY THE ENFORCING AGENCY OR

COMMISSIONING AGENT.

PROJ. REQ.	MANDATORY FEATURE OR MEASURE	COMPLIANCE
N.A.	SECTION 5.410.1 RECYCLING BY OCCUPANTS:  PROVIDE READILY ACCESSIBLE AREAS THAT SERVE THE ENTIRE BUILDING AND ARE IDENTIFIED FOR THE DEPOSITING, STORAGE AND COLLECTION OF NON-HAZARDOUS MATERIALS FOR RECYCLING, INCLUDING (AT A MINIMUM) PAPER, CORRUGATED CARDBOARD, GLASS, PLASTICS AND METALS OR MEET A LAWFULLY ENACTED LOCAL	
	RECYCLING ORDINANCE, IF MORE RESTRICTIVE.  ADDITIONS: ALL ADDITIONS CONDUCTED WITHIN A 12-MONTH PERIOD UNDER SINGLE OR MULTIPLE PERMITS, RESULTING IN AN INCREASE OF 30 PERCENT OR MORE IN FLOOR AREA, SHALL PROVIDE RECYCLING AREAS ON SITE.	
	EXCEPTION: ADDITIONS WITHIN A TENANT SPACE RESULTING IN LESS THAN A 30-PERCENT INCREASE IN THE TENANT SPACE FLOOR AREA.	
N.A.	SECTION 5.410.2 COMMISSIONING:	
	FOR NEW BUILDINGS 10,000 SQUARE FEET AND OVER, BUILDING COMMISSIONING SHALL BE INCLUDED IN THE DESIGN AND CONSTRUCTION PROCESSES OF THE BUILDING PROJECT TO VERIFY THAT THE BUILDING SYSTEMS AND COMPONENTS MEET THE OWNER'S OR OWNER REPRESENTATIVE'S PROJECT REQUIREMENTS. COMMISSIONING SHALL BE PERFORMED IN ACCORDANCE WITH THIS SECTION BY TRAINED PERSONNEL WITH EXPERIENCE ON PROJECTS OF COMPARABLE SIZE AND COMPLEXITY. COMMISSIONING REQUIREMENTS SHALL INCLUDE:	
	1. OWNER'S OR OWNER REPRESENTATIVE'S PROJECT REQUIREMENTS 2. BASIS OF DESIGN 3. COMMISSIONING MEASURES SHOWN IN THE CONSTRUCTION DOCUMENTS 4. COMMISSIONING PLAN 5. FUNCTIONAL PERFORMANCE TESTING	
	6. DOCUMENTATION AND TRAINING 7. COMMISSIONING REPORT	
	EXCEPTIONS:  1. DRY STORAGE WAREHOUSES OF ANY SIZE.	
	2. 2. AREAS UNDER 10,000 SQUARE FEET USED FOR OFFICES OR OTHER CONDITIONED ACCESSORY SPACES WITHIN DRY STORAGE WAREHOUSES	
	3. 3. TENANT IMPROVEMENTS UNDER 10,000 SQUARE FEET AS DESCRIBED IN SECTION 303.1.1.	
	4. 4. COMMISSIONING REQUIREMENTS FOR ENERGY SYSTEMS COVERED BY THE 2013 CALIFORNIA ENERGY CODE.	
	ALL BUILDING OPERATING SYSTEMS COVERED BY TITLE 24, PART 6, AS WELL AS PROCESS EQUIPMENT AND CONTROLS, AND RENEWABLE ENERGY SYSTEMS SHALL BE INCLUDED IN THE SCOPE OF THE COMMISSIONING REQUIREMENTS.	
N.A.	SECTION 5.410.1 RECYCLING BY OCCUPANTS:  PROVIDE READILY ACCESSIBLE AREAS THAT SERVE THE ENTIRE BUILDING AND ARE IDENTIFIED FOR THE DEPOSITING, STORAGE AND COLLECTION OF NON-HAZARDOUS MATERIALS FOR RECYCLING, INCLUDING (AT A MINIMUM) PAPER, CORRUGATED CARDBOARD, GLASS, PLASTICS AND METALS OR MEET A LAWFULLY ENACTED LOCAL RECYCLING ORDINANCE, IF MORE RESTRICTIVE.	
	ADDITIONS: ALL ADDITIONS CONDUCTED WITHIN A 12-MONTH PERIOD UNDER SINGLE OR MULTIPLE PERMITS, RESULTING IN AN INCREASE OF 30 PERCENT OR MORE IN FLOOR AREA, SHALL PROVIDE RECYCLING AREAS ON SITE.	
	<b>EXCEPTION:</b> ADDITIONS WITHIN A TENANT SPACE RESULTING IN LESS THAN A 30-PERCENT INCREASE IN THE TENANT SPACE FLOOR AREA.	
N.A.	SECTION 5.410.2 COMMISSIONING: FOR NEW BUILDINGS 10,000 SQUARE FEET AND OVER, BUILDING COMMISSIONING SHALL BE INCLUDED IN THE DESIGN AND CONSTRUCTION PROCESSES OF THE BUILDING PROJECT TO VERIFY THAT THE BUILDING SYSTEMS AND COMPONENTS MEET THE OWNER'S OR OWNER REPRESENTATIVE'S PROJECT REQUIREMENTS. COMMISSIONING SHALL BE PERFORMED IN ACCORDANCE WITH THIS SECTION BY TRAINED PERSONNEL WITH EXPERIENCE ON PROJECTS OF COMPARABLE SIZE AND COMPLEXITY. COMMISSIONING REQUIREMENTS SHALL INCLUDE:	PROJECT IS LESS THAN 10,000 SQUARE FEET
	OWNER'S OR OWNER REPRESENTATIVE'S PROJECT REQUIREMENTS     BASIS OF DESIGN     COMMISSIONING MEASURES SHOWN IN THE CONSTRUCTION DOCUMENTS	
	4. COMMISSIONING PLAN 5. FUNCTIONAL PERFORMANCE TESTING 6. DOCUMENTATION AND TRAINING 7. COMMISSIONING REPORT	
	EXCEPTIONS:  1. DRY STORAGE WAREHOUSES OF ANY SIZE.	
	2. 2. AREAS UNDER 10,000 SQUARE FEET USED FOR OFFICES OR OTHER CONDITIONED ACCESSORY SPACES WITHIN DRY STORAGE WAREHOUSES	
	3. 3. TENANT IMPROVEMENTS UNDER 10,000 SQUARE FEET AS DESCRIBED IN SECTION 303.1.1.	
	4. 4. COMMISSIONING REQUIREMENTS FOR ENERGY SYSTEMS COVERED BY THE 2013 CALIFORNIA ENERGY CODE.	
	ALL BUILDING OPERATING SYSTEMS COVERED BY TITLE 24, PART 6, AS WELL AS PROCESS EQUIPMENT AND CONTROLS, AND RENEWABLE ENERGY SYSTEMS SHALL BE INCLUDED IN THE SCOPE OF THE COMMISSIONING REQUIREMENTS.	
N.A.	OWNER'S PROJECT REQUIREMENTS (OPR).  THE EXPECTATIONS AND REQUIREMENTS OF THE BUILDING APPROPRIATE TO ITS PHASE SHALL BE DOCUMENTED BEFORE THE DESIGN PHASE OF THE PROJECT BEGINS. THIS DOCUMENTATION SHALL INCLUDE THE FOLLOWING:  1. ENVIRONMENTAL AND SUSTAINABILITY GOALS.  2. ENERGY EFFICIENCY GOALS  3. INDOOR ENVIRONMENTAL QUALITY REQUIREMENTS.  4. PROJECT PROGRAM, INCLUDING FACILITY FUNCTIONS AND HOURS OF OPERATION, AND NEED FOR AFTER HOURS OPERATION.	PROJECT IS LESS THAN 10,000 SQUARE FEET
	5. EQUIPMENT AND SYSTEMS EXPECTATIONS. 6. BUILDING OCCUPANT AND OPERATION AND MAINTENANCE PERSONNEL EXPECTATIONS.	
N.A.	BASIS OF DESIGN (BOD)  A WRITTEN EXPLANATION OF HOW THE DESIGN OF THE BUILDING SYSTEMS MEETS THE OPR SHALL BE COMPLETED AT THE DESIGN PHASE OF THE BUILDING PROJECT. THE BASIS OF DESIGN DOCUMENT SHALL COVER THE FOLLOWING SYSTEMS:  1. HEATING, VENTILATION, AIR CONDITIONING SYSTEMS AND CONTROLS.  2. INDOOR LIGHTING SYSTEM AND CONTROLS  3. WATER HEATING SYSTEM	PROJECT IS LESS THAN 10,000 SQUARE FEET

# **BUILDING MAINTENANCE AND OPERATION (CONT.)**

PROJ. REQ.	MANDATORY FEATURE OR MEASURE	COMPLIANCE
N.A.	COMMISSIONING PLAN: PRIOR TO PERMIT ISSUANCE A COMMISSIONING PLAN SHALL BE COMPLETED TO DOCUMENT HOW THE PROJECT WILL BE COMMISSIONED. THE COMMISSIONING PLAN SHALL INCLUDE THE FOLLOWING:  1. GENERAL PROJECT INFORMATION.  2. COMMISSIONING GOALS.  3. SYSTEMS TO BE COMMISSIONED. PLANS TO TEST SYSTEMS AND COMPONENTS SHALL INCLUDE:  A. AN EXPLANATION OF THE ORIGINAL DESIGN INTENT.  B. EQUIPMENT AND SYSTEMS TO BE TESTED, INCLUDING THE EXTENT OF TESTS.  C. FUNCTIONS TO BE TESTED.  D. CONDITIONS UNDER WHICH THE TEST SHALL BE PERFORMED.  E. MEASURABLE CRITERIA FOR ACCEPTABLE PERFORMANCE.  4. COMMISSIONING TEAM INFORMATION.  5. COMMISSIONING PROCESS ACTIVITIES, SCHEDULES AND RESPONSIBILITIES. PLANS FOR THE COMPLETION OF COMMISSIONING SHALL BE INCLUDED.	PROJECT IS LESS THAN 10,000 SQUARE FEET

### **ENVIRONMENTAL QUALITY**

	ONMENTAL GOALITT	
PROJ. REQ.	MANDATORY FEATURE OR MEASURE	COMPLIANCE
N.A.	SECTION 5.503.1 FIREPLACES: INSTALL ONLY A DIRECT-VENT SEALED-COMBUSTION GAS OR SEALED WOOD-BURNING FIREPLACE, OR A SEALED WOOD STOVE OR PELLET STOVE, AND REFER TO RESIDENTIAL REQUIREMENTS IN THE CALIFORNIA ENERGY CODE, TITLE 24, PART 6, SUBCHAPTER 7, and SECTION 150. WOOD STOVES, PELLET STOVES AND FIREPLACES SHALL COMPLY WITH APPLICABLE LOCAL ORDINANCES. WOOD STOVES AND PELLET STOVES SHALL COMPLY WITH U.S. EPA PHASE II EMISSION LIMITS.	PROJECT DOES NOT CONTAIN ANY FIREPLACES
	SECTION 5.504.1.3 TEMPORARY VENTILATION: THE PERMANENT HVAC SYSTEM SHALL ONLY BE USED DURING CONSTRUCTION IF NECESSARY TO CONDITION THE BUILDING WITHIN THE REQUIRED TEMPERATURE RANGE FOR MATERIAL AND EQUIPMENT INSTALLATION. IF THE HVAC SYSTEM IS USED DURING CONSTRUCTION, USE RETURN AIR FILTERS WITH A MINIMUM EFFICIENCY REPORTING VALUE (MERV) OF 8, BASED ON ASHRAE 52.2-1999, OR AN AVERAGE EFFICIENCY OF 30 PERCENT BASED ON ASHRAE 52.1-1992. REPLACE ALL FILTERS IMMEDIATELY PRIOR TO OCCUPANCY.	CONTRACTOR SHALL PROVIDE AN ALTERNATE METHOD TO CONDITION THE SPACE FOR MATERIAL AND EQUIPMENT INSTILLATION THAT DOES NOT REQUIRE THE USE OF THE PERMANENT HVAC EQUIPMENT
	SECTION 5.504.3 PROTECTION OF MECHANICAL EQUIPMENT DURING CONSTRUCTION: AT THE TIME OF ROUGH INSTALLATION AND DURING STORAGE ON THE CONSTRUCTION SITE UNTIL FINAL STARTUP OF THE HEATING, COOLING AND VENTILATING EQUIPMENT, ALL DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, SWEET METAL OR OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY TO REDUCE THE AMOUNT OF DUST, WATER AND DEBRIS WHICH MAY ENTER THE SYSTEM.	CONTRACTOR SHALL PROVIDE ACCEPTABLE METHODS OF MECHANICAL EQUIPMENT PROTECTION. CONTRACTOR SHALL PROVIDE VERIFICATION OF COMPLIANCE AS REQUESTED BY THE ENFORCING AGENCY OR COMMISSIONING AGENT.

SECTION 5.504.4.1 ADHESIVES, SEALANTS AND CAULKS - ADHESIVES, SEALANTS, AND CAULKS USED ON THE PROJECT SHALL MEET THE REQUIREMENTS OF THE FOLLOWING STANDARDS:

1. ADHESIVES, ADHESIVE BONDING PRIMERS, ADHESIVE PRIMERS, SEALANTS, SEALANT PRIMERS AND CAULKS SHALL COMPLY WITH LOCAL OR REGIONAL AIR POLLUTION CONTROL OR AIR QUALITY MANAGEMENT DISTRICT RULES WHERE APPLICABLE, OR SCAQMD RULE 1168 VOC LIMITS, AS SHOWN IN TABLES 5.504.4.1 AND 5.504.4.2. SUCH PRODUCTS ALSO SHALL COMPLY WITH THE RULE 1168 PROHIBITION ON THE USE OF CERTAIN TOXIC COMPOUNDS (CHLOROFORM, ETHYLENE DICHLORIDE, METHYLENE CHLORIDE, PERCHLOROETHYLENE AND TRICHLOROETHYLENE), EXCEPT FOR AEROSOL PRODUCTS AS SPECIFIED IN SUBSECTION 2, BELOW.

2. AEROSOL ADHESIVES, AND SMALLER UNIT SIZES OF ADHESIVES, AND SEALANT OR CAULKING COMPOUNDS (IN UNITS OF PRODUCT, LESS PACKAGING, WHICH DO NOT WEIGH MORE THAN ONE POUND AND DO NOT CONSIST OF MORE THAN 16 FLUID OUNCES) SHALL COMPLY WITH STATEWIDE VOC STANDARDS AND OTHER REQUIREMENTS, INCLUDING PROHIBITIONS ON USE OF CERTAIN TOXIC COMPOUNDS, OF CALIFORNIA CODE OF REGULATIONS, TITLE 17, COMMENCING WITH SECTION 94507.

TABLE 5.504.4.1 ADHESIVE VOC LIMIT 1,2
(LESS WATER AND LESS EXEMPT COMPOUND IN GRAMS PER LITER)

ARCHITECTURAL APPLICATIONS	CURRENT VOC LIMIT
INDOOR CARPET ADHESIVES	50
CARPET PAD ADHESIVES	50
OUTDOOR CARPET ADHESIVES	150
WOOD FLOORING ADHESIVE	100
RUBBER FLOOR ADHESIVES	60
SUB-FLOOR ADHESIVES	50
CERAMIC TILE ADHESIVES	65
VCT AND ASPHALT TILE ADHESIVES	50
DRYWALL AND PANEL ADHESIVES	50
COVE BASE ADHESIVES	50
MULTIPURPOSE CONSTRUCTION ADHESIVES	70
STRUCTURAL GLAZING ADHESIVES	100
SINGLE-PLY ROOF MEMBRANE ADHESIVES	250
OTHER ADHESIVE NOT SPECIFICALLY LISTED	50

NADEL

CONTRACTOR TO USE

AND CAULKS THAT CONFORM TO SECTION

5.504.4.1. PRIOR TO

CONTRACTOR SHALL

REQUESTED BY THE

**ENFORCING AGENCY OR** 

COMMISSIONING AGENT.

PROVIDE VERIFICATION OF

**PURCHASE AND** 

INSTILLATION THE

**COMPLIANCE AS** 

NADEL STUDIO ONE INC 4445 EASTGATE MALL SUITE 407 SAN DIEGO, CA 92121 T. 619.232.8424

T3.1

SHEET NO.

38317 - 5 D

# PLANS FOR THE CONSTRUCTION OF SKYLINE TEMPORARY FIRE STATION

WWW.NADELARC.COM

**F.** 619.232.7179

7180 SKYLINE DR. SAN DIEGO, CALIFORNIA 92114 PARCEL ID. NO. 581-290-11-00

SHEET TITLE

CALIFORN BUILDING	CLEAR MAN MARKET	a a.—.—	D NO	OTES	T3.1
	NG AND CAP	GO, CAL ITAL PROJECTS D OF 40 SHEET	EPARTMEN		wbs. S-00687
APPROVED:	-	1	2/19/2 <b>DATE</b>	014	ROWAIDA JADAN  ASSOCIATE ENGINEER
DESCRIPTION  CAL. GREEN	BY	APPROVED	DATE	FILMED	MICHAEL RAMIREZ PROJECT MANAGER
					194-1755 CCS27 COORDINATE
	10				1834-6315 CCS83 COORDINATE

DATE COMPLETED

MANDATORY FEATURE OR MEASURE

# **ENVIRONMENTAL QUALITY (CONT.)**

REQ.

SECTION 5.504.4.1 ADHESIVES, SEALANTS AND CAULKS - ADHESIVES, SEALANTS, AND CAULKS USED ON THE PROJECT SHALL MEET THE REQUIREMENTS OF THE FOLLOWING STANDARDS: 1. ADHESIVES, ADHESIVE BONDING PRIMERS, ADHESIVE PRIMERS, SEALANTS, SEALANT

COMPLIANCE

CONTRACTOR TO USE ADHESIVES, SEALANTS,

AND CAULKS THAT **CONFORM TO SECTION** 

5.504.4.1. PRIOR TO

**PURCHASE AND** 

INSTILLATION THE

COMPLIANCE AS

CONTRACTOR SHALL

REQUESTED BY THE

**ENFORCING AGENCY OR** COMMISSIONING AGENT.

PROVIDE VERIFICATION OF

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2. AEROSOL ADHESIVES, AND SMALLER UNIT SIZES OF ADHESIVES, AND SEALANT OR CAULKING COMPOUNDS (IN UNITS OF PRODUCT, LESS PACKAGING, WHICH DO NOT WEIGH MORE THAN ONE POUND AND DO NOT CONSIST OF MORE THAN 16 FLUID OUNCES) SHALL COMPLY WITH STATEWIDE VOC STANDARDS AND OTHER REQUIREMENTS, INCLUDING PROHIBITIONS ON USE OF CERTAIN TOXIC COMPOUNDS, OF CALIFORNIA CODE OF REGULATIONS, TITLE 17, COMMENCING WITH SECTION 94507.

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RUBBER FLOOR ADHESIVES	60
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CERAMIC TILE ADHESIVES	65
VCT AND ASPHALT TILE ADHESIVES	50
DRYWALL AND PANEL ADHESIVES	50
COVE BASE ADHESIVES	50
MULTIPURPOSE CONSTRUCTION ADHESIVES	70
STRUCTURAL GLAZING ADHESIVES	100
SINGLE-PLY ROOF MEMBRANE ADHESIVES	250
OTHER ADHESIVE NOT SPECIFICALLY LISTED	50

SPECIALTY APPLICATIONS	CURRENT VOC LIMIT
PVC WELDING	510
CPVC WELDING	490
ABS WELDING	325
PLASTIC CEMENT WELDING	250
ADHESIVE PRIMER FOR PLASTIC	550
CONTACT ADHESIVE	80
SPECIAL PURPOSE CONTACT ADHESIVE	250
STRUCTURAL WOOD MEMBER ADHESIVE	140
TOP AND TRIM ADHESIVE	250

SUBSTRATE SPECIFIC APPLICATIONS	CURRENT VOC LIMIT
METAL TO METAL	30
PLASTIC FOAMS	50
POROUS MATERIAL (EXCEPT WOOD)	50
WOOD	30
FIBERGLASS	80

1. IF AN ADHESIVE IS USED TO BOND DISSIMILAR SUBSTRATES TOGETHER THE ADHESIVE WITH THE HIGHEST VOC CONTENT SHALL BE ALLOWED.

2. FOR ADDITIONAL INFORMATION REGARDING METHODS TO MEASURE THE VOC

CONTENT SPECIFIED IN THIS TABLE, SEE SOUTH COAST AIR QUALITY MANAGEMENT **DISTRICT RULE 1168,** 

REQ.	MANDATORY FEATURE OR MEASURE		COMPLIANCE
	TABLE 5.504.4.2 SEALANT VOC LIMIT (LESS WATER AND LESS EXEMPT COMP	POUND IN GRAMS PER	
	SEALANTS	CURRENT VOC	]
	ARCHITECTURAL	50	
	MARINE DECK	50	1
	NONMEMBRANE ROOF	150	1
	ROADWAY		1
	SINGLE-PLY ROOF MEMBRANE		1
	OTHER		
	SEALANT PRIMERS	CURRENT VOC LIMIT	
	ARCHITECTURAL NONPOROUS POROUS		
	MODIFIED BITUMINOUS		1
	MARINE DECK		1
	OTHER		1
	NOTE: FOR ADDITIONAL INFORMATION REGARDING N CONTENT SPECIFIED IN THESE TABLES, SEE SOUTH DISTRICT RULE 1168		
		L LIMITS APPLY. THE VOC CONTENT IITIONS FOR THE SPECIALTY	TO PURCHASE AND
	COATINGS CATEGORIES LISTED IN TABLE 5.504.4.3 S CLASSIFYING THE COATING AS A FLAT, NON-FLAT OF BASED ON ITS GLOSS, AS DEFINED IN SUBSECTIONS CALIFORNIA AIR RESOURCES BOARD SUGGESTED C CORRESPONDING FLAT, NON-FLAT OR NONFLAT-HIG 5.504.4.3 SHALL APPLY.	IITIONS FOR THE SPECIALTY SHALL BE DETERMINED BY R NONFLAT-HIGH GLOSS COATING, S 4.21, 4.36 AND 4.37 OF THE 2007 CONTROL MEASURE, AND THE SH GLOSS VOC LIMIT IN TABLE	TO PURCHASE AND INSTILLATION THE CONTRACTOR SHALL PROVIDE VERIFICATION COMPLIANCE AS REQUESTED BY THE ENFORCING AGENCY O
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	CLASSIFYING THE COATING AS A FLAT, NON-FLAT OF BASED ON ITS GLOSS, AS DEFINED IN SUBSECTIONS CALIFORNIA AIR RESOURCES BOARD SUGGESTED C CORRESPONDING FLAT, NON-FLAT OR NONFLAT-HIG 5.504.4.3 SHALL APPLY.  VOC CONTENT LIMITS FOR ARCHITECTURAL COATING GRAMS OF VOC PER LITER OF COATING, LESS WATE  COATING CATEGORY  FLAT COATINGS  NON-FLAT COATINGS  NON-FLAT HIGH GLOSS COATINGS  SPECIALTY COATINGS  ALUMINUM ROOF COATINGS  BITUMINOUS ROOF COATINGS  BITUMINOUS ROOF PRIMERS  BOND BREAKERS  CONCRETE CURING COMPOUNDS  DRIVEWAY SEALERS	ITTIONS FOR THE SPECIALTY SHALL BE DETERMINED BY R NONFLAT-HIGH GLOSS COATING, S 4.21, 4.36 AND 4.37 OF THE 2007 CONTROL MEASURE, AND THE SH GLOSS VOC LIMIT IN TABLE  RGS 23 ER AND LESS EXEMPT COMPOUNDS  CURRENT VOC LIMIT  50  100  400  400  50  350  350  100  50	TO PURCHASE AND INSTILLATION THE CONTRACTOR SHALL PROVIDE VERIFICATION COMPLIANCE AS REQUESTED BY THE ENFORCING AGENCY O
	CLASSIFYING THE COATING AS A FLAT, NON-FLAT OF BASED ON ITS GLOSS, AS DEFINED IN SUBSECTIONS CALIFORNIA AIR RESOURCES BOARD SUGGESTED C CORRESPONDING FLAT, NON-FLAT OR NONFLAT-HIG 5.504.4.3 SHALL APPLY.  VOC CONTENT LIMITS FOR ARCHITECTURAL COATING GRAMS OF VOC PER LITER OF COATING, LESS WATE  COATING CATEGORY  FLAT COATINGS  NON-FLAT HIGH GLOSS COATINGS  SPECIALTY COATINGS  ALUMINUM ROOF COATINGS  BITUMINOUS ROOF COATINGS  BITUMINOUS ROOF PRIMERS  BOND BREAKERS  CONCRETE CURING COMPOUNDS  DRIVEWAY SEALERS  DRY FOG COATINGS	INTIONS FOR THE SPECIALTY SHALL BE DETERMINED BY R NONFLAT-HIGH GLOSS COATING, S 4.21, 4.36 AND 4.37 OF THE 2007 CONTROL MEASURE, AND THE SH GLOSS VOC LIMIT IN TABLE  CURRENT VOC LIMIT  50  100  400  400  400  50  350  350  100  50  1100	TO PURCHASE AND INSTILLATION THE CONTRACTOR SHALL PROVIDE VERIFICATION COMPLIANCE AS REQUESTED BY THE ENFORCING AGENCY O
	CLASSIFYING THE COATING AS A FLAT, NON-FLAT OF BASED ON ITS GLOSS, AS DEFINED IN SUBSECTIONS CALIFORNIA AIR RESOURCES BOARD SUGGESTED C CORRESPONDING FLAT, NON-FLAT OR NONFLAT-HIG 5.504.4.3 SHALL APPLY.  VOC CONTENT LIMITS FOR ARCHITECTURAL COATING GRAMS OF VOC PER LITER OF COATING, LESS WATE  COATING CATEGORY  FLAT COATINGS  NON-FLAT HIGH GLOSS COATINGS  SPECIALTY COATINGS  ALUMINUM ROOF COATINGS  BITUMINOUS ROOF COATINGS  BITUMINOUS ROOF PRIMERS  BOND BREAKERS  CONCRETE CURING COMPOUNDS  DRIVEWAY SEALERS  DRY FOG COATINGS  FAUX FINISHING COATINGS	ITTIONS FOR THE SPECIALTY SHALL BE DETERMINED BY R NONFLAT-HIGH GLOSS COATING, S 4.21, 4.36 AND 4.37 OF THE 2007 CONTROL MEASURE, AND THE SH GLOSS VOC LIMIT IN TABLE  CURRENT VOC LIMIT  50  100  400  400  50  350  350  100  50  150  350	TO PURCHASE AND INSTILLATION THE CONTRACTOR SHALL PROVIDE VERIFICATION COMPLIANCE AS REQUESTED BY THE ENFORCING AGENCY O

500

420

250

120

450

GRAPHIC ARTS COATINGS (SIGN PAINTS)

HIGH-TEMPERATURE COATINGS

MAGNESITE CEMENT COATINGS

MASTIC TEXTURE COATINGS

LOW SOLIDS COATINGS 1

	METALLIC PIGMENTED COATINGS  METALLIC PIGMENTED COATINGS  MULTICOLOR COATINGS  PRETREATMENT WASH PRIMERS  PRIMERS, SEALERS AND UNDERCOATERS  REACTIVE PENETRATING SEALERS	100 500 250 420	
	MULTICOLOR COATINGS  PRETREATMENT WASH PRIMERS  PRIMERS, SEALERS AND UNDERCOATERS	250 420	
	PRETREATMENT WASH PRIMERS  PRIMERS, SEALERS AND UNDERCOATERS	420	
	PRIMERS, SEALERS AND UNDERCOATERS		
	,		
	REACTIVE PENETRATING SEALERS	100	
		350	
	RECYCLED COATINGS	250	
	ROOF COATINGS	50	
ı	RUST PREVENTATIVE COATINGS	250	
	SHELLACS: CLEAR	730	
	SHELLACS: OPAQUE	550	
	SPECIALTY PRIMERS, SEALERS AND UNDERCOATERS	100	
	STAINS	250	
	STONE CONSOLIDANTS	450	
	SWIMMING POOL COATINGS	340	
	TRAFFIC MARKING COATINGS	100	
	TUB AND TILE REFINISH COATINGS	420	
	WATERPROOFING MEMBRANES	250	
	WOOD COATINGS	275	
	WOOD PRESERVATIVES	350	
	ZINC-RICH PRIMERS	340	
	1. GRAMS OF VOC PER LITER OF COATING, INCLUDING WATE COMPOUNDS.  2. THE SPECIFIED LIMITS REMAIN IN EFFECT UNLESS REVISE SUBSEQUENT COLUMNS IN THE TABLE.  3. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIL AIR RESOURCES BOARD, ARCHITECTURAL COATINGS SUGG	ED LIMITS ARE LISTED IN IFIED BY THE CALIFORNIA	
REQUIR ED	FEBRUARY 1, 2008. MORE INFORMATION IS AVAILABLE FROM BOARD.  SECTION 5.504.4.3.1 AEROSOL PAINTS AND COATINGS - AER COATINGS SHALL MEET THE PWMIR LIMITS FOR ROC IN SECTION REQUIREMENTS, INCLUDING PROHIBITIONS ON USE OF CER AND OZONE DEPLETING SUBSTANCES, IN SECTIONS 94522(C)	ROSOL PAINTS AND CTION 94522(A)(3) AND OTHER RTAIN TOXIC COMPOUNDS C)(2) AND (D)(2) OF	CONTRACTOR TO USE AEROSOL PAINTS AND COATINGS THAT CONFORM TO SECTION 5.504.3.1. PRIOR TO
	CALIFORNIA CODE OF REGULATIONS, TITLE 17, COMMENCIN IN AREAS UNDER THE JURISDICTION OF THE BAY AREA AIR OF DISTRICT ADDITIONALLY COMPLY WITH THE PERCENT VOC ELIMITS OF REGULATION 8 RULE 49.	QUALITY MANAGEMENT	5.504.3.1. PRIOR TO PURCHASE AND INSTILLATION THE CONTRACTOR SHALL PROVIDE VERIFICATION OF COMPLIANCE AS REQUESTED BY THE ENFORCING AGENCY OR COMMISSIONING AGENT.
NA	5.504.4.4 CARPET SYSTEMS: ALL CARPET INSTALLED IN THE BUILDING INTERIOR SHALL METALLOWING TESTING AND PRODUCT REQUIREMENTS:		THIS PROJECT SCOPE IS A SHELL BUILDING ONLY. FLOOR FINISHES ARE PART OF TENANT
	1. CARPET AND RUG INSTITUTE'S GREEN LABEL PLUS PROGI 2. COMPLIANT WITH THE VOC-EMISSION LIMITS AND TESTIN SPECIFIED IN THE CALIFORNIA DEPARTMENT OF PUBLIC HEARD THE TESTING AND EVALUATION OF VOLATILE ORGANIC FROM INDOOR SOURCES USING ENVIRONMENTAL CHAMBER 2010 (ALSO KNOWN AS CDPH STANDARD METHOD V1.1 OR S 3. NSF/ANSI 140 AT THE GOLD LEVEL OR HIGHER; 4. SCIENTIFIC CERTIFICATIONS SYSTEMS SUSTAINABLE CHO 5. COMPLIANT WITH THE CALIFORNIA COLLABORATIVE FOR I SCHOOLS (CA-CHPS) CRITERIA INTERPRETATION FOR EQ 2.2 LISTED IN THE CHPS HIGH PERFORMANCE PRODUCT DATAB CUSHION. ALL CARPET CUSHION INSTALLED IN THE BUILDING THE REQUIREMENTS OF THE CARPET AND RUG INSTITUTE'S	NG REQUIREMENTS EALTH STANDARD METHOD C CHEMICAL EMISSIONS RS, VERSION 1.1, FEBRUARY SPECIFICATION 01350); OICE; OR HIGH PERFORMANCE .2 DATED JULY 2012 AND BASE. 5.504.4.4.1 CARPET NG INTERIOR SHALL MEET	IMPROVEMENT DRAWINGS UNDER A SEPARATE PERMIT.



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# PLANS FOR THE CONSTRUCTION OF SKYLINE TEMPORARY FIRE STATION

7180 SKYLINE DR. SAN DIEGO, CALIFORNIA 92114 PARCEL ID. NO. 581-290-11-00

SHEET TITLE	SHEET NO.				
CALIFORN BUILDING	T3.2				
	RING AND CAP	GO, CAL ITAL PROJECTS I OF 40 SHEET	DEPARTMEN'		was. S-00687
APPROVED:	~-	1	2/19/20 <b>DATE</b>	)14	SUBMITTED BY:  ROWAIDA JADAN  ASSOCIATE ENGINEER
DESCRIPTION	BY	APPROVED	DATE	FILMED	MICHAEL RAMIREZ
CAL. GREEN			~		194-1755 CCS27 COORDINATE
					1834-6315 CCS83 COORDINATE
CONTRACTOR	DATE STARTE	0 =2	350	38317 - 6 D	

\_\_\_\_ DATE COMPLETED

T3.2

# 2013 CALIFORNIA GREEN BUILDING STANDARD CODE

# NON-RESIDENTIAL MANDATORY MEASURES

#### ENVIRONMENTAL QUALITY (CONT.)

ENVIRONMENTAL QUALITY (CONT.)						
PROJ. REQ.	MANDATORY FEATURE OR MEASURE		COMPLIANCE			
x	SECTION 5.504.4.5 COMPOSITE WOOD PRODUCTS: HARDWOOD PLYWOOD, PARTICLE BOARD AND MEDIUM COMPOSITE WOOD PRODUCTS USED ON THE INTERIOR SHALL MEET THE REQUIREMENTS FOR FORMALDEHYDE TOXICS CONTROL MEASURE FOR COMPOSITE WOOD (1 BEFORE THE DATES SPECIFIED IN THOSE SECTIONS, AS VERIFICATION OF COMPLIANCE WITH THIS SECTION SH. REQUESTED BY THE ENFORCING AGENCY. DOCUMENTA ONE OF THE FOLLOWING:  1. PRODUCT CERTIFICATIONS AND SPECIFICATIONS 2. CHAIN OF CUSTODY CERTIFICATIONS 3. PRODUCT LABELED AND INVOICED AS MEETING THE REGULATION (SEE CCR, TITLE 17, SECTION 93120, ET SE 4. EXTERIOR GRADE PRODUCTS MARKED AS MEETING OF THE ENGINEERED WOOD ASSOCIATION, THE AUSTR EUROPEAN 636 3S STANDARDS 5. OTHER METHODS ACCEPTABLE TO THE ENFORCING A	CONTRACTOR TO USE COMPOSITE WOOD PRODUCTS THAT CONFORM TO SECTION 5.504.4.5. PRIOR TO PURCHASE AND INSTILLATION THE CONTRACTOR SHALL PROVIDE VERIFICATION OF COMPLIANCE AS REQUESTED BY THE ENFORCING AGENCY OR COMMISSIONING AGENT.				
	FORMALDEHYDE LIMITS 1 MAXIMUM FORMALDEHYDE EMISSIONS IN PARTS PER M	IILLION.				
	PRODUCT	CURRENT LIMIT				
	HARDWOOD PLYWOOD VENEER CORE	0.05				
	HARDWOOD PLYWOOD COMPOSITE CORE	0.05				
	PARTICLE BOARD	0.09				
	MEDIUM DENSITY FIBERBOARD	0.11				
	THIN MEDIUM DENSITY FIBERBOARD <sup>2</sup>	400				
	1. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SI AIR RESOURCES BOARD, AIR TOXICS CONTROL MEASU TESTED IN ACCORDANCE WITH ASTM E 1333-96 (2002). I SEE CALIFORNIA CODE OF REGULATIONS, TITLE 17, SEC 2. THIN MEDIUM DENSITY FIBERBOARD HAS A MAXIMUM MILLIMETERS.	RE FOR COMPOSITE WOOD AS FOR ADDITIONAL INFORMATION, CTIONS 93120 THROUGH 93120.12.				
N.A.	5.504.4.6 RESILIENT FLOORING SYSTEMS: FOR 80 PERCENT OF FLOOR AREA RECEIVING RESILIENT RESILIENT FLOORING SHALL MEET AT LEAST ONE OF THE TESTIFIED UNDER THE RESILIENT FLOOR COVERING (RFCI) FLOORSCORE PROGRAM;  2. COMPLIANT WITH THE VOC-EMISSION LIMITS AND TESTIFIED IN THE CALIFORNIA DEPARTMENT OF PUBLIC METHOD FOR THE TESTING AND EVALUATION CHAMBER 2010;  3. COMPLIANT WITH THE CALIFORNIA COLLABORATIVE IS SCHOOLS (CA-CHPS) CRITERIA INTERPRETATION FOR ELISTED IN THE CHPS HIGH PERFORMANCE PRODUCT DATABASE; OR  4. COMPLIANT WITH CDPH CRITERIA AS CERTIFIED UND CHILDREN'S & SCHOOLS PROGRAM.	THE PROJECT INCLUDES EXTERIOR BUILDING AND SITE UPGRADES ONLY. INTERIOR FINISHES ARE NOT A PART OF THE PROJECT SCOPE				
N.A.	SECTION 5.504.5.3 FILTERS - IN MECHANICALLY VENTILAR REGULARLY OCCUPIED AREAS OF THE BUILDING WITH A OUTSIDE AND RETURN AIR THAT PROVIDES AT LEAST A REPORTING VALUE (MERV) OF 8. MERV 8 FILTERS SHALL OCCUPANCY, AND RECOMMENDATIONS FOR MAINTENAVALUE SHALL BE INCLUDED IN THE OPERATION AND MAINSTALLED FILTERS SHALL BE CLEARLY LABELED BY THATHE MERV RATING.  EXCEPTIONS:  1. AN ASHRAE 10-PERCENT TO 15-PERCENT EFFICIENCY FOR AN HVAC UNIT MEETING THE 2013 CALIFORNIA ENEON LESS CAPACITY PER FAN COIL, IF THE ENERGY USE IS 0.4 W/CFM OR LESS AT DESIGN AIR FLOW.	THE PROJECT INCLUDES EXTERIOR BUILDING AND SITE UPGRADES ONLY. BUILDING MECHANICAL SYSTEMS ARE NOT A PART OF THE PROJECT SCOPE				
N.A.	5.504.7 ENVIRONMENTAL TOBACCO SMOKE (ETS) CONT ARE PROVIDED FOR SMOKING, PROHIBIT SMOKING WIT ENTRIES, OUTDOOR AIR INTAKES AND OPERABLE WIND AS ALREADY PROHIBITED BY OTHER LAWS OR REGULA ORDINANCES, REGULATIONS OR POLICIES OF ANY CITY CALIFORNIA COMMUNITY COLLEGE, CAMPUS OF THE CA OR CAMPUS OF THE UNIVERSITY OF CALIFORNIA, WHIC WHEN ORDINANCES, REGULATIONS OR POLICIES ARE NOT INFORM BUILDING OCCUPANTS OF THE PROHIBITIONS.	HIN 25 FEET OF BUILDING OWS AND WITHIN THE BUILDING TIONS; OR AS ENFORCED BY ', COUNTY, CITY AND COUNTY, ALIFORNIA STATE UNIVERSITY, HEVER ARE MORE STRINGENT.	THERE ARE NO OUTDOOR SMOKING AREAS			
х	SECTION 5.505.1 INDOOR MOISTURE CONTROL - BUILDING THE PROVISIONS OF CALIFORNIA BUILDING CODE, CCR 1203 (VENTILATION) AND CHAPTER 14 (EXTERIOR WALLS NOT APPLICABLE TO LOW-RISE RESIDENTIAL OCCUPAN THIS CODE.	, TITLE 24, PART 2, SECTIONS S). FOR ADDITIONAL MEASURES	THE PROJECT INCLUDES EXTERIOR BUILDING AND SITE UPGRADES ONLY. INTERIOR BUILDING AREAS ARE NOT A PART OF THE PROJECT SCOPE			

# **ENVIRONMENTAL QUALITY (CONT.)**

	SECTION 5.506.1 OUTSIDE AIR DELIVERY: FOR MECHANICALLY OR NATURALLY VENTILATED SPACES IN BUILDINGS, MEET THE MINIMUM REQUIREMENTS OF SECTION 120.1 (REQUIREMENTS FOR VENTILATION) OF THE 2013 CALIFORNIA ENERGY CODE, OR THE APPLICABLE LOCAL CODE, WHICHEVER IS MORE STRINGENT, AND DIVISION 1, CHAPTER 4 OF CCR, TITLE 8.	THE PROJECT INCLUDES EXTERIOR BUILDING AND SITE UPGRADES ONLY. BUILDING MECHANICAL SYSTEMS ARE NOT A PART OF THE PROJECT SCOPE
	SECTION 5.506.2 CARBON DIOXIDE (CO2) MONITORING: FOR BUILDINGS EQUIPPED WITH DEMAND CONTROL VENTILATION, CO2 SENSORS AND VENTILATION CONTROLS SHALL BE SPECIFIED AND INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE 2013 CALIFORNIA ENERGY CODE, SECTION 120(C)(4).	THE PROJECT INCLUDES EXTERIOR BUILDING AND SITE UPGRADES ONLY. BUILDING MECHANICAL SYSTEMS ARE NOT A PART OF THE PROJECT SCOPE
NA	SECTION 5.507.4 ACOUSTICAL CONTROL - EMPLOY BUILDING ASSEMBLIES AND COMPONENTS WITH SOUND TRANSMISSION CLASS (STC) VALUES DETERMINED IN ACCORDANCE WITH ASTM E 90 AND ASTM E 413 OR OUTDOOR-INDOOR SOUND TRANSMISSION CLASS (OITC) DETERMINED IN ACCORDANCE WITH ASTM E 1332, USING EITHER THE PRESCRIPTIVE OR PERFORMANCE METHOD IN SECTION 5.507.4.1 OR 5.507.4.2.  EXCEPTION: BUILDINGS WITH FEW OR NO OCCUPANTS OR WHERE OCCUPANTS ARE	THE PROJECT INCLUDES EXTERIOR BUILDING AND SITE UPGRADES ONLY. EXISTING BUILDING ACOUSTICAL CONTROLS ARE NOT A PART OF THE SCOPE OF THE PROJECT
	NOT LIKELY TO BE AFFECTED BY EXTERIOR NOISE, AS DETERMINED BY THE ENFORCEMENT AUTHORITY, SUCH AS FACTORIES, STADIUMS, STORAGE, ENCLOSED PARKING STRUCTURES AND UTILITY BUILDINGS  EXCEPTION: FOR PUBLIC SCHOOLS AND COMMUNITY COLLEGES, THE REQUIREMENTS OF THIS SECTION AND ALL SUBSECTIONS APPLY ONLY TO NEW CONSTRUCTION.	
N.A.	5.507.4.1 EXTERIOR NOISE TRANSMISSION, PRESCRIPTIVE METHOD: WALL AND ROOF-CEILING ASSEMBLIES EXPOSED TO THE NOISE SOURCE MAKING UP THE BUILDING OR ADDITION ENVELOPE OR ALTERED ENVELOPE SHALL MEET A COMPOSITE STC RATING OF AT LEAST 50 OR A COMPOSITE OITC RATING OF NO LESS THAN 40, WITH EXTERIOR WINDOWS OF A MINIMUM STC OF 40 OR OITC OF 30 IN THE FOLLOWING LOCATIONS:	THE PROJECT INCLUDES EXTERIOR BUILDING AND SITE UPGRADES ONLY. EXISTING BUILDING ACOUSTICAL CONTROLS ARE NOT A PART OF THE
	1. WITHIN THE 65 CNEL NOISE CONTOUR OF AN AIRPORT. EXCEPTIONS:  A. L <sub>DN</sub> OR CNEL FOR MILITARY AIRPORTS SHALL BE DETERMINED BY THE FACILITY AIR INSTALLATION COMPATIBLE LAND USE ZONE (AICUZ) PLAN.  B. L <sub>DN</sub> OR CNEL FOR OTHER AIRPORTS AND HELIPORTS FOR WHICH A LAND USE PLAN HAS NOT BEEN DEVELOPED SHALL BE DETERMINED BY THE LOCAL GENERAL PLAN NOISE ELEMENT.	SCOPE OF THE PROJECT
	2. WITHIN THE 65 CNELOR $L_{\rm DN}$ NOISE CONTOUR OF A FREEWAY OR EXPRESSWAY, RAILROAD, INDUSTRIAL SOURCE OR FIXED GUIDEWAY SOURCE AS DETERMINED BY THE NOISE ELEMENT OF THE GENERAL PLAN.	
	NOISE EXPOSURE WHERE NOISE CONTOURS ARE NOT READILY AVAILABLE. BUILDINGS EXPOSED TO A NOISE LEVEL OF 65 DB LEQ-1-HR DURING ANY HOUR OF OPERATION SHALL HAVE BUILDING, ADDITION OR ALTERATION EXTERIOR WALL AND ROOF-CEILING ASSEMBLIES EXPOSED TO THE NOISE SOURCE MEETING A COMPOSITE STC RATING OF AT LEAST 45 (OR OITC 35), WITH EXTERIOR WINDOWS OF A MINIMUM STC OF 40 (OR OITC 30).	
N.A.	SECTION 5.507.4.2 PERFORMANCE METHOD:  FOR BUILDINGS LOCATED AS DEFINED IN SECTION A5.507.4.1 OR A5.507.4.1.1, WALL AND ROOF-CEILING ASSEMBLIES EXPOSED TO THE NOISE SOURCE MAKING UP THE BUILDING ENVELOPE SHALL BE CONSTRUCTED TO PROVIDE AN INTERIOR NOISE ENVIRONMENT ATTRIBUTABLE TO EXTERIOR SOURCES THAT DOES NOT EXCEED AN HOURLY EQUIVALENT NOISE LEVEL (LEQ-1HR) OF 50 DBA IN OCCUPIED AREAS DURING ANY HOUR OF OPERATION. AN ACOUSTICAL ANALYSIS DOCUMENTING COMPLYING INTERIOR SOUND LEVELS SHALL BE PREPARED BY PERSONNEL APPROVED BY THE ARCHITECT OR ENGINEER OF RECORD. WALL AND FLOOR-CEILING ASSEMBLIES SEPARATING TENANT SPACES AND TENANT SPACES AND PUBLIC PLACES SHALL HAVE AN STC OF AT LEAST 40.	THE PROJECT INCLUDES EXTERIOR BUILDING AND SITE UPGRADES ONLY. EXISTING BUILDING ACOUSTICAL CONTROLS ARE NOT A PART OF THE SCOPE OF THE PROJECT
N.A.	SECTION 5.508 OUTDOOR AIR QUALITY - INSTALL HVAC, REFRIGERATION AND FIRE SUPPRESSION EQUIPMENT THAT DO NOT CONTAIN CFCS. INSTALL HVAC, REFRIGERATION AND FIRE SUPPRESSION EQUIPMENT THAT DO NOT CONTAIN HALONS.	THIS PROJECT SCOPE IS A SHELL BUILDING ONLY. REFRIGERATION AND FIRE SUPPRESSION EQUIPMENT ARE NOT A PART OF THE SCOPE OF THE PROJECT
N.A.	5.508.2 REFRIGERANT LEAK REDUCTION:  NEW COMMERCIAL REFRIGERATION SYSTEMS SHALL COMPLY WITH THE PROVISIONS OF THIS SECTION WHEN INSTALLED IN RETAIL FOOD STORES 8,000 SQUARE FEET OR MORE CONDITIONED AREA, AND THAT UTILIZE EITHER REFRIGERATED DISPLAY CASES, OR WALK-IN COOLERS OR FREEZERS CONNECTED TO REMOTE COMPRESSOR UNITS OR	THIS PROJECT SCOPE IS A SHELL BUILDING ONLY. REFRIGERATION EQUIPMENT ARE NOT A PART OF THE SCOPE OF THE PROJECT

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T3.3

# PLANS FOR THE CONSTRUCTION OF SKYLINE TEMPORARY FIRE STATION

7180 SKYLINE DR. SAN DIEGO, CALIFORNIA 92114 PARCEL ID. NO. 581-290-11-00

SHEET TITLE	SHEET NO.				
CALIFORN BUILDING	T3.3				
	NG AND CAP	GO, CAL ITAL PROJECTS D OF 40 SHEET	EPARTMENT		wes. S-00687
APPROVED: Sky Culv	~	12	2/19/20 <b>DATE</b>	)14	SUBMITTED BY:  ROWAIDA JADAN  ASSOCIATE ENGINEER
DESCRIPTION	BY	APPROVED	DATE	FILMED	MICHAEL RAMIREZ
CAL. GREEN					PROJECT MANAGER
					194-1755 ccs27 coordinate
					1834-6315 ccs83 coordinate
CONTRACTOR		DATE STARTE	6 m2		38317 - 7 D

# SKYLINE TEMPORARY FIRE STATION

# GENERAL NOTES

I. APPROVAL OF THESE PLANS BY THE CITY ENGINEER DOES NOT AUTHORIZE ANY WORK TO BE PERFORMED UNTIL A PERMIT TO PROCEED HAS BEEN ISSUED. 2. THE APPROVAL OF THIS PLAN OR ISSUANCE OF A PERMIT BY THE CITY OF SAN DIEGO DOES NOT AUTHORIZE THE SUBDIVIDER AND OWNER TO VIOLATE ANY FEDERAL, STATE OR CITY LAWS, ORDINANCES, REGULATIONS, OR POLICIES, INCLUDING, BUT NOT LIMITED TO, THE FEDERAL ENDANGERED SPECIES ACT OF 1973 AND AMENDMENTS THERETO (16 USC SECTION 1531 ET.SEQ.)

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SURVEY MONUMENTS AND/OR VERTICAL CONTROL BENCHMARKS WHICH ARE DISTURBED OR DESTROYED BY CONSTRUCTION. A LAND SURVEYOR MUST FIELD LOCATE, REFERENCE, AND/OR PRESERVE ALL HISTORICAL OR CONTROLLING MONUMENTS PRIOR TO ANY EARTHWORK. IF DESTROYED, A LAND SURVEYOR SHALL REPLACE SUCH MONUMENTS WITH APPROPRIATE MONUMENTS. A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE, SHALL BE FILED AS REQUIRED BY THE PROFESSIONAL LAND SURVEYORS ACT, SECTION 8771 OF THE BUSINESS AND PROFESSIONS CODE OF THE STATE OF CALIFORNIA. IF ANY VERTICAL CONTROL IS TO BE DISTURBED OR DESTROYED, THE CITY OF SAN DIEGO FIELD SURVEY SECTION MUST BE NOTIFIED, IN WRITING, AT LEAST 3 DAYS PRIOR TO CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE COST OF REPLACING ANY VERTICAL CONTROL BENCHMARKS DESTROYED BY THE CONSTRUCTION. 4. IMPORTANT NOTICE: SECTION 4216 OF THE GOVERNMENT CODE REQUIRES A DIG ALERT IDENTIFICATION NUMBER BE ISSUED BEFORE A "PERMIT TO EXCAVATE" WILL BE VALID.

FOR YOUR DIG ALERT I.D. NUMBER, CALL UNDERGROUND SERVICE ALERT, TOLL FREE I-800-422-4133, TWO DAYS BEFORE YOU DIG.
5. CONTRACTOR SHALL IMPLEMENT AN EROSION AND SEDIMENT CONTROL PROGRAM DURING THE PROJECT GRADING AND/OR CONSTRUCTION ACTIVITIES. THE PROGRAM SHALL MEET ALL APPLICABLE REQUIREMENTS OF THE STATE WATER RESOURCE CONTROL BOARD AND THE CITY OF SAN DIEGO MUNICIPAL CODE AND STORM WATER STANDARDS MANUAL.

. "PUBLIC IMPROVEMENT SUBJECT TO DESUETUDE OR DAMAGE." IF REPAIR OR REPLACEMENT OF SUCH PUBLIC IMPROVEMENTS IS REQUIRED, THE OWNER SHALL OBTAIN THE REQUIRED PERMITS FOR WORK IN THE PUBLIC RIGHT-OF-WAY, SATISFACTORY TO THE PERMIT- ISSUING AUTHORITY.

7. ALL EXISTING AND/OR PROPOSED PUBLIC UTILITY SYSTEM AND SERVICE FACILITIES SHALL BE INSTALLED UNDERGROUND IN ACCORDANCE WITH SECTION 144.0240 OF THE MUNICIPAL CODE. 8. PRIOR TO ANY DISTURBANCE TO THE SITE, EXCLUDING UTILITY MARK-OUTS AND SURVEYING, THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR A PRE-CONSTRUCTION MEETING WITH THE CITY OF SAN DIEGO FIELD ENGINEERING DIVISION (858) 627-3200.

9. DEVIATIONS FROM THESE SIGNED PLANS WILL NOT BE ALLOWED UNLESS A CONSTRUCTION CHANGE IS APPROVED BY THE CITY ENGINEER OR THE CHANGE IS REQUIRED BY THE CITY INSPECTOR.

10. AS-BUILT DRAWINGS MUST BE SUBMITTED TO THE RESIDENT ENGINEER PRIOR TO ACCEPTANCE OF THIS PROJECT BY THE CITY OF SAN DIEGO.

11. AN AS-GRADED GEOTECHNICAL REPORT AND A SET OF THE REDLINE GRADING PLANS SHALL BE SUBMITTED AT AREA 3 ON THE THIRD FLOOR OF DEVELOPMENT SERVICES WITHIN 30 CALENDAR DAYS OF THE COMPLETION OF GRADING. AN ADDITIONAL SET

SHALL BE PROVIDED TO THE RESIDENT ENGINEER OF THE FIELD ENGINEERING DIVISION AT 9485 AERO DR. 12. THE AREA WHICH IS DEFINED AS A NON GRADING AREA AND WHICH IS NOT TO BE DISTURBED SHALL BE STAKED PRIOR TO START OF THE WORK. THE PERMIT APPLICANT AND ALL OF THEIR REPRESENTATIVES OR CONTRACTORS SHALL COMPLY WITH THE REQUIREMENTS FOR PROTECTION OF THIS AREA AS REQUIRED BY ANY APPLICABLE AGENCY. ISSUANCE OF THE CITY'S GRADING PERMIT SHALL NOT RELIEVE THE APPLICANT OR ANY OF THEIR REPRESENTATIVES OR CONTRACTORS FROM COMPLYING WITH ANY STATE OR FEDERAL REQUIREMENTS BY AGENCIES INCLUDING BUT NOT LIMITED TO CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, CALIFORNIA DEPARTMENT OF FISH AND GAME. COMPLIANCE MAY INCLUDE OBTAINING PERMITS, OTHER AUTHORIZATIONS, OR COMPLIANCE WITH MANDATES BY ANY APPLICABLE STATE OR FEDERAL AGENCY. 13. CONTRACTOR SHALL REMOVE AND REPLACE ALL UTILITY BOXES SERVING AS HANDHOLES THAT ARE NOT IN "AS-NEW" CONDITION IN PROPOSED SIDEWALK. DAMAGED BOXES, OR THOSE THAT ARE NOT IN COMPLIANCE WITH CURRENT CODE SHALL BE REMOVED AND REPLACED WITH NEW BOXES, INCLUDING WATER, SEWER, TRAFFIC SIGNALS, STREET LIGHTS, DRY UTILITIES-SDG&E, COX, ETC. ALL NEW METAL LIDS SHALL BE SLIP RESISTANT (FRICTION FACTOR >/= 0.50) AND INSTALLED FLUSH WITH PROPOSED SIDEWALK GRADE. IF A SLIP RESISTANT METAL LID IS NOT COMMERCIALLY AVAILABLE FOR THAT USE, NEW BOXES AND LIDS SHALL BE INSTALLED.

# GRADING NOTES

I. GRADING AS SHOWN ON THESE PLANS SHALL BE IN CONFORMANCE WITH CURRENT STANDARD SPECIFICATIONS AND CHAPTER 14, ARTICLE 2, DIVISION 1, OF THE SAN 2. PLANT AND IRRIGATE ALL CUT AND FILL SLOPES AS REQUIRED BY ARTICLE 2, DIVISION 4, SECTION 142.0411 OF THE SAN DIEGO LAND DEVELOPMENT CODE AND ACCORDING TO SECTION IV OR THE LAND DEVELOPMENT MANUAL LANDSCAPE STANDARDS. 3. GRADED, DISTURBED, OR ERODED AREAS THAT WILL NOT BE PERMANENTLY PAVED, COVERED BY STRUCTURE, OR PLANTED FOR A PERIOD OVER 90 DAYS SHALL BE TEMPORARILY RE-VEGETATED WITH A NON-IRRIGATED HYDROSEED MIX, GROUND

COVER, OR EQUIVALENT MATERIAL. SEE SHEET G-5 FOR MIX AND SPECIFICATIONS.

# STORM WATER PROTECTION NOTES

I. THIS PROJECT IS SUBJECT TO MUNICIPAL STORM WATER PERMIT ORDER NO. R-9-2007-0001; AND RISK LEVEL/TYPE: CHECK ONE BELOW

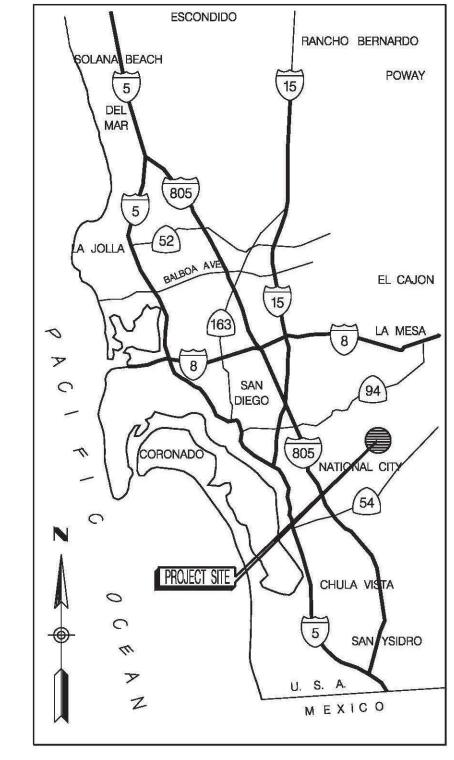
☐ CGP RISK LEVEL GP RISK LEVEL 2 GP RISK LEVEL 3

2. CHECK ONE:

THIS PROJECT WILL EXCEED THE MAXIMUM DISTURBED AREA LIMIT, THEREFORE A WEATHER TRIGGERED ACTION PLAN (WTAP) IS REQUIRED. THIS PROJECT WILL FOLLOW PHASED GRADING NOT TO EXCEED FIVE (5) ACRES PER PHASE. **⊠NOT APPLICABLE** 

3. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE WPCP OR SWPPP AS APPLICABLE

CONSTRUCTION CHANGE / ADDENDUM



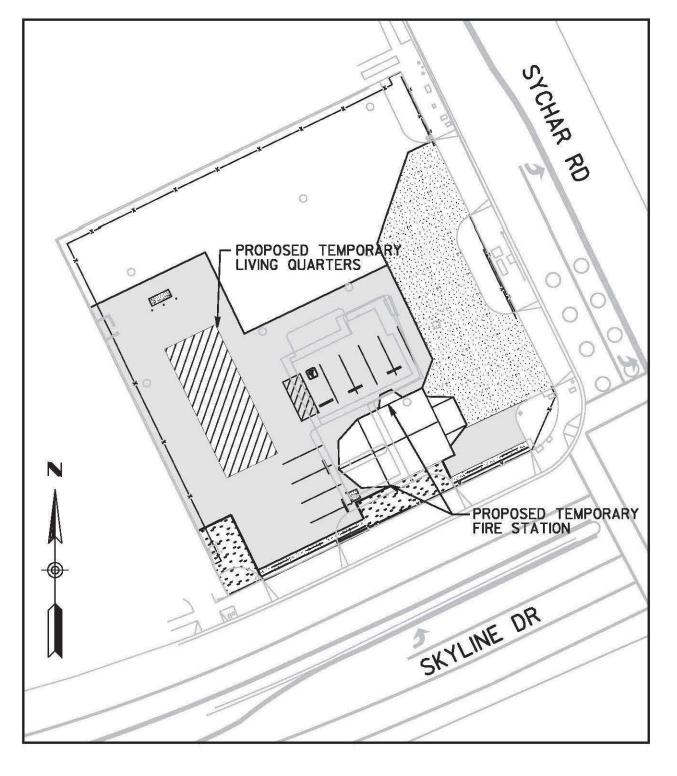
VICINITY MAP NOT TO SCALE

TOPOGRAPHY SOURCE EXISTING TOPOGRAPHY BASED ON FIELD SURVEY BY STUART ENGINEERING ON JUNE 13, 2014

ASSESSOR'S PARCEL NUMBER 58I-290-II

IMPORTANT NOTICE SECTION 4216 OF THE GOVERNMENT CODE REQUIRES THAT A DIG ALERT IDENTIFICATION NUMBER BE ISSUED BEOFRE A "PERMIT TO EXCAVATE" WILL BE VALID. FOR DIG ALERT I.D. NUMBER CALL UNDERGROUND SERVICE ALERT TOLL FREE 1-800-422-4133 TWO WORKING DAYS BEFORE YOU DIG

WARNING



SHEET 1-----TITLE SHEET SHEET 2-----NOTES SHEET 3-----GRADING PLAN SHEET 4-----EROSION CONTROL PLAN

# SITE ADDRESS

7180 SKYLINE DR. SAN DIEGO, CA 92114

OWNER /APPLICANT CITY OF SAN DIEGO

REFERENCE DRAWINGS

21142-D, 7131-D, 7141-D, 7143-D, 5266-D

LEGAL DESCRIPTION LOT 113 OF "SKYLINE HILLS UNIT NO. 1" ACCORDING TO MAP THEREOF NO. 4052 AS RECORDED IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY ON JANUARY 8, 1959

# FIELD DATA

THE BENCHMARK FOR THIS SURVEY IS THE NWBP AT THE INTERSECTION OF SKYLINE DRIVE AND SYCHAR ROAD. ELEV. 454.452 NGVD 29

# GRADING QUANTITIES

GRADED AREA 0.4 AC CUT QUANTITIES 475 CY FILL QUANTITIES 0 CY

WORK TO BE DONE

THE IMPROVEMENTS CONSIST OF THE FOLLOWING WORK TO BE DONE ACCORDING TO THESE PLANS AND THE SPECIFICATIONS AND STANDARD DRAWINGS OF THE CITY OF SAN DIEGO.

# STANDARD SPECIFICATIONS

DOCUMENT NO. PITS070II2-0I 2012 STANDARD SPECFICATIONS FOR PUBLIC WORKS CONSTRUCTION (GREENBOOK), 2012 EDITION PITS070II2-02 2012 CITY OF SAN DIEGO STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (WHITEBOOK), 2012 EDITION 769842 10-22-99 STANDARD SPECIAL PROVISIONS FOR SIGNALS, LIGHTING, AND ELECTRICAL SYSTEMS CALIFORNIA DEPARTMENT OF TRANSPORTATION, MANUAL AECI231064 12-31-06 OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD 2006) STANDARD DRAWINGS

DESCRIPTION

DOCUMENT NO. 2012 PITS070II2-03 **LEGEND** 

CITY OF SAN DIEGO STANDARD DRAWINGS INCLUDING REGIONAL STANDARD DRAWINGS

# PROPOSED IMPROVEMENTS

PROPOSED IMPROVEMENTS	
IMPROVEMENT STANDARD DWGS.	SYMBOL
PROPOSED DAYLIGHT LIMIT	— <del>   </del> –
PROPOSED MODULAR BUILDINGSEE ARCH. SITE PLAN	
PROPOSED APPARATUS STRUCTURE	
PROPOSED FENCE (PVT)	x
PROPOSED BACKFLOW PREVENTER (PVT)	
PROPOSED WATER SERVICE	<u> </u>
PROPOSED SEWER SERVICE	
PROPOSED ELECTRICAL LINESEE ELECTRICAL PLANS	E — —
PROPOSED PORTLAND CEMENT CONCRETE (PCC)	
PROPOSED PCC RIBBON GUTTER	E E E
PROPOSED LANDSCAPE AREA (3" MULCH)	<u> </u>
PROPOSED CURBSDG-I50 & SDL-I03	
PROPOSED MAJOR CONTOURPROPOSED MINOR CONTOUR	
EXISTING IMPROVEMENTS	
PROJECT BOUNDARY	
EXISTING RIGHT-OF-WAY	
EXISTING CONTOUR.	
EXISTING BUILDING LINE	
EXISTING CURB AND GUTTER	
EXISTING PEDESTRIAN RAMP	
CENTER LINE	
EXISTING WATER	
EXISTING SEWER	
EXISTING MANHOLE	
EXISTING GAS LINE	
EXISTING TELEPHONE LINE	
EXISTING DRY UTILITY CONDUIT	— EGTC —
EXISTING WELLHEAD	
EXISTING STREET LIGHT	
EXISTING POWER POLE	
EXISTING DRY UTILITY FACILITY	
EXISTING DRIVEWAY	

\* IHEREBY DECLARE THAT IAM THE ENGINEER OF WORK FOR THIS PROJECT THAT I HAVE EXERCISED RESPONSIBLE CHARGE OVER THE DESIGN OF THE PROJECT AS DEFINED IN SECTION 6703 OF THE BUSINESS AND PROFESSIONS CODE AND THAT THE DESIGN IS CONSISTENT WITH CURRENT STANDARDS. I UNDERSTAND THAT THE CHECK OF PROJECT DRAWINGS AND SPECIFICATIONS BY THE CITY OF SAN DIEGO IS CONFINED TO A REVIEW ONLY AND DOES NOT RELIEVE ME, AS ENGINEER OF WORK, OF MY RESPONSIBILITIES FOR PROJECT DESIGN.

(ENGINEER'S NAME) DATE

TEMPORARY BMP CONSTRUCTION SITE STORM WATER PRIORITY: HIGH \_\_\_ MEDIUM \_\_\_ LOW\_X\_ SPEC. NO. CONSULTANT SAN DIEGO, CA 92110

Riverside - Orange - San Luis Obispo - Bakersfield - Sacramento - Phoenix - Tucso

619.291.0707

ENGINEERING COMPAN

(FAX)619.291.4165

N6. 52295 rickengineering.com

PLANS FOR THE CONSTRUCTION OF SKYLINE TEMPORARY FIRE STATION COVER SHEET CITY OF SAN DIEGO, CALIFORNIA

C-1

WBS S-00687 PUBLIC WORKS DEPARTMENT SHEET 8 OF 40 SHEETS SIN an 12/19/2014 ROWAIDA JADAN FOR CITY ENGINEER PROJECT MANAGER DCE NAME MICHAEL RAMIREZ BY APPROVED DATE FILMED PROJECT ENGINEER DESCRIPTION ORIGINAL REC 194-1755 CCS27 COORDINATE 1834-6315 CCS83 COORDINATE CONTRACTOR . DATE STARTED . 38317- 8 D DATE COMPLETED

CHANGE APPROVAL NO DATE AFFECTED OR ADDED SHEET NUMBERS F THIS BAR DOES NOT MEASURE I' THEN DRAWING IS NOT TO SCALE.

CITY OF SAN DIEGO PUBLIC WORKS PROJECT



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# EROSION AND SEDIMENT CONTROL NOTES

TEMPORARY EROSION/SEDIMENT CONTROL, PRIOR TO COMPLETION OF FINAL IMPROVEMENTS, SHALL BE PERFORMED BY THE CONTRACTOR OR QUALIFIED PERSON AS INDICATED BELOW:

I. ALL REQUIREMENTS OF THE CITY OF SAN DIEGO "LAND DEVELOPMENT MANUAL, STORM WATER STANDARDS" MUST BE INCORPORATED INTO THE DESIGN AND CONSTRUCTION OF THE PROPOSED GRADING/IMPROVEMENTS CONSISTENT WITH THE APPROVED STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND/OR WATER POLLUTION CONTROL PLAN (WPCP) FOR CONSTRUCTION LEVEL BMP'S AND FOR PERMANENT POST CONSTRUCTION TREATMENT CONTROL PERMANENT BMP'S, THE WATER QUALITY TECHNICAL REPORT (WQTR) IF APPLICABLE.

2. FOR STORM DRAIN INLETS, PROVIDE A GRAVEL BAG SILT BASIN IMMEDIATELY UPSTREAM OF INLET

3. FOR INLETS LOCATED AT SUMPS ADJACENT TO TOP OF SLOPES, THE CONTRACTOR SHALL ENSURE THAT WATER DRAINING TO THE SUMP IS DIRECTED INTO THE INLET AND THAT A MINIMUM OF 1.00' FREEBOARD EXISTS AND IS MAINTAINED ABOVE THE TOP OF THE INLET. IF FREEBOARD IS NOT PROVIDED BY GRADING SHAWE ON THESE PIECES. THE CONTRACTOR SHALL PROVIDE IT VIA TEMPORARY MEASURES, I.E. GRAVEL BAGS OR DIKES.

4. THE CONTRACTOR OR QUALIFIED PERSON SHALL BE RESPONSIBLE FOR CLEANUP OF SILT AND MUD ON ADJACENT STREET(S) AND STORM DRAIN SYSTEM DUE TO CONSTRUCTION ACTIVITY.

5. THE CONTRACTOR OR QUALIFIED PERSON SHALL CHECK AND MAINTAIN ALL LINED AND UNLINED DITCHES AFTER EACH RAINFALL.

6. THE CONTRACTOR SHALL REMOVE SILT AND DEBRIS AFTER EACH MAJOR RAINFALL.

7. EQUIPMENT AND WORKERS FOR EMERGENCY WORK SHALL BE MADE AVAILABLE AT ALL TIMES DURING THE RAINY SEASON. ALL NECESSARY MATERIALS SHALL BE STOCKPILED ON SITE AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES WHEN RAIN IS

8. THE CONTRACTOR SHALL RESTORE ALL EROSION/SEDIMENT CONTROL DEVICES TO WORKING ORDER TO THE SATISFACTION OF THE CITY ENGINEER OR RESIDENT ENGINEER AFTER EACH RUN-OFF

THE CONTRACTOR SHALL INSTALL ADDITIONAL EROSION/SEDIMENT CONTROL MEASURES AS MAY BE REQUIRED BY THE RESIDENT ENGINEER DUE TO UNCOMPLETED GRADING OPERATIONS OR UNFORESEEN CIRCUMSTANCES, WHICH MAY ARISE.

IO. THE CONTRACTOR SHALL BE RESPONSIBLE AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPOUNDED WATERS CREATE A HAZARDOUS

II. ALL EROSION/SEDIMENT CONTROL MEASURES PROVIDED PER THE APPROVED GRADING PLAN SHALL BE INCORPORATED HEREON, ALL EROSION/SEDIMENT CONTROL FOR INTERIM CONDITIONS SHALL BE DONE TO THE SATISFACTION OF THE RESIDENT ENGINEER.

12. GRADED AREAS AROUND THE PROJECT PERIMETER MUST DRAIN AWAY FROM THE FACE OF THE SLOPE AT THE CONCLUSION OF EACH WORKING DAY.

13. ALL REMOVABLE PROTECTIVE DEVICES SHOWN SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN RAIN IS IMMINENT.

14. THE CONTRACTOR SHALL ONLY GRADE, INCLUDING CLEARING AND GRUBBING FOR THE AREAS FOR WHICH THE CONTRACTOR OR QUALIFIED PERSON CAN PROVIDE EROSION/SEDIMENT CONTROL

15. THE CONTRACTOR SHALL ARRANGE FOR WEEKLY MEETINGS DURING OCTOBER IST TO APRIL 30TH FOR PROJECT TEAM (GENERAL CONTRACTOR, QUALIFIED PERSON, EROSION CONTROL SUBCONTRACTOR IF ANY, ENGINEER OF WORK, OWNER/DEVELOPER AND THE RESIDENT ENGINEER) TO EVALUATE THE ADEQUACY OF THE EROSION/SEDIMENT CONTROL MEASURES AND OTHER RELATED CONSTRUCTION ACTIVITIES.

# STORM WATER QUALITY NOTES -CONSTRUCTION BMP'S

THIS PROJECT SHALL COMPLY WITH ALL REQUIREMENTS OF THE MUNICIPAL PERMIT ISSUED BY SAN DIEGO REGIONAL WATER QUALITY CONTROL BOARD (SDRWQCB) AND MUNICIPAL STORM WATER NATIONAL POLLUTION DISCHARGE ELIMINIATION SYSTEM (NPDES) PERMIT ON JANUARY 24, 2007.

(HTTP://DOCS.SANDIEGO.GOV/MUNICODE/MUNICODECHAPTERI4/CHI4/CHI4ARTO2DIVISIONO2.PDF & STORM WATER AMANUAL HTTP://WWW.SANDIEGO.GOV/DEVELOPMENT-SERVICES/PDF/NEWS/STORMWATERMANUAL.PDF)

NOTES BELOW REPRESENT KEY MINIMUM REQUIREMENTS FOR CONSTRUCTION BMP'S.

I. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANUP OF ALL SILT & MUD ON ADJACENT STREETS, DUE TO CONSTRUCTION VEHICLES OR ANY OTHER CONSTRUCTION ACTIVITY, AT THE END OF EACH WORK DAY, OR AFTER A STORM EVENT THAT CAUSES A BREECH IN INSTALLED CONSTRUCTION BMP'S WHICH MAY COMPROMISE STORM WATER QUALITY WITHIN ANY STREETS. A STABALIZED CONSTRUCTION EXIT MAY BE REQUIRED TO PREVENT CONSTRUCTION VEHICLES OR EQUIPMENT FROM TRACKING MUD OR SILT ONTO THE STREET.

2. ALL STOCKPILES OF SOIL AND/OR BUILDING MATERIALS THAT ARE INTENDED TO BE LEFT FOR A PERIOD GREATER THAN 7 CALENDAR DAYS ARE TO BE COVERED. ALL REMOVABLE BMP DEVICES SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN 5 DAY RAIN PROBABILITY FORECAST

3. A CONCRETE WASHOUT SHALL BE PROVIDED ON ALL PROJECTS WHICH PROPOSE THE CONSTRUCTION OF ANY CONCRETE IMPROVEMENTS WHICH ARE TO BE POURED IN PLACE ON SITE.

4. THE CONTRACTOR SHALL RESTORE ALL EROSION/SEDIMENT CONTROL DEVICES TO WORKING ORDER AFTER EACH RUN-OFF PRODUCING RAINFALL OR AFTER ANY MATERIAL BREACH IN EFFECTIVENESS.

5. ALL SLOPES THAT ARE CREATED OR DISTURBED BY CONSTRUCTION ACTIVITY MUST BE PROTECTED AGAINST EROSION AND SEDIMENT TRANSPORT AT ALL TIMES.

6. THE STORAGE OF ALL CONSTRUCTION MATERIALS AND EQUIPMENT MUST BE PROTECTED AGAINST ANY POTENTIAL RELEASE OF POLLUTANTS INTO THE ENVIORNMENT.

# SPECIAL NOTES

THE FOLLOWING NOTES ARE PROVIDED TO GIVE DIRECTIONS TO THE CONTRACTOR BY THE ENGINEER OF WORK. THE CITY ENGINEER'S SIGNATURE ON THESE PLANS DOES NOT CONSTITUTE APPROVAL OF ANY OF THESE NOTES, AND THE CITY WILL NOT BE RESPONSIBLE FOR THEIR

I. NEITHER THE OWNER NOR THE ENGINEER OF WORK WILL ENFORCE SAFETY MEASURES OR REGULATIONS. THE CONTRACTOR SHALL DESIGN, CONSTRUCT AND MANTAIN SAFETY DEVICES, INCLUDING SHORING, AND SHALL BE SOLELY RESPONSIBLE FOR SAFETY DEVICES, INCLUDING SHORING, AND SHALL BE SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS AND REGULATIONS

2. CONTRACTOR SHALL MAKE EXPLORATION EXCAVATIONS AND LOCATE EXISTING UNDERGROUND FACILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO PLANS. IF REVISIONS ARE NECESSARY BECAUSE OF LOCATION OF EXISTING FACILITIES CONTRACTOR SHALL REQUEST INFORMATION BEFORE DOING ANY WORK BY CALLING THE ENGINEER OF WORK.

3. BEFORE EXCAVATING FOR THIS CONTRACT, VERIFY LOCATION OF UNDERGROUND UTILITIES.
THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES OR STRUCTURES SHOWN ON THESE PLANS HAS BEEN ORTAINED FROM AVAILABLE RECORDS ONLY AND MAY NOT ON THESE PLANS HAS BEEN OBTAINED FROM AVAILABLE RECORDS ONLY AND MAY NOT REFLECT ALL EXISTING UTILITIES. LOCATIONS OF ALL EXISTING UTILITIES SHALL BE CONFIRMED BY FIELD MEASUREMENTS BY CONTRACTOR PRIOR TO CONSTRUCTION OF WORK.

4. CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN HEREON AND ANY OTHER EXISTING LINES NOT OF RECORD OR SHOWN ON THESE

5. WHERE TRENCHES ARE ADJACENT TO FUTURE BUILDING SITES, SOILS REPORTS SHALL BE SUBMITTED TO THE ENGINEER OF WORK BY A QUALIFIED SOILS ENGINEER WHICH CERTIFY.

THAT ALL TRENCH BACKFILL SHALL BE COMPACTED PER RECOMMENDATIONS IN THE GEOTECHNICAL REPORT FOR THE PROJECT.

S. SAFETY FENCES SHALL BE PROVIDED BY THE CONTRACTOR WHERE REQUIRED BY THE CITY ENGINEER. 7. DURING ACTIVE CONSTRUCTION, AREAS SHALL BE WATERED TO REDUCE FUGITIVE DUST.
8. CONTRACTOR TO ADJUST ALL PROPOSED AND EXISTING FACILITIES TO GRADE.
9. CONTACTOR TO REMOVE/REPLACE/RELOCATE ALL EXISTING FACILITES REQUIRED TO INSTALL

IO. CONTRACTOR TO REMOVE/REPLACE/RELOCATE ANY LANDSCAPING/HARDSCAPING WHICH CONFLICTS IN ANY WAY WITH THE INSTALLATION OR PROPER FUNCTIONING OF THE PROPOSED

IMPROVEMENTS.

II. ALL PROPOSED STORM DRAIN FACILITIES ARE PRIVATE UNLESS OTHERWISE NOTED.

12. REFER TO ARCHITECT'S PLAN FOR HARDSCAPE LAYOUT & SPECIFICATIONS.

13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE QUANTITIES SHOWN HEREON AND BALANCING THE EARTHWORK ONSITE. IF THE SITE CANNOT BE BALANCED THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL IMPORT OR EXPORT OF MATERIALS. ALL ADJUSTMENTS MUST BE PRESENTED TO ENGINEER OF WORK WITH ADEQUATE TIME FOR REVISIONS PRIOR TO CONSTRUCTION. ONLY IN SUCH CASES AS REQUESTED BY THE CONTRACTOR SHALL THE ENGINEER OF WORK PROVIDE AREAS OF ELEVATION ADJUSTMENTS TO THE APPROVED PLANS AT THE LIABILITY OF THE CONTRACTOR.

14. THE CONTRACTOR SHALL BE RESPONSIBLE TO INSURE THAT THAT ALL SLOPES ARE BUILT IN ACCORDANCE WITH THESE PLANS. IF THERE IS ANY QUESTION REGARDING THESE PLANS OR FIELD STAKES, THE CONTRACTOR SHALL REQUEST AN INTERPRETATION BEFORE DOING ANY WORK BY CALLING THE ENGINEER OF WORK.

15. THE CONTRACTOR SHALL UNCOVER ALL UTILITES THAT MAY BE JOINED, CROSSED, OR

15. THE CONTRACTOR SHALL UNCOVER ALL UTILITES THAT MAY BE JOINED, CROSSED, OR PARALLELED TO VERIFY BOTH HORIZONTAL AND VERTICAL LOCATION PRIOR TO ANY CONSTRUCTION. ANY CONFLICT OR DISCREPANCY SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO CONSTRUCTION. OTHERWISE THE CONTRACTOR ACCEPTS FULL RESPONSIBILITY FOR ANY ADDITIONAL CONSTRUCTION OR RELOCATION COSTS. 16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATION, MANTAINING, RELOCATION, AND OR REMOVAL OF EXISTING UTILITIES.

17. THE CONTRACTOR SHALL REPLACE ALL DESTROYED OR DAMAGED SURFACE IMPROVEMENT WITH IMPROVEMENT EQUAL OR SUPERIOR.
18. SURVEY MONUMENTS SHALL BE PRESERVED & REFERENCED BEFORE CONSTRUCTION & REPLACED AFTER CONSTRUCTION PURSUANT TO SECTION 8771 OF THE BUSINESS AND

19. CONTRACTOR SHALL NOTIFY THE SAN DIEGO GAS & ELECTRIC COMPANY PRIOR TO STARTING WORK NEAR COMPANY FACILITIES AND SHALL COORDINATE HIS WORK WITH COMPANY REPRESENTATIVES.

20. CONTACTOR SHALL NOTIFY THE TELEPHONE COMPANY PRIOR TO STARTING WORK NEAR COMPANY FACILITIES AND SHALL COORDINATE HIS WORK WITH COMPANY REPRESENTATIVES. 21. BEFORE EXCAVATING FOR THIS CONTRACT, VERIFY LOCATION OF UNDERGROUND FACILITES. THE CONTRACTOR SHALL TELEPHONE FOR: TELEPHONE FACILITIES (800) 422-4133 (DIG ALERT)

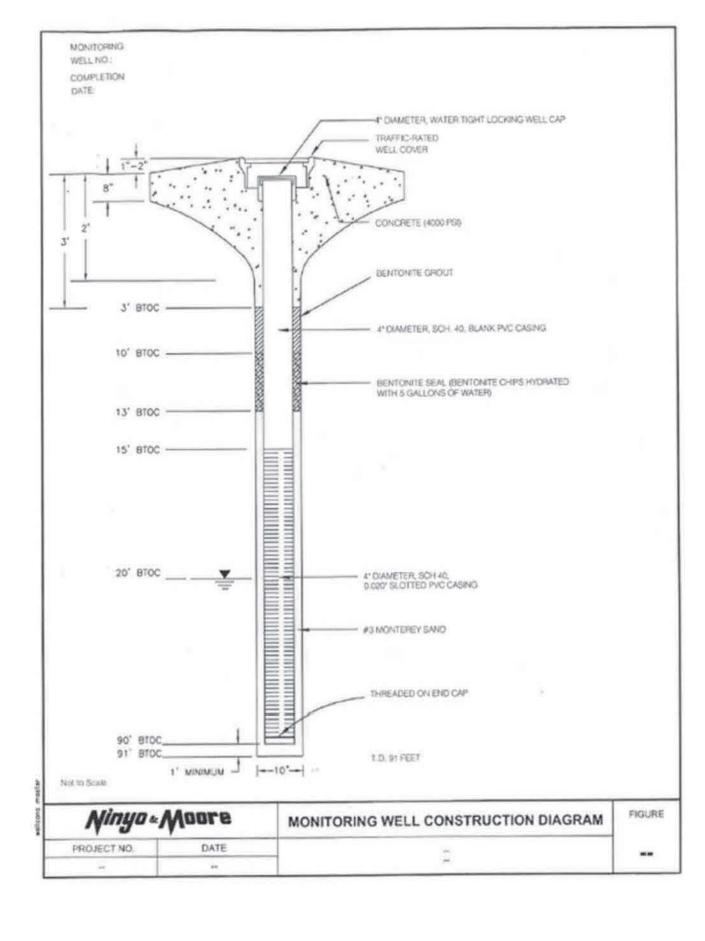
SAN DIEGO GAS & ELECTRIC COMPANY 811 22. CONTRACTOR SHALL COORDINATE HIS WORK WITH THAT OF OTHER CONTRACTORS WORKING ON THE SITE, INCLUDING GRADING, DRAINAGE, LANDSCAPING AND IRRIGATION, CONTRACTOR SHALL BE RESONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION.
23. CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE

AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY, INDEMNIFY AND HOLD CITY OF SAN DIEGO HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OR WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF CITY OF SAN DIEGO PERSONNEL.

24. GRADING QUANTITIES ARE GEOMETRIC ESTIMATES FOR PERMIT PURPOSES ONLY AND ARE NOT TO BE USED FOR BID OR FINAL PAY QUANTITIES. CONTRACTORS SHALL BE REQUIRED TO CREATE A FINAL EARTHWORK PRIOR TO ANY ONSITE CONSTRUCTION. THIS EARTHWORK SHALL ACCOUNT FOR SUBSIDENCE, SHRINKAGE, UNDERCUTS PROJECTS PHASING, SEQUENCING, OVER-EXCATION AND ET CETERA, SHOULD ANY DISCREPENCY ARISE THE CONTRACTOR SHALL

NOTIFY THE ENGINEER OF WORK IMMEDIATELY.

25. CONTRACTOR SHALL MEET THE INTENT OF THESE PLANS. IF GRADE STAKES CONFLICT WITH INTENT OF THE PLANS, CONTACTOR SHALL NOTIFY ENGINEER OF WORK PRIOR TO WORK BEING PERFORMED.



# PLANS FOR THE CONSTRUCTION OF SKYLINE TEMPORARY FIRE STATION NOTES SHEET

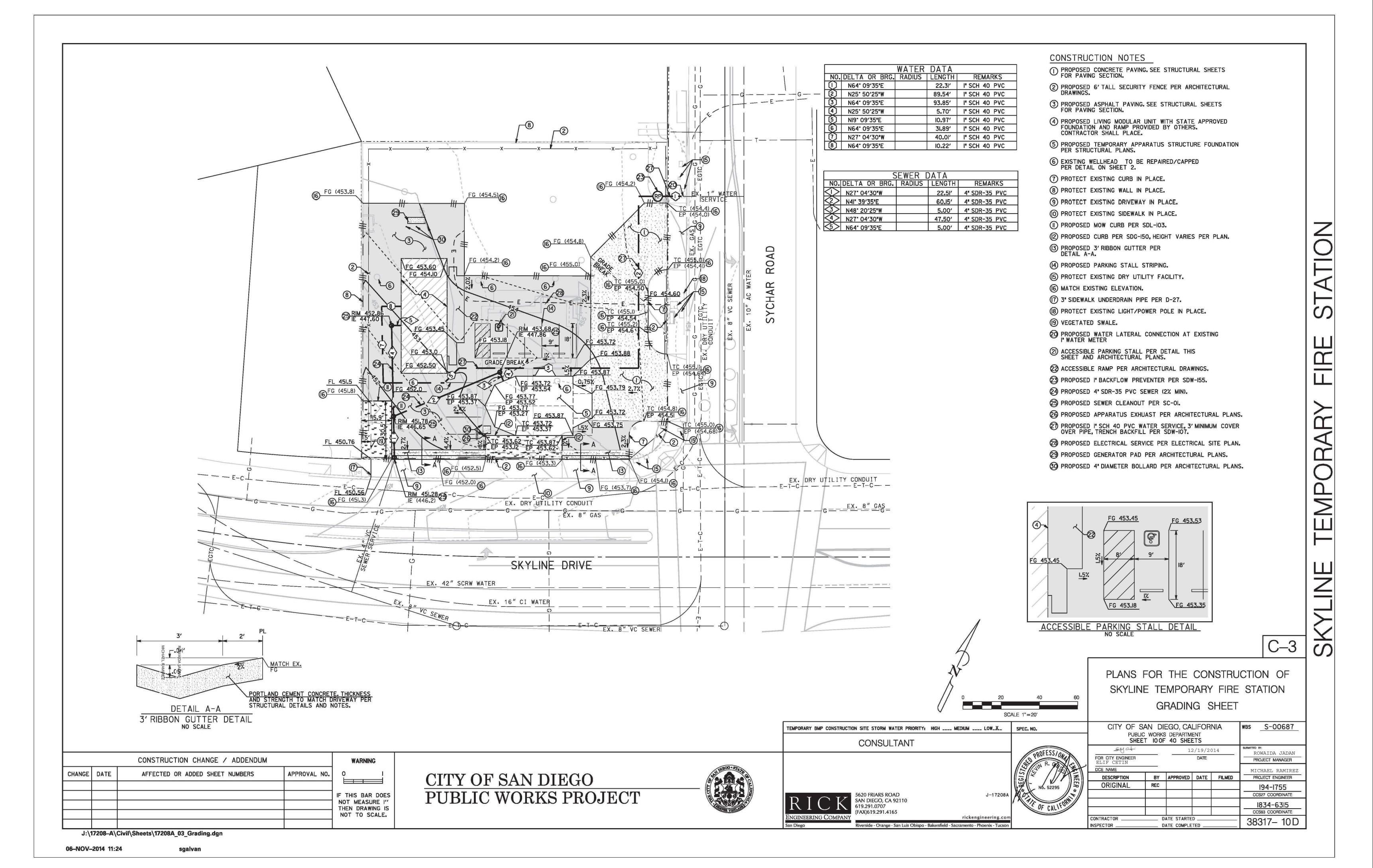
TEMPORARY BMP CONSTRUCTION SITE STORM WATER PRIORITY: HIGH MEDIUM LOW_X_	PUBLIC WORKS DEPARTMENT		NIA	was _S-00687_			
OONSOLIANI	PROFESS/ONAL R. QUARTE	FOR CITY ENGINEER ELIF CETIN DCE NAME		12	2/19/20 <b>DATE</b>	14	ROWAIDA JADAN PROJECT MANAGER  MICHAEL RAMIREZ
	N6. 52295	DESCRIPTION ORIGINAL	BY	APPROVED	DATE	FILMED	PROJECT ENGINEER
RICK SAN DIEGO, CA 92110 619.291.0707 (FAX)619.291.4165	A OF CALIFORNIA						CCS27 COORDINATE  1834-6315 CCS83 COORDINATE
ENGINEERING COMPANY  San Diego  Riverside - Orange - San Luis Obispo - Bakersfield - Sacramento - Phoenix - Tucso		CONTRACTOR	25 -12	ATE COMPLE			38317- 9 D

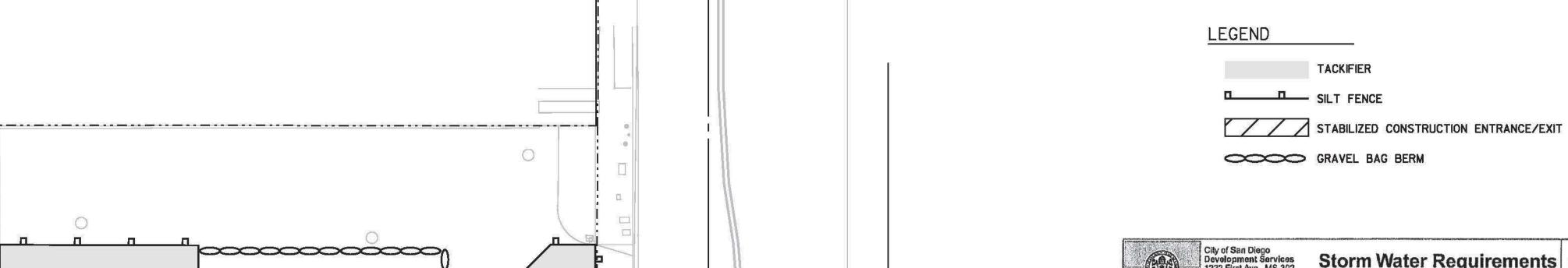
CONSTRUCTION CHANGE / ADDENDUM WARNING CHANGE DATE AFFECTED OR ADDED SHEET NUMBERS APPROVAL NO. THIS BAR DOES NOT MEASURE I' THEN DRAWING IS NOT TO SCALE.

CITY OF SAN DIEGO PUBLIC WORKS PROJECT



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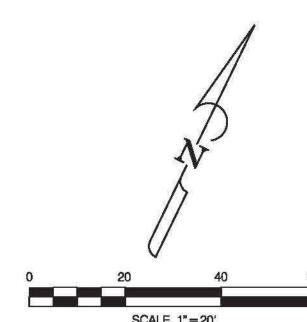




CONTRACTOR TO REPLACE GRAVEL BAGS AT END OF WORKDAY AS NECESSARY WHEN RAIN

	City of San Diego Development Services 1222 First Ave., MS-302  Storm Water Requirements	2000	ORM 5-560
THE	San Diego, CA 92101 (619) 446-5000  Applicability Checklist	-	JARY 2011
Pro	ject Address: Project Number (fo	or City U	se Only):
	CTION 1. Permanent Storm Water BMP Requirements: ditional information for determining the requirements is found in the <u>Storm Water Standards Manual</u> .	One of the State of S	
Pro me If	rt A: Determine if Exempt from Permanent Storm Water BMP Requirements.  ojects that are considered maintenance, or are otherwise not categorized as "development projects that projects" according to the Storm Water Standards manual are not required to install permanent story is checked for any line in Part A, proceed to Part C and check the box labeled "Exempt Projected for all of the lines, continue to Part B.	orm wate	er BMPs
1,	The project is not a Development Project as defined in the <u>Storm Water Standards Manual</u> : for example habitat restoration projects, and construction inside an existing building.	☐ Yes	⊠ No
2.	The project is only the construction of underground or overhead linear utilities.	Yes	No No
3.	The project qualifies as routine maintenance (replaces or renews existing surface materials because of failed or deteriorating condition). This includes roof replacement, pavement spot repairs and resurfacing treatments such as asphalt overlay or slurry seal, and replacement of damaged pavement.	☐ Yes	No XX
4.	The project only installs sidewalks, bike lanes, or pedestrian ramps on an existing road, and does not change sheet flow condition to a concentrated flow condition.	OTEN CONTRACTOR OF THE PERSON	X No
	Peridential development of 10 on more units		
1.	Residential development of 10 or more units.		M No
		☐ Yes	
1.	Residential development of 10 or more units.  Commercial development and similar non-residential development greater than one acre. Hospitals; laboratories and other medical facilities; educational institutions; recreational facilities; municipal facilities; commercial nurseries; multi-apartment buildings; car wash facilities; mini-malls and other business complexes; shopping malls; hotels; office buildings; public warehouses; automotive	☐ Yes	No No
1.	Residential development of 10 or more units.  Commercial development and similar non-residential development greater than one acre. Hospitals; laboratories and other medical facilities; educational institutions; recreational facilities; municipal facilities; commercial nurseries; multi-apartment buildings; car wash facilities; mini-malls and other business complexes; shopping malls; hotels; office buildings; public warehouses; automotive dealerships; and other light industrial facilities.  Heavy industrial development greater than one acre. Manufacturing plants,	Yes	No No
1. 2. 3.	Residential development of 10 or more units.  Commercial development and similar non-residential development greater than one acre. Hospitals; laboratories and other medical facilities; educational institutions; recreational facilities; municipal facilities; commercial nurseries; multi-apartment buildings; car wash facilities; mini-malls and other business complexes; shopping malls; hotels; office buildings; public warehouses; automotive dealerships; and other light industrial facilities.  Heavy industrial development greater than one acre. Manufacturing plants, food processing plants, metal working facilities, printing plants, and ficet storage areas.  Automotive repair shop. Facilities categorized in any one of Standard Industrial	Yes	No No No
1. 2. 3.	Residential development of 10 or more units.  Commercial development and similar non-residential development greater than one acre. Hospitals; laboratories and other medical facilities; educational institutions; recreational facilities; municipal facilities; commercial nurseries; multi-apartment buildings; car wash facilities; mini-malls and other business complexes; shopping malls; hotels; office buildings; public warehouses; automotive dealerships; and other light industrial facilities.  Heavy industrial development greater than one acre. Manufacturing plants, food processing plants, metal working facilities, printing plants, and fleet storage areas.  Automotive repair shop. Facilities categorized in any one of Standard Industrial Classification (SIC) codes 5013, 5014, 5541, 7532-7534, or 7536-7539.  Restaurant. Facilities that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption	Yes Yes Yes Yes	No No No
1. 2. 3. 4.	Residential development of 10 or more units.  Commercial development and similar non-residential development greater than one acre. Hospitals; laboratories and other medical facilities; educational institutions; recreational facilities; municipal facilities; commercial nurseries; multi-apartment buildings; car wash facilities; mini-malls and other business complexes; shopping malls; hotels; office buildings; public warehouses; automotive dealerships; and other light industrial facilities.  Heavy industrial development greater than one acre. Manufacturing plants, food processing plants, metal working facilities, printing plants, and fleet storage areas.  Automotive repair shop. Facilities categorized in any one of Standard Industrial Classification (SIC) codes 5013, 5014, 5541, 7532-7534, or 7536-7539.  Restaurant. Facilities that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC code 5812), and where the land area for development is greater than 5,000 square feet.  Hillside development greater than 5,000 square feet. Development that creates 5,000 square feet of impervious surface and is located in an area with known crosive soil conditions and where	Yes Yes Yes Yes Yes Yes	M No M No M No
1. 2. 3. 4. 5.	Residential development of 10 or more units.  Commercial development and similar non-residential development greater than one acre. Hospitals; laboratories and other medical facilities; educational institutions; recreational facilities; municipal facilities; commercial nurseries; multi-spartment buildings; car wash facilities; mini-malls and other business complexes; shopping malls; hotels; office buildings; public warehouses; automotive dealerships; and other light industrial facilities.  Heavy industrial development greater than one acre. Manufacturing plants, food processing plants, metal working facilities, printing plants, and fleet storage areas.  Automotive repair shop. Facilities categorized in any one of Standard Industrial Classification (SIC) codes 5013, 5014, 5541, 7532-7534, or 7536-7539.  Restaurant. Facilities that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC code 5812), and where the land area for development is greater than 5,000 square feet. Hillside development greater than 5,000 square feet. Development that creates 5,000 square feet of impervious surface and is located in an area with known erosive soil conditions and where the development will grade on any natural slope that is twenty-five percent or greater.  Water Quality Sensitive Area. Development located within, directly adjacent to, or discharging directly to a Water Quality Sensitive Area (as depicted in Appendix C) in which the project either creates 2,500 square feet of impervious surface on a proposed project site or increases the area of imperviousness of a proposed project site to 10% or more of its naturally occurring condition. "Directly adjacent" is defined as being situated within 200 feet of the Water Quality Sensitive Area, "Discharging directly to" is defined as outflow from a drainage conveyance system that is composed entirely of flows from the subject development or redevelopment site, and no	Yes Yes Yes Yes Yes Yes	No No No No
1. 2. 3. 4. 5.	Commercial development and similar non-residential development greater than one acre. Hospitals; laboratories and other medical facilities; educational institutions; recreational facilities; municipal facilities; commercial nurseries; multi-apartment buildings; car wash facilities; mini-malls and other business complexes; shopping malls; hotels; office buildings; public warehouses; automotive dealerships; and other light industrial facilities.  Heavy industrial development greater than one acre. Manufacturing plants, food processing plants, metal working facilities, printing plants, and fleet storage areas.  Automotive repair shop. Facilities categorized in any one of Standard Industrial Classification (SIC) codes 5013, 5014, 5541, 7532-7534, or 7536-7539.  Restaurant. Facilities that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC code 5812), and where the land area for development is greater than 5,000 square feet.  Hillside development greater than 5,000 square feet. Development that creates 5,000 square feet of impervious surface and is located in an area with known erosive soil conditions and where the development will grade on any natural slope that is twenty-five percent or greater.  Water Quality Sensitive Area. Development located within, directly adjacent to, or discharging directly to a Water Quality Sensitive Area (as depicted in Appendix C) in which the project either creates 2,500 square feet of impervious surface on a proposed project site or increases the area of imperviousness of a proposed project site to 10% or more of its naturally occurring condition. "Directly adjacent" is defined as being situated within 200 feet of the Water Quality Sensitive Area. "Discharging directly to" is defined as outlow from a drainage conveyance system that is composed entirely of flows from the subject development or redevelopment site, and not commingled with flows from adjacent lands.	Yes Yes Yes Yes Yes Yes	No No No No

1	Street, road, highway, or freeway. New paved surface in excess of 5,000 square fee used for the transportation of automobiles, trucks, motorcycles, and other vehicles (unless it meets the exclusion for road reconfiguration on line 11).	et 🔾 Yes 🌠 No
10.	Retail Gasoline Outlet (RGO) that is: (a) 5,000 square feet or more or (b) has a projected Average Daily Traffic (ADT) of 100 or more vehicles per day.	☐ Yes W No
11.	Significant Redevelopment; project installs and/or replaces 5,000 square feet or more impervious surface and the existing site meets at least one of the categories above. The is not considered Significant Rodevelopment if reconfiguring an existing road or parking without a change to the footprint of an existing developed road or parking lot. The exist footprint is defined as the outside curb or the outside edge of pavement when there is not considered.	re of project ng lot ting
and j	Other Pollutant Generating Project. Any other project not covered in the categorie above, that disturbs one acre or more and is not excluded by the criteria below. cts creating less than 5,000 sf of impervious surface and where added landscaping does rertilizers, such as slope stabilization using native plants. Calculation of the square footage linear pathways that are for infrequent vehicle use, such as emergency maintenance accoult with pervious surfaces or if they sheet flow to surrounding pervious surfaces.	☐ Yes ☒ No not require regular use of pesticides ge of impervious surface need not in
Par	C: Select the appropriate category based on the outcome of Parts A & B.	
1,	If "Yes" is checked for any line in Part A, then check this box. Continue to Section 2.	☐ Exempt Project
2.	If "No" is checked for all lines in Part A, and Part B, then check this box.  Continue to Section 2.	Standard Development Project
3.	If "No" is checked for all lines in Part A, and "Yes" is checked for at least one of the lines in Part B, then check this box. Continue to Section 2. See the Storm Water Standards Manual for guidance on determining if Hydromodification Management Plan requirements apply.	Priority Development Project
1.	Is the project subject to California's statewide General NPDES Permit for Storm Water Discharges Associated with Construction Activities? (See State Water Resources Contro Board Order No. 2009-0009-DWQ for rules on enrollment)	Ol Yes 🔼 No
2.	Does the project propose grading or soil disturbance?	Ø Yes □ No
3.	Would storm water or urban runoff have the potential to contact any portion of the construction area, including washing and staging areas?	¥ Yes □ No
4.	Would the project use any construction materials that could negatively affect water quality if discharged from the site (such as, paints, solvents, concrete, and stucco)?	X Yes □ No
Carago transfer	daving it married for mont one dame to arm and bemiss' and armed some ass, must asserted;	
5.	Check this box if "Yes" is checked for line 1. Continue to Part E.	SWPPP Required
5. 6.	Check this box if "Yes" is checked for line 1. Continue to Part E.  Check this box if "No" is checked for line 1, and "Yes is checked for any line 2-4.	SWPPP Required
6. 7. Part	Check this box if "Yes" is checked for line 1. Continue to Part E.  Check this box if "No" is checked for line 1, and "Yes is checked for any line 2-4.  Continue to Part E.  Check this box if "No" is checked for all lines 1-4. Part E does not apply.  E: Determine Construction Site Priority prioritization must be completed with this form, noted on the plans, and included in the	SWPPP Required  WPCP Required  No Document Required  SWPPP or WPCP. The City re-
6. 7. Part This serve NOT	Check this box if "Yes" is checked for line 1. Continue to Part E.  Check this box if "No" is checked for line 1, and "Yes is checked for any line 2-4.  Continue to Part E.  Check this box if "No" is checked for all lines 1-4. Part E does not apply.  E: Determine Construction Site Priority	SWPPP Required  WPCP Required  No Document Required  SWPPP or WPCP. The City re- ote: The construction priority does
7. Part This serve NOI be co	Check this box if "Yes" is checked for line 1. Continue to Part E.  Check this box if "No" is checked for line 1, and "Yes is checked for any line 2-4.  Continue to Part E.  Check this box if "No" is checked for all lines 1-4. Part E does not apply.  E: Determine Construction Site Priority  prioritization must be completed with this form, noted on the plans, and included in the is the right to adjust the priority of the projects both before and during construction. [No change construction BMP requirements that apply to projects; rather, it determines the	SWPPP Required  WPCP Required  No Document Required  SWPPP or WPCP. The City re- ote: The construction priority does e frequency of inspections that will  son eñasquitos watershed)
7. Part This serve NOT be co	Check this box if "Yes" is checked for line 1. Continue to Part E.  Check this box if "No" is checked for line 1, and "Yes is checked for any line 2-4.  Continue to Part E.  Check this box if "No" is checked for all lines 1-4. Part E does not apply.  E: Determine Construction Site Priority prioritization must be completed with this form, noted on the plans, and included in the is the right to adjust the priority of the projects both before and during construction. [No change construction BMP requirements that apply to projects; rather, it determines the inducted by City staff.]  High Priority a) Projects where the site is 50 acres or more and grading will occur during the wet seas of Projects 1 acre or more and tributary to an impaired water body for sediment (e.g., Peter Projects 1 acre or more within or directly adjacent to or discharging directly to a coast within a Water Quality Sensitive Area.	SWPPP Required  WPCP Required  No Document Required  SWPPP or WPCP. The City re- ote: The construction priority does a frequency of inspections that will  son anasquitos watershed) stal lagoon or other receiving water



Signature: Ravonala Kacler

PLANS FOR THE CONSTRUCTION OF SKYLINE TEMPORARY FIRE STATION EROSION CONTROL SHEET

WBS S-00687

SUBMITTED BY:

ROWAIDA JADAN PROJECT MANAGER

MICHAEL RAMIREZ

PROJECT ENGINEER

194-1755 CCS27 COORDINATE

1834-6315 CCS83 COORDINATE

38317- 11 D

Date: August 19, 2014

		SC	ALE 1"=20'					
ARY BMP CONSTRUCTION	N SITE STORM WATER PRIORITY: HIGH	MEDIUM LOW_X_	SPEC. NO.	CITY OF S		EGO, CAI		NIA
	CONSULTANT		-64	SHEE	T II OF	40 SHEE	ETS	
	001100217111		ODEFCCIO	sy al	299	12	2/19/20	14
			R. O.	FOR CITY ENGINEER ELIF CETIN		a <del>l</del>	DATE	
			198X2	DCE NAME				
				DESCRIPTION	BY	APPROVED	DATE	FILMED
			N6. 52295	ORIGINAL	REC			
	5620 FRIARS ROAD	J-17208A	No.					
	SAN DIEGO, CA 92110 619.291.0707		OF CALIFORN					
	(FAX)619.291.4165							
EERING COMPANY	· · · · · · · · · · · · · · · · · · ·	rickengineering.com	- 10	CONTRACTOR		ATE STARTE	0	
•	Riverside - Orange - San Luis Obieno - Rakersfield - Sa	cramento - Phoeniy - Tucson		INSPECTOR		ATE COMPLE	TED	

		CONSTRUCTION CHANGE / ADDENDUM		WARNING
CHANGE	DATE	AFFECTED OR ADDED SHEET NUMBERS	APPROVAL NO.	0
				IF THIS BAR DOES NOT MEASURE I" THEN DRAWING IS

STAGING AREA

SKYLINE DRIVE

CITY OF SAN DIEGO PUBLIC WORKS PROJECT



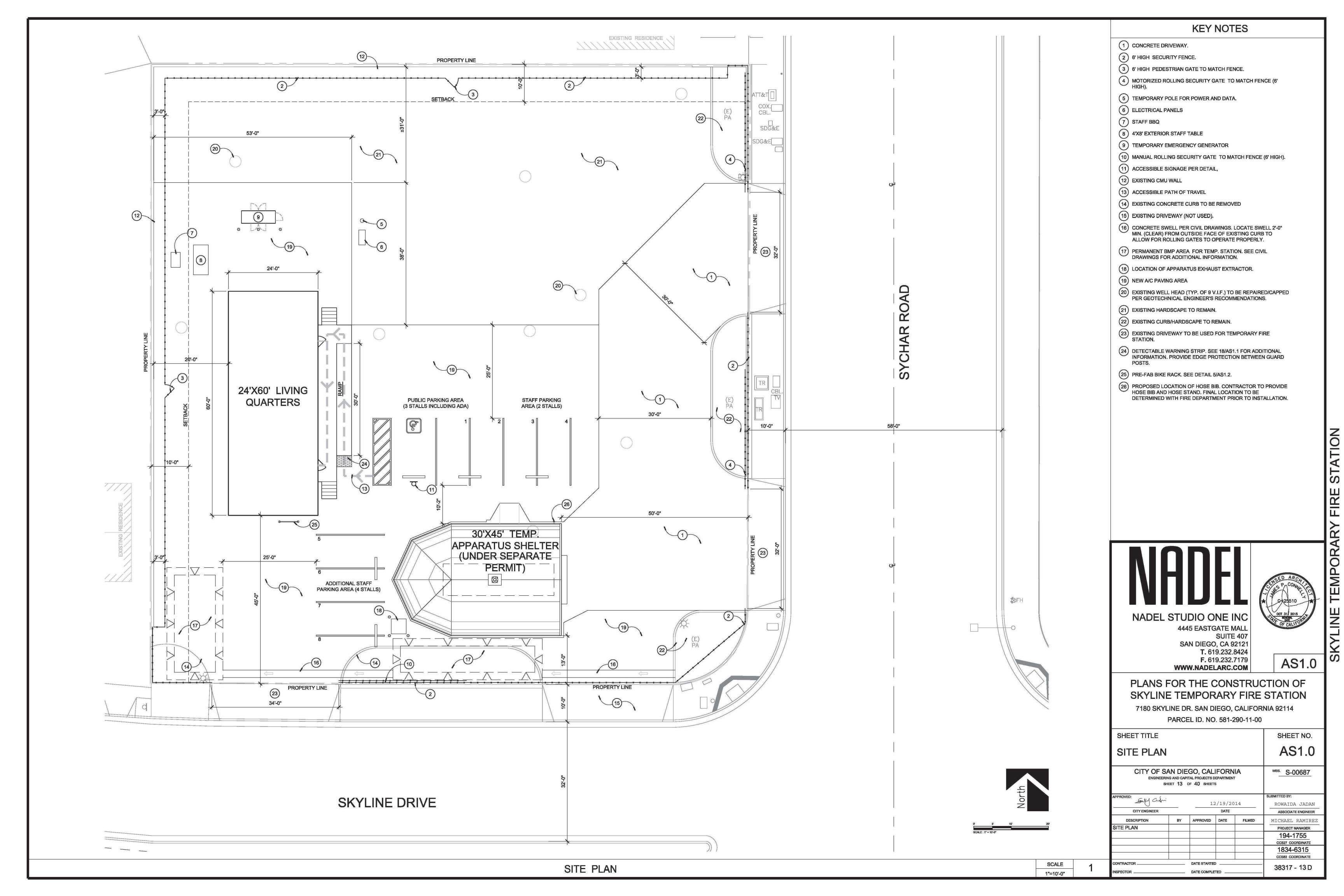


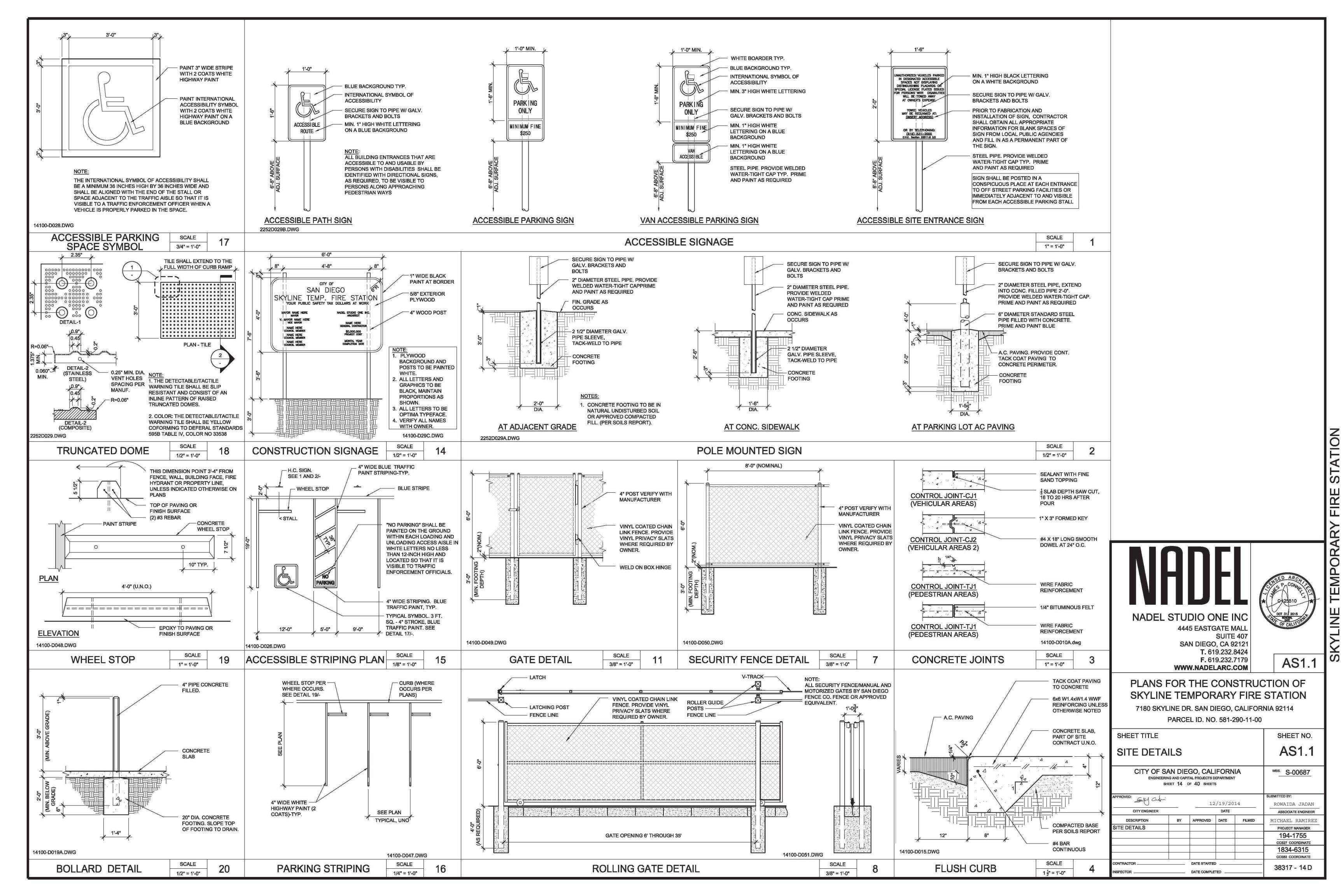
J:\17208-A\Civil\Sheets\17208A\_04\_Erosion\_Control.dgn

06-NOV-2014 11:24

sgalvan

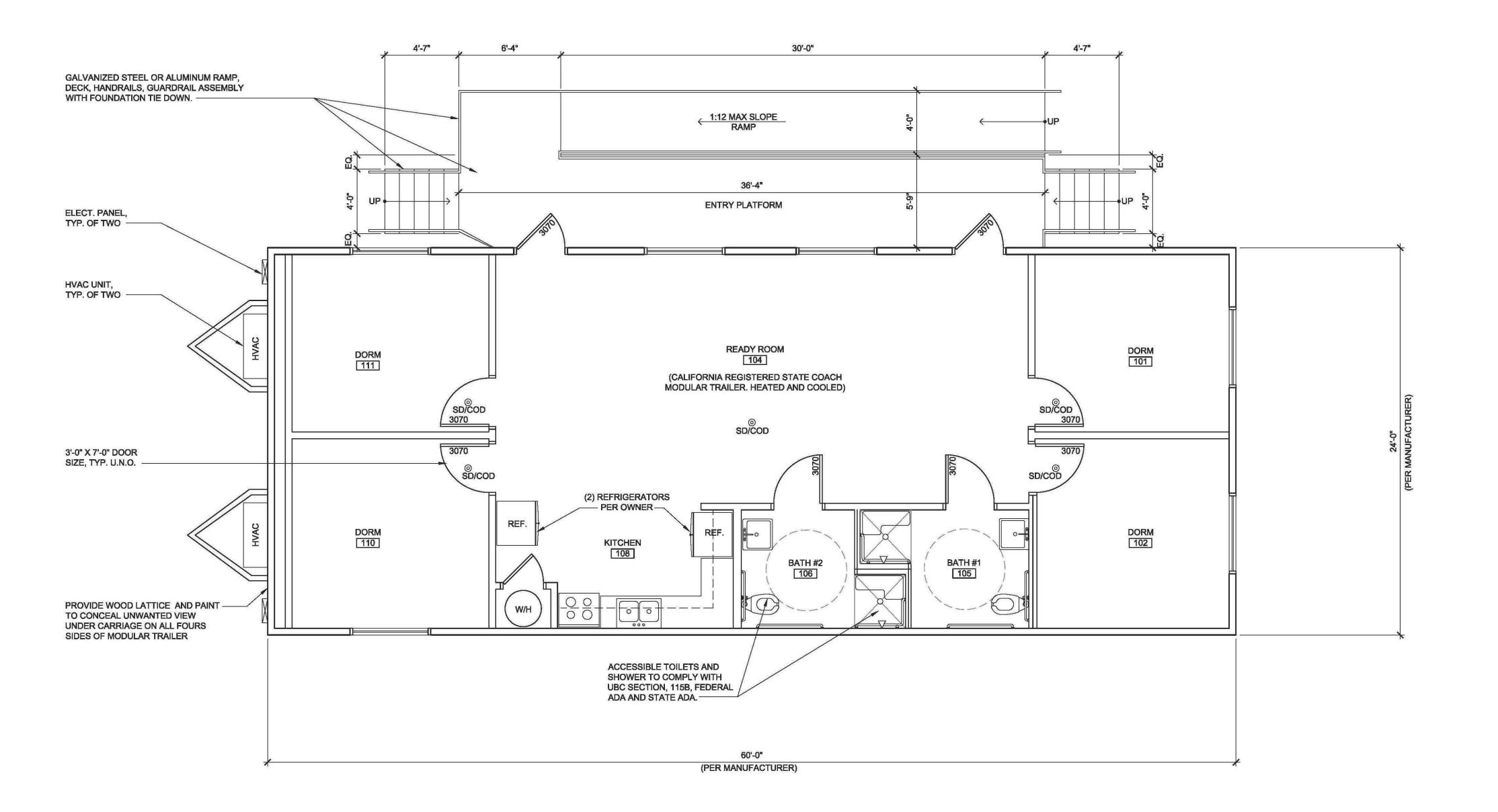
**GENERAL NOTES** 



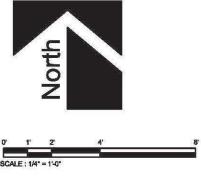


DATE COMPLETED

1" = 1'-0"



OCCUPANCY LOAD: DORM ROOM: 600 SQ. FT. / 200 SQ. FT. = 3 OCCUPANTS **USE IS 4 OCCUPANTS** PER OCCUPANT



# **GENERAL NOTES**

- OWNER TO PROVIDE AND CONTRACTOR TO INSTALL A CALIFORNIA STATE REGISTERED TRAILER WITH THIS FLOOR PLAN ON THIS TEMPORARY SITE.
- 2. OPERABLE WINDOWS (TYPICAL OF EACH WINDOW IN ROOMS 101, 102, 110 AND 111) SHALL HAVE A NET CLEAR EMERGENCY ESCAPE OPENING OF 5.7 SQ. FT. A MINIMUM HEIGHT OPENING OF 24" BY MINIMUM WIDTH OF 20". THE SILL SHALL BE LESS THAN 44" ABOVE FINISH FLOOR.
- 3. MODULAR UNIT MANUFACTURER TO PROVIDE AND INSTALL SMOKE AND CARBON MONOXIDE DETECTORS WITH BATTERY BACKUP AS REQUIRED PER CODE.
- 4. SMOKE ALARMS SHALL BE INTERCONNECTED AND HARD-WIRED WITH BATTERY BACK UP.
- 5. CARBON MONOXIDE ALARMS SHALL BE INTERCONNECTED AND HARD-WIRED WITH BATTERY BACK UP.
- 6. ALL SMOKE ALARMS SHALL BE LISTED IN ACCORDANCE WITH UL217 AND INSTALLED IN ACCORDANCE WITH THE PROVISIONS OF THE GOVERNING CRC AND THE HOUSEHOLD FIRE WARNING EQUIPMENT PROVISIONS OF NFPA 72. SYSTEMS AND COMPONENTS SHALL BE CALIFORNIA STATE FIRE MARSHALL LISTED AND APPROVED IN ACCORDANCE WITH CCR, TITLE 19, DIVISION 1 FOR THE PURPOSE FOR WHICH THEY ARE INSTALLED.
- 7. SINGLE AND MULTIPLE-STATION CARBON MONOXIDE ALARMS SHALL BE LISTED AS COMPLYING WITH THE REQUIREMENTS OF UL2034. CARBON MONOXIDE DETECTORS SHALL BE LISTED AS COMPLYING WITH THE REQUIREMENTS OF UL2075.
- 8. FINAL LAYOUT AND FINISH CONDITION OF LIVING QUARTERS TO BE INSTALLED ON SITE, MUST BE COORDINATED BETWEEN OWNER AND MANUFACTURER. FINAL APPROVAL BY OWNER.

# **LEGEND**

COMBINATION CARBON MONOXIDE AND SMOKE DETECTOR. SEE NOTES 3-7 ON THIS SHEET FOR ADDITIONAL INFORMATION.

NADEL STUDIO ONE INC

4445 EASTGATE MALL SUITE 407 SAN DIEGO, CA 92121 T. 619.232.8424 F. 619.232.7179 WWW.NADELARC.COM

A1.0

# PLANS FOR THE CONSTRUCTION OF SKYLINE TEMPORARY FIRE STATION

7180 SKYLINE DR. SAN DIEGO, CALIFORNIA 92114

PARCEL ID. NO. 581-290-11-00

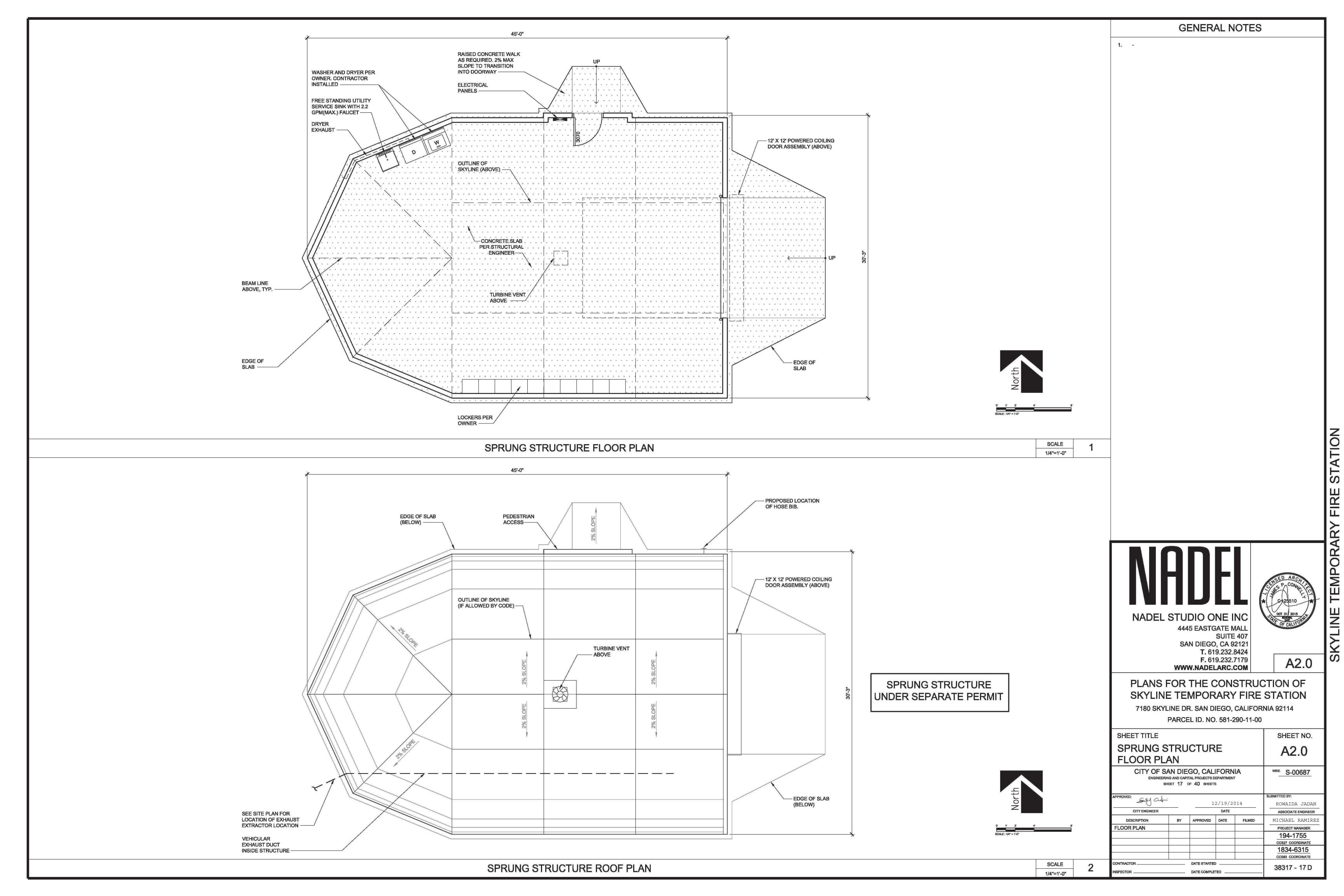
SHEET TITLE	SHEET NO.				
MODULAF FLOOR PL	A1.0				
CITY OF SENGINEE	RING AND CAP	EGO, CAL PITAL PROJECTS D OF 40 SHEET	DEPARTMENT		wes. S-00687
APPROVED:	**	12	2/19/20 DATE	14	SUBMITTED BY:  ROWAIDA JADAN  ASSOCIATE ENGINEER
DESCRIPTION	BY	APPROVED	DATE	FILMED	MICHAEL RAMIREZ
FLOOR PLAN				8:	PROJECT MANAGER
					194-1755 CCS27 COORDINATE
					1834-6315 CCS83 COORDINATE
CONTRACTOR	40	DATE STARTE	D		00047 400

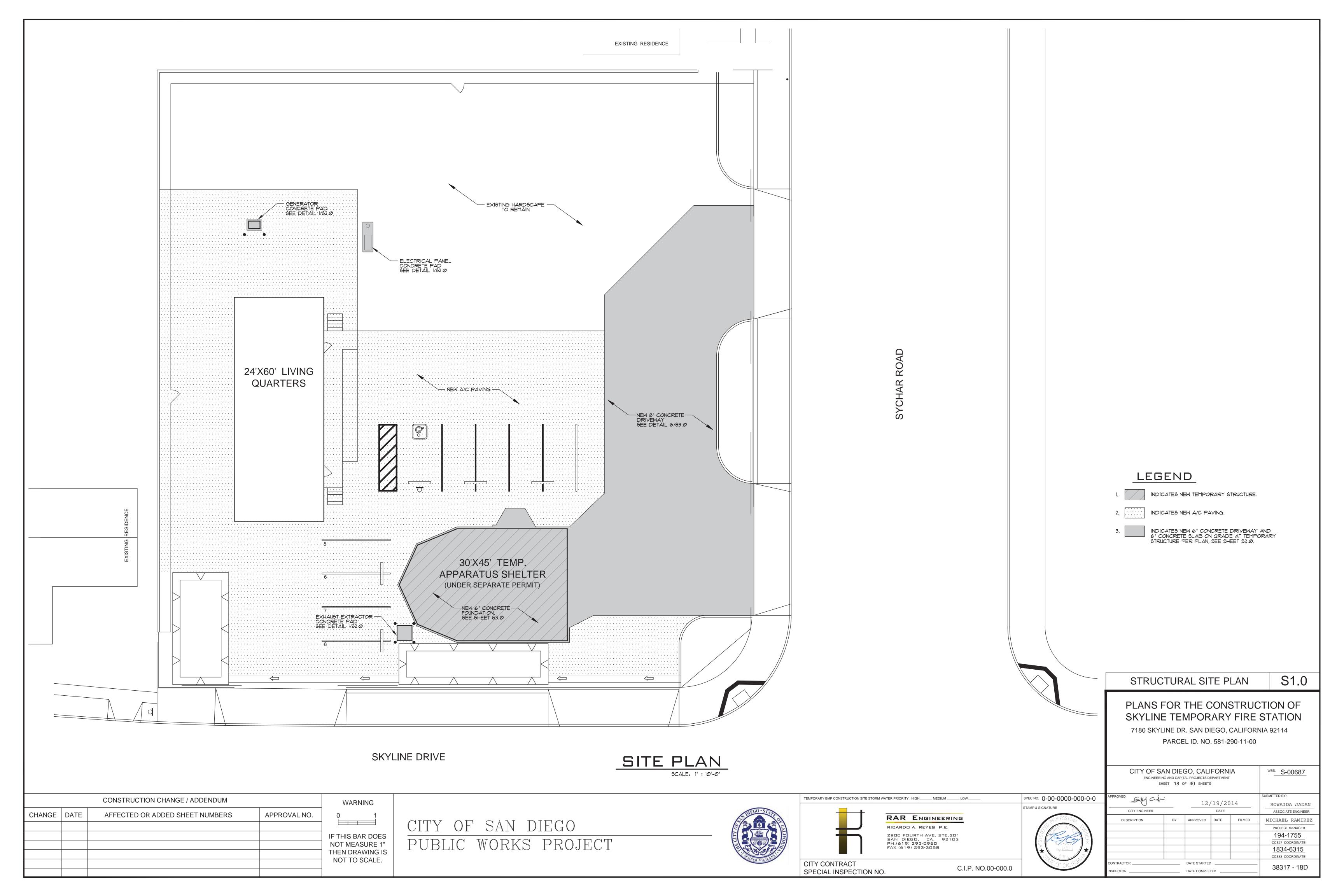
MODULAR LIVING QUARTERS FLOOR PLAN

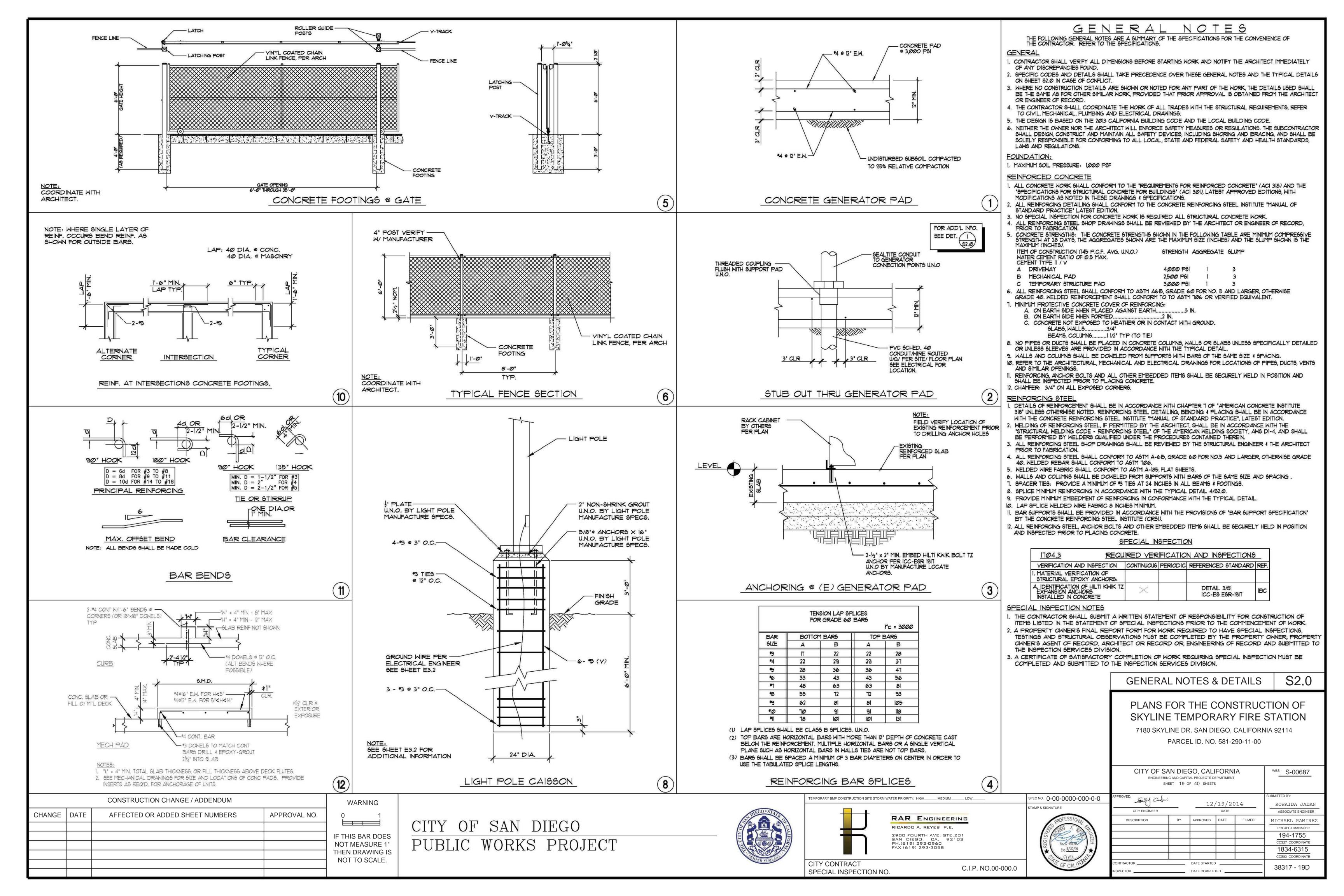
SCALE 1/4"=1'-0"

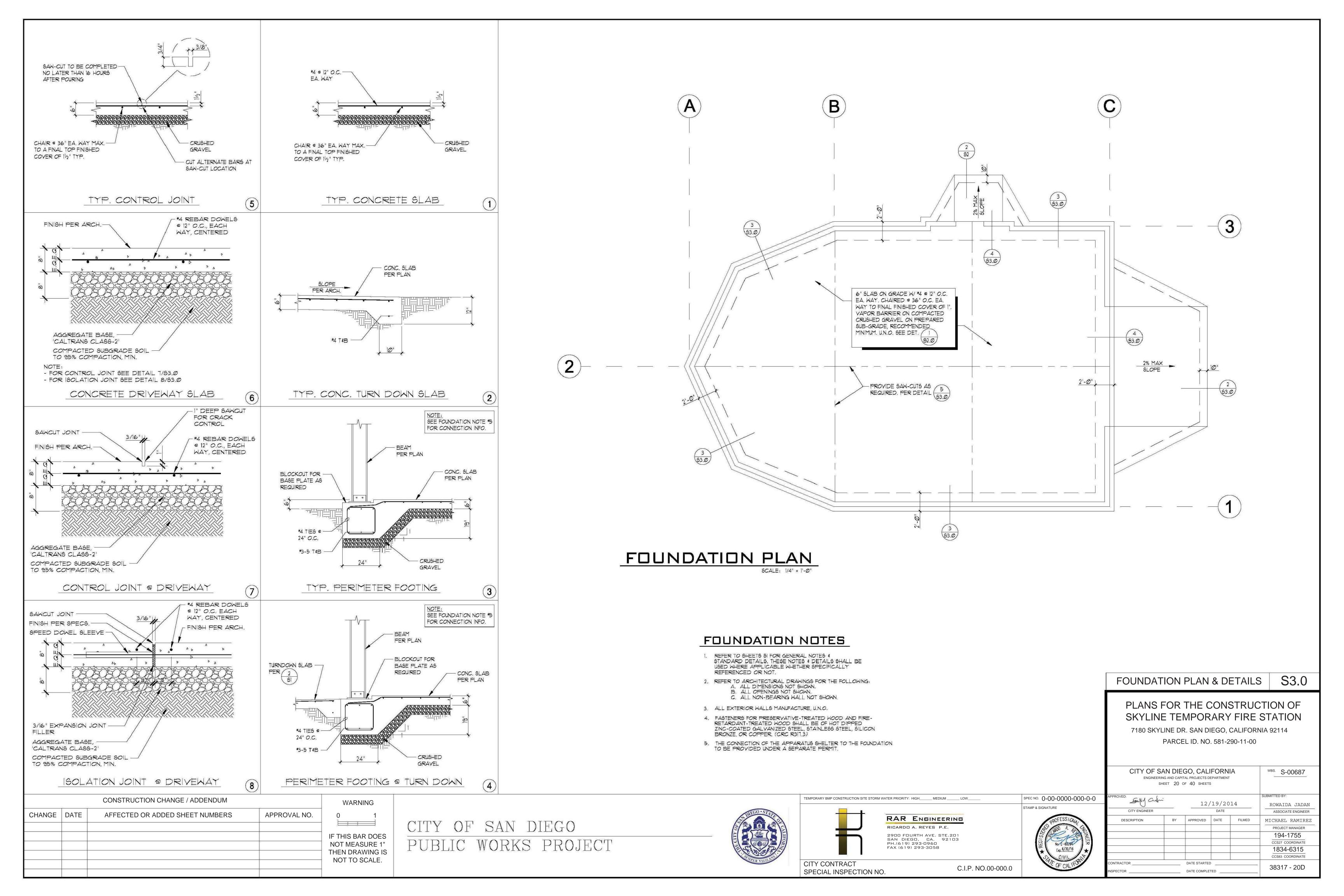
\_\_ DATE COMPLETED

38317 - 16D









P0.1

38317 - 21 D

		PLUMBING L	EGEND	
SYMBOL	ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION
	s	SEWER PIPE	AFG A/G AP	ABOVE FINISHED GRADE ABOVE GRADE
	٧	VENT PIPE	ARCH	ACCESS PANEL ARCHITECT OR ARCHITECTURAL BELOW GRADE
	CW	COLD WATER PIPE	B/G BOP B/S	BOTTOM OF PIPE BELOW SLAB
——ф——	FCO	FLOOR CLEAN OUT	CEC	CALIFORNIA BUILDING CODE CALIFORNIA ELECTRICAL CODE
<u> </u>	GCO	GRADE CLEAN OUT	CFC CMC	CALIFORNIA FIRE CODE CALIFORNIA MECHANICAL CODE
<u></u>	wco	WALL CLEAN OUT	CPC CI CISPI	CALIFORNIA PLUMBING CODE CAST IRON CAST IRON SOIL PIPE INSTITUTE
	FC	FLEXIBLE CONNECTION	CONN	CONNECT OR CONNECTION CONTRACTOR
——₩——	SOV	SHUT OFF VALVE	DWG(S) EA	DRAWING(S) EACH
—ф—	BV	BALL VALVE	ELEC	ELECTRICAL ELEVATION
	PRV	PRESSURE REDUCING VALVE	FF FLR FT	FINISHED FLOOR FLOOR FEET OR FOOT
—-— <del>-</del>	CONT	CONTINUED OR CONTINUATION	FU GPM	FIXTURE UNIT GALLONS PER MINUTE
	WHA	WATER HAMMER ARRESTOR	HD HR	HEAD HOUR
	RPBP	REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER	IND INV	INDIRECT INVERT
————— <del>»</del> +	НВ	HOSE BIBB	IE LS MFR	INVERT ELEVATION LAUNDRY SINK MANUFACTURER
		PIPE DOWN OR DROP	MAX MECH	MAXIMUM MECHANICAL
		PIPE UP OR RISE	MIN NTS	MINIMUM NOT TO SCALE
		VALVE ON DROP	NO PLBG	NUMBER PLUMBING
		VALVE ON RISE	PDI MTD NSF	PLUMBING AND DRAINAGE INSTITUTE MOUNTED NATIONAL SANITATION FOUNDATION
•	POC	POINT OF CONNECTION	RI SCH	ROUGH-IN SCHEDULE
0	AD, FD	AREA DRAIN OR FLOOR DRAIN	SOV SPEC	SHUT-OFF VALVE SPECIFICATION
	FS, RR	FLOOR SINK OR ROOF RECEPTOR	STRUC TEMP	STRUCTURAL TEMPERATURE
٥	VTR	VENT THROUGH ROOF	TDL TEL TYP	TOTAL DEVELOPED LENGTH TOTAL EQUIVALENT LENGTH TYPICAL
ASSE AMERICAN SOCIE	TY FOR MECH	ANICAL ENGINEERS	UNO UL WB, WSB WHA YB	UNLESS NOTED OTHERWISE UNDERWRITERS LABORATORIES WASHING MACHINE SUPPLY BOX WATER HAMMER ARRESTOR YARD BOX

	FIXTURE DATA												
			DOMESTIC				SEWER						
SYMBOL	DESCRIPTION	NO. OF UNITS F.U. PER UNIT		TOTAL FIXT	URE UNITS HW	NO. OF UNITS	F.U. PER 2	TOTAL FIXTURE UNITS					
BT 1	LAUNDRY SINK	1	4.0	4.0	3.0	1	2.0	2.0					
WB 1	CLOTHES WASHER SUPPLY BOX	i	4.0	4.0	3.0	i	3.0	3.0					
HB 1	HOSE BIBB	o	2.5	0.0	0.0	o							
	TOTAL			8.0	6.0			5.0					

1) WATER FIXTURE UNITS PER CPC TABLE A 2.1 (2) SEWER FIXTURE UNITS PER CPC TABLE 702.1

CONSTRUCTION CHANGE / ADDENDUM

AFFECTED OR ADDED SHEET NUMBERS

CHANGE DATE

	PLUMBING PIPE MATERIAL SCHEDULE									
SERVICE	LOCATION	PIPE MATERIAL	SLOPE							
WATER	ABOVE GRADE	ASTM B88 TYPE "L" HARD DRAWN COPPER WITH WROUGHT COPPER FITTINGS.	1/32" PER 1'							
WAILK	BELOW GRADE	ASTM B88 TYPE "K" HARD DRAWN COPPER, FACTORY INSULATED, WITH WROUGHT COPPER FITTINGS.	1/32" PER 1'							
SEWER AND	ABOVE GRADE	ASTM A74 SERVICE WEIGHT CAST IRON, ALL FITTINGS SHALL BE AS PER CPC.	1/4" PER 1'							
VENT	BELOW GRADE	ABS SCHEDULE 40 (CONFORM TO ASTMD 2321-2000), ALL FITTINGS SHALL BE AS PER CPC.	1/4" PER 1'							

# PLUMBING GENERAL NOTES:

- 1. CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS OF ALL EXISTING UTILITY PIPES PRIOR TO START OF WORK. NECESSARY ADJUSTMENTS TO THE PLUMBING LAYOUT SHALL BE DONE AT NO EXTRA COST.
- 2. CONTRACTOR SHALL NOTIFY ALL LOCAL UTILITY COMPANIES INCLUDING BUT NOT LIMITED TO THE GAS COMPANY, ELECTRIC COMPANY, TELEPHONE COMPANY, AND THE WATER DEPARTMENT, ABOUT THE EXTENT OF PLUMBING WORK. ALL EXCAVATION WORK SHALL BE APPROVED BY ALL UTILITY COMPANIES TO ASSURE PREVENTION OF INTERRUPTION OF EXISTING SERVICES PRIOR TO START OF WORK.
- 3. ALL PLUMBING WORK SHALL MEET OR EXCEED THE REQUIREMENTS OF THE UNIFORM PLUMBING CODE, UNIFORM BUILDING CODE, UNIFORM MECHANICAL CODE, C.A.C. TITLE 24, AMERICANS WITH DISABILITIES ACT (A.D.A.), NATIONAL FIRE PROTECTION ASSOCIATION (N.F.P.A.), THE LOCAL CITY AND COUNTY CODES, AND ALL OTHER CODES HAVING JURISDICTION. IN CASE OF CONFLICT, THE MORE STRICT REGULATIONS SHALL GOVERN.
- 4. ALL PLUMBING WORK SHALL BE COORDINATED WITH THE WORKS OF OTHER TRADES PRIOR TO START OF WORK. NECESSARY ADJUSTMENTS SHALL BE MADE AT NO
- 5. FOR MINIMUM PIPE SIZE CONNECTIONS TO EACH PLUMBING FIXTURE SEE PLUMBING FIXTURE SCHEDULE. THESE VALUES ARE MINIMUM; LARGER CONNECTIONS MAY RESULT BASED ON THE DIFFERENT MANUFACTURER'S RECOMMENDATIONS.
- 6. MANUFACTURER'S NAMES AND MODEL NUMBERS SHOWN FOR PLUMBING FIXTURES AND EQUIPMENT ARE FOR REFERENCE ONLY. OTHER MANUFACTURERS WHICH CAN
- MEET THE DESIGN REQUIREMENTS OF THE PLUMBING SYSTEM MAY BE SUBSTITUTED UPON APPROVAL FROM THE ARCHITECT AND THE OWNER.
- 7. SEWER AND VENT PIPES ABOVE GROUND SHALL BE ASTM A74 SERVICE WEIGHT CAST IRON. SEWER, ALL FITTINGS SHALL BE AS PER CPC. SEWER AND VENT PIPES SHALL BE UNIFORMLY SLOPED AT 1/4" PER FOOT.
- 8. COLD WATER PIPES ABOVE GROUND SHALL BE ASTM B88 TYPE "L" HARD DRAWN COPPER TUBING WITH WROUGHT COPPER FITTINGS. COLD WATER PIPES BELOW GROUND SHALL BE ASTM B88 TYPE "K" HARD DRAWN COPPER TUBING FACTORY INSULATED WITH WROUGHT COPPER FITTINGS.
- PROVIDE DIELECTRIC FITTINGS FOR DISSIMILAR METALS IN CONTACT.
- 10. PROVIDE HANGERS AND SUPPORTS FOR PIPING IN ACCORDANCE WITH THE RECOMMENDATIONS OF MSS SP-69-2002.
- 11. PROVIDE VALVES AT THE FOLLOWING LOCATIONS:
- A. WATER MAIN SHUT-OFF VALVE IN VALVE BOX.
- B. VALVE WITH HOSE CONNECTION ON DOWNSTREAM SIDE OF THE MAIN SHUT-OFF VALVE.
- C. SHUT-OFF VALVE ON EACH SUPPLY TO EACH FIXTURE AND EQUIPMENT ITEM NOT PROVIDED WITH CONTROL STOP OR OTHER AUXILIARY SHUT-OFF VALVE. INSTALL SHUT-OFF VALVES SO THAT STEMS EITHER ARE VERTICAL WITH HANDWHEELS OR OPERATORS ON TOP OR ARE HORIZONTAL AND SO THAT VALVES ARE EASILY ACCESSIBLE FOR OPERATION, SERVICE, REMOVAL AND REPLACEMENT.
- 13. PROVIDE SLEEVES FOR ALL PIPE AND TUBING PASSING THROUGH FLOORS, ROOFS, AND WALLS. PACK CAULK INTO THE SPACE AROUND THE PIPE OR TUBING. PROVIDE FLASHING FOR ALL PIPES EXTENDING THROUGH THE ROOF.
- 14. ALL VENT TERMINATIONS AT ROOF SHALL BE AT LEAST 10 FEET AWAY FROM OUTSIDE AIR INTAKES, OPERABLE WINDOWS, AND THE LIKE.
- 15. FILL CRACKS BETWEEN FIXTURES AND WALL/FLOORS WITH SILICONE RUBBER SEALANT.
- 16. LOCATE, SIZE, AND INSTALL WATER HAMMER ARRESTERS IN ACCORDANCE WITH PLUMBING AND DRAINAGE INSTITUTE STANDARD NO. WH-201.
- 17. INSTALL FIXTURES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND ALL APPLICABLE CODES. SECURE FLOOR OUTLET OF FLOOR-MOUNTED FIXTURES TO DRAINAGE CONNECTIONS AND FLOOR IN A RIGID MANNER. RIGIDLY SUPPORT WALL-HUNG FIXTURES BY MEANS OF METAL SUPPORTING MEMBERS. USE CHROMIUM-PLATED BRASS BOLTS, NUTS, AND WASHERS WHERE EXPOSED. ALL CONNECTIONS SHALL BE MADE GAS-TIGHT AND WATER-TIGHT. USE OF PUTTY AND PLASTICS FOR GASKETS WILL NOT BE PERMITTED.
- 18. PROVIDE ALL FIXTURE COMPONENTS AS INDICATED ON DRAWINGS. PROVIDE ADDITIONAL COMPONENTS AS PER MANUFACTURER'S RECOMMENDATIONS FOR PROPER OPERATION OF THE FIXTURES.
- 19. PROVIDE EACH PLUMBING FIXTURE (INCLUDING HOSE BIBBS) WITH AN INDIVIDUAL STOP OR COMPRESSION VALVE OF POLISHED CHROME-PLATED LOOSE KEY TYPE.
- 20. WHERE DEPTHS OR INVERTS ELEVATIONS ARE NOT INDICATED, PROVIDE MINIMUM COVERAGE (ABOVE TOP OF PIPES) AS FOLLOWS:
- A. ANY PIPING UNDER SLAB (TOP OF PIPE TO UNDERSIDE OF SLAB): 18 INCHES.
- B. CAST IRON AND COPPER PIPES IN OTHER LOCATIONS: 18 INCHES.
- C. EXCAVATE TO UNDISTURBED EARTH: CUT LEVEL AND FORM TRUE. REMOVE DEBRIS, RUBBISH AND SOFT MATERIAL (SUCH AS MUD). WHERE ROCK IS ENCOUNTERED, UNDERCUT TRENCHES 6-INCHES AND FILL WITH WELL TAMPED NEUTRAL SAND AND PEA GRAVEL TO PROPER PIPÉ ELEVATION. DURING EXCAVATION FREE OF STANDING WATER. UNDERCUT TRENCH 6-INCHES AND INSTALL PIPING IN A 6-INCH NEUTRAL SAND ENVELOPE.
- 21. BACKFILL TO A POINT 12-INCHES ABOVE TOP OF PIPING WITH EARTH (EXCAVATED MATERIAL MAY BE USED) FREE OF CLAY, DEBRIS, RUBBISH, ROCKS, OR CLODS OVER 4-INCHES IN THE GREATEST DIMENSION. BACKFILL ABOVE 12-INCHES FROM TOP OF PIPING MAY BE WITH EXCAVATED MATERIAL. APPLY BACKFILL BY HAND IN 6-INCH DEEP LAYERS THE FULL WIDTH OF THE TRENCH. MOISTEN EACH LAYER (DO NOT FLOOD OR PUDDLE), AND HAND TAMP TO A MINIMUM 90 PERCENT COMPACTION BEFORE PROCEEDING WITH THE NEXT LAYER OF BACKFILL.
- 22. DO NOT EXCAVATE UNDER FOUNDATIONS OR FOOTINGS EXCEPT IN MANNER PERMITTED BY THE ARCHITECT. DO NOT BACKFILL UNTIL INSTALLED PIPING HAS BEEN SUCCESSFULLY TESTED.
- 23. VERIFICATION OF WATER AGENCY APPROVAL SHALL BE SUBMITTED TO THE BUILDING AND SAFETY DIVISION PRIOR TO ISSUANCE OF A PLUMBING PERMIT FOR THIS
- 24. ALL PENETRATIONS THRU FIRE RATED ASSEMBLIES SHALL BE PACKED WITH APPROVED FIRE PROOFING. FOR LOCATIONS OF FIRE RATED ASSEMBLIES, SEE
- 25. ROUTE ALL PIPES AS HIGH AS POSSIBLE IN EXPOSED LOCATIONS. COORDINATE ROUTING WITH ALL OTHER TRADES PRIOR TO START OF WORK.

# PLUMBING MANDATORY MEASURES

- 1. ALL PLUMBING SYSTEM COMPONENTS SHALL MEET OR EXCEED THE REQUIREMENTS OF C.B.C. (CALIFORNIA EDITION), CMC, CPC, NEC, NFPA, ASTM, ANSI, AND ALL LOCAL AND STATE CODE REQUIREMENTS.
- 2. ALL PLUMBING EQUIPMENT LISTED IN (CCR) SECTION 113 OF THE 2013 CALIFORNIA CODE OF REGULATIONS, TITLE-24, PART 1, ENERGY EFFICIENCY STANDARDS MUST BE CERTIFIED BY THE MANUFACTURER TO MEET OR EXCEED SPECIFICATIONS OR EFFICIENCIES ADOPTED BY THE CEC.
- 3. ALL PIPING EXPOSED TO WEATHER SHALL BE METALLIC.
- 4. ALL FERROUS PIPING EXPOSED TO WEATHER SHALL BE GALVANIZED.
- 5. ALL PIPES, FITTINGS AND FIXTURES USED TO CONVEY POTABLE WATER SHALL BE LEAD FREE IN COMPLIANCE WITH CALIFORNIA AB 1953.
- 6. ALL INSULATING MATERIALS INSTALLED MUST BE CERTIFIED BY CALIFORNIA ENERGY COMMISSION TO MEET C.E.C. ENERGY EFFICIENCY STANDARDS (E.E.S.) SECTION 123 AND SECTION 1201.2.7.8.2 OF CMC (CALIFORNIA EDITION).
- 7. ALL INSULATION INSTALLED SHALL MEET THE FLAME SPREAD AND SMOKE DENSITY REQUIREMENTS OF SECTION 719 OF THE 2010 CBC.
- 8. CROSS CONNECTION PROTECTION SHALL BE PROVIDED AT ALL POTABLE WATER SUPPLIED APPLIANCES AND EQUIPMENT (OTHER THAN THOSE LISTED IN INFORMATION BULLETIN 103).

				PL	_UM	BING FIXTURE SCHEDULE
	AND THE WAR AND THE STREET		MIN. PIF	PE SIZE		
SYMBOL	FIXTURE	CW	HW	٧	S	REMARKS
LS 1	LAUNDRY SINK	3/4"	1	2™	2"	FLORESTONE MODEL FM LAUNDRY SINK; 23" X 22" X 35" FLOOR MOUNTED LAUNDRY SINK WITH 4 HEAVY DUTY MOLDED LEGS AND DRAIN PLUG. CHICAGO FAUCET 349-L9ABCP FAUCET DECK MOUNTED SINGLE HOLE SINGLE SUPPLY WITH 9-1/2" SWING SPOUT
WB 1	WASHER BOX	3/4"	]	2"	2"	SIOUX CHIEF WASHER OX BOX PLASTIC SUPPLY AND WASTE BOX. COLD WATER ONLY WITH SHOCK ARRESTOR AND 2" WASTE FITTING
HB	HOSE BIBB	3/4"		2"	2"	SILLCOCK IN LOCKABLE BOX WITH APPROVED BACKFLOW PREVENTER

DI LIVERIA ENTENE COLLEGIA E

APPLICABLE CODES

2013 CALIFORNIA ADMINISTRATIVE CODE (CAC), PART 1, TITLE

2013 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 C.C.R. (2012 EDITION INTERNATIONAL BUILDING CODE WITH

2013 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24

C.C.R. (2012 EDITION NATIONAL ELECTRICAL CODE WITH 2013

2013 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 C.C.R. (2012 EDITION IAPMO UNIFORM MECHANICAL CODE WITH

2013 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 C.C.R. (2012 EDITION IAPMO UNIFORM PLUMBING CODE WITH

2013 CALIFORNIA ENERGY CODE, PART 6, TITLE 24, C.C.R.

(2012 EDITION CALIFORNIA ENERGY COMMISSION BUILDING

(2012 EDITION OF INTERNATIONAL FIRE CODE WITH 2013

2013 CALIFORNIA GREEN CODE, PART 11, TITLE 24, C.C.R.

TITLE 19 C.C.R. PUBLIC SAFETY, STATE FIRE MARSHAL

2013 CALIFORNIA REFERENCED STANDARDS CODE, PART 12,

2013 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24, C.C.R.

2013 CALIFORNIA AMENDMENTS)

2013 CALIFORNIA AMENDMENTS)

2013 CALIFORNIA AMENDMENTS)

ENERGY EFFICIENCY STANDARDS)

CALIFORNIA AMENDMENTS)

TITLE 24, C.C.R.

REGULATIONS.

CALIFORNIA AMENDMENTS)

PLANS FOR THE CONSTRUCTION OF SKYLINE TEMPORARY FIRE STATION

7180 SKYLINE DR. SAN DIEGO, CALIFORNIA 92114 PARCEL ID. NO. 581-290-11-00

PLUMBING LEGEND, SCHEDULES

AND GENERAL NOTES

CITY OF ENGINEE	RING AND CAPI	GO, CAL TAL PROJECTS D OF 40 SHEET	EPARTMENT		WBS. S-00687
APPROVED: SEW CO.	<b>←</b>	12	2/19/20 DATE	14	SUBMETTED BY:  ROWAIDA JADAN  ASSOCIATE ENGINEER
DESCRIPTION	BY	APPROVED	DATE	FILMED	MICHAEL RAMIREZ PROJECT MANAGER
					CCS27 COORDINATE
CONTRACTOR		DATE STARTE			CCS83 COORDINATE

DATE COMPLETED

IF THIS BAR DOES **NOT MEASURE 1"** THEN DRAWING IS NOT TO SCALE.

WARNING

APPROVAL NO.

CITY OF SAN DIEGO PUBLIC WORKS PROJECT



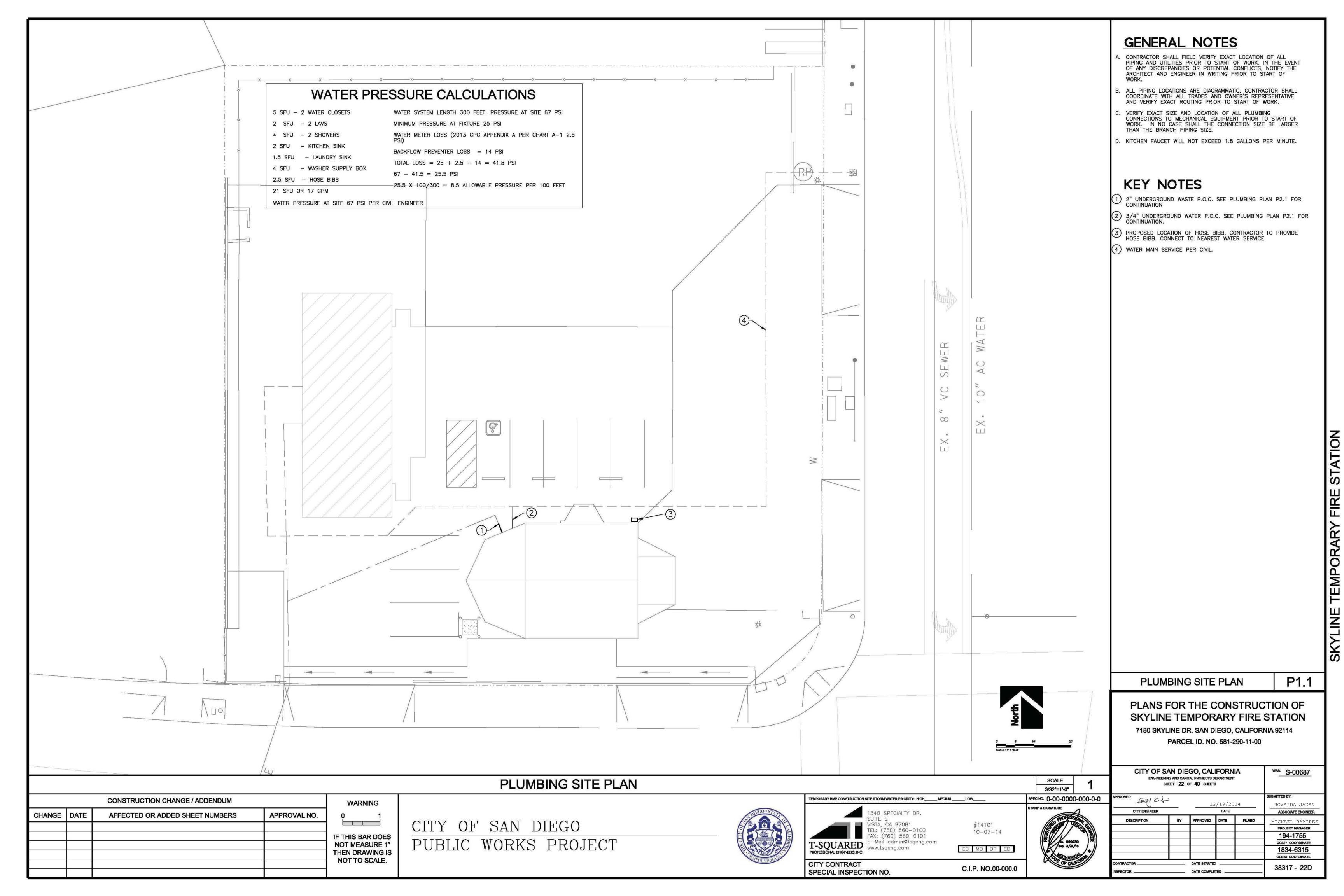


CITY CONTRACT

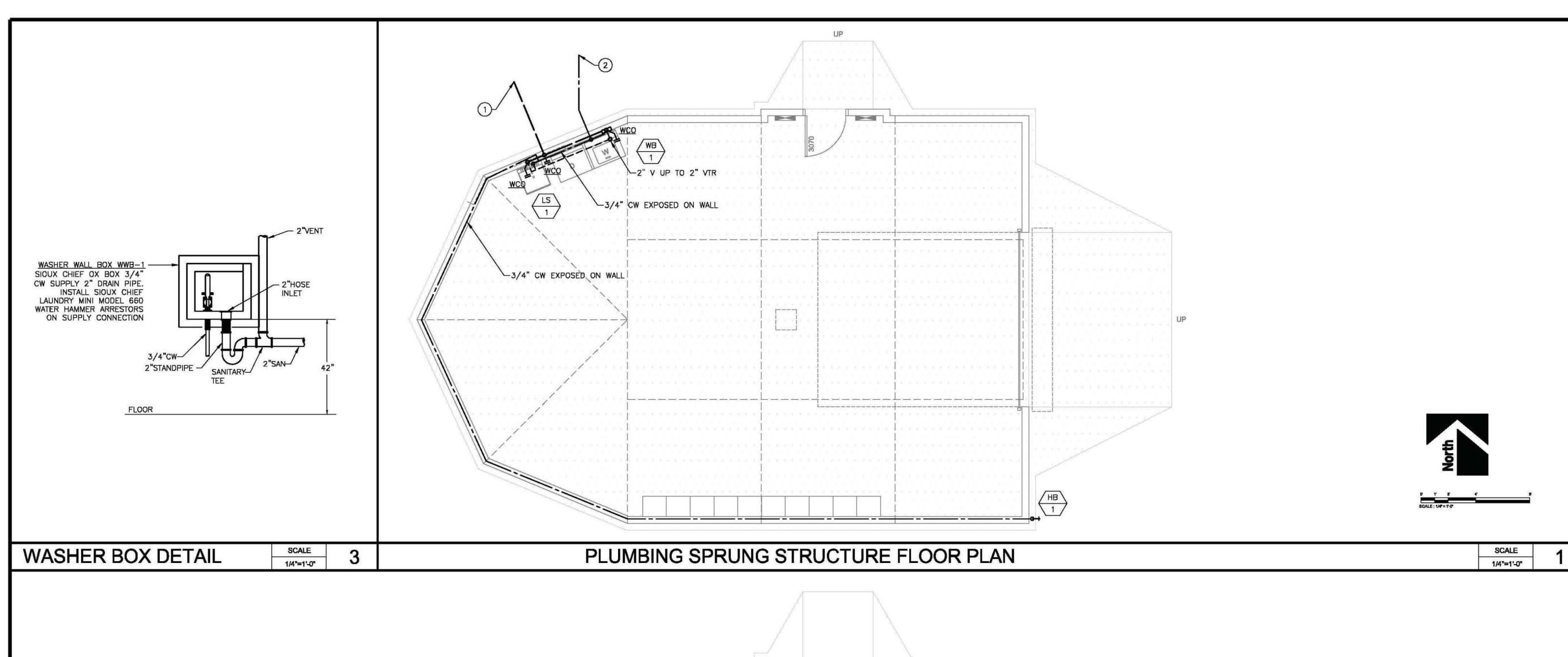
SPECIAL INSPECTION NO.

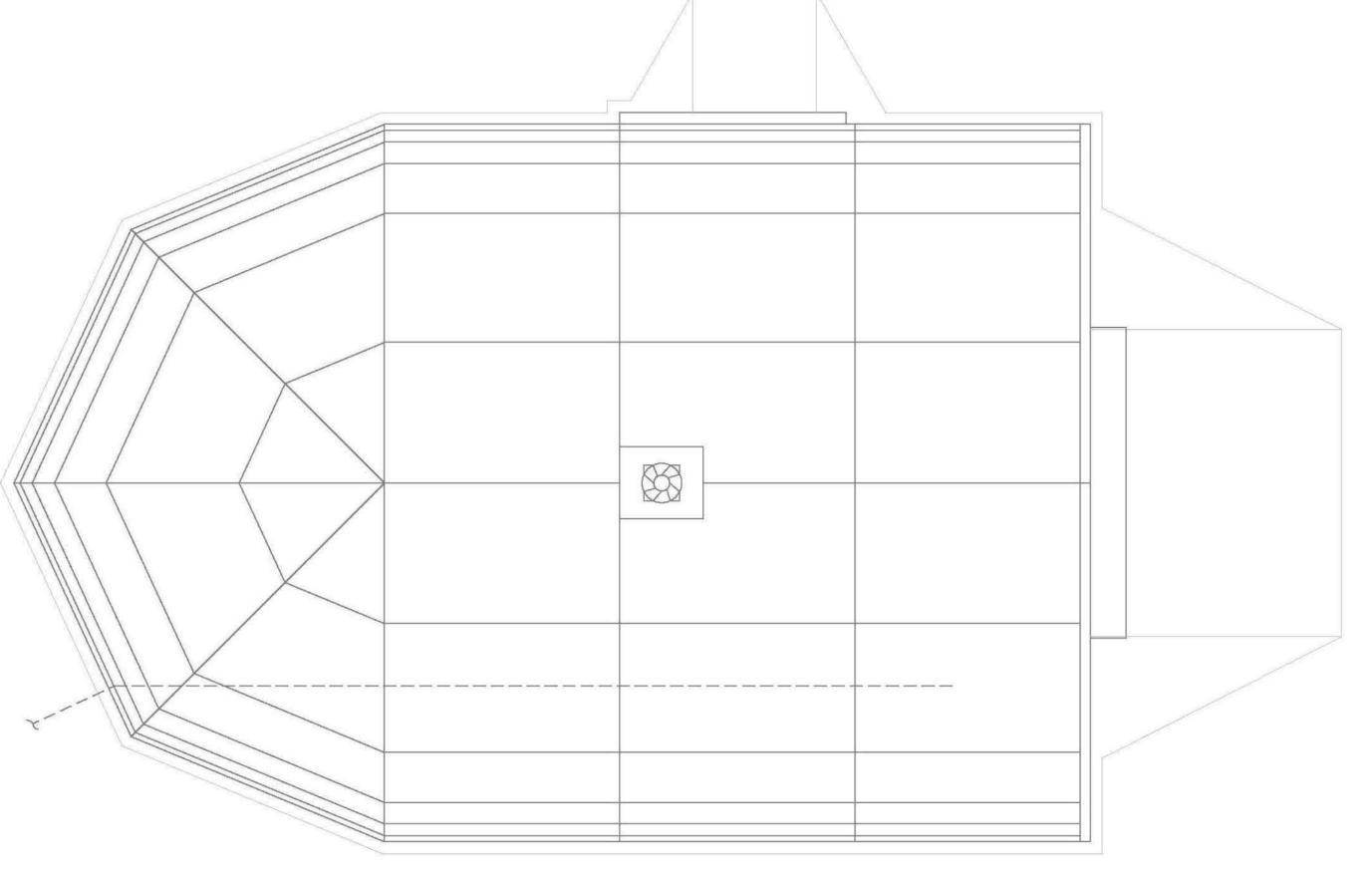
#14101 09-12-14

ED MD DP ED C.I.P. NO.00-000.0 SPEC NO. 0-00-0000-000-0-0









PLUMBING SPRUNG STRUCTURE ROOF PLAN

**GENERAL NOTES** 

CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION OF ALL PIPING AND UTILITIES PRIOR TO START OF WORK. IN THE EVENT OF ANY DISCREPANCIES OR POTENTIAL CONFLICTS, NOTIFY THE ARCHITECT AND ENGINEER IN WRITING PRIOR TO START OF ALL PIPING LOCATIONS ARE DIAGRAMMATIC. CONTRACTOR SHALL

COORDINATE WITH ALL TRADES AND OWNER'S REPRESENTATIVE AND VERIFY EXACT ROUTING PRIOR TO START OF WORK. VERIFY EXACT SIZE AND LOCATION OF ALL PLUMBING

CONNECTIONS TO MECHANICAL EQUIPMENT PRIOR TO START OF WORK. IN NO CASE SHALL THE CONNECTION SIZE BE LARGER THAN THE BRANCH PIPING SIZE.

D. KITCHEN FAUCET WILL NOT EXCEED 1.8 GALLONS PER MINUTE.

# **KEY NOTES**

2" UNDERGROUND WASTE P.O.C. SEE P1.1 AND CIVIL PLANS FOR CONTINUATION.

2 3/4" UNDERGROUND WATER P.O.C. SEE P1.1 AND CIVIL PLANS FOR CONTINUATION.

PLUMBING FLOOR PLANS & DETAIL

P2.1

PLANS FOR THE CONSTRUCTION OF SKYLINE TEMPORARY FIRE STATION 7180 SKYLINE DR. SAN DIEGO, CALIFORNIA 92114

PARCEL ID. NO. 581-290-11-00

		CONSTRUCTION CHANGE / ADDENDUM		WARNING
CHANGE	DATE	AFFECTED OR ADDED SHEET NUMBERS	APPROVAL NO.	0 1
				IF THIS BAR DOES
				NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

CITY OF SAN DIEGO PUBLIC WORKS PROJECT



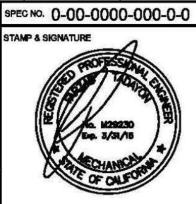


CITY CONTRACT SPECIAL INSPECTION NO.

TEMPORARY BMP CONSTRUCTION SITE STORM WATER PRIORITY: HIGH \_\_\_\_\_ MEDIUM \_\_\_\_ LOW\_\_

10-06-14 ED MD DP ED

C.I.P. NO.00-000.0



ENGINEER	BY APPROVED DATE FILMED MICHAEL RAMIR PROJECT MANAGER  194-1755 CCS27 COORDINATE 1834-6315 CCS83 COORDINATE  DATE STARTED  38317 - 23D	wss. S-00687			
APPROVED: Sky Cul-	-	12		14	SUBMITTED BY:  ROWAIDA JADAN  ASSOCIATE ENGINEER
DESCRIPTION	BY	APPROVED	DATE	FILMED	MICHAEL RAMIREZ PROJECT MANAGER
	4				3
CONTRACTOR		DATE STARTE			38317 - 23D

- A. THE GENERAL CONDITIONS. SUPPLEMENTARY CONDITIONS. SPECIAL REQUIREMENTS, AND APPLICABLE PORTIONS OF DIVISION 1 OF THE SPECIFICATION ARE A PART OF THIS DIVISION AND THE REQUIREMENTS CONTAINED HEREIN ARE SUPPLEMENTARY TO THEM.
- B. THIS DIVISION IS AN INTEGRATED WHOLE COMPRISING INTERRELATED AND INTERDEPENDENT SECTIONS AND SHALL BE CONSIDERED IN ITS ENTIRETY IN DETERMINING REQUIREMENTS.
- C. REFER TO OTHER SECTIONS OF THIS DIVISION FOR ADDITIONAL REQUIREMENTS OR INFORMATION REGARDING THE SUBJECTS OF THIS SECTION. 1.02 ABBREVIATIONS AND DEFINITIONS (AS USED ON DIVISION 15 DRAWINGS AND
- A. THIS DIVISION IS ABBREVIATED AND INCLUDES INCOMPLETE SENTENCES. SUPPLY OMITTED WORDS BY INFERENCE.
- SYMBOLS: "[S]" MEANS SUBMITTALS ARE REQUIRED; "[M/O]" MEANS MAINTENANCE/OPERATING DATA IS REQUIRED; SEE PARAGRAPHS HEREINAFTER.
- C. "PROVIDE" MEANS FURNISH, INSTALL AND CONNECT UNLESS OTHERWISE DESCRIBED IN SPECIFIC INSTANCES.
- D. "PIPING" MEANS PIPES, FITTINGS, VALVES AND ALL LIKE PIPE ACCESSORIES
- "DUCTWORK" MEANS DUCTS, PLENUMS, COMPARTMENTS, CASINGS OR ANY LIKE DEVICES, INCLUDING THE BUILDING STRUCTURE, WHICH ARE USED TO CONVEY
- "EXTEND", "SUBMIT", "REPAIR", "ABANDON", "REPLACE", "REMOVE" AND SIMILAR WORDS MEAN THAT THE CONTRACTOR (OR HIS DESIGNATED SUBCONTRACTOR) SHALL ACCOMPLISH THE ACTION DESCRIBED.
- G. "CODES" OR "CODE" MEANS ALL CODES, LAWS, STATUTES, RULES, REGULATIONS, ORDINANCES, ORDERS, DECREES, AND OTHER REQUIREMENTS OF ALL LEGALLY CONSTRUCTED AUTHORITIES AND PUBLIC UTILITY FRANCHISE HOLDERS HAVING JURISDICTION.
- H. "PRODUCTS", "MATERIALS" AND "EQUIPMENT" ARE USED INTERCHANGEABLY AND MEAN MATERIALS, FIXTURES, EQUIPMENT, ACCESSORIES, ETC.
- "UTILITY AREAS" ARE DEFINED AS MECHANICAL, ELECTRICAL, JANITORIAL, AND SIMILAR ROOMS OR SPACES WHICH ARE NORMALLY USED OR OCCUPIED ONLY BY CUSTODIAL OR MAINTENANCE PERSONNEL, "PUBLIC AREAS" ARE DEFINED AS THE ROOMS OR SPACES WHICH ARE NOT INCLUDED IN THE UTILITY AREAS
- "BUILDING BOUNDARY" INCLUDES CONCRETE WALKWAYS IMMEDIATELY ADJACENT TO THE BUILDING STRUCTURE.
- K. "BELOW GRADE" MEANS BURIED IN THE GROUND.
- "SUBSTANTIAL MECHANICAL COMPLETION" MEANS ALL COMPONENTS OF ALL SYSTEMS ARE FUNCTIONING BUT LACKING IN FINAL ADJUSTMENT.
- M. PRESSURE RATING SPECIFIED (SUCH AS FOR VALVES AND THE LIKE) MEANS DESIGN WORKING PRESSURE FOR AND WITH REFERENCES TO THE FLUID WHICH THE DEVICE WILL SERVE.

#### 1.03 DESCRIPTION

PROVIDE A COMPLETE AND OPERABLE INSTALLATION, INCLUDING ALL LABOR SUPERVISION, MATERIALS, EQUIPMENT, TOOLS, APPARATUS, TRANSPORTATION, WAREHOUSING, RIGGING, SCAFFOLDING AND OTHER EQUIPMENT AND SERVICES NECESSARY TO ACCOMPLISH THE WORK IN ACCORDANCE WITH THE INTENT AND MEANING OF THESE DRAWINGS AND SPECIFICATIONS.

#### 1.04 RELATED WORK

- A. COORDINATION: REFER TO ARCHITECTURAL, CIVIL, STRUCTURAL, AND ELECTRICAL DRAWINGS FOR THE CONSTRUCTION DETAILS AND COORDINATE THE WORK OF THIS DIVISION WITH THAT OF OTHER DIVISIONS. ORDER THE WORK OF THIS DIVISION SO THAT PROGRESS WILL HARMONIZE WITH THAT OF OTHER DIVISIONS AND ALL WORK WILL PROCEED EXPEDITIOUSLY. THE WORK OF THIS DIVISION SHALL INCLUDE DIRECT RESPONSIBILITY FOR THE CORRECT PLACING AND CONNECTION OF MECHANICAL WORK IN RELATION TO THE WORK OF OTHER
- B. EXAMINE OTHER DIVISIONS FOR WORK RELATED TO THE WORK OF THIS DIVISION ESPECIALLY DIVISION 16 - ELECTRICAL.

- A. VISIT THE SITE PRIOR TO BIDDING AND INVESTIGATE THE EXISTING CONDITIONS WHICH AFFECT OR WILL BE AFFECTED BY THE WORK OF THIS DIVISION. BECOME THOROUGHLY FAMILIAR WITH THE WORKING CONDITIONS AND TAKE INTO ACCOUNT ANY SPECIAL OR UNUSUAL FEATURES PECULIAR TO THIS JOB. BY THE ACT OF SUBMITTING A BID, THE CONTRACTOR WILL BE DEEMED TO HAVE COMPLIED WITH THE FORGOING, TO HAVE ACCEPTED SUCH CONDITIONS, AND TO HAVE MADE ALLOWANCE THEREFORE IN PREPARING HIS BID.
- B. THE LOCATION OF EXISTING CONCEALED UTILITY LINES ARE SHOWN IN ACCORDANCE WITH REFERENCE DATA RECEIVED BY THE ARCHITECT. THE ARCHITECT DOES NOT GUARANTEE THE ACCURACY OF SUCH DATA. THE POINTS OF CONNECTION ARE THEREFORE APPROXIMATE AND THE BIDDER SHALL INCLUDE ADEQUATE FUNDS IN HIS BID TO COVER COSTS OF CONNECTION REGARDLESS OF THEIR EXACT LOCATION.
- C. EXERCISE EXTREME CAUTION DURING TRENCHING OPERATIONS. REPAIR THE DAMAGE CAUSED BY SUCH OPERATIONS TO EXISTING UTILITY LINES AT NO COST TO THE OWNER, WHETHER THE LINES ARE SHOWN ON DRAWINGS OR

# 1.06 DRAWINGS AND SPECIFICATIONS

- DRAWINGS AND SPECIFICATIONS ARE INTENDED TO COMPLEMENT EACH OTHER. WHERE A CONFLICT EXISTS BETWEEN THE REQUIREMENTS OF THE DRAWINGS AND/OR THE SPECIFICATIONS, REQUEST CLARIFICATION
- . THE ARCHITECT SHALL INTERPRET THE DRAWINGS AND THE SPECIFICATIONS AND HIS DECISION AS TO THE TRUE INTENT AND MEANING THEREOF AND THE QUALITY, QUANTITY, AND SUFFICIENCY OF THE MATERIALS AND WORKMANSHIP FURNISHED THERE UNDER SHALL BE ACCEPTED AS FINAL AND CONCLUSIVE.
- C. IN CASE OF CONFLICT NOT CLARIFIED PRIOR TO BIDDING DEADLINE. USE THE MOST COSTLY ALTERNATIVE (BETTER QUALITY GREATER QUANTITY, OR LARGER SIZE) IN PREPARING THE BID. A CLARIFICATION WILL BE ISSUED TO THE SUCCESSFUL BIDDER AS SOON AS FEASIBLE AFTER THE AWARD AND IF APPROPRIATE A DEDUCTIVE CHANGE ORDER WILL BE ISSUED.
- D. ALL PROVISIONS SHALL BE DEEMED MANDATORY EXCEPT AS EXPRESSLY INDICATED AS OPTIONAL BY THE WORD "MAY" OR "OPTION".

# 1.07 WATER (DOMESTIC) AND SANITARY SEWERS

CHANGE DATE

. WITHIN 5 DAYS AFTER AWARD OF CONTRACT, NOTIFY THE SERVING UTILITIES THAT THE PROJECT IS UNDER CONSTRUCTION AND APPLY FOR PERMANENT SERVICE IN THE NAME OF THE OWNER. FURNISH PERTINENT LOAD AND LOCATION INFORMATION TO THEM INCLUDING THE REQUIRED DATES FOR PERMANENT SERVICE. VERIFY SERVICE LOCATIONS AND CONFORM TO UTILITY COMPANY REQUIREMENTS. CONTRACTOR SHALL PAY CHARGES FOR PERMANENT SERVICE CONNECTIONS LEVIED BY THE UTILITIES FOR WHICH HE WILL BE REIMBURSED BY THE OWNER. THE REIMBURSEMENT SHALL BE LIMITED TO THE ACTUAL AMOUNT OF THE UTILITY SERVICE CHARGES AND A COPY OF THE BILLING FROM THE UTILITY COMPANY SHALL ACCOMPANY THE CONTRACTOR'S INVOICE.

**CONSTRUCTION CHANGE / ADDENDUM** 

AFFECTED OR ADDED SHEET NUMBERS

#### 1.08 PERMITS AND INSPECTIONS

- A. OBTAIN, SCHEDULE AND PAY FOR PERMITS, LICENSES, APPROVALS, TESTS, AND INSPECTIONS REQUIRED BY LEGALLY CONSTITUTED AUTHORITIES AND PUBLIC UTILITY FRANCHISE HOLDERS HAVING JURISDICTION OVER THE WORK.
- B. AFFORD THE ARCHITECT'S REPRESENTATIVE EVERY FACILITY FOR EVALUATING THE SKILL AND COMPETENCE OF THE MECHANICS AND TO EXAMINE THE MATERIALS. CONCEALED WORK SHALL BE REOPENED WHEN SO DIRECTED DURING HIS PERIODIC VISITS.

#### 1.09 CODES AND REGULATIONS

- A. BY SUBMITTING A BID, CONTRACTOR IS DEEMED TO REPRESENT HIMSELF AS COMPETENT TO ACCOMPLISH THE WORK OF THIS DIVISION IN CONFORMANCE WITH APPLICABLE CODES. IN CASE OF CONFLICT BETWEEN THE CONTRACT DOCUMENTS AND THE CODE REQUIREMENTS, THE CODES SHALL TAKE PRECEDENCE. SHOULD SUCH CONFLICTS APPEAR. CEASE WORK ON THE PARTS OF THE CONTRACT AFFECTED AND IMMEDIATELY NOTIFY THE ARCHITECT IN WRITING. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CORRECT, AT NO COST TO THE OWNER, ANY WORK HE EXECUTES IN VIOLATION OF CODE REQUIREMENTS. SPECIFY REFERENCES TO CODES ELSEWHERE IN THIS DIVISION ARE EITHER TO AID THE CONTRACTOR IN LOCATING APPLICABLE INFORMATION OR TO DENY HIM PERMISSION TO USE OPTIONS WHICH ARE PERMITTED BY
- B. APPLICABLE CODES: (CURRENT EDITIONS AND ITS SUBSEQUENT AMENDMENTS UNLESS OTHERWISE NOTED)
- ALL LOCAL CODES OF BRITISH COLUMBIA AND/OR COUNTY AS APPLICABLE
- INTERNATIONAL BUILDING CODE INTERNATIONAL MECHANICAL CODE
- 4. INTERNATIONAL PLUMBING CODE
- INTERNATIONAL ENERGY CONSERVATION CODE
- 6. FIRE MARSHAL REGULATIONS
- 7. REGULATIONS OF ALL OTHER AUTHORITIES HAVING JURISDICTION.
- C. WHERE CONFLICT OR VARIATION EXISTS AMONG CODES, THE MOST STRINGENT SHALL GOVERN.
- D. CERTIFICATES OF CONFORMANCE OR COMPLIANCE: SUBMIT ORIGINAL AND NOT PRE-PRINTED CERTIFICATIONS, DO NOT MAKE STATEMENTS IN THE CERTIFICATIONS THAT COULD BE INTERPRETED TO IMPLY THAT THE PRODUCT DOES NOT MEET ALL REQUIREMENTS SPECIFIED, SUCH AS "AS GOOD AS" "ACHIEVE THE SAME END USE AND RESULTS AS MATERIALS FORMULATED IN ACCORDANCE WITH THE REFERENCED PUBLICATIONS", "EQUAL OR EXCEED THE SERVICES AND PERFORMANCE OF THE SPECIFIED MATERIAL". SIMPLY STATE THAT THE PRODUCT CONFORMS TO THE REQUIREMENTS SPECIFIED.
- CERTIFIED TEST REPORTS: CERTIFIED TEST REPORTS ARE REPORTS OF TESTS CONDUCTED ON PREVIOUSLY MANUFACTURED MATERIALS OR EQUIPMENT IDENTICAL TO THAT PROPOSED FOR USE, BEFORE DELIVERY OF MATERIALS AND EQUIPMENT, SUBMIT CERTIFIED COPIES OF TEST REPORTS SPECIFIED IN THE
- F. FACTORY TESTS: FACTORY TESTS ARE TESTS WHICH ARE REQUIRED TO BE PERFORMED ON THE ACTUAL MATERIALS OR EQUIPMENT PROPOSED FOR USE. SUBMIT RESULTS OF THE TESTS IN ACCORDANCE WITH THE REQUIREMENTS FOR LABORATORY TEST RESULTS OF THIS CONTRACT.
- G. PERMITS AND CERTIFICATES OF INSPECTION: FURNISH THE ORIGINALS.
- H. TESTING PROCEDURES AND TEST RESULTS REQUIRED IN THIS AND OTHER SECTIONS. FURNISH 2 COPIES.
- OTHER DATA REQUIRED BY OTHER SECTIONS OF THIS DIVISION. FURNISH 2

#### 1.10 RECORD AND DOCUMENTATION

- A. ACCUMULATE THE FOLLOWING AND DELIVER TO THE OWNER'S REPRESENTATIVE PRIOR TO FINAL ACCEPTANCE OF THE WORK:
- RECORD (AS-BUILT) DRAWINGS:
- a. MAINTAIN IN GOOD ORDER IN THE FIELD OFFICE A COMPLETE SET OF PRINTS FOR ALL WORK BEING DONE UNDER DIVISION 15. UPDATE THE DRAWINGS DAILY WITH NEAT AND LEGIBLE ANNOTATIONS IN RED INK SHOWING THE WORK AS ACTUALLY INSTALLED.
- THE ACTUAL SIZE, LOCATION AND ELEVATION OF ALL BURIED LINES VALVE BOXES, MANHOLES, MONUMENTS, AND STUB-OUTS SHALL BE ACCURATELY LOCATED AND DIMENSIONED FROM BUILDING WALLS OR OTHER PERMANENT LANDMARKS.
- c. FURNISH THE ORIGINALS.
- B. STANDARD COMPLIANCE: WHERE EQUIPMENT OR MATERIALS ARE SPECIFIED TO CONFORM WITH REQUIREMENTS OF STANDARDS OF RECOGNIZED TECHNICAL OR INDUSTRIAL ORGANIZATIONS SUCH AS AMERICAN NATIONAL STANDARDS (ANSI), AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME), AMERICAN SOCIETY OF HEATING, REFRIGERATION AND AIR CONDITIONING ENGINEERS (ASHRAE). UNDERWRITERS LABORATORIES (UL), AMERICAN REFRIGERATION INSTITUTE (ARI), AMERICAN GAS ASSOCIATION (AGA), OR NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION (NEMA), THAT USE A LABEL OR PUBLISHED LISTING AS A METHOD OF INDICATING COMPLIANCE, PROOF OF SUCH CONFORMANCE SHALL BE SUBMITTED AND APPROVED. THE LABEL OR LISTING OF THE SPECIFIED ORGANIZATION WILL BE ACCEPTABLE EVIDENCE.
- C. CERTIFICATES OF CONFORMANCE OR COMPLIANCE: SUBMIT ORIGINAL AND NOT PRE-PRINTED CERTIFICATIONS. DO NOT MAKE STATEMENTS IN THE CERTIFICATIONS THAT COULD BE INTERPRETED TO IMPLY THAT THE PRODUCT DOES NOT MEET ALL REQUIREMENTS SPECIFIED, SUCH AS "AS GOOD AS" "ACHIEVE THE SAME END USE AND RESULTS AS MATERIALS FORMULATED IN ACCORDANCE WITH THE REFERENCED PUBLICATIONS", "EQUAL OR EXCEED THE SERVICES AND PERFORMANCE OF THE SPECIFIED MATERIAL". SIMPLY STATE THAT THE PRODUCT CONFORMS TO THE REQUIREMENTS SPECIFIED.
- D. CERTIFIED TEST REPORTS: CERTIFIED TEST REPORTS ARE REPORTS OF TESTS CONDUCTED ON PREVIOUSLY MANUFACTURED MATERIALS OR EQUIPMENT IDENTICAL TO THAT PROPOSED FOR USE. BEFORE DELIVERY OF MATERIALS AND EQUIPMENT, SUBMIT CERTIFIED COPIES OF TEST REPORTS SPECIFIED IN THE INDIVIDUAL SECTIONS.
- E. FACTORY TESTS: FACTORY TESTS ARE TESTS WHICH ARE REQUIRED TO BE PERFORMED ON THE ACTUAL MATERIALS OR EQUIPMENT PROPOSED FOR USE. SUBMIT RESULTS OF THE TESTS IN ACCORDANCE WITH THE REQUIREMENTS FOR LABORATORY TEST RESULTS OF THIS CONTRACT.
- F. PERMITS AND CERTIFICATES OF INSPECTION: FURNISH THE ORIGINALS.
- G. TESTING PROCEDURES AND TEST RESULTS REQUIRED IN THIS AND OTHER SECTIONS. FURNISH 2 COPIES. H. OTHER DATA REQUIRED BY OTHER SECTIONS OF THIS DIVISION. FURNISH 2

#### COPIES. 1.11 TOOLS

APPROVAL NO.

A. PROVIDE ALL SPECIAL TOOLS NEEDED FOR PROPER OPERATION AND ROUTINE ADJUSTMENT AND MAINTENANCE OF SYSTEMS AND EQUIPMENT. DELIVER TOOLS TO OWNER'S REPRESENTATIVE AND REQUEST A RECEIPT FOR SAME.

# 1.12 CONSTRUCTION COST BREAKDOWN

THE MECHANICAL WORK.

WARNING

IF THIS BAR DOES

**NOT MEASURE 1'** 

THEN DRAWING IS

NOT TO SCALE.

A. TO ASSIST THE ARCHITECT AND ENGINEER IN EVALUATION OF THE CONSTRUCTION COST, THE CONTRACTOR SHALL PREPARE AND SUBMIT FOR REVIEW A CONSTRUCTION COST BREAKDOWN FOR THE MAJOR SUBDIVISIONS OF

#### B. SUBDIVIDE EACH ITEM ON THE BREAKDOWN INTO TWO HEADINGS: LABOR AND MATERIALS. INCLUDE OVERHEAD AND PROFIT IN EACH ENTRY

C. COST BREAKDOWNS SHALL BE SUBMITTED AND APPROVED PRIOR TO THE FIRST PAYMENT REQUEST. SEND ONE COPY OF THE BREAKDOWN DIRECTLY TO THE ENGINEER AND THE REMAINING COPIES SENT THROUGH REGULAR CHANNELS.

#### PART 2 PRODUCTS 2.01 MATERIALS AND EQUIPMENT

- A. STANDARD PRODUCTS: MATERIALS AND EQUIPMENT SHALL BE ESSENTIALLY THE STANDARD CATALOGED PRODUCTS OF MANUFACTURERS REGULARLY ENGAGED IN PRODUCTION OF SUCH MATERIALS OR EQUIPMENT AND SHALL BE THEIR LATEST STANDARD DESIGNS THAT COMPLY WITH THE SPECIFICATION REQUIREMENTS. MATERIALS AND EQUIPMENT SHALL DUPLICATE ITEMS THAT HAVE BEEN IN SATISFACTORY COMMERCIAL OR INDUSTRIAL USE AT LEAST TWO YEARS PRIOR TO BID OPENING. WHERE TWO OR MORE UNITS OF THE SAME TYPE OF EQUIPMENT ARE REQUIRED, THESE UNITS SHALL BE PRODUCTS OF A SINGLE MANUFACTURER. THE COMPONENTS THEREOF, HOWEVER, ARE NOT REQUIRED TO BE EXCLUSIVELY OF THE SAME MANUFACTURER. EACH MAJOR COMPONENT OF EQUIPMENT SHALL HAVE MANUFACTURER'S NAME, ADDRESS, MODEL, AND SERIAL NUMBER ON A NAMEPLATE SECURELY AFFIXED IN A CONSPICUOUS PLACE. THE NAMEPLATE OF THE DISTRIBUTING AGENT WILL NOT BE **ACCEPTABLE**
- WHENEVER ON THE PLANS, OR IN THESE SPECIFICATIONS, PRODUCTS ARE IDENTIFIED BY THE NAME OF ONE MANUFACTURER, IT IS INTENDED THAT EQUIVALENT PRODUCTS OF OTHER MANUFACTURERS ARE ACCEPTABLE, UNLESS OTHERWISE INDICATED, IF ACCEPTED AS A SUBSTITUTION BY THE ARCHITECT. WHERE THREE OR MORE MANUFACTURERS ARE LISTED AS "ACCEPTABLE MANUFACTURERS" HOWEVER, THEN THE PRODUCTS FURNISHED SHALL BE THE PRODUCT OF ONE OF THE MANUFACTURERS LISTED. MANUFACTURERS LISTED AS "ACCEPTABLE MANUFACTURERS" SHALL MEET QUALITY AND PERFORMANCE OF A PARTICULAR ONE SPECIFIED BY BOTH NAME AND CATALOG NUMBER.

#### 2.02 SUBSTITUTIONS

- A. GENERAL: SHOULD THE CONTRACTOR DESIRE TO SUBSTITUTE FOR SPECIFIED PRODUCTS, HE SHALL SUBMIT WITH THE MATERIAL LIST A COMPLETE LIST OF THE REQUESTED SUBSTITUTIONS. THE REQUEST SHALL CONTAIN COMPLETE DESCRIPTIVE INFORMATION OF THE PRODUCTS. SAMPLES FOR EVALUATION SHALL ALSO BE SUBMITTED UPON THE ARCHITECT'S REQUEST. IF IN THE ARCHITECT'S OPINION THE PRODUCTS AS PRESENTED IN THIS FIRST SUBMITTAL ARE IN VARIANCE WITH THE SPECIFIED PRODUCTS, OR IF THE INFORMATION SUBMITTED IS NOT SUFFICIENTLY COMPLETE TO ALLOW PROPER EVALUATION. THE SUBSTITUTION WILL BE DISALLOWED FROM CONSIDERATION AND THE SPECIFIED PRODUCTS SHALL BE FURNISHED. BY PROPOSING A SUBSTITUTION, IT IS DEEMED THAT THE CONTRACTOR SHALL BEAR THE COST OF ANY CHANGES (WHETHER ARCHITECTURAL, STRUCTURAL, ELECTRICAL OR MECHANICAL) NECESSARY TO ACCOMMODATE THE SUBSTITUTION.
- B. SPECIFIC: REFER TO OTHER SECTIONS OF THIS DIVISION FOR ADDITIONAL REQUIREMENTS.

#### 2.03 SUBMITTALS

### A. GENERAL:

- PROVIDE FOR ALL ITEMS INDICATED WITH THE SYMBOL "[S]" AT TITLES OR BEGINNING OF PARAGRAPHS IN ACCORDANCE WITH THE DIVISION 1 SECTION COVERING SUBMITTALS AND AS HEREIN SPECIFIED. WHERE WARRANTY OF LONGER THAN ONE YEAR IS SPECIFIED, INCLUDE SUCH WARRANTY WITH SUBMITTAL. ARCHITECT'S REVIEW OF THE SUBMITTAL IS ONLY FOR GENERAL CONFORMANCE WITH DESIGN COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THE SUBMITTAL PROCEDURE IS REQUIRED AS AN EFFORT TO MINIMIZE THE PROBLEMS WHICH OCCUR DUE TO THE DISCOVERY OF CONTRACTOR NON-COMPLIANCE AT THE CONSTRUCTION SITE. THE CONTRACTOR IS RESPONSIBLE FOR CONFORMATION AND CORRELATION OF THE DIMENSIONS, QUANTITIES AND SIZES, FOR INFORMATION THAT PERTAINS TO FABRICATION METHODS OR CONSTRUCTION TECHNIQUES, AND FOR COORDINATION OF WORK OF ALL DIVISIONS OF THE WORK, DEVIATIONS IF ANY, FROM CONTRACT DOCUMENTS SHALL BE CLEARLY AND COMPLETELY INDICATED (BY A SEPARATE LETTER IF DEVIATIONS ARE EXTENSIVE) IN THE SUBMITTALS, AND THE LACK OF SUCH IS DEEMED COMPLETE COMPLIANCE WITH CONTRACT DOCUMENTS WITHOUT ANY DEVIATIONS. SUBMITTALS FAVORABLY PROCESSED WILL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR DEVIATIONS NOT SO REPORTED NOR FOR ERRORS IN
- 2. IN ADDITION TO THE ABOVE, UPON PERMISSION TO PROCEED AFTER REVIEW OF SUBMITTAL AND PRIOR TO THE INSTALLATION OF WORK, SUBMIT DIMENSIONED AND SCALED DRAWINGS (NOT LESS THAN 1/4-INCH EQUAL O ONE FOOT) OF ALL MECHANICAL EQUIPMENT ROOMS AND AREAS. SUCH AYOUTS SHALL INDICATE. BUT NOT BE LIMITED TO. ALL MECHANICAL EQUIPMENT, CONTROL PANELS, PIPING, HOUSEKEEPING PADS, DUCTWORK, TUBE PULL, ACCESS AND MAINTENANCE CLEARANCES. AND OTHER LIKE ITEMS. THE LAYOUT SHALL ALSO INDICATE MAJOR EQUIPMENT TO BE PROVIDED UNDER OTHER SECTIONS OF WORK.
- 3. CONTRACTOR STAMP: ALL SUBMITTALS SHALL BE STAMPED WITH THE FOLLOWING TEXT AND SIGNED BY THE CONTRACTORS REPRESENTATIVE: "IT IS HEREBY CERTIFIED THAT THE PRODUCTS SHOWN AND MARKED IN THIS SUBMITTAL ARE IN COMPLIANCE WITH THE CONTRACT DOCUMENTS AND CAN BE INSTALLED IN THE ALLOCATED SPACES EXCEPT WHERE NOTED AS DEVIATIONS.

# CERTIFIED BY:-----

SUBMITTALS WILL BE REJECTED.

- 4. ALL SUBMITTALS SHALL BE COMPLETE AND WITH CATALOG DATA AND INFORMATION PROPERLY MARKED TO SHOW, AMONG OTHER THINGS, EQUALITY OF MATERIAL (WHERE SUBSTITUTION IS ALLOWED AND DESIRED ADEQUACY IN CAPACITY AND PERFORMANCE TO MEET MINIMUM CAPACITIES OF PERFORMANCE AS SPECIFIED OR INDICATED. ARRANGE THE SUBMITTALS IN THE SAME SEQUENCE AS THESE SPECIFICATIONS, AND REFERENCE (AT THE UPPER RIGHT-HAND CORNER) THE PARTICULAR SPECIFICATION PROVISION FOR WHICH EACH SUBMITTAL IS INTENDED. INCOMPLETE
- 5. FOR ALL WORK UNDER DIVISION 15, THE NOTATIONS BY THE CONTRACTOR OR SUPPLIER ON SUBMITTAL DOCUMENTS "PER PLANS AND SPECIFICATIONS", OR "AS SPECIFIED", OR SIMILAR WORDING OR PHRASING IS NOT ACCEPTABLE AND WILL BE CAUSE OF REJECTION. COMPLETE DESCRIPTIVE SUBMITTALS ARE REQUIRED FOR ALL DIVISION 15 WORK. 6. REFER TO THE OTHER SECTIONS OF THIS DIVISION FOR SPECIFIC
- REQUIREMENTS. MATERIAL LIST: WITHIN 15 DAYS AFTER AWARD OF CONTRACT, SUBMIT FOR APPROVAL A COMPLETE LIST OF MATERIALS PROPOSED FOR USE. FURNISH
- NAMES AND ADDRESSES OF MANUFACTURERS, CATALOG NUMBERS (WHERE APPLICABLE) TYPES AND TRADE NAMES. FOR PURPOSES OF UNIFORMITY, ONLY ONE MANUFACTURER WILL BE ACCEPTED FOR EACH CLASS OR TYPE OF MATERIAL. THIS LIST IS IN ADDITION TO SHOP DRAWINGS.
- C. SHOP DRAWINGS: SUBMIT SHOP DRAWINGS WITH SUCH PROMPTNESS AS TO CAUSE NO DELAY IN THE WORK. DO NOT COMMENCE FABRICATION OF THE EQUIPMENT UNTIL THE APPROVED DRAWINGS ARE RECEIVED FROM THE OWNER'S REPRESENTATIVE.
- D. OTHER SUBMITTALS: AS REQUIRED BY OTHER SECTIONS OF THIS DIVISION. PART 3 EXECUTION

# 3.01 WORKMANSHIP AND INSTALLATION METHODS

B. EXECUTE THE WORK SO AS TO CONTRIBUTE TO EASE OF OPERATION AND MAINTENANCE, MAXIMUM ACCESSIBILITY AND BEST APPEARANCE, EXECUTE IT SO THAT THE INSTALLATION WILL CONFORM AND ADJUST ITSELF TO THE BUILDING STRUCTURE, ITS EQUIPMENT AND ITS USAGE. THE WORK SHALL BE SYMMETRICAL, PLUMB, UNIFORM, PROPERLY ALIGNED, AND FIRMLY SECURED I

A. WORKMANSHIP SHALL BE IN THE BEST STANDARD PRACTICE OF THE TRADE.

#### 3.02 TESTS

# A. GENERAL:

- 1. DEMONSTRATE THAT ALL COMPONENTS OF THE WORK OF THIS DIVISION HAVE BEEN PROVIDED AND THAT THEY OPERATE IN ACCORDANCE WITH THE
- 2. PROVIDE INSTRUMENTS AND PERSONNEL FOR TESTS AND DEMONSTRATIONS.
- SUBMIT SIGNED TEST RESULTS. B. SPECIFIC: REFER TO THE OTHER SECTIONS OF THIS DIVISION FOR TEST
- 3.03 DELIVERY, HANDLING, STORAGE OF MATERIALS AND PROTECTION OF WORK
- A. PROTECT MATERIALS AGAINST DIRT, WATER, CHEMICAL AND MECHANICAL DAMAGE BOTH WHILE IN STORAGE AND DURING CONSTRUCTION
- B. COVER MATERIALS IN SUCH A MANNER THAT NO FINISHED SURFACES WILL BE DAMAGED, MARRED OR SPLATTERED WITH PLASTER OR PAINT. AND ALL MOVING PARTS WILL BE KEPT CLEAN AND DRY
- C. REPLACE OR REFINISH ANY DAMAGED MATERIALS INCLUDING FRONTS OF CONTROL PANELS, DUCTWORK FITTINGS, AND SHOP FABRICATED DUCTWORK.
- D. KEEP CABINETS AND OTHER OPENINGS CLOSED TO PREVENT ENTRY OF FOREIGN MATTER.

#### 3.04 CLEANUP AND HOUSEKEEPING

SURFACES POLISHED.

REQUIREMENTS.

- A. CLEANING SHALL BE DONE AS THE WORK PROCEEDS. PERIODICALLY REMOVE WASTE AND DEBRIS TO KEEP THE SITE AS CLEAN AS IS PRACTICAL.
- B. LEAVE EXPOSED PARTS OF THE MECHANICAL WORK IN A NEAT, CLEAN AND USABLE CONDITION, WITH PAINTED SURFACES UNBLEMISHED AND PLATED METAL

#### 3.05 PROJECT CONDITIONS

A. SITE EXAMINATIONS AND CONDITIONS:

- 1. REGARD INFORMATION RELATIVE TO EXISTING CONDITIONS, SERVICES AND STRUCTURE AS APPROXIMATE ONLY. VERIFY DIMENSIONS AND LOCATIONS, AND BE KNOWLEDGEABLE OF ALL WORKING CONDITIONS BEFORE SUBMITTING BID. VERIFY PRESSURE, LOCATION, SIZE, AND ELEVATION OF EXISTING SERVICES (TO WHICH POINTS OF CONNECTION ARE TO BE MADE OR CROSSED) AS SOON AS POSSIBLE AND PRIOR TO COMMENCEMENT OF ANY NEW WORK.
- 2. MAKE MINOR DEVIATIONS NECESSARY TO CONFORM WITH ACTUAL LOCATIONS AND CONDITIONS. SUBMISSION OF BID PRESUMES PROPER EXAMINATION OF SITE, LOCATIONS, DIMENSIONS AND CONDITIONS, AND NO ADDITIONAL COST WILL BE HONORED FOR LACK OF SUCH EXAMINATIONS.
- B. EXISTING SERVICES: EXAMINE THE CONTRACT DRAWINGS AND VISIT THE PROJECT SITE TO ASCERTAIN THE EXTENT OF THE EXISTING SERVICES. WHERE EXISTING EQUIPMENT/SERVICES SERVING EXISTING STRUCTURES AND/OR EXISTING STRUCTURES TO BE DEMOLISHED ARE TO REMAIN IN SERVICE, REROUTE, RELOCATE, OR EXTEND SUCH EXISTING EQUIPMENT AND/OR SERVICES TO ACCOMMODATE THIS PROJECT WITHOUT ADDITIONAL COST
- C. INTERRUPTION OF EXISTING SERVICES: WHERE IT IS NECESSARY TO REROUTE EXISTING SERVICES OR UTILITIES. OR TO MAKE CONNECTIONS OF NEW WORK TO EXISTING SERVICES OR UTILITIES, GIVE TIMELY WRITTEN NOTICE OF SUCH INTENT TO THE OWNER AND SECURE WRITTEN APPROVAL BEFORE PROCEEDING MAKE ALL SUCH INTERRUPTIONS AT SUCH TIME AS PERMITTED BY THE OWNER ANTICIPATE SUCH INTERRUPTIONS TO BE MADE OUTSIDE OF NORMAL WORKING HOURS OR NORMAL WORKING DAYS; THEREFORE, NO ADDITIONAL COST WILL BE PERMITTED FOR SUCH WORK. EXCEPT IN A CASE OF EMERGENCY INVOLVING LIFE, LIMB OR HEALTH, DO NOT OPERATE ANY EXISTING EQUIPMENT (INCLUDING VALVES). WHERE SUCH OPERATIONS ARE NECESSARY, THEY SHALL BE PERFORMED BY THE OWNER'S PERSONNEL.

### D. ACCESS AND PLACEMENT OF WORK:

- 1. CHECK AND COORDINATE FOR CLEARANCE, ACCESSIBILITY AND PLACEMENT OF EQUIPMENT EITHER BY GOING THROUGH OPENINGS PROVIDED OR BY PLACING EQUIPMENT DURING CONSTRUCTION, ORDERING OF EQUIPMENT TO BE SHIPPED, DISASSEMBLED, OR DISASSEMBLY OF EQUIPMENT AT PROJECT SITE AND RE-ASSEMBLY OF EQUIPMENT TO ACCOMPLISH THIS REQUIREMENT SHALL BE EXECUTED WITHOUT ADDITIONAL COST. WHERE PROVIDED OPENINGS ARE INADEQUATE TO ACCOMMODATE EQUIPMENT, PROVIDE NEW OPENINGS AND RESTORATION OF SAME, ALL AT NO ADDITIONAL COST. OBTAIN WRITTEN APPROVAL FOR NEW OPENINGS BEFORE PROCEEDING.
- 2. VERIFY LOCATION OF ALL PLUMBING FIXTURES AND EQUIPMENT WITHIN FINISHED SPACES WITH THE ARCHITECTURAL DRAWINGS. IN THE EVENT THAT MECHANICAL DRAWINGS DO NOT INDICATE EXACT LOCATIONS, OR ARE IN CONFLICT WITH THE ARCHITECTURAL DRAWINGS, OBTAIN INFORMATION REGARDING PROPER LOCATIONS. INSTALLATION OF WORK WITHOUT PROPER INSTRUCTION UNDER SUCH CIRCUMSTANCES WILL RESULT IN RELOCATION OF WORK, WHEN DIRECTED, WITHOUT ADDITIONAL COST
- VERIFICATION AND COORDINATION: DRAWINGS INDICATING SUGGESTED DISTRIBUTION ROUTES ARE DIAGRAMMATIC ONLY. AND ALL SCALED AND FIGURED DIMENSIONS ARE APPROXIMATE AND ARE INDICATED FOR ESTIMATING PURPOSES ONLY. THE DRAWINGS DO NOT INDICATE NECESSARY OFFSETS AND LIKE ITEMS. DO NOT CONSTRUE CONTRACT DRAWINGS AS FABRICATION DRAWINGS. PRIOR TO FABRICATION AND INSTALLATION OF WORK, VERIFY ALL DIMENSIONS, SIZES AND DISTRIBUTION ROUTES WITH ACTUAL CONDITIONS, AND PREPARE SUBMITTAL AND FABRICATION DRAWINGS. COORDINATE TO AVOID POSSIBLE CONFLICTS AND RESOLVE SAME WHERE SUCH EXIST. INSTALL WORK TO CONFORM TO STRUCTURE, AVOID OBSTRUCTION, PRESERVE HEADROOM, AND KEEP OPENINGS AND PASSAGEWAY CLEAR. CHANGES NECESSARY, RESULTING FROM SUCH VERIFICATIONS AND COORDINATIONS, SHALL NOT BE A CAUSE FOR ADDITIONAL

# F. SEE DRAWINGS FOR EXTENT OF DEMOLITION.

# 3.06 WARRANTY

- A. GUARANTEE, IN WRITING, ALL WORK AGAINST FAULT OF ANY PRODUCT OR WORKMANSHIP FOR A PERIOD OF NOT LESS THAN ONE YEAR AFTER FORMAL ACCEPTANCE BY THE OWNER; EXCEPT, WHERE LONGER PERIODS ARE SPECIFIED IN THE SPECIFICATIONS, SUCH LONGER PERIODS SHALL GOVERN. HOWEVER, WHEN ANY COMPONENT FAILS AT ANY TIME DURING THIS PERIOD, THE WARRANTY PERIOD FOR SUCH COMPONENT AND ALL OTHER COMPONENTS THAT ARE INACTIVE BECAUSE OF SAID FAILURE SHALL BE SUSPENDED. THE WARRANTY PERIOD FOR SUCH COMPONENT SHALL RESUME TO RUN FOR THE REMAINING PORTION OF THE WARRANTY PERIOD WHEN FAILED COMPONENT IS COMPLETELY REPAIRED AND IN OPERATION; HOWEVER, IN NO CASE SHALL THE RESUMED PORTION OF THE WARRANTY PERIOD BE LESS THAN 3 MONTHS IN DURATION.
- B. NEITHER PAYMENTS FOR WORK, NOR TOTAL OR PARTIAL OCCUPANCY OF WORK BY THE OWNER, WITHIN OR PRIOR TO THE WARRANTY PERIOD SPECIFIED. SHALL BE CONSTRUED AS ACCEPTANCE OF FAULTY WORK OR SHALL CONDONE ANY NEGLIGENCE OF OMISSION OF CONTRACTOR IN DOING THE WORK.

# 3.07 SAFETY REQUIREMENTS

A. ENCLOSE AND GUARD BELTS, PULLEYS, CHAINS, GEARS, COUPLINGS, PROJECTING SETSCREWS, KEYS AND OTHER ROTATING PARTS IN ACCORDANCE WITH THE OSHA 1910.219. INSULATE, GUARD, AND COVER ANY HIGH-TEMPERATURE EQUIPMENT AND PIPING SO LOCATED AS TO ENDANGER PERSONNEL OR CREATURE A FIRE HAZARD.

#### 3.08 MANUFACTURER'S RECOMMENDATIONS

A. WHERE INSTALLATION PROCEDURES OR ANY PART THEREOF ARE REQUIRED TO BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE MANUFACTURER OF THE MATERIAL OR EQUIPMENT BEING INSTALLED, FURNISH PRINTED COPIES OF THESE RECOMMENDATIONS TO THE INSTALLING CONTRACTOR AND ARCHITECT PRIOR TO INSTALLATION. DO NOT PROCEED WITH THE INSTALLATION OF THE ITEM UNTIL THE RECOMMENDATIONS ARE RECEIVED. FAILURE TO FURNISH THESE RECOMMENDATIONS CAN BE CAUSE FOR REJECTION OF THE MATERIAL

#### END OF SECTION 15010

#### SECTION 15082 - PIPING INSULATION

PART 1 GENERAL

#### 1.01 SECTION INCLUDES A. PIPING INSULATION.

B. ACCESSORIES. 1.02 RELATED SECTIONS

# A. SECTION 07840 — FIRESTOPPING.

- B. SECTION 09900 PAINTS AND COATINGS: PAINTING INSULATION JACKET.
- C. SECTION 15145 PLUMBING PIPING: PLACEMENT OF HANGERS AND HANGER INSERTS.

#### 1.03 SUBMITTALS

- A. SEE SECTION 01300 ADMINISTRATIVE REQUIREMENTS, FOR SUBMITTAL PROCEDURES.
- B. PRODUCT DATA: PROVIDE PRODUCT DESCRIPTION, THERMAL CHARACTERISTICS, LIST OF MATERIALS AND THICKNESS FOR EACH SERVICE, AND LOCATIONS.
- C. MANUFACTURER'S INSTRUCTIONS: INDICATE INSTALLATION PROCEDURES THAT ENSURE ACCEPTABLE WORKMANSHIP AND INSTALLATION STANDARDS WILL BE

#### 1.04 QUALITY ASSURANCE

A. MANUFACTURER QUALIFICATIONS: COMPANY SPECIALIZING IN MANUFACTURING THE PRODUCTS SPECIFIED IN THIS SECTION WITH NOT LESS THAN THREE YEARS OF DOCUMENTED EXPERIENCE.

#### A. ACCEPT MATERIALS ON SITE, LABELED WITH MANUFACTURER'S IDENTIFICATION, PRODUCT DENSITY, AND THICKNESS.

1.05 DELIVERY, STORAGE, AND PROTECTION

1.06 ENVIRONMENTAL REQUIREMENTS

#### A. MAINTAIN AMBIENT CONDITIONS REQUIRED BY MANUFACTURERS OF EACH PRODUCT.

PART 2 PRODUCTS

2.01 REQUIREMENTS FOR ALL PRODUCTS OF THIS SECTION A. SURFACE BURNING CHARACTERISTICS: FLAME SPREAD/SMOKE DEVELOPED

#### INDEX OF 25/50, MAXIMUM, WHEN TESTED IN ACCORDANCE WITH ASTM E 84. 2.02 FLEXIBLE ELASTOMERIC CELLULAR INSULATION

A. MANUFACTURER: 2.02 FLEXIBLE ELASTOMERIC CELLULAR INSULATION

NOMACO; MODEL K-FLEX.

A. MANUFACTURER: ARMACELL INTERNATIONAL: WWW.ARMACELL.COM.

B. INSULATION: PREFORMED FLEXIBLE ELASTOMERIC CELLULAR RUBBER INSULATION COMPLYING WITH ASTM C 534 GRADE 3; USE MOLDED TUBULAR

- MATERIAL WHEREVER POSSIBLE. MINIMUM SERVICE TEMPERATURE: -40 DEGREES F (-40 DEGREES C).
- MAXIMUM SERVICE TEMPERATURE: 220 DEGREES F (104 DEGREES C). CONNECTION: WATERPROOF VAPOR BARRIER ADHESIVE.
- C. VAPOR BARRIER JACKET: WHITE KRAFT PAPER, BONDED TO ALUMINIZED FILM WITH SELF SEALING LAP. MOISTURE VAPOR TRANSMISSION WHEN TESTED
- ACCORDING TO ASTM E 96 OF 0.02 PERM-IN. WG. 2.03 INSULATION FOR DRAIN ASSEMBLIES UNDER HANDICAP LAVATORIES.
- A. MOLDED FLEXIBLE CELLULAR FOAMED PLASTIC
- CAP WITH VELCRO CLOSURE
- 2. FINISH: WHITE, SHAPED TO ENCLOSE DRAIN ASSEMBLIES 3. NOT MORE THAN 0.28 K FACTOR AT 75 DEGREES F MEAN
- 4. MANUFACTURERS a. PLUMEREX "HANDY-SHIELD"
- b. EGL SALES "TRAP CAP" c. APPROVED EQUIVALENT.

# PLUMBING SPECIFICATIONS

CITY OF SAN DIEGO, CALIFORNIA

# PLANS FOR THE CONSTRUCTION OF SKYLINE TEMPORARY FIRE STATION 7180 SKYLINE DR. SAN DIEGO, CALIFORNIA 92114

P4.1

WBS. S-00687

PARCEL ID. NO. 581-290-11-00

ENGINEE		OF 40 SHEET			
APPROVED:	~··	1.3	2/19/20:	1 //	SUBMITTED BY:  ROWAIDA JADAN
CITY ENGINEER		12	DATE	-	ASSOCIATE ENGINEER
DESCRIPTION	BY	APPROVED	DATE	FILMED	MICHAEL RAMIREZ
					PROJECT MANAGER
			1		194-1755 CCS27 COORDINATE
	1 2 4				1834-6315 CCS83 COORDINATE
CONTRACTOR		DATE STARTE			38317 - 24D

CITY OF SAN DIEGO PUBLIC WORKS PROJECT









SPECIAL INSPECTION NO.

TEMPORARY BMP CONSTRUCTION SITE STORM WATER PRIORITY: HIGH\_\_\_\_\_ MEDIUM \_\_\_\_\_ LOW\_\_

C.I.P. NO.00-000.0

#14101

ED MD DP ED

10-06-14

SPEC NO. 0-00-0000-000-0-0

AMP & SIGNATURE

VERIFY THAT SURFACES ARE CLEAN AND DRY, WITH FOREIGN MATERIAL REMOVED

#### 3.02 INSTALLATION

- A. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- B. INSTALL IN ACCORDANCE WITH NAIMA NATIONAL INSULATION STANDARDS.
- C. EXPOSED PIPING: LOCATE INSULATION AND COVER SEAMS IN LEAST VISIBLE
- D. INSULATED PIPES CONVEYING FLUIDS BELOW AMBIENT TEMPERATURE: INSULATE ENTIRE SYSTEM INCLUDING FITTINGS, VALVES, UNIONS, FLANGES, STRAINERS, FLEXIBLE CONNECTIONS, AND EXPANSION JOINTS.
- FOR HOT AND COLD PIPING CONVEYING FLUIDS 140 DEGREES F (60 DEGREES C) OR LESS, DO NOT INSULATE FLANGES AND UNIONS AT EQUIPMENT, BUT BEVEL AND SEAL ENDS OF INSULATION.
- INSERTS AND SHIELDS:
- APPLICATION: PIPING 1-1/2 INCHES (40 MM) DIAMETER OR LARGER.
- 2. SHIELDS: GALVANIZED STEEL BETWEEN PIPE HANGERS OR PIPE HANGER ROLLS AND INSERTS
- 3. INSERT LOCATION: BETWEEN SUPPORT SHIELD AND PIPING AND UNDER THE FINISH JACKET
- INSERT CONFIGURATION: MINIMUM 6 INCHES (150 MM) LONG, OF SAME THICKNESS AND CONTOUR AS ADJOINING INSULATION; MAY BE FACTORY
- 5. INSERT MATERIAL: HYDROUS CALCIUM SILICATE INSULATION OR OTHER HEAVY DENSITY INSULATING MATERIAL SUITABLE FOR THE PLANNED TEMPERATURE RANGE
- G. CONTINUE INSULATION THROUGH WALLS, SLEEVES, PIPE HANGERS, AND OTHER PIPE PENETRATIONS. FINISH AT SUPPORTS. PROTRUSIONS. AND INTERRUPTIONS. AT FIRE SEPARATIONS, REFER TO SECTION 07840.

#### 3.03 SCHEDULES

- A. PLUMBING SYSTEMS:
- 6. DOMESTIC HOT AND COLD WATER SUPPLY:
- a. FLEXIBLE ELASTOMERIC INSULATION:
- 1) PIPE SIZE RANGE: 1/2 INCH TO 3 INCHES.
- b. CELLULAR FOAM INSULATION:
- PIPE SIZE RANGE: 2 INCHES AND BELOW.
- 2) THICKNESS: 1 INCH.
- PIPE SIZE RANGE: 2-1/2 INCH AND ABOVE.
- THICKNESS: 1-1/2 INCH.

#### END OF SECTION 15082

SECTION 15145 - PLUMBING PIPING

#### 1.01 SECTION INCLUDES

PART 1 GENERAL

- A. PIPE, PIPE FITTINGS, VALVES, AND CONNECTIONS FOR PIPING SYSTEMS.
- SANITARY SEWER
- DOMESTIC WATER
- CONDENSATE DRAIN.

# 1.02 RELATED SECTIONS

- A. SECTION 02515 DISINFECTION OF WATER DISTRIBUTION SYSTEM
- B. SECTION 08310 ACCESS DOORS AND PANELS.
- C. SECTION 09900 PAINTS AND COATINGS.
- D. SECTION 15072 VIBRATION ISOLATION.
- . SECTION 15082 PIPING INSULATION. F. SECTION 15122 — PIPING EXPANSION COMPENSATION.
- 1.03 SUBMITTALS

- A. SEE SECTION 01300 ADMINISTRATIVE REQUIREMENTS, FOR SUBMITTAL PROCEDURES.
- PRODUCT DATA: PROVIDE DATA ON PIPE MATERIALS, PIPE FITTINGS, VALVES, AND ACCESSORIES. PROVIDE MANUFACTURERS CATALOG INFORMATION. INDICATE VALVE DATA AND RATINGS.
- C. PROJECT RECORD DOCUMENTS: RECORD ACTUAL LOCATIONS OF VALVES.

# 1.04 QUALITY ASSURANCE

- A. PERFORM WORK IN ACCORDANCE WITH STATE OF CALIFORNIA, STANDARDS.
- 1. MAINTAIN ONE COPY ON PROJECT SITE.
- B. VALVES: MANUFACTURER'S NAME AND PRESSURE RATING MARKED ON VALVE
- WELDING MATERIALS AND PROCEDURES: CONFORM TO ASME (BPV IX) AND APPLICABLE STATE LABOR REGULATIONS.
- WELDERS CERTIFICATION: IN ACCORDANCE WITH ASME (BPV IX).
- IDENTIFY PIPE WITH MARKING INCLUDING SIZE, ASTM MATERIAL CLASSIFICATION, ASTM SPECIFICATION, WATER PRESSURE RATING.

# 1.05 REGULATORY REQUIREMENTS

- A. PERFORM WORK IN ACCORDANCE WITH THE INTERNATIONAL PLUMBING CODE.
- . CONFORM TO APPLICABLE CODE FOR INSTALLATION OF BACKFLOW PREVENTION
- DEVICES. C. PROVIDE CERTIFICATE OF COMPLIANCE FROM AUTHORITY HAVING JURISDICTION
- INDICATING APPROVAL OF INSTALLATION OF BACKFLOW PREVENTION DEVICES.

# 1.06 DELIVERY, STORAGE, AND PROTECTION

- ACCEPT VALVES ON SITE IN SHIPPING CONTAINERS WITH LABELING IN PLACE. INSPECT FOR DAMAGE.
- PROVIDE TEMPORARY PROTECTIVE COATING ON CAST IRON AND STEEL VALVES.
- C. PROVIDE TEMPORARY END CAPS AND CLOSURES ON PIPING AND FITTINGS. MAINTAIN IN PLACE UNTIL INSTALLATION.
- PROTECT PIPING SYSTEMS FROM ENTRY OF FOREIGN MATERIALS BY TEMPORARY COVERS, COMPLETING SECTIONS OF THE WORK, AND ISOLATING PARTS OF COMPLETED SYSTEM.

CONSTRUCTION CHANGE / ADDENDUM

AFFECTED OR ADDED SHEET NUMBERS

# 1.07 ENVIRONMENTAL REQUIREMENTS

CHANGE DATE

A. DO NOT INSTALL UNDERGROUND PIPING WHEN BEDDING IS WET OR FROZEN.

#### 1.08 EXTRA MATERIALS

- A. SEE SECTION 01600 PROJECT REQUIREMENTS, FOR ADDITIONAL PROVISIONS.
- B. PROVIDE TWO REPACKING KITS FOR EACH SIZE VALVE

# PART 2 PRODUCTS

- 2.01 SANITARY SEWER PIPING, BURIED WITHIN 5 FEET (1500 MM) OF BUILDING
- A. ABS PIPE: ASTM D 2751 OR ASTM F 628.
- FITTINGS: ABS.

FITTINGS: ABS.

- JOINTS: SOLVENT WELDED WITH ASTM D 2235 CEMENT.
- B. ABS PIPE: ASTM D 2661 OR ASTM F 2751

# 2. JOINTS: SOLVENT WELDED WITH ASTM D 2235 CEMENT.

- 2.02 SANITARY SEWER PIPING, ABOVE GRADE
- A. CAST IRON PIPE: CISPI 301, HUBLESS, SERVICE WEIGHT FITTINGS: CAST IRON.
- 2. JOINTS: CISPI 310, NEOPRENE GASKETS AND STAINLESS STEEL CLAMP-AND-SHIELD ASSEMBLIES.

# 2.03 WATER PIPING, RUNNING UNDER BUILDING SLAB

- A. COPPER TUBE: ASTM B88; TYPE K, DRAWN.
  - FITTINGS: ASME B16.18, CAST COPPER ALLOY OR ASME B16.22, WROUGHT COPPER AND BRONZE.
- FITTINGS: CAST IRON, COATED.
- JOINTS: ASTM B 32, ALLOY SN95 SOLDER.

#### JOINTS: GROOVED MECHANICAL COUPLINGS 2.04 WATER PIPING, ABOVE GRADE

- A. COPPER TUBE: ASTM B 88 (ASTM B 88M), TYPE L (B), DRAWN (H).
- 1. FITTINGS: ASME B16.18, CAST COPPER ALLOY OR ASME B16.22,
- FITTINGS: CAST IRON, COATED.

WROUGHT COPPER AND BRONZE

JOINTS: ASTM B 32, ALLOY SN95 SOLDER

### 2.06 FLANGES, UNIONS, AND COUPLINGS

- A. UNIONS FOR PIPE SIZES 3 INCHES (80 MM) AND UNDER:
- FERROUS PIPE: CLASS 150 MALLEABLE IRON THREADED UNIONS.
- 2. COPPER TUBE AND PIPE: CLASS 150 BRONZE UNIONS WITH SOLDERED
- B. FLANGES FOR PIPE SIZE OVER 1 INCH (25 MM)
  - FERROUS PIPE: CLASS 150 MALLEABLE IRON THREADED OR FORGED STEEL SLIP-ON FLANGES; PREFORMED NEOPRENE GASKETS.
- COPPER TUBE AND PIPE: CLASS 150 SLIP—ON BRONZE FLANGES; PREFORMED NEOPRENE GASKETS.
- C. GROOVED AND SHOULDERED PIPE END COUPLINGS:
- HOUSING: MALLEABLE IRON CLAMPS TO ENGAGE AND LOCK, DESIGNED TO PERMIT SOME ANGULAR DEFLECTION, CONTRACTION, AND EXPANSION; STEEL BOLTS, NUTS, AND WASHERS; GALVANIZED FOR GALVANIZED PIPE.
- 2. SEALING GASKET: "C" SHAPE COMPOSITION SEALING GASKET.
- DIELECTRIC CONNECTIONS: UNION WITH GALVANIZED OR PLATED STEEL THREADED END, COPPER SOLDER END, WATER IMPERVIOUS ISOLATION BARRIER.

# 2.07 PIPE HANGERS AND SUPPORTS

- A. PLUMBING PIPING DRAIN, WASTE, AND VENT:
- 1. CONFORM TO ASME B31.9.
- 2. HANGERS FOR PIPE SIZES 1/2 INCH (15 MM) TO 1-1/2 INCHES (40 MM): MALLEABLE IRON, ADJUSTABLE SWIVEL, SPLIT RING.
- . HANGERS FOR PIPE SIZES 2 INCHES (50 MM) AND OVER: CARBON STEEL, ADJUSTABLE, CLEVIS.
- 4. MULTIPLE OR TRAPEZE HANGERS: STEEL CHANNELS WITH WELDED SPACERS AND HANGER RODS.
- 5. WALL SUPPORT FOR PIPE SIZES TO 3 INCHES (80 MM): CAST IRON

6. WALL SUPPORT FOR PIPE SIZES 4 INCHES (100 MM) AND OVER: WELDED

- STEEL BRACKET AND WROUGHT STEEL CLAMP.
- VERTICAL SUPPORT: STEEL RISER CLAMP.
- 8. FLOOR SUPPORT: CAST IRON ADJUSTABLE PIPE SADDLE, LOCK NUT, NIPPLE, FLOOR FLANGE, AND CONCRETE PIER OR STEEL SUPPORT.
- 9. COPPER PIPE SUPPORT: CARBON STEEL RING, ADJUSTABLE, COPPER PLATED.

# B. PLUMBING PIPING — WATER:

- CONFORM TO ASME B31.9.
- 2. HANGERS FOR PIPE SIZES 1/2 INCH (15 MM) TO 1-1/2 INCHES (40 MM): MALLEABLE IRON, ADJUSTABLE SWIVEL, SPLIT RING.
- 3. HANGERS FOR COLD PIPE SIZES 2 INCHES (50 MM) AND OVER: CARBON STEEL, ADJUSTABLE, CLEVIS.
- 4. HANGERS FOR HOT PIPE SIZES 2 INCHES (50 MM) TO 4 INCHES (100 MM): CARBON STEEL, ADJUSTABLE, CLEVIS.
- 5. MULTIPLE OR TRAPEZE HANGERS: STEEL CHANNELS WITH WELDED SUPPORTS OR SPACERS AND HANGER RODS.
- WALL SUPPORT FOR PIPE SIZES TO 3 INCHES (80 MM): CAST IRON
- 7. WALL SUPPORT FOR PIPE SIZES 4 INCHES (100 MM) AND OVER: WELDED STEEL BRACKET AND WROUGHT STEEL CLAMP.
- 8. VERTICAL SUPPORT: STEEL RISER CLAMP. 9. FLOOR SUPPORT FOR COLD PIPE: CAST IRON ADJUSTABLE PIPE SADDLE, LOCK NUT, NIPPLE, FLOOR FLANGE, AND CONCRETE PIER OR STEEL
- IRON ADJUSTABLE PIPE SADDLE, LOCKNUT, NIPPLE, FLOOR FLANGE, AND CONCRETE PIER OR STEEL SUPPORT 11. COPPER PIPE SUPPORT: CARBON STEEL RING, ADJUSTABLE, COPPER

10. FLOOR SUPPORT FOR HOT PIPE SIZES TO 4 INCHES (100 MM): CAST

# 2.08 BALL VALVES

APPROVAL NO.

- A. MANUFACTURERS:
- CONBRACO INDUSTRIES: WWW.CONBRACO.COM.
- NIBCO, INC: WWW.NIBCO.COM. MILWAUKEE VALVE COMPANY: WWW.MILWAUKEEVALVE.COM.

B. CONSTRUCTION, 4 INCHES (100 MM) AND SMALLER: MSS SP-110, CLASS 150, BRONZE, TWO PIECE BODY, CHROME PLATED BRASS BALL, FULL PORT TEFLON SEATS AND STUFFING BOX RING, BLOW-OUT PROOF STEM, LEVER HANDLE, SOLDER ENDS WITH UNION.

# 2.10 RELIEF VALVES

- A. TEMPERATURE AND PRESSURE RELIEF:
  - MANUFACTURERS:
  - a. CLA-VAL CO: WWW.CLA-VAL.COM. HENRY TECHNOLOGIES: WWW.HENRYTECH.COM.
  - c. WATTS REGULATOR COMPANY: WWW.WATTSREGULATOR.COM
- 2. AGA Z21.22 CERTIFIED, BRONZE BODY, TEFLON SEAT, STAINLESS STEEL STEM AND SPRINGS, AUTOMATIC, DIRECT PRESSURE ACTUATED TEMPERATURE RELIEF MAXIMUM 210 DEGREES F (98.9 DEGREES C), CAPACITY ASME (BPV IV) CERTIFIED AND LABELLED.

### PART 3 EXECUTION

# 3.01 EXAMINATION

 VERIFY THAT EXCAVATIONS ARE TO REQUIRED GRADE, DRY, AND NOT OVER-EXCAVATED.

#### 3.02 PREPARATION

- A. REAM PIPE AND TUBE ENDS. REMOVE BURRS.
- B. REMOVE SCALE AND DIRT, ON INSIDE AND OUTSIDE, BEFORE ASSEMBLY.

#### C. PREPARE PIPING CONNECTIONS TO EQUIPMENT WITH FLANGES OR UNIONS. 3.03 INSTALLATION

- A. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS
- B. PROVIDE NON-CONDUCTING DIELECTRIC CONNECTIONS WHEREVER JOINTING
- C. ROUTE PIPING IN ORDERLY MANNER AND MAINTAIN GRADIENT. ROUTE PARALLEL AND PERPENDICULAR TO WALLS
- D. INSTALL PIPING TO MAINTAIN HEADROOM, CONSERVE SPACE, AND NOT INTERFERE WITH USE OF SPACE.
- GROUP PIPING WHENEVER PRACTICAL AT COMMON ELEVATIONS. INSTALL PIPING TO ALLOW FOR EXPANSION AND CONTRACTION WITHOUT
- STRESSING PIPE, JOINTS, OR CONNECTED EQUIPMENT. G. PROVIDE CLEARANCE IN HANGERS AND FROM STRUCTURE AND OTHER EQUIPMENT FOR INSTALLATION OF INSULATION AND ACCESS TO VALVES AND FITTINGS. REFER TO SECTION 15082.
- PROVIDE ACCESS WHERE VALVES AND FITTINGS ARE NOT EXPOSED COORDINATE SIZE AND LOCATION OF ACCESS DOORS WITH SECTION 08310.
- INSTALL VENT PIPING PENETRATING ROOFED AREAS TO MAINTAIN INTEGRITY OF ROOF ASSEMBLY. WHERE PIPE SUPPORT MEMBERS ARE WELDED TO STRUCTURAL BUILDING

FRAMING, SCRAPE, BRUSH CLEAN, AND APPLY ONE COAT OF ZINC RICH

- K. PREPARE EXPOSED, UNFINISHED PIPE, FITTINGS, SUPPORTS, AND ACCESSORIES
- READY FOR FINISH PAINTING.
- INSTALL BELL AND SPIGOT PIPE WITH BELL END UPSTREAM
- M. INSTALL VALVES WITH STEMS UPRIGHT OR HORIZONTAL, NOT INVERTED. N. INSTALL WATER PIPING TO ASME B31.9.
- O. SLEEVE PIPES PASSING THROUGH PARTITIONS, WALLS AND FLOORS.
- PROVIDE INSERTS FOR PLACEMENT IN CONCRETE FORMWORK
- 2. PROVIDE INSERTS FOR SUSPENDING HANGERS FROM REINFORCED CONCRETE SLABS AND SIDES OF REINFORCED CONCRETE BEAMS. PROVIDE HOOKED ROD TO CONCRETE REINFORCEMENT SECTION FOR
- INSERTS CARRYING PIPE OVER 4 INCHES (100 MM). 4. WHERE CONCRETE SLABS FORM FINISHED CEILING, LOCATE INSERTS FLUSH
- WITH SLAB SURFACE.
- Q. PIPE HANGERS AND SUPPORTS INSTALL IN ACCORDANCE WITH ASME B31.9.
- SUPPORT HORIZONTAL PIPING AS SCHEDULED.
- 3. INSTALL HANGERS TO PROVIDE MINIMUM 1/2 INCH (15 MM) SPACE BETWEEN FINISHED COVERING AND ADJACENT WORK.
- 4. PLACE HANGERS WITHIN 12 INCHES (300 MM) OF EACH HORIZONTAL 5. USE HANGERS WITH 1-1/2 INCH (40 MM) MINIMUM VERTICAL ADJUSTMENT. DESIGN HANGERS FOR PIPE MOVEMENT WITHOUT DISENGAGEMENT OF
- 6. SUPPORT VERTICAL PIPING AT EVERY FLOOR. SUPPORT RISER PIPING
- INDEPENDENTLY OF CONNECTED HORIZONTAL PIPING. WHERE SEVERAL PIPES CAN BE INSTALLED IN PARALLEL AND AT SAME ELEVATION, PROVIDE MULTIPLE OR TRAPEZE HANGERS.

SECTION 09900. HANGERS AND SUPPORTS LOCATED IN CRAWL SPACES.

PIPE SHAFTS, AND SUSPENDED CEILING SPACES ARE NOT CONSIDERED

8. PRIME COAT EXPOSED STEEL HANGERS AND SUPPORTS. REFER TO

9. PROVIDE HANGERS ADJACENT TO MOTOR DRIVEN EQUIPMENT WITH VIBRATION ISOLATION; REFER TO SECTION 15072.

#### 10. SUPPORT CAST IRON DRAINAGE PIPING AT EVERY JOINT. 3.04 APPLICATION

- A. USE GROOVED MECHANICAL COUPLINGS AND FASTENERS ONLY IN ACCESSIBLE
- LOCATIONS. B. INSTALL UNIONS DOWNSTREAM OF VALVES AND AT EQUIPMENT OR APPARATUS
- CONNECTIONS. C. INSTALL BRASS MALE ADAPTERS EACH SIDE OF VALVES IN COPPER PIPED
- SYSTEM. SOLDER ADAPTERS TO PIPE. D. INSTALL BALL VALVES FOR SHUT-OFF AND TO ISOLATE EQUIPMENT, PART OF SYSTEMS, OR VERTICAL RISERS.
- E. INSTALL BALL VALVES FOR THROTTLING, BYPASS, OR MANUAL FLOW CONTROL SERVICES.

# 3.05 DISINFECTION OF DOMESTIC WATER PIPING SYSTEM

- A. DISINFECT WATER DISTRIBUTION SYSTEM IN ACCORDANCE WITH SECTION 02515.
- C. ENSURE PH OF WATER TO BE TREATED IS BETWEEN 7.4 AND 7.6 BY ADDING ALKALI (CAUSTIC SODA OR SODA ASH) OR ACID (HYDROCHLORIC).

B. PRIOR TO STARTING WORK, VERIFY SYSTEM IS COMPLETE, FLUSHED AND

- D. INJECT DISINFECTANT, FREE CHLORINE IN LIQUID, POWDER, TABLET OR GAS FORM. THROUGHOUT SYSTEM TO OBTAIN 50 TO 80 MG/L RESIDUAL.
- E. BLEED WATER FROM OUTLETS TO ENSURE DISTRIBUTION AND TEST FOR
- DISINFECTANT RESIDUAL AT MINIMUM 15 PERCENT OF OUTLETS.

G. IF FINAL DISINFECTANT RESIDUAL TESTS LESS THAN 25 MG/L, REPEAT

- F. MAINTAIN DISINFECTANT IN SYSTEM FOR 24 HOURS.
- TREATMENT H. FLUSH DISINFECTANT FROM SYSTEM UNTIL RESIDUAL EQUAL TO THAT OF
- INCOMING WATER OR 1.0 MG/L.
- TAKE SAMPLES NO SOONER THAN 24 HOURS AFTER FLUSHING, FROM 10 PERCENT OF OUTLETS AND FROM WATER ENTRY, AND ANALYZE IN ACCORDANCE WITH AWWA C651

#### 3.06 FIELD INSPECTIONS AND TESTS

A. FUSION WELDING INSPECTION: ALL BUTT-FUSION JOINTS SHALL BE VISUALLY INSPECTED BY COMPARING WITH MANUFACTURER'S VISUAL JOINT APPEARANCE CHART. OTHER JOINTS SHALL BE INSPECTED FOR PROPER FUSED CONNECTION LINSATISFACTORY JOINTS NEEDING IMPROVEMENT SHALL BE REPLACED BY CUTTING OUT DEFECTIVE JOINT OR REPLACING FITTINGS. INSPECT 100 PERCEN OF ALL JOINTS AND RE-INSPECT ALL CORRECTIONS. ALL FIRST TIME INSPECTIONS SHALL BE ASSISTED BY PIPE MANUFACTURER'S REPRESENTATIVE AND APPROVED BY THE ARCHITECT

#### 3.07 SCHEDULES

- A. PIPE HANGER SPACING:
- a. PIPE SIZE: 1/2 INCHES (15 MM) TO 1-1/4 INCHES (32 MM):
- MAXIMUM HANGER SPACING: 6.5 FT (2 M).
- 2) HANGER ROD DIAMETER: 3/8 INCHES (9 MM)
- MAXIMUM HANGER SPACING: 10 FT (3 M).
- 2) HANGER ROD DIAMETER: 3/8 INCH (9 MM). c. PIPE SIZE: 2-1/2 INCHES (65 MM) TO 3 INCHES (75 MM):

b. PIPE SIZE: 1-1/2 INCHES (40 MM) TO 2 INCHES (50 MM):

 MAXIMUM HANGER SPACING: 10 FT (3 M). 2) HANGER ROD DIAMETER: 1/2 INCH (13 MM).

2) HANGER ROD DIAMETER: 5/8 INCH (15 MM).

- d. PIPE SIZE: 4 INCHES (100 MM) TO 6 INCHES (150 MM):
- MAXIMUM HANGER SPACING: 10 FT (3 M).

#### END OF SECTION 15145

SECTION 15146 - PLUMBING SPECIALTIES

PART 1 GENERAL 1.01 SECTION INCLUDES

1.02 RELATED SECTIONS

- A. CLEANOUTS.
- B. WATER HAMMER ARRESTORS. C. ICEMAKER SUPPLY BOXES.
- A. SECTION 01100 SUMMARY: PRODUCT REQUIREMENTS FURNISHED KITCHEN
- OWNER-SUPPLIED PRODUCTS. C. SECTION 15145 — PLUMBING PIPING
- D. SECTION 15410 PLUMBING FIXTURES.

B. SECTION 01600 - PRODUCT REQUIREMENTS: PROCEDURES FOR

E. SECTION 15430 — PLUMBING EQUIPMENT. F. SECTION 16155 - EQUIPMENT WIRING: ELECTRICAL CHARACTERISTICS AND

### WIRING CONNECTIONS.

PROCEDURES.

- 1.03 SUBMITTALS A. SEE SECTION 01300 - ADMINISTRATIVE REQUIREMENTS, FOR SUBMITTAL
- B. PRODUCT DATA: PROVIDE COMPONENT SIZES, ROUGH-IN REQUIREMENTS. SERVICE SIZES, AND FINISHES.
- C. SHOP DRAWINGS: INDICATE DIMENSIONS, WEIGHTS, AND PLACEMENT OF OPENINGS AND HOLES.

D. CERTIFICATES: CERTIFY THAT OIL INTERCEPTORS MEET OR EXCEED SPECIFIED

REQUIREMENTS. E. MANUFACTURER'S INSTRUCTIONS: INDICATE MANUFACTURER'S INSTALLATION INSTRUCTIONS: INDICATE ASSEMBLY AND SUPPORT REQUIREMENTS.

F. PROJECT RECORD DOCUMENTS: RECORD ACTUAL LOCATIONS OF EQUIPMENT,

CLEANOUTS, BACKFLOW PREVENTERS, WATER HAMMER ARRESTORS TRAP

- PRIMERS, TEMPERING VALVES. G. OPERATION DATA: INDICATE FREQUENCY OF TREATMENT REQUIRED FOR
- INTERCEPTORS. H. MAINTENANCE DATA: INCLUDE INSTALLATION INSTRUCTIONS, SPARE PARTS

TWO LOOSE KEYS FOR OUTSIDE HOSE BIBBS.

YEARS DOCUMENTED EXPERIENCE.

#### LISTS, EXPLODED ASSEMBLY VIEWS. 1.04 QUALITY ASSURANCE A. MANUFACTURER QUALIFICATIONS: COMPANY SPECIALIZING IN MANUFACTURING

# 1.05 DELIVERY, STORAGE, AND PROTECTION

A. ACCEPT SPECIALTIES ON SITE IN ORIGINAL FACTORY PACKAGING. INSPECT FOR

THE PRODUCTS SPECIFIED IN THIS SECTION WITH NOT LESS THAN THREE

 A. SEE SECTION 01600 — PRODUCT REQUIREMENTS, FOR ADDITIONAL PROVISIONS. B. SUPPLY USE IN MAINTENANCE OF PROJECT:

1.06 EXTRA MATERIALS

- TWO HOSE END VACUUM BREAKERS FOR HOSE BIBBS. PART 2 PRODUCTS
- 2.01 CLEANOUTS A. MANUFACTURERS:
- ZURN INDUSTRIES, INC: WWW.ZURN.COM.JOSAM COMPANY: WWW.JOSAM.COM.
- JAY R. SMITH MANUFACTURING COMPANY: WWW.JAYRSMITH.COM. JOSAM COMPANY: WWW.JOSAM.COM.

340 SPECIALTY DR.

B. CLEANOUTS AT EXTERIOR SURFACED AREAS: ROUND CAST NICKEL BRONZE ACCESS FRAME AND NON-SKID COVER.

TEMPORARY BMP CONSTRUCTION SITE STORM WATER PRIORITY: HIGH\_\_\_\_\_ MEDIUM \_\_\_\_\_ LOW\_ SPEC NO. 0-00-0000-000-0-0 AMP & SIGNATURE

> #14101 10-06-14

ED MD DP ED

CITY ENGINEER DESCRIPTION Esp. 3/31/15 INSPECTOR .

PARCEL ID. NO. 581-290-11-00

WBS. S-00687

38317 - 25D

Ship and 12/19/2014 ROWAIDA JADAN DATE ASSOCIATE ENGINEER APPROVED DATE FILMED IICHAEL RAMIRE PROJECT MANAGER 194-1755 CS27 COORDINATE 1834-6315

1. LINE TYPE WITH LACQUERED CAST IRON BODY AND ROUND EPOXY COATED GASKETED COVER, AND ROUND STAINLESS STEEL ACCESS COVER SECURED

F. CLEANOUTS AT INTERIOR UNFINISHED ACCESSIBLE AREAS: CALKED OR

1. LINE TYPE WITH LACQUERED CAST IRON BODY AND ROUND EPOXY COATED

GALVANIZED CAST IRON BODY WITH ANCHOR FLANGE, REVERSIBLE CLAMPING

IN SERVICE AREAS AND ROUND GASKETED DEPRESSED COVER TO ACCEPT

COLLAR, THREADED TOP ASSEMBLY, AND ROUND GASKETED SCORED COVER

# THREADED TYPE. PROVIDE BOLTED STACK CLEANOUTS ON VERTICAL RAINWATER

### 2.02 WATER HAMMER ARRESTORS

- A. MANUFACTURERS:
- JAY R. SMITH MANUFACTURING COMPANY; WWW.JAYRSMITH.COM. WATTS REGULATOR COMPANY; WWW.WATTSREGULATOR.COM.
- ZURN INDUSTRIES, INC; WWW.ZURN.COM.

C. CLEANOUTS AT EXTERIOR UNSURFACED AREAS:

D. CLEANOUTS AT INTERIOR FINISHED FLOOR AREAS:

E. CLEANOUTS AT INTERIOR FINISHED WALL AREAS:

FLOOR FINISH IN FINISHED FLOOR AREAS.

GASKETED COVER.

- SUBSTITUTIONS: SEE SECTION 01600 PRODUCT REQUIREMENTS.
- B. WATER HAMMER ARRESTORS: STAINLESS STEEL CONSTRUCTION, BELLOWS TYPE SIZED IN ACCORDANCE WITH PDI-WH 201, PRECHARGED SUITABLE FOR OPERATION IN

TEMPERATURE RANGE -100 TO 300 DEGREES F (-73 TO 149 DEGREES

#### C) AND MAXIMUM 250 PSI (1700 KPA) WORKING PRESSURE. 2.03 WASHING MACHINE BOXES AND VALVES

- A. BOX MANUFACTURERS:
- LSP SPECIALTY PRODUCTS; WWW.LSPPRODUCTS.COM.
- OATEY; WWW.OATEY.COM. SUBSTITUTIONS: SEE SECTION 01600 — PRODUCT REQUIREMENTS.
- B. VALVE MANUFACTURERS:

LSP SPECIALTY PRODUCTS; WWW.LSPPRODUCTS.COM.

IPS CORPORATION/WATER-TITE; WWW.IPSCORP.COM.

IPS CORPORATION/WATER-TITE; WWW.IPSCORP.COM.

ZURN INDUSTRIES, INC; WWW.ZURN.COM. SUBSTITUTIONS: SEE SECTION 01600 — PRODUCT REQUIREMENTS.

C. DESCRIPTION: PLASTIC PREFORMED ROUGH—IN BOX WITH BRASS LONG SHANK

VALVES WITH WHEEL HANDLES, SOCKET FOR 2 INCH WASTE, SLIP IN FINISHING

# 3.01 INSTALLATION

- A. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. B. EXTEND CLEANOUTS TO FINISHED FLOOR OR WALL SURFACE. LUBRICATE THREADED CLEANOUT PLUGS WITH MIXTURE OF GRAPHITE AND LINSEED OIL.
- ENSURE CLEARANCE AT CLEANOUT FOR RODDING OF DRAINAGE SYSTEM. C. ENCASE EXTERIOR CLEANOUTS IN CONCRETE FLUSH WITH GRADE. D. INSTALL FLOOR CLEANOUTS AT ELEVATION TO ACCOMMODATE FINISHED FLOOR.

INSTALL APPROVED POTABLE WATER PROTECTION DEVICES ON PLUMBING LINES

WHERE CONTAMINATION OF DOMESTIC WATER MAY OCCUR; ON BOILER FEED

WATER LINES, JANITOR ROOMS, FIRE SPRINKLER SYSTEMS, PREMISE ISOLATION, IRRIGATION SYSTEMS, FLUSH VALVES, INTERIOR AND EXTERIOR HOSE BIBS. F. INSTALL AIR CHAMBERS ON HOT AND COLD WATER SUPPLY PIPING TO EACH FIXTURE OR GROUP OF FIXTURES (EACH WASHROOM). FABRICATE SAME SIZE

AS SUPPLY PIPE OR 3/4 INCH (20 MM) MINIMUM, AND MINIMUM 18 INCHES (450 MM) LONG.

END OF SECTION 15146

PART 3 EXECUTION

PLUMBING SPECIFICATIONS

CITY OF SAN DIEGO, CALIFORNIA

ENGINEERING AND CAPITAL PROJECTS DEPARTMENT SHEET 25 OF 40 SHEETS

SKYLINE TEMPORARY FIRE STATION 7180 SKYLINE DR. SAN DIEGO, CALIFORNIA 92114

PLANS FOR THE CONSTRUCTION OF

CCS83 COORDINATE

DATE COMPLETED

IF THIS BAR DOES **NOT MEASURE 1'** THEN DRAWING IS NOT TO SCALE.

WARNING

CITY OF SAN DIEGO PUBLIC WORKS PROJECT



ISTA, CA 92081 760) 560-0100 -Mail admin@tsqeng.com T-SQUARED L-Mail aaminwts PROFESSIONAL ENGINEERS, INC. CITY CONTRACT

SPECIAL INSPECTION NO.

C.I.P. NO.00-000.0

P4.3

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SECTION 15410 - PLUMBING FIXTURES
PART 1 GENERAL
1.01 SECTION INCLUDES
  A. LAUNDRY SINK.
1.02 RELATED SECTIONS
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A. SECTION 07900 - JOINT SEALERS: SEAL FIXTURES TO WALLS AND FLOORS.

B. SECTION 15145 - PLUMBING PIPING.

C. SECTION 15146 — PLUMBING SPECIALTIES. D. SECTION 15430 — PLUMBING EQUIPMENT.

#### 1.03 SUBMITTALS

A. SEE SECTION 01300 - ADMINISTRATIVE REQUIREMENTS, FOR SUBMITTAL

B. PRODUCT DATA: PROVIDE CATALOG ILLUSTRATIONS OF FIXTURES, SIZES, ROUGH-IN DIMENSIONS, UTILITY SIZES, TRIM, AND FINISHES.

C. MANUFACTURER'S INSTRUCTIONS: INDICATE INSTALLATION METHODS AND PROCEDURES.

D. MAINTENANCE DATA: INCLUDE FIXTURE TRIM EXPLODED VIEW AND REPLACEMENT PARTS LISTS.

WARRANTY: SUBMIT MANUFACTURER WARRANTY AND ENSURE FORMS HAVE BEEN COMPLETED IN OWNER'S NAME AND REGISTERED WITH MANUFACTURER.

1.04 QUALITY ASSURANCE A. MANUFACTURER QUALIFICATIONS: COMPANY SPECIALIZING IN MANUFACTURING THE TYPE OF PRODUCTS SPECIFIED IN THIS SECTION, WITH MINIMUM THREE YEARS OF DOCUMENTED EXPERIENCE.

#### 1.05 REGULATORY REQUIREMENTS

A. PRODUCTS REQUIRING ELECTRICAL CONNECTION: LISTED AND CLASSIFIED BY UNDERWRITERS LABORATORIES INC., AS SUITABLE FOR THE PURPOSE SPECIFIED AND INDICATED.

1.06 DELIVERY, STORAGE, AND PROTECTION A. ACCEPT FIXTURES ON SITE IN FACTORY PACKAGING. INSPECT FOR DAMAGE.

B. PROTECT INSTALLED FIXTURES FROM DAMAGE BY SECURING AREAS AND BY LEAVING FACTORY PACKAGING IN PLACE TO PROTECT FIXTURES AND PREVENT

#### 1.07 WARRANTY

A. SEE SECTION 01780 - CLOSEOUT SUBMITTALS, FOR ADDITIONAL WARRANTY

B. PROVIDE FIVE YEAR MANUFACTURER WARRANTY FOR ELECTRIC WATER COOLER. 1.08 EXTRA MATERIALS

A. SEE SECTION 01600 - PROJECT REQUIREMENTS, FOR ADDITIONAL PROVISIONS.

B. SUPPLY TWO SETS OF FAUCET WASHERS, FLUSH VALVE SERVICE KITS, LAVATORY SUPPLY FITTINGS, SHOWER HEADS, AND TOILET SEATS.

#### PART 2 PRODUCTS

### 2.01 LAUNDRY SINK

#### A. MANUFACTURERS:

- FLORESTONE MODEL FM
- SUBSTITUTIONS: SEE SECTION 01600 PRODUCT REQUIREMENTS.
- B. PLASTIC POLYMER:
- IAMPMO/AMSI Z124.6.
- a. 23"x22"x35" FLOOR MOUNTED
- b. FOUR HEAVY DUTY MOLDED LEGS
- C. SUPPLY FAUCET MANUFACTURERS:
- CHICAGO FAUCET
- SUBSTITUTIONS: SEE SECTION 01600 PRODUCT REQUIREMENTS.
- D. SUPPLY FAUCET:
- CHICAGO FAUCET 349-L9ABCP FAUCET DECK MOUNTED SINGLE HOLE SINGLE SUPPLY WITH 9-1/2" SWING SPOUT

### PART 3 EXECUTION

# 3.01 EXAMINATION

A. VERIFY THAT WALLS AND FLOOR FINISHES ARE PREPARED AND READY FOR INSTALLATION OF FIXTURES.

# 3.02 PREPARATION

A. ROUGH-IN FIXTURE PIPING CONNECTIONS IN ACCORDANCE WITH MINIMUM SIZES INDICATED IN FIXTURE ROUGH-IN SCHEDULE FOR PARTICULAR FIXTURES.

# 3.03 INSTALLATION

A. INSTALL EACH FIXTURE WITH TRAP, EASILY REMOVABLE FOR SERVICING AND

B. PROVIDE CHROME PLATED RIGID OR FLEXIBLE SUPPLIES TO FIXTURES WITH

LOOSE KEY STOPS, REDUCERS, AND ESCUTCHEONS.

C. INSTALL COMPONENTS LEVEL AND PLUMB. D. INSTALL AND SECURE FIXTURES IN PLACE WITH WALL SUPPORTS AND BOLTS.

E. SEAL FIXTURES TO WALL AND FLOOR SURFACES WITH SEALANT AS SPECIFIED

IN SECTION 07900, COLOR TO MATCH FIXTURE. F. SOLIDLY ATTACH WATER CLOSETS TO FLOOR WITH LAG SCREWS. LEAD

#### FLASHING IS NOT INTENDED HOLD FIXTURE IN PLACE. 3.04 INTERFACE WITH WORK OF OTHER SECTIONS

A. REVIEW MILLWORK SHOP DRAWINGS. CONFIRM LOCATION AND SIZE OF FIXTURES AND OPENINGS BEFORE ROUGH—IN AND INSTALLATION.

# 3.05 ADJUSTING

A. ADJUST STOPS OR VALVES FOR INTENDED WATER FLOW RATE TO FIXTURES WITHOUT SPLASHING, NOISE, OR OVERFLOW.

CONSTRUCTION CHANGE / ADDENDUM

# 3.06 CLEANING AND PROTECTION

A. CLEAN PLUMBING FIXTURES AND EQUIPMENT.

B. DO NOT PERMIT USE OF FIXTURES.

# 3.07 SCHEDULES

A. FIXTURE ROUGH-IN

SEE FIXTURE SCHEDULE ON PLANS.

END OF SECTION 15410

WARNING		CONSTRUCTION CHANGE / ADDENDUM		
0 1	APPROVAL NO.	AFFECTED OR ADDED SHEET NUMBERS	DATE	CHANGE
IF THIS BAR DO				
NOT MEASURE THEN DRAWING				
NOT TO SCAL				

CITY OF SAN DIEGO PUBLIC WORKS PROJECT





CITY CONTRACT

SPECIAL INSPECTION NO.

#14101 10-06-14 ED MD DP ED

C.I.P. NO.00-000.0

SPEC NO. 0-00-0000-000-0-0

12-32-2-32-2-32-32-32-32-32-32-32-32-32-3	NG AND CAPI	GO, CAL TAL PROJECTS D OF 40 SHEETS	EPARTMENT		wss. S-00687
APPROVED: Say Cul-	2	12	2/19/20 DATE	14	ROWAIDA JADAN  ASSOCIATE ENGINEER
DESCRIPTION	BY	APPROVED	DATE	FILMED	MICHAEL RAMIREZ PROJECT MANAGER
					194-1755 ccs27 coordinate
					1834-6315 ccs83 coordinate
CONTRACTORINSPECTOR		DATE STARTE			38317 - 26D

PLUMBING SPECIFICATIONS

PLANS FOR THE CONSTRUCTION OF SKYLINE TEMPORARY FIRE STATION

7180 SKYLINE DR. SAN DIEGO, CALIFORNIA 92114 PARCEL ID. NO. 581-290-11-00

# **GENERAL NOTES**

- ALL BRANCH DUCTS SHALL HAVE BALANCE DAMPERS WITH QUADRANT LOCKS.
- 2. ALL DUCT SIZES SHOWN ARE NET INSIDE DIMENSIONS.
- 3. DUCTWORK SHALL BE GALVANIZED SHEET METAL IN COMPLETE CONFORMANCE WITH U.M.C., AND SMACNA HVAC DUCT CONSTRUCTION STANDARDS. FLEXIBLE DUCTS MAY BE USED TO CONNECT INTO AIR OUTLETS AND INLETS. MAXIMUM LENGTH OF FLEXIBLE DUCTWORK SHALL
- ALL BRACING OF DUCTS AND PIPING SHALL BE INSTALLED IN ACCORDANCE WITH SMACNA GUIDELINES.
- I. DUCT AND PLENUM INSULATION SHALL BE IN ACCORDANCE WITH THE 2013 CALIFORNIA CODE OF REGULATIONS, TITLE-24, PART 1, ENERGY EFFICIENCY STANDARDS, TABLE 4-4 AND THE LATEST EDITION OF THE CALIFORNIA MECHANICAL CODE (C.M.C.) SECTION 605.
- 5. THERMOSTATS SHALL BE LOCATED AT 4' 0" ABOVE FINISHED FLOOR (46" MAX. IF MOUNTED OVER CASEWORK OR OTHER OBSTRUCTION) IN ACCORDANCE WITH A.D.A. REQUIREMENTS, UNLESS NOTED OTHERWISE.
- 6. PROVIDE FLEXIBLE CONNECTIONS AT THE INLET AND OUTLET OF ALL FANS.

SECTION 717. AND UL,, LOCAL, STATE, AND N.F.P.A. FIRE CODES.

- 7. COORDINATE FINAL LOCATIONS OF AIR DISTRIBUTION DEVICES WITH THE ARCHITECTURAL REFLECTED CEILING PLANS, I.E. LIGHTS, SPEAKERS, TILES AND SPRINKLER HEADS.
- 8. ALL SUPPLY CEILING DIFFUSERS SHALL HAVE 4-WAY AIR FLOW DISTRIBUTION PATTERNS,
- UNLESS INDICATED OTHERWISE. 9. COORDINATE FINAL LOCATIONS OF THERMOSTATS WITH ARCHITECT AND OWNER'S
- TRADES INCLUDING ELECTRICAL, TELEPHONE, ETC. 10. FIRE/SMOKE DAMPERS SHALL BE INSTALLED ON ALL DUCTWORK PASSING THROUGH FIRE SEPÁRATING WALLS, AND SHALL BE INSTALLED AS PER 2013 CMC SECTION 605.0, 2013 CBC

REPRESENTATIVE PRIOR TO INSTALLATION. FIELD COORDINATE LOCATIONS WITH OTHER

- ALL ROOF PENETRATIONS, CUTTING, PATCHING, BLOCKOUTS, STRUCTURAL SUPPORT, ROOF OPENINGS, LEVELING OF PRE-FAB CURBS SHALL BE BY GENERAL CONTRACTOR. CONTRACTOR SHALL VERIFY EXACT ROOF OPENING SIZES WITH UNIT MANUFACTURER PRIOR TO START OF WORK AND SHALL MAKE ALL NECESSARY ADJUSTMENTS AT NO EXTRA COST TO OWNER.
- 12. LOCATION OF ALL MECHANICAL EQUIPMENT SHOWN ARE SCHEMATIC. CONTRACTOR SHALL FIELD COORDINATE EXACT LOCATIONS AND REQUIRED SERVICE/MAINTENANCE CLEARANCES PRIOR TO START OF WORK.
- 13. CONTRACTOR SHALL VERIFY WEIGHTS OF ALL MECHANICAL EQUIPMENT WITH THEIR MANUFACTURER PRIOR TO START OF WORK. IF DIFFERENT THAN THE WEIGHTS INDICATED ON DRAWINGS, CONTRACTOR SHALL INFORM THE ARCHITECT AND STRUCTURAL ENGINEER PRIOR TO START OF WORK.
- 14. CONTRACTOR SHALL VERIFY ALL ELECTRICAL LOADS W/MFR. AND COORDINATE WITH THE ELECTRICAL CONTRACTOR AND THE MANUFACTURER PRIOR TO START OF WORK. NOTIFY THE ARCHITECT, IN WRITING, IN CASE OF ANY DISCREPANCIES, PRIOR TO START OF WORK.
- 15. ALL HVAC EQUIPMENT, APPLIANCES, AND DUCTWORK SHALL CONFORM TO THE LATEST GUIDELINES OF U.L., A.G.A., N.F.P.A., C.M.C., C.P.C., AND ALL OTHER LOCAL CODES HAVING
- 16. TEST AND BALANCE THE HVAC SYSTEM AS PER REQUIREMENTS OF THE MANDATORY HVAC MEASURES INDICATED ON THIS SHEET.
- CONTRACTOR SHALL FIELD VERIFY EXACT CEILING SPACE AVAILABLE FOR ROUTING OF DUCT. PRIOR TO START OF WORK, INFORM ARCHITECT, IN WRITING, IN CASE OF ANY DISCREPANCY OR POTENTIAL CONFLICTS PRIOR TO FABRICATING AND/OR PURCHASE OF ANY DUCTWORK.
- 18. ACCESS PANELS SHALL BE PROVIDED TO ALL EQUIPMENT, MANUAL VOLUME DAMPERS, ETC. LOCATED IN INACCESSIBLE AREAS.
- 19. MAINTAIN MINIMUM 10'-0" BETWEEN ALL OA INTAKES AND EXHAUST AIR DISCHARGES OR

#### **LEGEND** DESCRIPTION SYMBOL ABBREV. FLEXIBLE CONNECTION, DUCTWORK DUCT SIZE (1ST NUMBER INDICATES SIDE 10x6 SHOWN) SQUARE ELBOW WITH TURNING VANES ROUND ELBOW MVD MANUAL VOLUME DAMPER BACKDRAFT DAMPER BD FLEXIBLE DUCTWORK OA OUTSIDE AIR ROUND DUCT UP ER/EG EXHAUST AIR REGISTER/GRILLE EA \_\<u>~</u> EXHAUST AIR AP CEILING ACCESS PANEL EA RECTANGULAR EXHAUST DUCT UP WALL SWITCH/WALL STAT CFM CUBIC FEET PER MINUTE A.F.F. ABOVE FINISH FLOOR A.F.G. ABOVE FINISH GRADE A.G.A. AMERICAN GAS ASSOCIATION ALUMINUM ARCH. ARCHITECT OR ARCHITECTURAL BHP BRAKE HORSEPOWER BLDG BUILDING BTU(H) BRITISH THERMAL UNIT (PER HOUR) CAP. CAPACITY C.B.C. CALIFORNIA BUILDING CODE C.E.C. CALIFORNIA ENERGY COMMISSION C.M.C. CALIFORNIA MECHANICAL CODE C.P.C. CALIFORNIA PLUMBING CODE CD CONDENSATE DRAIN CGBSC CALIFORNIA GREEN BUILDING STANDARDS COMMISSION CONC. CONCRETE COND. CONDITIONS CONN. CONNECTIONS COORD COORDINATE COPPER DB DRY BULE DOWN DRAWING(S) DWG(S) DIRECT EXPANSION **EQUAL** ENERGY EFFICIENCY RATIO ENERGY EFFICIENCY STANDARDS **EFFICIENCY**

	LEG	END (CONT.)
YMBOL	ABBREV.	DESCRIPTION
	ELEC.	ELECTRICAL
	ESP	EXTERNAL STATIC PRESSURE (INCHES OF
		WATER)
	FAB	FABRICATED
	F.A.R.	FREE AREA REQUIRED
	FLA	FULL LOAD AMPS FEET PER MINUTE
	FPM	The contact No. 154-452-years and 154-452-years
	FT. GA.	FEET GAUGE
	GALV.	GALVANIZED
	GSM	GALVANIZED SHEET METAL
	HERS	HOME ENERGY RATING SYSTEM
	HP	HORSEPOWER
	HVAC	HEATING, VENTILATION AND AIR CONDITIONING
	IN.	INCHES
	IPLV	INTEGRATED PART-LOAD VALUE
	KW	KILOWATT
	LBS.	POUNDS
	MECH.	MECHANICAL
	MAX.	MAXIMUM
	мв	MACHINE BOLT
	мвн	1000 BTUH
	MCA	MINIMUM CIRCUIT AMPACITY
	MFR	MANUFACTURER
	MIN.	MINIMUM
	моср	MAXIMUM OVERCURRENT PROTECTION
	MTG.	MOUNTING
	MVD	MANUAL VOLUME DAMPER
	NA	NOT APPLICABLE
	N.F.P.A.	NATIONAL FIRE PROTECTION ASSOCIATION
	NO.	NUMBER
	OBD	OPPOSED BLADE DAMPER
	OPER.	OPERATING
	PH	PHASE
	QTY.	QUANTITY
	RPM	REVOLUTIONS PER MINUTE
	SF	SQUARE FEET
	SQ.	SQUARE
	SMACNA	SHEET METAL AND AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION
	S.M.S.	SHEET METAL SCREW
	STRUC.	STRUCTURAL
	THRU	THROUGH
	TYP.	TYPICAL
	U.L.	UNDERWRITER'S LABORATORIES
	٧	VOLTAGE/VOLTS
	WB	WET BULB
	WT.	WEIGHT

	EXHAUST FAN SCHEDULE													
TAG	MANUFACTURER & MODEL NO.	SERVES	CFM	ESP (IN. W.G.)	DRIVE TYPE	RPM	BHP (WATTS)	HP (WATTS)	MAX. SONES	٧	PH	FAN TYPE	OPER. WEIGHT (LBS.)	REMARKS
EF 1	PLYMOVENT FUA-2100	APPARATUS BAY	1000	3.0	BELT	3480		1		230	1	UTILITY SET	180	123456

- SUPPORT ON CONCRETE PAD PER DETAIL 3/M3.1.
- PROVIDE WITH CONTROL PANEL AND WEATHERPROOF ENCLOSURE. FAN IS RADIAL, CAST ALMAG WHEEL, CAST ALUMINUM HOUSING, WITH FLEXIBLE CONNECTIONS, MOTOR GUARD, SILENCER, AND BACKDRAFT RAINGUARD. FAN SHALL BE SPARK RESISTANT.
- (3) INTERLOCK WITH PRESSURE SENSOR.

- (4) PROVIDE FUSED DISCONNECT AND MOTOR STARTER. COORDINATE WITH EXHAUST REMOVAL SYSTEM SUPPLIER.
- (5) PROVIDE ALL CONTROL WIRING IN CONDUIT AND ALL ACCESSORIES REQUIRED BY MANUFACTURER FOR A COMPLETE AND OPERATIONAL
- (6) FIELD VERIFY EXACT ELECTRICAL REQUIREMENTS WITH MANUFACTURER AND COORDINATE WITH ELECTRICAL CONTRACTOR PRIOR TO START OF

# MANDATORY HVAC SYSTEM MEASURES

- . ALL WORK INDICATED ON DRAWINGS AND/OR SPECIFICATIONS SHALL BE COORDINATED WITH WORKS OF OTHER TRADES PRIOR TO START OF WORK.
- 2. ALL HVAC EQUIPMENT LISTED IN SECTION 100(G) OF THE E.E.S. MUST BE C.E.C. CERTIFIED.
- 3. ALL PIPING AND DUCTWORK SHALL BE INSULATED CONSISTENT WITH THE REQUIREMENTS OF

5. ALL HVAC SYSTEMS SHALL MEET THE CONTROL REQUIREMENTS PER SECTION 112 AND 122

- SECTION 118, 123 AND 124 E.E.S. AND TABLE 6-6A AND 6-6B OF C.M.C. 4. ALL HVAC EQUIPMENT AND APPLIANCE SHALL MEET THE REQUIREMENTS PER SECTIONS
- 111-113, 115 AND 120-129 E.E.S.
- 6. ALL VENTILATION SYSTEMS SHALL BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH THE C.M.C.
- 7. THE CONTRACTOR SHALL PROVIDE THE BUILDING OWNER, MANAGER, AND THE ORIGINAL OCCUPANTS A LIST OF THE HEATING, VENTILATION, AND AIR CONDITIONING FEATURES, MATERIALS, AND COMPONENTS INSTALLED IN THE BUILDING AND OPERATING INSTRUCTIONS.
- 8. INSULATION MATERIAL SHALL MEET THE CALIFORNIA QUALITY STANDARD PER SECTION 118
- 9. ALL SPACE CONDITIONING AND VENTILATION SYSTEMS SHALL BE BALANCED TO THE QUANTITIES SPECIFIED IN THESE PLANS, IN ACCORDANCE WITH THE NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB) PROCEDURAL STANDARDS, OR ASSOCIATED AIR BALANCE COUNCIL (AABC) NATIONAL STANDARDS. TESTING AND BALANCING SHALL BE DONE BY AN INDEPENDENT QUALIFIED AGENCY.
- 10. ALL SYSTEMS SHALL PROVIDE THE MINIMUM OUTSIDE AIR AS SHOWN ON THE MECHANICAL DRAWINGS, AND SHALL BE MEASURED AND CERTIFIED BY AN INDEPENDENT QUALIFIED TESTING AGENCY.
- 11. DUCT INSULATION SHALL HAVE A MINIMUM INSTALLED R-VALUE OF 8.0.
- 12. DURING CONSTRUCTION, ENDS OF DUCT OPENINGS SHALL BE SEALED AND MECHANICAL EQUIPMENT SHALL BE COVERED TO PROTECT INTEGRITY OF SYSTEM CLEANLINESS.
- 13. PRIOR TO FINAL APPROVAL OF THE BUILDING, THE LICENSED CONTRACTOR, ARCHITECT OR ENGINEER IN RESPONSIBLE CHARGE OF THE OVERALL CONSTRUCTION MUST COMPLETE AND SIGN THE GREEN BUILDING STANDARDS CERTIFICATION FORM AND GIVE TO THE BUILDING DEPARTMENT OFFICIAL TO BE FILED WITH THE APPROVED PLANS.
- 14. PROVIDE TEMPORARY MEANS OF BUILDING VENTILATION DURING CONSTRUCTION IN ACCORDANCE WITH CGBSC SECTION 5.504.1.1.

# VEHICLE EXHAUST SYSTEM NOTES

- A. THE GENERAL CONTRACTOR SHALL PROVIDE:
- ADEQUATE ACCESS TO THE JOB SITE.
- INFORMATION ON CONSTRUCTION SCHEDULING TO FACILITATE PROGRESSIVE INSTALLATION.
- 3. ELECTRICAL POWER TO THE VEHICLE EXHAUST CONTROL PANEL. (230V/1ø) 4. ELECTRICAL POWER/CONTROL WIRING FROM THE VEHICLE EXHAUST CONTROL PANEL TO
- THE EXHAUST FAN.
- MOUNTING PROVISIONS FOR THE CONTROL PANEL.
- 6. NECESSARY STRUCTURE AND BACKING TO SUPPORT VEHICLE EXHAUST RAILS AND SUPPORT SYSTEM USING A MAXIMUM LEG SPACING OF 10 FEET. (COORDINATE WITH ARCHITECT.)
- THE CODE REQUIRED FUSE DISCONNECT AT THE FAN.
- 8. LOW VOLTAGE CONDUIT FROM THE CONTROL PANEL OR PANELS TO A POINT ABOVE THE CENTER OF EACH TRACK OR RAIL.
- 9. ALL NECESSARY LINE AND LOW VOLTAGE WIRING AND CONDUIT TO CONTROL PANEL AND FROM THE CONTROL PANEL TO THE EXHAUST FAN.
- 10. EQUIPMENT PAD FOR MOUNTING THE EXHAUST FAN.
- 11. FLASHING FOR ROOF/WALL PENETRATIONS.
- 12. TREATING/FINISHING OF ALL FLASHING AND EQUIPMENT ASSOCIATED WITH EXHAUST REMOVAL SYSTEM.
- B. THE VEHICLE EXHAUST SUBCONTRACTOR SHALL PROVIDE:
- 1. SLIDING BALANCER TRACK SYSTEM.
- 2. RADIAL HIGH STATIC EXHAUST FAN. SIZED FOR ADEQUATE AIR FLOW FOR THE NUMBER OF DROPS, AT THE VOLTAGE AND PHASE FOR THE PARTICULAR STATION. AS REQUIRED.
- 3. CONTROL PANELS WHICH HOUSE THE MOTOR STARTER, OVERLOAD RELAYS, TIMER, STEP-DOWN TRANSFORMER. AS REQUIRED.
- 4. SENSORS TO ACTIVATE THE EXHAUST FAN UPON VEHICLE START-UP. AS REQUIRED.
- 5. COMPLETE SUPPORT STRUCTURE FOR TRACKS OR RAILS.
- 6. ALL SYSTEM DUCTWORK (MIN. 22 GAGE GALVANIZED STEEL ALL SIZES), HANGERS, AND MAGNETIC GRABBERS.
- 7. ALL MISC. FITTINGS, WITH NECESSARY ADAPTERS, FOR COMPLETE SYSTEM OPERATION.
- 8. COMPLETE THE CONNECTION OF LOW VOLTAGE WIRING FROM POINT(S) ABOVE RAILS AS PROVIDED BY THE GENERAL CONTRACTOR TO THE PROVIDED PRESSURE SENSORS.
- 9. COMPLETE START-UP OF THE SYSTEM.
- 10. TRAINING OF THE FIRE FIGHTING CREWS.
- TRAINING VIDEO.

MECHANICAL LEGEND AND NOTES

PLANS FOR THE CONSTRUCTION OF SKYLINE TEMPORARY FIRE STATION

7180 SKYLINE DR. SAN DIEGO, CALIFORNIA 92114

PARCEL ID. NO. 581-290-11-00

	RING AND CAPI	GO, CAL TAL PROJECTS D OF 40 SHEET	EPARTMENT		wss. S-00687
APPROVED: Sky Col	~:	12	2/19/20	14	SUBMITTED BY:  ROWAIDA JADAN
CITY ENGINEER		îlî-	DATE	7.4	ASSOCIATE ENGINEER
DESCRIPTION	BY	APPROVED	DATE	FILMED	MICHAEL RAMIREZ
			ŀ		PROJECT MANAGER  194-1755

DATE COMPLETED

CS27 COORDINATE

1834-6315

CCS83 COORDINATE

38317 - 27D

CONSTRUCTION CHANGE / ADDENDUM WARNING CHANGE DATE AFFECTED OR ADDED SHEET NUMBERS APPROVAL NO. IF THIS BAR DOES **NOT MEASURE 1"** THEN DRAWING IS NOT TO SCALE.

CITY OF SAN DIEGO PUBLIC WORKS PROJECT





CITY CONTRACT

SPECIAL INSPECTION NO.



ED MD DP ED

10-07-14

#14101

C.I.P. NO.00-000.0

SPEC NO. 0-00-0000-000-0-0

M2.1

WBS. S-00687

ASSOCIATE ENGINEER

PROJECT MANAGER

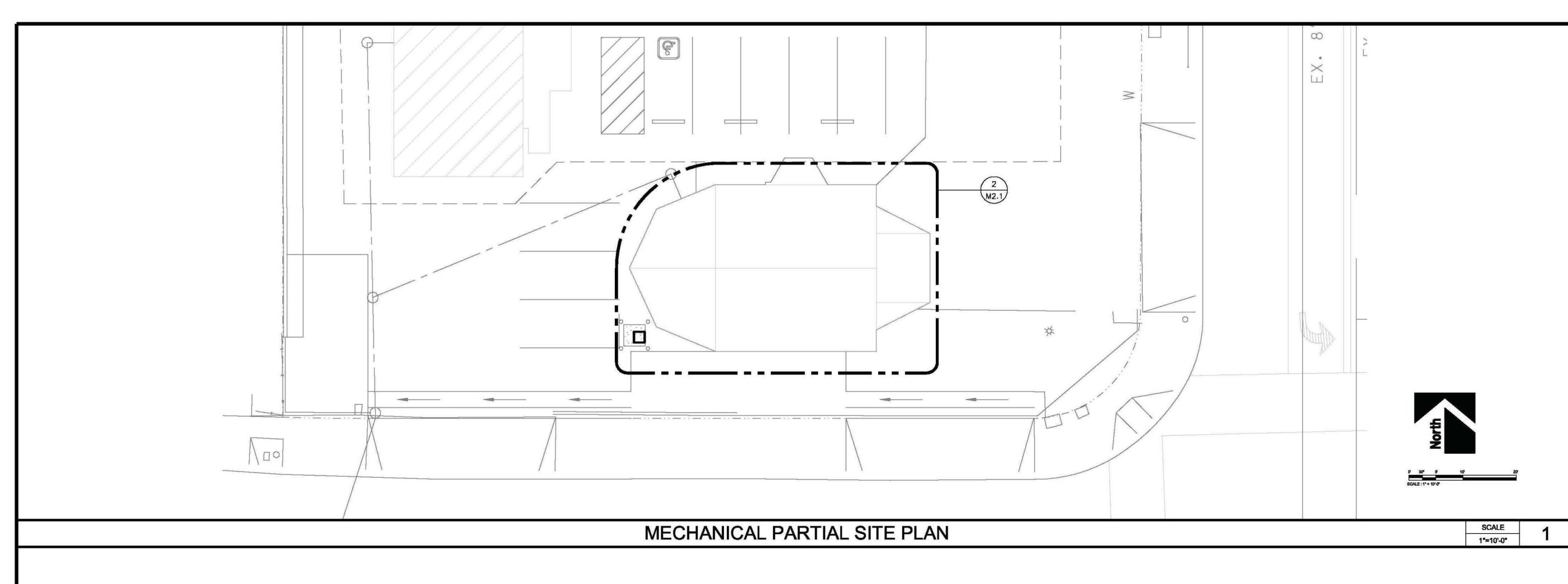
194-1755

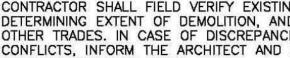
CS27 COORDINATE

CCS83 COORDINATE

38317 - 28D

1834-6315



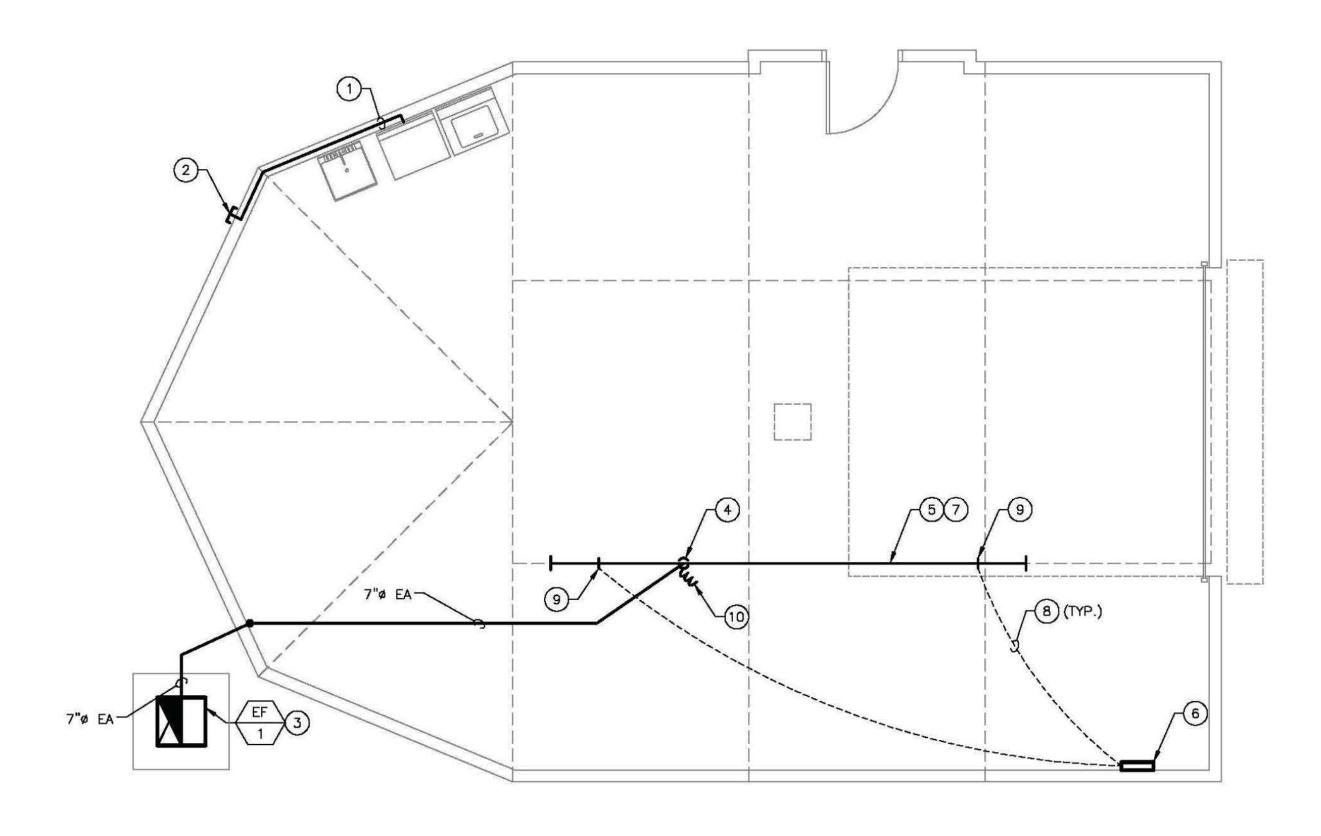


GENERAL NOTES

- A. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS, DETERMINING EXTENT OF DEMOLITION, AND COORDINATE WITH ALL OTHER TRADES. IN CASE OF DISCREPANCIES OR ANY POTENTIAL CONFLICTS, INFORM THE ARCHITECT AND ENGINEER IN WRITING PRIOR TO START OF WORK.
- B. ALL EXISTING EQUIPMENT, DUCTWORK AND AIR DISTRIBUTION DEVICES, WHICH ARE TO REMAIN, SHALL BE CLEANED AND REFURBISHED TO ORIGINAL WORKING CONDITION.
- C. ALL WORK TO BE DEMOLISHED OR REMOVED SHALL NOT BE RE-INSTALLED UNLESS NOTED OTHERWISE.

# KEY NOTES

- (1) 4" SMOOTH RIGID DRYER VENT IN WALL. PROVIDE WALL BOX.
- (2) DRYER VENT TERMINATION PER DETAIL 1/M3.1.
- 3 VEHICLE EXHAUST SEE DETAIL 3/M3.1. TERMINATE MIN. 10'-0" A.F.G.
- 7"ø VEHICLE EXHAUST DUCT. SEE 4/M3.1 FOR ATTACHMENT TO RAIL SYSTEM. SEE SPECIFICATION FOR MATERIAL & DETAIL 5/M3.1 FOR
- 5 SLIDING BALANCER TRACK SYSTEM FOR VEHICLE EXHAUST. MOUNTING SHALL BE VERIFIED BY MANUFACTURER'S REP. MOUNT BOTTOM OF RAIL AT 14'-0" A.F.F.
- 6 VEHICLE EXHAUST REMOVAL SYSTEM CONTROL PANEL, VERIFY EXACT LOCATION WITH OWNER PRIOR TO START OF WORK, MOUNT PER MANUFACTURER'S RECOMMENDATIONS.
- 7 CONTRACTOR SHALL PROVIDE STRUCTURAL CROSS MEMBERS AS REQUIRED BY THE MANUFACTURER FOR SUPPORT OF EXHAUST REMOVAL SYSTEM.
- 8 ROUTE LOW VOLTAGE CONTROL WIRING IN CONDUIT TO SENSOR CONNECTION ON EACH RAIL.
- 9 SENSOR LOCATION FOR AUTO START. LOCATION SHALL BE WITHIN FIVE FEET OF FRONT & BACK OF RAIL. FOR ADDITIONAL DETAILS SEE SPECIFICATIONS AND MANUFACTURER'S INSTALLATION GUIDE.
- 10) FLEXIBLE EXHAUST HOSE, FITTINGS, & CONNECTIONS AS SPECIFIED AND PER MANUFACTURER'S RECOMMENDATIONS.





SPEC NO. 0-00-0000-000-0-0 TEMPORARY BMP CONSTRUCTION SITE STORM WATER PRIORITY: HIGH\_\_\_\_\_MEDIUM \_\_\_\_LOW\_\_ VISTA, CA 92081 TEL: (760) 560-0100 FAX: (760) 560-0101 E-Mail admin@tsqeng.com #14101 10-07-14 T-SQUARED E-Mail admin@ts-www.tsqeng.com ED MD DP ED CITY CONTRACT

CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS DEPARTMENT SHEET 28 OF 40 SHEETS 12/19/2014

MECHANICAL PLANS

PLANS FOR THE CONSTRUCTION OF

SKYLINE TEMPORARY FIRE STATION

7180 SKYLINE DR. SAN DIEGO, CALIFORNIA 92114

PARCEL ID. NO. 581-290-11-00

MECHANICAL SPRUNG STRUCTURE FLOOR PLAN

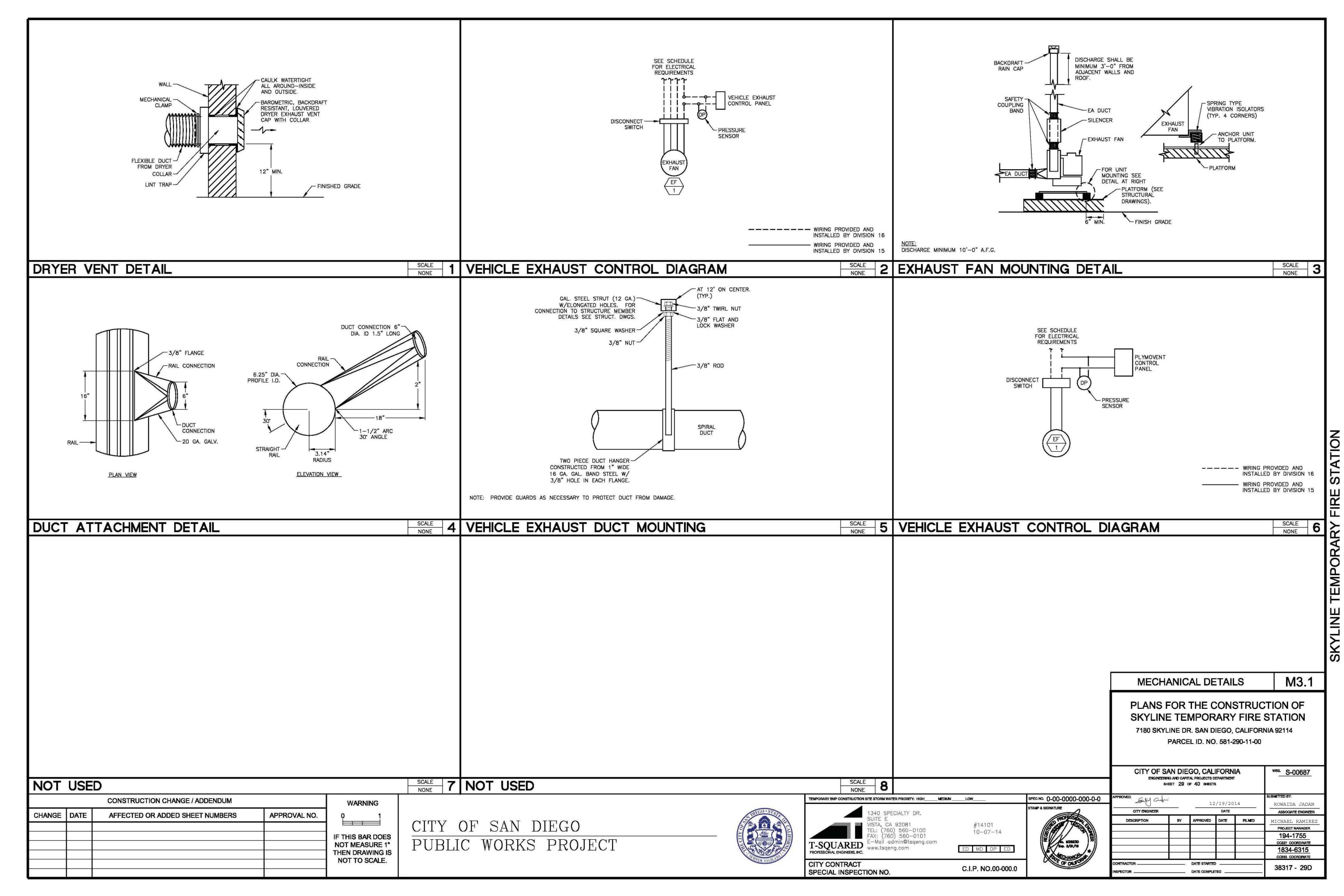
CONSTRUCTION CHANGE / ADDENDUM WARNING CHANGE DATE APPROVAL NO. AFFECTED OR ADDED SHEET NUMBERS IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

CITY OF SAN DIEGO PUBLIC WORKS PROJECT



SPECIAL INSPECTION NO.

C.I.P. NO.00-000.0



- 1.01 GENERAL REQUIREMENTS A. THE GENERAL CONDITIONS, SUPPLEMENTARY CONDITIONS, SPECIAL REQUIREMENTS, AND APPLICABLE PORTIONS OF DIVISION 1 OF THE SPECIFICATION ARE A PART OF THIS DIVISION AND THE REQUIREMENTS CONTAINED HEREIN ARE SUPPLEMENTARY TO
- B. THIS DIVISION IS AN INTEGRATED WHOLE COMPRISING INTERRELATED AND INTERDEPENDENT SECTIONS AND SHALL BE CONSIDERED IN ITS ENTIRETY IN DETERMINING REQUIREMENTS.
- REFER TO OTHER SECTIONS OF THIS DIVISION FOR ADDITIONAL REQUIREMENTS OR INFORMATION REGARDING THE SUBJECTS OF THIS SECTION.
- A. PROVIDE A COMPLETE AND OPERABLE INSTALLATION, INCLUDING ALL LABOR SUPERVISION, MATERIALS, EQUIPMENT, TOOLS, APPARATUS, TRANSPORTATION WAREHOUSING, RIGGING, SCAFFOLDING AND OTHER EQUIPMENT AND SERVICES NECESSARY TO ACCOMPLISH THE WORK IN ACCORDANCE WITH THE INTENT AND MEANING OF THESE DRAWINGS AND SPECIFICATIONS.

#### 1.03 RELATED WORK

- A. COORDINATION: REFER TO ARCHITECTURAL, CIVIL, STRUCTURAL, AND ELECTRICAL DRAWINGS FOR THE CONSTRUCTION DETAILS AND COORDINATE THE WORK OF THIS DIVISION WITH THAT OF OTHER DIVISIONS. ORDER THE WORK OF THIS DIVISION SO THAT PROGRESS WILL HARMONIZE WITH THAT OF OTHER DIVISIONS AND ALL WORK WILL PROCEED EXPEDITIOUSLY. THE WORK OF THIS DIVISION SHALL INCLUDE DIRECT RESPONSIBILITY FOR THE CORRECT PLACING AND CONNECTION OF MECHANICAL WORK IN RELATION TO THE WORK OF OTHER DIVISIONS.
- EXAMINE OTHER DIVISIONS FOR WORK RELATED TO THE WORK OF THIS DIVISION ESPECIALLY DIVISION 16 - ELECTRICAL.

#### 1.04 EXISTING CONDITIONS

- A. VISIT THE SITE PRIOR TO BIDDING AND INVESTIGATE THE EXISTING CONDITIONS WHICH AFFECT OR WILL BE AFFECTED BY THE WORK OF THIS DIVISION. BECOME THOROUGHLY FAMILIAR WITH THE WORKING CONDITIONS AND TAKE INTO ACCOUNT ANY SPECIAL OR UNUSUAL FEATURES PECULIAR TO THIS JOB. BY THE ACT OF SUBMITTING A BID, THE CONTRACTOR WILL BE DEEMED TO HAVE COMPLIED WITH THE FORGOING, TO HAVE ACCEPTED SUCH CONDITIONS, AND TO HAVE MADE ALLOWANCE THEREFORE IN PREPARING HIS BID.
- B. THE LOCATIONS OF EXISTING CONCEALED UTILITY LINES ARE SHOWN IN ACCORDANCE WITH REFERENCE DATA RECEIVED BY THE ARCHITECT. THE ARCHITECT DOES NOT GUARANTEE THE ACCURACY OF SUCH DATA. THE POINTS OF CONNECTION ARE THEREFORE APPROXIMATE AND THE BIDDER SHALL INCLUDE ADEQUATE FUNDS IN HIS BID TO COVER COSTS OF CONNECTION REGARDLESS OF THEIR EXACT LOCATION.
- C. EXERCISE EXTREME CAUTION DURING TRENCHING OPERATIONS, REPAIR THE DAMAGE CAUSED BY SUCH OPERATIONS TO EXISTING UTILITY LINES AT NO COST TO THE OWNER, WHETHER THE LINES ARE SHOWN ON DRAWINGS OR NOT.

#### 1.05 DRAWINGS AND SPECIFICATIONS

- A. DRAWINGS AND SPECIFICATIONS ARE INTENDED TO COMPLEMENT EACH OTHER. WHERE A CONFLICT EXISTS BETWEEN THE REQUIREMENTS OF THE DRAWINGS AND/OR THE SPECIFICATIONS, REQUEST CLARIFICATION.
- B. THE ARCHITECT SHALL INTERPRET THE DRAWINGS AND THE SPECIFICATIONS, AND HIS DECISION AS TO THE TRUE INTENT AND MEANING THEREOF AND THE QUALITY, QUANTITY, AND SUFFICIENCY OF THE MATERIALS AND WORKMANSHIP FURNISHED THERE UNDER SHALL BE ACCEPTED AS FINAL AND CONCLUSIVE
- C. IN CASE OF CONFLICT NOT CLARIFIED PRIOR TO BIDDING DEADLINE, USE THE MOST COSTLY ALTERNATIVE (BETTER QUALITY, GREATER QUANTITY, OR LARGER SIZE) IN PREPARING THE BID. A CLARIFICATION WILL BE ISSUED TO THE SUCCESSFUL BIDDER AS SOON AS FEASIBLE AFTER THE AWARD AND IF APPROPRIATE A DEDUCTIVE CHANGE ORDER WILL BE ISSUED.
- D. ALL PROVISIONS SHALL BE DEEMED MANDATORY EXCEPT AS EXPRESSLY INDICATED AS OPTIONAL BY THE WORD "MAY" OR "OPTION".

A. BY SUBMITTING A BID. CONTRACTOR IS DEEMED TO REPRESENT HIMSELF AS COMPETENT TO ACCOMPLISH THE WORK OF THIS DIVISION IN CONFORMANCE WITH ALL APPLICABLE CODES. IN CASE OF CONFLICT BETWEEN THE CONTRACT DOCUMENTS AND THE CODE REQUIREMENTS. THE CODES SHALL TAKE PRECEDENCE SHOULD SUCH CONFLICTS APPEAR, CEASE WORK ON THE PARTS OF THE CONTRACT AFFECTED AND IMMEDIATELY NOTIFY THE ARCHITECT IN WRITING, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CORRECT. AT NO COST TO THE OWNER, ANY WORK HE EXECUTES IN VIOLATION OF CODE REQUIREMENTS. SPECIFY REFERENCES TO CODES ELSEWHERE IN THIS DIVISION ARE EITHER TO AID THE CONTRACTOR IN LOCATING APPLICABLE INFORMATION OR TO DENY HIM PERMISSION TO USE OPTIONS WHICH ARE PERMITTED BY CODES. WHERE CONFLICT OR VARIATION EXISTS AMONG CODES, THE MOST STRINGENT SHALL GOVERN.

# PART 2 PRODUCTS

# 2.01 MATERIALS AND EQUIPMENT

- A. STANDARD PRODUCTS: MATERIALS AND EQUIPMENT SHALL BE ESSENTIALLY THE STANDARD CATALOGED PRODUCTS OF MANUFACTURERS REGULARLY ENGAGED IN PRODUCTION OF SUCH MATERIALS OR EQUIPMENT AND SHALL BE THEIR LATEST STANDARD DESIGNS THAT COMPLY WITH THE SPECIFICATION REQUIREMENTS. MATERIALS AND EQUIPMENT SHALL DUPLICATE ITEMS THAT HAVE BEEN IN SATISFACTORY COMMERCIAL OR INDUSTRIAL USE AT LEAST TWO YEARS PRIOR TO BID OPENING. WHERE TWO OR MORE UNITS OF THE SAME TYPE OF EQUIPMENT ARE REQUIRED, THESE UNITS SHALL BE PRODUCTS OF A SINGLE MANUFACTURER. THE COMPONENTS THEREOF, HOWEVER, ARE NOT REQUIRED TO BE EXCLUSIVELY OF THE SAME MANUFACTURER. EACH MAJOR COMPONENT OF EQUIPMENT SHALL HAVE MANUFACTURER'S NAME, ADDRESS, MODEL, AND SERIAL NUMBER ON A NAMEPLATE SECURELY AFFIXED IN A CONSPICUOUS PLACE. THE NAMEPLATE OF THE DISTRIBUTING AGENT WILL NOT BE ACCEPTABLE
- WHENEVER ON THE PLANS, OR IN THESE SPECIFICATIONS, PRODUCTS ARE IDENTIFIED BY THE NAME OF ONE MANUFACTURER, IT IS INTENDED THAT EQUIVALENT PRODUCTS OF OTHER MANUFACTURERS ARE ACCEPTABLE. UNLESS OTHERWISE INDICATED, IF ACCEPTED AS A SUBSTITUTION BY THE ARCHITECT. WHERE THREE OR MORE MANUFACTURERS ARE LISTED AS "ACCEPTABLE MANUFACTURERS" HOWEVER, THEN THE PRODUCTS FURNISHED SHALL BE THE PRODUCT OF ONE OF THE MANUFACTURERS LISTED. MANUFACTURERS LISTED AS "ACCEPTABLE MANUFACTURERS" SHALL MEET QUALITY AND PERFORMANCE OF A PARTICULAR ONE SPECIFIED BY BOTH NAME AND CATALOG NUMBER.

# 2.02 SUBSTITUTIONS

A. GENERAL: SHOULD THE CONTRACTOR DESIRE TO SUBSTITUTE FOR SPECIFIED PRODUCTS, HE SHALL SUBMIT WITH THE MATERIAL LIST A COMPLETE LIST OF THE REQUESTED SUBSTITUTIONS. THE REQUEST SHALL CONTAIN COMPLETE DESCRIPTIVE INFORMATION OF THE PRODUCTS. SAMPLES FOR EVALUATION SHALL ALSO BE SUBMITTED UPON THE ARCHITECT'S REQUEST. IF IN THE ARCHITECT'S OPINION THE PRODUCTS AS PRESENTED IN THIS FIRST SUBMITTAL ARE IN VARIANCE WITH THE SPECIFIED PRODUCTS, OR IF THE INFORMATION SUBMITTED IS NOT SUFFICIENTLY COMPLETE TO ALLOW PROPER EVALUATION, THE SUBSTITUTION WILL BE DISALLOWED FROM CONSIDERATION AND THE SPECIFIED PRODUCTS SHALL BE FURNISHED. BY PROPOSING A SUBSTITUTION. IT IS DEEMED THAT THE CONTRACTOR SHALL BEAR THE COST OF ANY CHANGES (WHETHER ARCHITECTURAL, STRUCTURAL, ELECTRICAL OR MECHANICAL) NECESSARY TO ACCOMMODATE THE SUBSTITUTION

# 2.03 SUBMITTALS

CHANGE

# A. GENERAL:

DATE

. PROVIDE FOR ALL ITEMS IN ACCORDANCE WITH THE DIVISION 1 SECTION COVERING SUBMITTALS AND AS HEREIN SPECIFIED. WHERE WARRANTY OF LONGER THAN ONE YEAR IS SPECIFIED, INCLUDE SUCH WARRANTY WITH SUBMITTAL. ARCHITECT'S REVIEW OF THE SUBMITTAL IS ONLY FOR GENERAL CONFORMANCE WITH DESIGN COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR CONFORMATION AND

CONSTRUCTION CHANGE / ADDENDUM

AFFECTED OR ADDED SHEET NUMBERS

- CORRELATION OF THE DIMENSIONS, QUANTITIES AND SIZES, FOR INFORMATION THAT PERTAINS TO FABRICATION METHODS OR CONSTRUCTION TECHNIQUES, AND FOR COORDINATION OF WORK OF ALL DIVISIONS OF THE WORK. DEVIATIONS, IF ANY, FROM CONTRACT DOCUMENTS SHALL BE CLEARLY AND COMPLETELY INDICATED (BY A SEPARATE LETTER IF DEVIATIONS ARE EXTENSIVE) IN THE SUBMITTALS, AND THE LACK OF SUCH IS DEEMED COMPLETE COMPLIANCE WITH CONTRACT DOCUMENTS WITHOUT ANY DEVIATIONS. SUBMITTALS FAVORABLY PROCESSED WILL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR DEVIATIONS NOT SO REPORTED NOR FOR ERRORS IN THE SUBMITTAL.
- 2. ALL SUBMITTALS SHALL BE COMPLETE AND WITH CATALOG DATA AND INFORMATION PROPERLY MARKED TO SHOW, AMONG OTHER THINGS, EQUALITY OF MATERIAL (WHERE SUBSTITUTION IS ALLOWED AND DESIRED), ADEQUACY IN CAPACITY AND PERFORMANCE TO MEET MINIMUM CAPACITIES OF PERFORMANCE AS SPECIFIED OR INDICATED. ARRANGE THE SUBMITTALS IN THE SAME SEQUENCE AS THESE SPECIFICATIONS, AND REFERENCE (AT THE UPPER RIGHT-HAND CORNER) THE PARTICULAR SPECIFICATION PROVISION FOR WHICH EACH SUBMITTAL IS INTENDED. COMPLETE DESCRIPTIVE SUBMITTALS ARE REQUIRED FOR ALL DIVISION 15 WORK. INCOMPLETE SUBMITTALS WILL BE REJECTED.
- B. SHOP DRAWINGS: SUBMIT SHOP DRAWINGS WITH SUCH PROMPTNESS AS TO CAUSE NO DELAY IN THE WORK. DO NOT COMMENCE FABRICATION OF THE EQUIPMENT UNTIL THE APPROVED DRAWINGS ARE RECEIVED FROM THE OWNER'S REPRESENTATIVE.

#### PART 3 EXECUTION

### 3.01 WORKMANSHIP AND INSTALLATION METHODS

- A. WORKMANSHIP SHALL BE IN THE BEST STANDARD PRACTICE OF THE TRADE.
- B. EXECUTE THE WORK SO AS TO CONTRIBUTE TO EASE OF OPERATION AND MAINTENANCE, MAXIMUM ACCESSIBILITY AND BEST APPEARANCE. EXECUTE IT SO THAT THE INSTALLATION WILL CONFORM AND ADJUST ITSELF TO THE BUILDING STRUCTURE, ITS EQUIPMENT AND ITS USAGE. THE WORK SHALL BE SYMMETRICAL, PLUMB, UNIFORM, PROPERLY ALIGNED, AND FIRMLY SECURED IN PLACE.
- C. INSTALL EQUIPMENT IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS UNLESS OTHERWISE NOTED OR SPECIFIED.

### 3.02 DELIVERY, HANDLING, STORAGE OF MATERIALS AND PROTECTION OF WORK

- A. PROTECT MATERIALS AGAINST DIRT, WATER, CHEMICAL AND MECHANICAL DAMAGE BOTH WHILE IN STORAGE AND DURING CONSTRUCTION.
- B. COVER MATERIALS IN SUCH A MANNER THAT NO FINISHED SURFACES WILL BE DAMAGED, MARRED OR SPLATTERED WITH PLASTER OR PAINT AND ALL MOVING PARTS WILL BE KEPT CLEAN AND DRY.
- C. REPLACE OR REFINISH ANY DAMAGED MATERIALS INCLUDING FRONTS OF CONTROL PANELS, DUCTWORK FITTINGS, AND SHOP FABRICATED DUCTWORK.
- D. KEEP CABINETS AND OTHER OPENINGS CLOSED TO PREVENT ENTRY OF FOREIGN
- E. COVER ENDS OF DUCTWORK NOT YET CONNECTED TO AIR DISTRIBUTION DEVICES UNTIL FINAL CONNECTION HAS BEEN MADE. 3.03 CLEANUP AND HOUSEKEEPING
- A. CLEANING SHALL BE DONE AS THE WORK PROCEEDS. PERIODICALLY REMOVE WASTE AND DEBRIS TO KEEP THE SITE AS CLEAN AS IS PRACTICAL.
- B. LEAVE EXPOSED PARTS OF THE MECHANICAL WORK IN A NEAT, CLEAN AND USABLE CONDITION, WITH PAINTED SURFACES UNBLEMISHED AND PLATED METAL SURFACES

#### 3.04 PROJECT CONDITIONS

#### A. SITE EXAMINATIONS AND CONDITIONS:

- 1. REGARD INFORMATION RELATIVE TO EXISTING CONDITIONS, SERVICES AND STRUCTURE AS APPROXIMATE ONLY. VERIFY DIMENSIONS AND LOCATIONS, AND BE KNOWLEDGEABLE OF ALL WORKING CONDITIONS BEFORE SUBMITTING BID. VERIFY PRESSURE, LOCATION, SIZE, AND ELEVATION OF EXISTING SERVICES (TO WHICH POINTS OF CONNECTION ARE TO BE MADE OR CROSSED) AS SOON AS POSSIBLE AND PRIOR TO COMMENCEMENT OF ANY NEW WORK.
- 2. MAKE MINOR DEVIATIONS NECESSARY TO CONFORM WITH ACTUAL LOCATIONS AND CONDITIONS. SUBMISSION OF BID PRESUMES PROPER EXAMINATION OF SITE, LOCATIONS, DIMENSIONS AND CONDITIONS, AND NO ADDITIONAL COST WILL BE HONORED FOR LACK OF SUCH EXAMINATIONS.
- B. EXISTING SERVICES: EXAMINE THE CONTRACT DRAWINGS AND VISIT THE PROJECT SITE TO ASCERTAIN THE EXTENT OF THE EXISTING SERVICES. WHERE EXISTING EQUIPMENT/SERVICES SERVING EXISTING STRUCTURES AND/OR EXISTING STRUCTURÉS TO BE DEMOLISHED ARE TO REMAIN IN SERVICE. REROUTE. RELOCATE OR EXTEND SUCH EXISTING EQUIPMENT AND/OR SERVICES TO ACCOMMODATE THIS PROJECT WITHOUT ADDITIONAL COST.
- C. INTERRUPTION OF EXISTING SERVICES: WHERE IT IS NECESSARY TO REPOUTE EXISTING SERVICES OR UTILITIES, OR TO MAKE CONNECTIONS OF NEW WORK TO EXISTING SERVICES OR UTILITIES, GIVE TIMELY WRITTEN NOTICE OF SUCH INTENT TO THE OWNER AND SECURE WRITTEN APPROVAL BEFORE PROCEEDING. MAKE ALL SUCH INTERRUPTIONS AT SUCH TIME AS PERMITTED BY THE OWNER. ANTICIPATE SUCH INTERRUPTIONS TO BE MADE OUTSIDE OF NORMAL WORKING HOURS OR NORMAL WORKING DAYS: THEREFORE, NO ADDITIONAL COST WILL BE PERMITTED FOR SUCH WORK. EXCEPT IN A CASE OF EMERGENCY INVOLVING LIFE, LIMB OR HEALTH, DO NOT OPERATE ANY EXISTING EQUIPMENT (INCLUDING VALVES). WHERE SUCH OPERATIONS ARE NECESSARY, THEY SHALL BE PERFORMED BY THE OWNER'S PERSONNEL.

# D. ACCESS AND PLACEMENT OF WORK:

- 1. CHECK AND COORDINATE FOR CLEARANCE, ACCESSIBILITY AND PLACEMENT OF EQUIPMENT EITHER BY GOING THROUGH OPENINGS PROVIDED OR BY PLACING FOURMENT DURING CONSTRUCTION, ORDERING OF FOURMENT TO BE SHIPPED. DISASSEMBLED, OR DISASSEMBLY OF EQUIPMENT AT PROJECT SITE AND RE-ASSEMBLY OF EQUIPMENT TO ACCOMPLISH THIS REQUIREMENT SHALL BE EXECUTED WITHOUT ADDITIONAL COST. WHERE PROVIDED OPENINGS ARE INADEQUATE TO ACCOMMODATE EQUIPMENT, PROVIDE NEW OPENINGS AND RESTORATION OF SAME, ALL AT NO ADDITIONAL COST. OBTAIN WRITTEN APPROVAL FOR NEW OPENINGS BEFORE PROCEEDING.
- 2. VERIFY LOCATION OF ALL PLUMBING FIXTURES AND EQUIPMENT WITHIN FINISHED SPACES WITH THE ARCHITECTURAL DRAWINGS. IN THE EVENT THAT MECHANICAL DRAWINGS DO NOT INDICATE EXACT LOCATIONS, OR ARE IN CONFLICT WITH THE ARCHITECTURAL DRAWINGS, OBTAIN INFORMATION REGARDING PROPER LOCATIONS INSTALLATION OF WORK WITHOUT PROPER INSTRUCTION UNDER SUCH CIRCUMSTANCES WILL RESULT IN RELOCATION OF WORK, WHEN DIRECTED WITHOUT ADDITIONAL COST.
- 3. VERIFICATION AND COORDINATION: DRAWINGS INDICATING SUGGESTED DISTRIBUTION ROUTES ARE DIAGRAMMATIC ONLY, AND ALL SCALED AND FIGURED DIMENSIONS ARE APPROXIMATE AND ARE INDICATED FOR ESTIMATING PURPOSES ONLY. THE DRAWINGS DO NOT INDICATE NECESSARY OFFSETS AND LIKE ITEMS. DO NOT CONSTRUE CONTRACT DRAWINGS AS FABRICATION DRAWINGS. PRIOR TO FABRICATION AND INSTALLATION OF WORK, VERIFY ALL DIMENSIONS, SIZES AND DISTRIBUTION ROUTES WITH ACTUAL CONDITIONS, AND PREPARE SUBMITTAL AND FABRICATION DRAWINGS. COORDINATE TO AVOID POSSIBLE CONFLICTS AND RESOLVE SAME WHERE SUCH EXIST. INSTALL WORK TO CONFORM TO STRUCTURE, AVOID OBSTRUCTION, PRESERVE HEADROOM, AND KEEP OPENINGS AND PASSAGEWAY CLEAR. CHANGES NECESSARY, RESULTING FROM SUCH VERIFICATION AND COORDINATION, SHALL NOT BE CAUSE FOR ADDITIONAL COST.

APPROVAL NO.

A. GUARANTEE, IN WRITING, ALL WORK AGAINST FAULT OF ANY PRODUCT OR WORKMANSHIP FOR A PERIOD OF NOT LESS THAN ONE YEAR AFTER FORMAI ACCEPTANCE BY THE OWNER; EXCEPT, WHERE LONGER PERIODS ARE SPECIFIED IN THE SPECIFICATIONS, SUCH LONGER PERIODS SHALL GOVERN. HOWEVER, WHEN ANY COMPONENT FAILS AT ANY TIME DURING THIS PERIOD, THE WARRANTY PERIOD FOR SUCH COMPONENT AND ALL OTHER COMPONENTS THAT ARE INACTIVE BECAUSE OF SAID FAILURE SHALL BE SUSPENDED. THE WARRANTY PERIOD FOR SUCH COMPONENT SHALL RESUME RUNNING FOR THE REMAINING PORTION OF THE WARRANTY PERIOD WHEN FAILED COMPONENT IS COMPLETELY REPAIRED AND IN OPERATION; HOWEVER, IN NO CASE SHALL THE RESUMED PORTION OF THE WARRANTY PERIOD BE LESS THAN 3 MONTHS IN DURATION.

B. NEITHER PAYMENTS FOR WORK, NOR TOTAL OR PARTIAL OCCUPANCY OF WORK BY

THE OWNER, WITHIN OR PRIOR TO THE WARRANTY PERIOD SPECIFIED, SHALL BE CONSTRUED AS ACCEPTANCE OF FAULTY WORK OR SHALL CONDONE ANY NEGLIGENCE OF OMISSION OF CONTRACTOR IN DOING THE WORK.

#### 3.06 SAFETY REQUIREMENTS

A. ENCLOSE AND GUARD BELTS, PULLEYS, CHAINS, GEARS, COUPLINGS, PROJECTING SETSCREWS, KEYS AND OTHER ROTATING PARTS IN ACCORDANCE WITH THE OSHA 1910.219. INSULATE, GUARD, AND COVER ANY HIGH-TEMPERATURE EQUIPMENT AND PIPING SO LOCATED AS TO ENDANGER PERSONNEL OR CREATURE A FIRE HAZARD.

#### 3.07 MANUFACTURER'S RECOMMENDATIONS

A. WHERE INSTALLATION PROCEDURES OR ANY PART THEREOF ARE REQUIRED TO BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE MANUFACTURER OF THE MATERIAL OR EQUIPMENT BEING INSTALLED, FURNISH PRINTED COPIES OF THESE RECOMMENDATIONS TO THE INSTALLING CONTRACTOR AND ARCHITECT PRIOR TO INSTALLATION. DO NOT PROCEED WITH THE INSTALLATION OF THE ITEM UNTIL THE RECOMMENDATIONS ARE RECEIVED. FAILURE TO FURNISH THESE RECOMMENDATIONS CAN BE CAUSE FOR REJECTION OF THE MATERIAL.

#### END OF SECTION 15010

#### SECTION 15800 - DUCTWORK AND ACCESSORIES

#### PART 1 GENERAL

#### 1.01 GENERAL REQUIREMENTS

A. ALL DUCTWORK SHALL ADHERE TO THE STRICTEST OF REGULATIONS AS REFERENCED IN THE SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION, INC. (SMACNA) PUBLICATIONS, UNIFORM MECHANICAL CODE, APPLICABLE EDITION (UMC), UNIFORM BUILDING CODE, APPLICABLE EDITION (UBC), AND NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) STANDARDS.

#### PART 2 PRODUCTS 2.01 SHEET METAL MATERIALS [S]

- A. GALVANIZED STEEL SHEETS: GALVANIZED SHEET STEEL (ASTM A 527) OF LOCK FORMING QUALITY, WITH A MINIMUM COATING OF 1-1/4 OUNCES ZINC TOTAL FOR BOTH SIDES PER SQUARE FOOT CONFORMING TO THE REQUIREMENTS OF UMC. 2.02 DUCTS SERVING DRYER EXHAUST SYSTEMS [S]
- A. CONSTRUCT DUCTWORK OF GALVANIZED STEEL SHEETS. DUCTS SHALL HAVE A SMOOTH SEAMLESS INTERIOR SURFACE.
  - 1. CURVED ELBOWS: MAKE A CENTERLINE RADIUS NOT LESS THAN 1-1/2 TIMES
  - THE WIDTH OR DIAMETER OF THE DUCT. UTILIZE LONG RADIUS ELBOWS WHERE SPACE PERMITS. C. JOINTS: MAKE SUBSTANTIALLY AIRTIGHT. NO DUST MARK FROM AIR LEAKS SHALL
  - SHOW AT DUCT JOINTS OR CONNECTIONS TO HOODS OR LOUVERS. D. LAPS: MAKE LAPS AT JOINTS IN THE DIRECTION OF AIRFLOW. BUTTON-PUNCH OR BOLT-CONNECTION IN STANDING SEAMS SHALL BE SPACED AT FIXED CENTERS NOT
  - GREATER THAN 6-INCHES. HORIZONTAL LOCKS OR SEAMS, KNOWN AS "BUTTON PUNCH SNAP-LOCK" MAY BE USED IN LIEU OF PITTSBURGH LOCK. E. FITTINGS: ELBOWS, TAKE-OFFS, TRANSITIONS, AND FLEXIBLE CONNECTIONS SHALL
  - CONFORM WITH SMACNA HVAC DCS. F. JOINTS AND SEAMS: ALL JOINTS AND SEAMS SHALL HAVE A SMOOTH SEAMLESS

#### INTERIOR SURFACE. 2.03 FLEXIBLE DUCT CONNECTORS [S]

- A. CONFORMS TO NFPA 90A, UL LISTED, PRE-FABRICATED TYPE WITH MINIMUM 3-INCH WIDE FLEXIBLE FABRIC STRIP AND TWO STRIPS OF MINIMUM 2-3/4-INCH WIDE, 24-GAUGE GALVANIZED OR IRON FIRMLY ATTACHED TO THE FABRIC STRIP. FLEXIBLE MATERIALS SHALL BE RATED FOR THE TEMPERATURES, PRESSURES, GASES CONVEYED, AND ATMOSPHERIC CONDITIONS.
- 1. INDOOR LOCATIONS: HEAVY GLASS FABRIC COATED ON ONE SIDE WITH NEOPRENE, MINIMUM 30 OUNCES PER SQUARE YARD; DURO DYNE "METAL FAB NEOPRENE-LA (SPECIFICATIONS GRADE)", VENTFABRICS "24 GA. METALEDGE VENTGLAS-LA", OR APPROVED EQUIVALENT.
- 2. OUTDOOR LOCATIONS (EXPOSED TO WEATHER): HEAVY GLASS OR NYLON FABRIC COATED WITH HYPALON OR VINYL; MINIMUM 22 OUNCES PER SQUARE YARD WEIGHT; DURO DYNE "METAL FAB EXCELON", VENTFABRICS "24 GA. METALEDGE VENTLON". OR APPROVED EQUIVALENT.
- B. FLEXIBLE CONNECTORS FOR EXHAUST SYSTEMS SHALL BE COMPATIBLE TO THE SPECIFIC SYSTEM EXHAUST AIR AND SHALL BE RESISTANT TO FUMES, VAPORS, AND CORROSIVE MIXTURES.
- ALL CONNECTORS SHALL PROVIDE MINIMUM 2-INCH CLEARANCE BETWEEN METAL PARTS AT ALL FAN AND UNIT CONNECTIONS. 2.04 JOINT SEALERS AND SEALANTS [S]
- A. JOINT SEALERS AND SEALANTS SHALL BE NON-HARDENING, WATER RESISTANT, MILDEW AND MOLD RESISTANT.
  - 1. TYPE: HEAVY MASTIC OR LIQUID USED ALONE OR WITH TAPE, SUITABLE FOR JOINT CONFIGURATION AND COMPATIBLE WITH SUBSTRATES, AND RECOMMENDED BY MANUFACTURER FOR PRESSURE CLASS OF DUCTS.
  - 2. VOC CONTENT: NOT MORE THAN 250 G/L, EXCLUDING WATER. 3. SURFACE BURNING CHARACTERISTICS: FLAME SPREAD OF ZERO, SMOKE DEVELOPED OF ZERO, WHEN TESTED IN ACCORDANCE WITH ASTM E 84.

# 2.05 HANGERS [S]

- A. HANGER ROD: ASTM A 36/A 36M; STEEL, GALVANIZED; THREADED BOTH ENDS, ONE END, OR CONTINUOUSLY THREADED.
- 2.06 CLEANING SYSTEMS

4. FOR USE WITH FLEXIBLE DUCTS: UL LABELED.

- A. MARK POSITION OF DAMPERS AND AIR-DIRECTIONAL MECHANICAL DEVICES BEFORE CLEANING, AND PERFORM CLEANING BEFORE AIR BALANCING.
- AND FOR INSPECTION. CREATE OTHER OPENINGS TO COMPLY WITH DUCT STANDARDS. 2. DISCONNECT FLEXIBLE DUCTS AS NEEDED FOR CLEANING AND INSPECTION.

B. USE SERVICE OPENINGS, AS REQUIRED, FOR PHYSICAL AND MECHANICAL ENTRY

- 3. REMOVE AND REINSTALL CEILING SECTIONS TO GAIN ACCESS DURING THE CLEANING PROCESS. C. VENT VACUUMING SYSTEM TO THE OUTSIDE. INCLUDE FILTRATION TO CONTAIN
- DEBRIS REMOVED FROM HVAC SYSTEMS, AND LOCATE EXHAUST DOWN WIND AND AWAY FROM AIR INTAKES AND OTHER POINTS OF ENTRY INTO BUILDING.
- D. CLEAN THE FOLLOWING METAL DUCT SYSTEMS BY REMOVING SURFACE CONTAMINANTS AND DEPOSITS: 1. AIR OUTLETS AND INLETS (REGISTERS, GRILLES, AND DIFFUSERS).
- RETURN—AIR DUCTS, DAMPERS, AND ACTUATORS.
- 4. SUPPLY-AIR DUCTS, DAMPERS, ACTUATORS, AND TURNING VANES.
- E. MECHANICAL CLEANING METHODOLOGY: 1. CLEAN METAL DUCT SYSTEMS USING MECHANICAL CLEANING METHODS THAT

2. SUPPLY, RETURN, AND PLENUMS, DAMPERS AND TERMINAL DEVICES.

- EXTRACT CONTAMINANTS FROM WITHIN DUCT SYSTEMS AND REMOVE CONTAMINANTS FROM THE BUILDING. 2. USE VACUUM-COLLECTION DEVICES THAT ARE OPERATED CONTINUOUSLY DURING
- SO AREAS BEING CLEANED ARE UNDER NEGATIVE PRESSURE 3. USE MECHANICAL AGITATION TO DISLODGE DEBRIS ADHERED TO INTERIOR DUCT SURFACES WITHOUT DAMAGING INTEGRITY OF METAL DUCTS, DUCT LINER, OR

CLEANING. CONNECT VACUUM DEVICE TO DOWNSTREAM END OF DUCT SECTIONS

DUCT ACCESSORIES. 4. CLEAN FIBROUS-GLASS DUCT LINER WITH HEPA VACUUMING EQUIPMENT: DO NOT PERMIT DUCT LINER TO GET WET.

#### F. CLEANLINESS VERIFICATION:

- 1. VISUALLY INSPECT METAL DUCTS FOR CONTAMINANTS
  - 2. WHERE CONTAMINANTS ARE DISCOVERED, RE-CLEAN AND REINSPECT DUCTS.

#### PART 3 EXECUTION

#### 3.01 INSTALLATION A. DUCTWORK, LOW PRESSURE:

- 1. GENERAL: FABRICATE AND INSTALL IN ACCORDANCE WITH NFPA 90A AND SMACNA "HVAC DUCT CONSTRUCTION STANDARDS", AND UNLESS OTHERWISE SPECIFIED OR INDICATED, WITH THE FOLLOWING REVISIONS.
- a. USE AIRFOIL VANES ONLY.
- b. ALSO PROVIDE DUCT ACCESS PANEL DOWNSTREAM OF COILS.
- USE ADHESIVE PLUS METAL SCREWS ON METALLIC FLEXIBLE DUCT. DO NOT USE CRIMP JOINTS.
- PROVIDE TOTALLY ENCLOSED BELT GUARDS. ALL PLENUMS SHALL HAVE CASING CONSTRUCTION.
- BE TOTALLY RESPONSIBLE FOR PROPER DUCTWORK HANGING SYSTEM. USE DOUBLE NUTS AND LOCK WASHERS ON ALL THREADED ROD
- 2. PROVIDE DUCTWORK INSTRUMENT ACCESS WHERE REQUIRED TO BALANCE THE SYSTEMS AND FOR THE FOLLOWING:
- a. SUCTION AND DISCHARGE OF EACH FAN UNIT.
- b. OUTSIDE AIR DUCTS AND RETURN AIR DUCTS OF EACH AIR SYSTEM. EACH HEAT TRANSFER COIL, UPSTREAM AND DOWNSTREAM.
- d. EACH LOCATION WHERE CONTROL OR SENSING DEVICES ARE LOCATED. 3. TAPE TO MAKE AIRTIGHT ALL TRANSVERSE AND LONGITUDINAL JOINTS (INCLUDING TAP-IN CONNECTIONS) WITH TAPE DIPPED IN LAGGING ADHESIVE AND INSTALLED PER MANUFACTURER'S PRINTED INSTRUCTION; EXPOSED DUCTS IN CONDITIONED
- 4. SOLDER OR SEAL WITH SEALANT TO MAKE WATERTIGHT ALL SEAMS AND JOINTS
- OF DUCTWORK EXPOSED TO WEATHER. 5. DUCTWORK DIMENSIONS INDICATED ARE NET INSIDE DIMENSIONS. INCREASE DUCTWORK TO ALLOW FOR INSULATION THICKNESS WHERE SUCH ARE LINED.
- 6. VERIFY, COORDINATE AND LOCATE OUTSIDE AIR INTAKES TO KEEP AT LEAST 10-FEET AWAY FROM PLUMBING VENTS.

# END OF SECTION 15800

SPACES EXCEPTED

# SECTION 15838 - VEHICLE EXHAUST REMOVAL SYSTEMS

# PART 1 GENERAL

1.01 RELATED DOCUMENTS

CONDITIONS OF THE CONTRACT AND PORTIONS OF DIVISION ONE OF THIS PROJECT MANUAL APPLY TO THIS SECTION AS THOUGH REPEATED HEREIN.

PROVIDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO PUT IN WORKING OPERATION A COMPLETE TURNKEY SYSTEM TO REMOVE BOTH DIESEL AND AUTOMOTIVE EXHAUST GASES AND PARTICULATE OF OPERATING VEHICLES WITHIN THE CONFINES OF SPECIFIED FIRE STATION(S). ALL NECESSARY CONTROLS, MOTORS, FITTINGS, DUCTWORK BLOWER(S), LABOR AND ALL OTHER EQUIPMENT AND MATERIALS SPECIFIED SHALL BE PART OF THE WORK.

#### A. SLIDING BALANCER TRACK SECTION INCLUDES:

- SLIDING TRACK.
- SUPPORT LEGS. DOUBLE TRACK JOINER PLATE.
- TRACK SPLICING ASSEMBLY. RISER CLAMP ASSEMBLY.
- TROLLEY/BALANCER ASSEMBLY. REGULATOR ASSEMBLY.
- UNCOUPLING VALVE ASSEMBLY. UPPER FLEXIBLE HOSE,
- LOWER HOSE ASSEMBLY.
- SAFETY DISCONNECT COUPLING. COLLECTION NOZZLE ASSEMBLY.
- MANUAL FILL VALVE. COMPRESSED AIR FEATURES.
- HOSE SADDLE.
- ELECTRICAL CONTROLLERS. ELECTRICAL SYSTEM.
- 18. AIR MOVING DEVICES. 19. DUCTWORK SYSTEM
- B. ALL ITEMS OF EQUIPMENT AND MATERIALS DESCRIBED IN THESE SPECIFICATIONS ARE TO BE FURNISHED INSTALLED AND PLACED INTO PROPER OPERATING CONDITION IN ACCORDANCE WITH GOOD PRACTICE AND MANUFACTURER'S WRITTEN OR PUBLISHED INSTRUCTIONS.
- 1. THE EXHAUST REMOVAL SYSTEM SHALL PROVIDE 100 PERCENT COMPLETE EVACUATION OF ALL DIESEL FUMES AT THE SOURCE FROM START UP TO EXIT OF THE APPARATUS FROM THE FIRE STATION. THE DIESEL EXHAUST REMOVAL SYSTEM SHALL BE CAPABLE OF DELIVERING COMPLETE COVERAGE FOR BAYS UP TO 110 FEET IN LENGTH. THE SYSTEM MUST BE ABLE TO ACCOMMODATE DRIVE THROUGH AND BACK-IN BAYS TO MEET ALL THE NEEDS OF THE FIRE
- 2. THE SYSTEM SHALL NOT AFFECT PERSONNEL BOARDING THE APPARATUS. HOSE LOOPS SHALL NOT HANG ANY LOWER THEN SIX FEET FROM THE BAY FLOOR. THE HOSE ASSEMBLY SHALL NOT COME INTO CONTACT WITH THE VEHICLE OTHER THAN ONE CONNECTION POINT TO THE VEHICLES TAILPIPE. THE HOSE ASSEMBLY SHALL NOT TOUCH OR DRAG ON THE BAY FLOOR
- 3. THE EXHAUST SYSTEM SHALL NOT BLOCK DOORWAYS, EXITS, AND AISLES IN THE APPARATUS BAY, WHICH COULD ENDANGER THE WELFARE OF FIRE PERSONNEL
- 4. TO PROTECT THE APPARATUS ELECTRICAL SYSTEM FROM POSSIBLE DAMAGE, THE SYSTEM BID SHALL NOT INCORPORATE ANY TYPE OF ELECTROMAGNETIC DEVICE THAT REQUIRES THE APPARATUS TO BE UTILIZED AS AN ELECTRICAL GROUND FOR SYSTEMS OPERATION.
- 5. THE SYSTEM MUST BE DESIGNED AND CAPABLE OF CAPTURING 100% OF THE EXHAUST GAS AND PARTICULATE EVEN IN THE EVENT OF A COMPLETE POWER FAILURE. THE SYSTEM SHALL NOT DETACH ITSELF FROM THE APPARATUS FOR ANY REASON OTHER THAN NORMAL EXITING OF THE APPARATUS BAY. SYSTEM SHALL DISCHARGE EXHAUST OUTSIDE THE STATION EVEN IN THE EVENT OF A
- 6. THE SYSTEM SHALL UNDER NO CIRCUMSTANCE ALLOW EXHAUST LEAKAGE OR

# BYPASS THE NOZZLE.

- 1.03 SUBMITTALS A. PRODUCT DATA: THE VEHICLE EXHAUST REMOVAL SYSTEMS EQUIPMENT TO BE PROVIDED AS FOLLOWS: SBTA-21 SLIDING BALANCER TRACK WITH ONE DROP, ONE OS-3 CONTROL PANEL, ONE FUA-2100, 1 HP BLOWER.
- B. CLOSEOUT SUBMITTALS: OPERATION AND MAINTENANCE DATA MANUAL INCLUDING SPARE PARTS LIST.

# 1.04 QUALITY ASSURANCE

- A. ENGAGE A FACTORY CERTIFIED EXPERIENCED INSTALLER TO PERFORM WORK OF THIS SECTION WHO HAS COMPLETED INSTALLATIONS SIMILAR IN DESIGN AND EXTENT TO THAT INDICATED FOR THIS PROJECT, AND WHO HAS A RECORD OF SUCCESSFUL IN-SERVICE PERFORMANCE.
- B. ALL COMPONENTS SHALL BE FABRICATED IN STRICT ACCORD WITH STANDARDS SET FORTH IN THE CURRENT EDITION OF ISO 9002. THE MANUFACTURER MUST BE ISO 9001 CERTIFIED, UL AND CUL CERTIFIED WWW.UL.COM/DATABASE/ AND CERTIFIED BY THE AIR MOVEMENT AND CONTROL ASSOCIATION (AMCA) WWW.AMCA.ORG/SEARCH.HTM TO ENSURE QUALITY, CONSISTENCY AND RELIABILITY OF PRODUCTS. CERTIFICATION DOCUMENTS SHALL BE PROVIDED AND ATTACHED TO THE BID PROPOSAL. NO EXCEPTIONS.

A. AIR MOVEMENT & CONTROL ASSOCIATION INTERNATIONAL, INC.

EXISTING CONDITIONS: VERIFY DIMENSIONS OF INSTALLATION AREAS BY FIELD

FIXTURES, FIXED EQUIPMENT AND WORK STATIONS, HVAC EQUIPMENT.

# 1.08 REFERENCES

LOCATION.

MEASUREMENTS.

1.07 COORDINATION

AMCA STANDARD 500-D-98, "LABORATORY METHODS OF TESTING DAMPERS FOR

A. COORDINATE LAYOUT AND INSTALLATION WITH OTHER WORK, INCLUDING LIGHT

FIRE-SUPPRESSION SYSTEM COMPONENTS AND COORDINATE LOCATION AND

#### B. ASTM INTERNATIONAL. GALVANIZED STEEL

A653/A653M-04A STANDARD SPECIFICATION FOR STEEL SHEET, ZINC-COATED (GALVANIZED) OR ZINC—IRON ALLOY—COATED (GALVANNEALED) BY THE HOT—DIF

C. ENGAGE A FIRM EXPERIENCED IN MANUFACTURING SIMILAR TO THAT INDICATED FOR

INSPECT CONDITION OF PREPARATORY WORK PERFORMED BY OTHER TRADES.

5. REVIEW THAT ALL COMPONENTS SPECIFIED IN THIS SECTION AND RELATED

COMPONENTS SPECIFIED IN OTHER SECTIONS ARE ACCOUNTED FOR.

PACKING, SHIPPING, HANDLING AND UNLOADING: DELIVER HOSES WITH PROTECTIVE

PACKAGING. STORE IN ORIGINAL PROTECTIVE CRATING AND COVERING AND IN A DRY

D. CONDUCT CONFERENCE AT PROJECT SITE. REVIEW METHODS AND PROCEDURES

RELATED TO VEHICLE EXHAUST SYSTEM INSTALLATION.

4. REVIEW STRUCTURAL LOADING LIMITATIONS.

REQUIREMENTS OF SERVICE-UTILITY CONNECTIONS.

1.05 DELIVERY, STORAGE AND HANDLING

1.06 PROJECT/SITE CONDITIONS

EVIEW ACCESS REQUIREMENTS FOR EQUIPMENT DELIVERY.

2. REVIEW EQUIPMENT STORAGE AND SECURITY REQUIREMENTS.

THIS PROJECT AND WITH A RECORD OF SUCCESSFUL IN-SERVICE PERFORMANCE.

#### 1.09 BIDDER QUALIFICATIONS

BIDS WILL ONLY BE ACCEPTED FROM COMPANIES THAT HAVE AN ESTABLISHED REPUTATION IN THE BUSINESS OF SYSTEM DESIGN, TURNKEY INSTALLATION AND LONG-TERM SERVICE OF AUTOMATIC EMERGENCY RESPONSE VEHICLE EXHAUST REMOVAL SYSTEMS FOR A MINIMUM OF NO LESS THAN TEN (10) YEARS. BIDDER SHALL SHOW PROOF THAT THE SYSTEM SPECIFIED IN THIS BID DOCUMENT HAS BEEN FIELD TESTED AND PROVEN BY SUPPLYING A LIST OF REFERENCES WITH NO LESS THAN 20 FIRE STATIONS WITH SYSTEMS INSTALLED BY BIDDER (WITH COMPARABLE EMERGENCY AND NON-EMERGENCY RUN RATES) WITHIN THE STATE. REFERENCES SHALL BE SUBMITTED WITH THE BID DOCUMENT AND SHALL INCLUDE PHONE NUMBERS AND CONTACT NAMES.

#### 1.10 MANUFACTURER QUALIFICATIONS

BIDS SHALL ONLY BE ACCEPTED BY BIDDERS SUPPLYING EQUIPMENT FROM MANUFACTURERS THAT HAVE AN ESTABLISHED REPUTATION IN THE BUSINESS OF MANUFACTURING AUTOMATIC EMERGENCY RESPONSE VEHICLE EXHAUST REMOVAL SYSTEMS FOR A MINIMUM OF NO LESS THAN TEN (10) YEARS. THE MANUFACTURER MUST BE ISO 9001 CERTIFIED, UL AND CUL CERTIFIED WWW.UL.COM/DATABASE/ AND CERTIFIED BY THE AIR MOVEMENT AND CONTROL ASSOCIATION (AMCA) WWW.AMCA.ORG/SEARCH.HTM TO ENSURE QUALITY, CONSISTENCY AND RELIABILITY OF PRODUCTS. CERTIFICATION DOCUMENTS SHALL BE PROVIDED AND ATTACHED TO THE BID PROPOSAL, NO EXCEPTIONS. WHERE THE REQUIREMENT CALLS FOR A PACKAGED EXHAUST SYSTEM TO BE PROVIDED ALL ITEMS SHALL BE THE PRODUCT OF THE MANUFACTURER. THE PRODUCT OFFERING MUST BE A PRODUCT THAT HAS BEEN OFFERED BY THAT MFG. FOR A MINIMUM PERIOD OF TEN (10) YEARS. NO PROTOTYPES OR PRIVATE LABEL PRODUCTS BY OTHER MANUFACTURERS WILL BE ALLOWED. SYSTEM BID SHALL HAVE A LIFE OF SERVICE OF NO LESS THAN 10 YEARS TO ESTABLISH PROOF OF QUALITY, LONGEVITY AND SERVICE. NO EXCEPTIONS.

MECHANICAL SPECIFICATIONS

# PLANS FOR THE CONSTRUCTION OF SKYLINE TEMPORARY FIRE STATION 7180 SKYLINE DR. SAN DIEGO, CALIFORNIA 92114

M4.1

PARCEL ID. NO. 581-290-11-00

	CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS DEPARTMENT SHEET 30 OF 40 SHEETS								
APPROVED:	ah:	1:	2/19/20	)14	SUBMITTED BY:  ROWAIDA JADAN				
CITY ENGINEE	₽R	ii.	DATE		ASSOCIATE ENGINEER				
DESCRIPTION	BY	APPROVED	DATE	FILMED	MICHAEL RAMIREZ				
			l .		PROJECT MANAGER				
	4) 444 5344				1834-6315 ccsss coordinate				
CONTRACTOR		DATE STARTE			38317 - 30D				

IF THIS BAR DOES **NOT MEASURE 1'** THEN DRAWING IS NOT TO SCALE.

WARNING

CITY OF SAN DIEGO

PUBLIC WORKS PROJECT









SPECIAL INSPECTION NO.

CITY CONTRACT

TEMPORARY BMP CONSTRUCTION SITE STORM WATER PRIORITY: HIGH\_\_\_\_\_ MEDIUM \_\_\_\_\_ LOW\_\_

#14101 760) 560-0100 10-07-14 760) 560-0101 -Mail admin@tsqeng.com ED MD DP ED

C.I.P. NO.00-000.0

TAMP & SIGNATURE

SPEC NO. 0-00-0000-000-0-0

WEB: INFO@PLYMOVENTUSA.COM B. MANUFACTURER'S REPRESENTATIVE: AAIR PURIFICATION SYSTEMS 9040 KENAMAR DRIVE #402

SAN DIEGO, CA 92121 800-776-6746 858-578-3762 FAX

#### WEB: WWW.AAIRPURIFICATION.COM 2.02 SLIDING BALANCER TRACK SYSTEM

TRACK MATERIAL: A ONE-PIECE CONTINUOUS EXTRUDED ALUMINUM TRACK IN A MINIMUM LENGTH OF 19 FEET. PROFILE SHALL BE OF A BOXLOC TYPE PROFILE. TRACK HEIGHT 3-1/8 INCHES, TRACK WIDTH 1-1/2 INCHES, TRACK THICKNESS 1/8 INCH; AIRCRAFT ALUMINUM ALLOY TYPE AA-6063 (ASTM B209/B209M). TRACK: EXTRUDED DESIGN THAT SHALL INCORPORATE THREE SEPARATE AND FUNCTIONING CHANNELS. CHANNEL INCLUDES THE MOUNTING CHANNEL, THE TROLLEY CHANNEL AND THE BOXLOC CHANNEL MOUNTING COMPARTMENT: DESIGNED TO ACCEPT THE SLIDER BARS (WHICH SHALL BE PROVIDED WITH FACTORY SUPPLIED VERTICAL SUPPORT LEGS AND RISER CLAMP DUCT CONNECTION) AND TO ALLOW POSITIONING ALONG THE FULL LENGTH OF THE SLOTTED TRACK-MOUNTING CHANNEL. MOUNTING CHANNEL: ALSO ACCOMMODATE THE COMPRESSED AIRLINES FOR THE PURPOSES OF SAFE STORAGE AND APPEARANCE. TROLLEY CHANNEL: ALLOW THE TROLLEY/BALANCER/ HOSE ASSEMBLY TO GLIDE TO THE DOOR THRESHOLD IN A SAFE AND EFFECTIVE MANNER. BOXLOC CHANNEL: ALLOW THE WHOLE TRACK TO REMAIN RIGID AS IT HANGS FROM FACTORY SUPPLIED LEG SUPPORTS AND ALSO SHALL PROVIDE AN AREA TO ATTACH BOLTS FOR SPLICING ADDITIONAL TRACKS TOGETHER FOR SYSTEMS OVER 19 FEET LONG. THE OVERALL EXTRUDED TRACK LENGTHS SHALL BE 19 FOOT STANDARD AND SHALL WEIGH NO MORE THAN 35 POUNDS. THE TRACK SYSTEM SHALL BE EQUIPPED WITH END STOPS THAT LIMIT TRAVEL OF FLEX HOSE AS THE VEHICLE EXITS THE BUILDING. THE END STOP SHALL BE FABRICATED OF ZINC PLATED STEEL IN A U SHAPE FORM WITH A RUBBER END STOP ON THE IMPACT END. IT SHALL BE ATTACHED BY USING A 1/4 INCH MOLDED LOCKING BOLT. THE END STOP SHALL BE SECURED TO THE TRACK WITH NO LESS THAN (2) 1/4 INCH BOLTS AND LOCKING NUTS LOCATED ON THE UNDERSIDE OF THE TRACK. FOR SECURITY, A 1/4 INCH BOLT SHALL BE DRILLED THROUGH THE ENDS OF EACH TRACK SYSTEM TO ENSURE THAT THE TROLLEY/BALANCER ASSEMBLY(S) ROLL NO FURTHER THAN THE END OF THE TRACK SYSTEM. 2.03 SUPPORT LEGS

SUPPORT LEG AND MOUNTING FEET: MANUFACTURED AND PROVIDED BY THE SUPPLIER OF PRIMARY EXHAUST REMOVAL SYSTEM. LEG MATERIAL: AIRCRAFT ALUMINUM ALLOY TYPE AA-6063 (ASTM B209/B209M). SUPPORTS SHALL COME STANDARD IN 19 FEET LENGTHS. A MINIMUM OF ONE SUPPORT WITH APPROPRIATE BRACING SHALL BE PROVIDED FOR EVERY 10 LINEAR FEET OF TRACK PROFILE. THE SUPPORT LEGS SHALL CONSIST OF A SQUARE TUBULAR PROFILE WITH DIMENSIONS NO LESS THAN 2 INCH OD X 0.1 INCH WITH 0.4 INCH (10MM) FASTENING HARDWARE PROVIDED. VERTICAL ADJUSTABLE MOUNTING FOOT: CAPABLE OF ATTACHING THE LEG ASSEMBLY TO A CEILING WITH A 30 DEGREE PITCH, COMPLETE WITH A SLIDER BAR AND 3/8 INCH (9.5 MM) HARDWARE NECESSARY FOR MOUNTING THE HORIZONTAL TRACK TO THE MOUNTING CHANNEL SYSTEM. HORIZONTAL ADJUSTABLE MOUNTING FOOT: CAPABLE OF ATTACHING THE LEG ASSEMBLY TO A WALL, COMPLETE WITH A SLIDER BAR AND 3/8 INCH HARDWARE NECESSARY FOR MOUNTING THE HORIZONTAL TRACK TO THE MOUNTING CHANNEL SYSTEM. SUPPORT LEG: EQUIPPED WITH ROUND TUBULAR ZINC-PLATED STEEL KNEE BRACE WITH PRESSED ENDS IN STANDARD LENGTHS OF 20 INCHES, 30 INCHES AND 72 INCHES. ANGLE COMPLETELY ADJUSTABLE TO THE LEG SUPPORT AND MOUNTED PERPENDICULAR AND PARALLEL TO DIRECTION OF THE TRACK. TYPICAL SUPPORT ANGLE: 45 DEGREES FROM THE CENTERLINE OF THE FACTORY PROVIDED SUPPORT LEG. THE STANDARD LEG SHALL BE CAPABLE OF MEETING A SEISMIC 4 REQUIREMENT.

#### 2.04 DOUBLE TRACK JOINER PLATE

JOINER PLATE: CONSTRUCTED FROM A MINIMUM OF 1/4 INCH THICK ZINC-PLATED MATERIAL, DESIGNED TO CONNECT TWO PARALLEL TRACKS TO MAKE A DOUBLE TRACK SYSTEM TO ACCOMMODATE AN APPARATUS BAY OVER 40 FEET IN LENGTH. JOINER PLATE: 10-INCH BY 8- INCH FLAT ZINC-PLATED STEEL AND DESIGNED TO ATTACH THE TWO TRACKS TO A SINGLE FACTORY SUPPLIED SUPPORT LEG. THE STEEL PLATE SHALL (6) 3/8-INCH HOLES DRILLED 6-7/8-INCHES APART TO ACCOMMODATE THE SLIDER BAR PROVIDED WITH FACTORY SUPPORT LEGS. JOINER PLATE: HAVE TWO SLIDER BARS ATTACHED TO THE PLATE, LOCATED ON THE OUTSIDE EDGES OF THE PLATE, THESE SLIDER BARS SHALL FIT INTO THE BOXLOC TRACK-MOUNTING CHANNEL FOR A SIMPLE AND SECURE ATTACHMENT OF THE PLATE TO THE BOXLOC TRACK. THE CENTER PORTION OF THE JOINER PLATE SHALL PROVIDE ATTACHMENT FOR THE FACTORY SUPPLIED SUPPORT LEG.

# 2.05 TRACK SPLICING ASSEMBLY

TRACK SPLICE: MANUFACTURED OF GALVANIZED STEEL (ASTM A653/A653M) IN TWO PARTS AND UTILIZED AS A CLAMPING DEVICE. THIS CLAMP SHALL ACCURATELY SECURE BOTH TRACKS TOGETHER IN A FASHION, WHICH SHALL ELIMINATE ANY POSSIBILITY OF OBSTRUCTING THE TROLLEY ASSEMBLY AS IT PASSES THROUGH THIS CONNECTION POINT OF TRACK SYSTEM. CONNECTING LENGTH OF SPLICE SHALL BE A MINIMUM OF 15-3/4-INCHES LONG AND FABRICATED OF 14 GAUGE MATERIAL. FOUR (4) 1/4-INCH BOLTS WITH LOCK NUTS SHALL PASS DIRECTLY THROUGH INTERNAL PARTITION OF THE BOXLOC TRACK. THE SPLICING SLEEVE SHALL FIT EXTERNALLY AROUND THE OUTSIDE DIMENSION OF EXTRUDED ALUMINUM TRACK PROFILE.

# 2.06 RISER CLAMP ASSEMBLY

RISER CLAMP: FABRICATED AS A ONE PIECE WELDED ASSEMBLY, MANUFACTURED TO CREATE THE TRANSFER OF THE HARD SPIRAL PIPE JOINED AT THE TOP AND FLEXIBLE DUCT CONNECTION AT THE BOTTOM. THE RISER CLAMP SHALL BE PRE-DRILLED TO MOUNT AN AIR REGULATOR ASSEMBLY FOR THE PNEUMATIC NOZZLE AND TO ACCEPT AIRLINES THAT PASS THROUGH AIRTIGHT SEALS MOUNTED TO RISER PIPE. A SLIDER BAR AND ASSOCIATED HARDWARE SHALL BE PROVIDED WITH RISER CLAMP ASSEMBLY. SIZES OF THE RISER CLAMP WILL RANGE FROM 4 INCHES (101.6 MM) TO 5 INCHES (127 MM) IN DIAMETER TO MATCH THE OUTPUT VELOCITY OF THE VEHICLES THAT WILL PARK IN THAT STATION.

# 2.07 TROLLEY/BALANCER ASSEMBLY

TROLLEY ASSEMBLY: MANUFACTURED AS A TWO-PIECE GALVANIZED STEEL ASSEMBLY INCLUDING BUMPER STOPS AT EACH END. FIXED TO THE SIDE OF THE TROLLEY ARE SOLID STEEL PINS, WHICH SHALL BE FOR LOAD CARRYING BEARINGS THAT ARE SEALED AND PERMANENTLY LUBRICATED. THE LOAD CARRYING BEARINGS SHALL TRAVEL INTERNALLY IN TRACK TROLLEY CHANNEL. TWO ADDITIONAL PERMANENTLY LUBRICATED TROLLEY WHEELS SHALL BE PROVIDED ON BOTTOM SIDE OF THE TRACK TO REDUCE WOBBLE OF TROLLEY AS IT CONVEYS THE HOSE ASSEMBLY TO THE DOOR THRESHOLD RELEASE PLATE: ATTACHED TO THE CHASSIS OF THE TROLLEY TO SMOOTHLY ENERGIZE THE UNCOUPLING RELEASE VALVE WHEN THE TROLLEY-BALANCER ASSEMBLY APPROACHES THE DOOR THRESHOLD. SYSTEM BALANCER ASSEMBLY: SELF-ADJUSTING WEIGHT SPRING TENSION BALANCER WITH A LIFTING CAPACITY OF NO LESS THAN 31 POUNDS. THE BALANCER SHALL HAVE A MINIMUM DIAMETER STAINLESS STEEL CABLE OF .080 INCH, SAFETY LINK CONNECTION.

# 2.10 UPPER FLEXIBLE HOSE

CHANGE DATE

UPPER HOSE: FLEXIBLE EXHAUST HOSE MANUFACTURED FOR THE SOLE PURPOSE OF VENTING HIGH TEMPERATURE EXHAUST GASES. FLEXIBLE HOSE: DESIGNED STRICTLY FOR THE HARSH ENVIRONMENT OF RAPID RESPONSE AND AUTO-RELEASE OF A VEHICLE EXHAUST TAILPIPE. HOSE: RANGE FROM 4 INCH TO 5 INCH DIAMETERS WITH VARYING LENGTHS DEPENDING ON THE SYSTEM LENGTH REQUIRED RANGING FROM 20 FEET TO 43 FEET WITHOUT JOINING OR SPLICING CONNECTIONS. HOSE MATERIAL: HIGH TEMPERATURE SYNTHETIC RUBBER IMPREGNATED INTO A HIGH TEMPERATURE LAMINATED FABRIC WITH A MINIMUM OVERLAPPING THICKNESS OF 2-7/16 INCHES. THIS CONSTRUCTION OF HOSE MUST BE CAPABLE OF OPERATING AT CONTINUOUS EMPERATURES OF 400 DEGREES F AND INTERMITTENT TEMPERATURES OF 500 DEGREES F SUCH AS ARE EXPERIENCED WHEN PUMP CHECKS ARE PERFORMED INSIDE THE STATION. WIRE HELIX: BOUND AND PROTECTED IN LAMINATIONS OF HOSE WINDING. THIS SHALL BE ACCOMPLISHED IN A FASHION, WHICH ELIMINATES ANY POSSIBILITY OF PERSONNEL COMING IN CONTACT WITH AN EXPOSED HOT METAL HELIX. THE HOSE SHALL FURTHER PROTECT THE INTERNAL WIRE HELIX FROM HEAT BUILDUP AND IN TURN ADD INCREASED VISIBILITY TO PERSONNEL. WEAR STRIP: 9/16 INCH

CONSTRUCTION CHANGE / ADDENDUM

AFFECTED OR ADDED SHEET NUMBERS

WIDE AND BE PROVIDED AS A SAFETY YELLOW COLOR. THE BEND RADIUS OF THE HIGH TEMPERATURE HOSE SHALL BE NO LESS THAN 1.5 TIMES THE DIAMETER OF HOSE TO ENSURE THAT HOT GASES ARE NOT RESTRICTED AS THEY PASS THROUGH THE SYSTEM. SUBMIT UL LISTING.

#### 2.11 LOWER HOSE ASSEMBLY

LOWER HOSE: RIGID 4 INCH TO 5 INCH DIAMETER BY 2 FOOT LONG SECTION OF YELLOW AND BLACK HOSE IDENTICAL IN APPEARANCE TO THE UPPER HOSE ASSEMBLY.

#### 2.12 SAFETY DISCONNECT COUPLING SAFETY DISCONNECT COUPLING: 4-PART SEGMENTED COUPLING WITH REMOVABLE WEAR STRIPS TO PROTECT THE VEHICLE AND DISCONNECT FROM WEAR SHALL BE INCORPORATED IN THE DESIGN OF THE SYSTEM. COUPLING: CONSIST OF TWO SPUN ALUMINUM (ASTM B209/B209M) COLLARS CONNECTED BY A REUSABLE-SEGMENTED COUPLING BAND. THE RELEASE TENSION OF THIS DEVICE SHALL BE PRESET AT 130 POUNDS (59 KG). AND ADJUSTABLE FROM 20 POUNDS (9 KG). TO 206 POUNDS (93

KG) OF SEPARATING FORCE TO ACCOMMODATE VARYING EXIT SPEEDS OF VEHICLES.

### 2.13 COLLECTION NOZZLE ASSEMBLY

COUPLING: REUSABLE.

- A. COLLECTION NOZZLE ASSEMBLY: PROVIDE A SUBSTANTIALLY AIR TIGHT SEAL AROUND EXHAUST TAIL PIPE WHEN CONNECTED THUS ALLOWING FOR 100% SOURCE CAPTURE. THE SEAL SHALL NOT ALLOW FOR ESCAPE OF LIFE THREATENING EXHAUST GASES, WHICH MAY BE PRESENT DURING THE FOLLOWING CONDITIONS:
- 1. IN THE EVENT VEHICLE'S ENGINE IS ACCELERATED ABOVE NORMAL IDLE RESULTING IN AN EXHAUST VELOCITY GREATER THAN 5000 FEET PER MINUTE (25.4 METERS PER SECOND).
- 2. IN THE EVENT THAT THE OUTPUT VELOCITY OR CFM OF THE EXHAUST EXCEEDS THE MANUFACTURERS NORMAL CAPTURE VELOCITY OR CFM OF EXHAUST

#### 2.14 HOSE SADDLE

HOSE SUSPENSION SADDLE: FABRICATED OF A RUBBER MOLDED CUSHION SPECIFICALLY MANUFACTURED FOR THE SOLE PURPOSE OF SUSPENDING HIGH TEMPERATURE EXHAUST VENTILATION HOSE IN A RAPID RESPONSE AND AUTO-RELEASE APPLICATION. THE DESIGN OF THE SADDLE SHALL SMOOTHLY TRANSITION THE DIRECTION OF THE HOSE DURING ITS TRAVEL ALONG THE TRACK. SECURING CLAMPS SHALL BE PROVIDED INCLUDING A LINK FASTENER, FOR THE PURPOSE OF MOUNTING IT TO THE BALANCER SAFETY LINK.

#### 2.15 ELECTRICAL CONTROLLERS

- A. CONTROLLER: BUILT AND SUPPLIED BY A UL RECOGNIZED AND LISTED EXHAUST SYSTEM MANUFACTURER. CONTROLLER SHALL CARRY THE UL - CUL LISTING LABEL AS AN "ENCLOSED INDUSTRIAL CONTROL PANEL." INDIVIDUAL COMPONENTS LISTED BY UL - CUL SHALL NOT SATISFY THE ABOVE REQUIREMENT, MANUFACTURER SHALL UNDERGO MONTHLY INSPECTIONS BY UL TO VERIFY ALL REQUIREMENTS AND STANDARDS ARE MET AS OUTLINED BY UL. THE CONTROLLER SHALL BE DELIVERED AS AN OPERATING SYSTEM THREE SERIES CONTROLLER OR AN APPROVED EQUAL TO THE SPECIFICATIONS TO FOLLOW.
- B. ELECTRICAL CONTROLLERS: BEAR A VISIBLE UL LISTING LABEL AS PROOF OF SUBSCRIBERSHIP AND SHALL BE VALIDATED BY UL WWW.UL.COM/DATABASE/ AS AN "ENCLOSED INDUSTRIAL CONTROL PANEL". CERTIFICATION DOCUMENTS SHALL ACCOMPANY BID DOCUMENTS.
- MANUFACTURER NAME:
- UL FILE NO.:
- 3. ELECTRICAL CONTROLLER AND MANUFACTURER SHALL BE RECOGNIZED AND LISTED BY UL. CONTROLLER SHALL BE MANUFACTURED IN ACCORDANCE WITH UNDERWRITERS LABORATORIES STANDARD UL-508 FOR "ENCLOSED INDUSTRIAL CONTROL PANELS". THE ELECTRICAL CONTROLLER SHALL INCLUDE A CLASS LIMITED ENERGY CONTROL CIRCUIT. ENCLOSURES SHALL BE NEMA 12 RATED AND UL LISTED AS TYPE 12. THE ELECTRICAL CONTROL COMPONENTS SHALL BE PROVIDED AND MOUNTED IN AN ELECTRICAL ENCLOSURE TO RESTRICT ACCESS TO INTERNAL COMPONENTS OF THE CONTROLLER BY AUTHORIZED PERSONNEL ONLY.
- C. CONTROLLER PERFORMANCE: DESIGNED TO SENSE THE OUTPUT PRESSURE AND TEMPERATURE CHANGE INSIDE THE DUCTWORK SYSTEM, WHICH IS NORMALLY GENERATED BY ANY INTERNAL COMBUSTION ENGINE DESIGNED TO PROPEL A MOTOR VEHICLE. THE OPERATING LOGIC SHALL BE DESIGNED TO COMPLETE THIS CYCLE. AT ANY POINT IN TIME WHEN A COLLECTION DEVICE IS CONNECTED TO A MOTOR VEHICLE'S EXHAUST TAILPIPE, AS THE OPERATOR STARTS THE VEHICLE, THE CONTROLLER SHALL AUTOMATICALLY SENSE THE ENGINE'S OUTPUT PRESSURE OR FEMPERATURE OF THE EXHAUST AND IN TURN ENERGIZE THE ELECTRICAL CONTACTOR WHICH WILL SUPPLY POWER TO THE AMCA CERTIFIED SPARK RESISTANT FAN MOTOR. THROUGH THE USE OF AN ADJUSTABLE TIMER THE CONTROLLER SHALL KEEP THE CONTACTORS ENERGIZED FOR UP TO SIX MINUTES IN ACCORDANCE WITH THE STATIONS RESPONSE REQUIREMENT. IF THE RESPONDING VEHICLE DOES NOT DISCONNECT FROM THE EXHAUST VENTILATION SYSTEM IN LESS THAN THE DESIGNATED SETTING, THE TEMPERATURE OVERRIDE SWITCH SHALL OVERRIDE THE TIME DELAY TO ENSURE CONTINUOUS SYSTEM OPERATION. THIS AUTOMATED FUNCTION WILL WORK FOR AS LONG AS THE EXHAUST GAS TEMPERATURE IS IN EXCESS OF THE SETTING ON THE HEAT SENSOR LOCATED IN THE DUCTWORK SYSTEM. THIS CYCLE SHALL NOT ALLOW THE ELECTRICAL CONTACTOR, WHICH ENERGIZES THE EXHAUST FAN, TO SHORT CYCLE OR STOP THE FAN WHILE THE SYSTEM IS CONNECTED TO AN OPERATING VEHICLE.
- D. MOTOR CONTROL CONTACTOR: ALLEN BRADLEY INDUSTRIAL ELECTRICAL CONTACTOR 100C SERIES. THE CONTACTOR SHALL BE UL - CUL LISTED AS AN APPROVED
- ON THREE PHASE APPLICATIONS THE OVERLOAD RELAY SHALL PREVENT SINGLE PHASING OF THE BLOWER MOTOR. THE OVERLOAD RELAY SHALL BE UL LISTED AS AN APPROVED COMPONENT.
- E. MOTOR CONTROL OVERLOAD RELAY: ALLEN BRADLEY 193 ES SERIES. OVERLOAD RELAY SHALL HAVE AN ADJUSTABLE TRIP RANGE TO MEET THE PROPER FULL LOAD AMPERAGE OF THE BLOWER MOTOR
- F. SOFT TOUCH CONTROLS: INCORPORATED ON THE FACE OR THE ACCESS DOOR OF THE CONTROLLER BY THE USE OF AN ADHESIVE BACKED LEXAN MEMBRANE TYPE LABEL TO PREVENT WATER INFILTRATION, WHICH WOULD VOID THE NEMA 12R RATING. LABEL: PROVIDED AND SECURED PERMANENTLY TO THE EXTERIOR OF THE ELECTRICAL CONTROLLER. LABEL: INCLUDE THE NAME OF THE MANUFACTURER, ADDRESS, TELEPHONE NUMBER, USER INSTRUCTIONS AND ANY WARNINGS OR CAUTIONS REQUIRED BY UNDERWRITERS LABORATORIES.
  - AUTO START: THIS MODE OF OPERATION SHALL BE STRICTLY FOR NORMAL DAY TO DAY USE, AS IT WOULD APPLY TO RECEIVING AN EMERGENCY CALL AND LEAVING THE STATION. ANY ONE OR COMBINATION OF THE THREE DEVICES LISTED BELOW IN PARAGRAPH H SHALL ACTIVATE THE SYSTEM. THE SYSTEM SHALL MAINTAIN ITSELF IN THE AUTO START MODE AND ALWAYS RETURN THERE AFTER THE STOP SEQUENCE HAS BEEN INITIATED. THE CONTROLLER SHALL NOT HAVE A PERMANENT OFF POSITION DUE TO THE POTENTIAL HEALTH HAZARDS OF DIESEL EXHAUST COMPONENTS.
- 2. STOP: THIS MODE OF OPERATION SHALL BE A SYSTEM OVERRIDE TO SHUT DOWN THE SYSTEM MANUALLY. UPON ACTIVATING THIS MODE OF OPERATION THE EXHAUST SYSTEM BLOWER SHALL SHUT DOWN. AFTER A PERIOD NOT TO EXCEED THREE SECONDS THE CONTROLLER SHALL AUTOMATICALLY RETURN TO THE AUTO START READY MODE. THIS SHALL BE A SAFETY FEATURE TO PREVENT A POTENTIAL HEALTH HAZARD FROM CARCINOGENIC DIESEL EXHAUST LEAKAGE FROM SYSTEMS HAVING AN UNDESIRABLE OPEN NOZZLE
- 3. THIS MODE OF OPERATION SHALL BE A SYSTEM OVERRIDE TO RUN THE EXHAUST SYSTEM BLOWER CONTINUOUSLY FOR THE PURPOSE OF RUNNING THE VEHICLES INDOORS FOR EQUIPMENT CHECKS DURING INCLEMENT WEATHER. UPON ACTIVATING THIS MODE OF OPERATION THE EXHAUST SYSTEM BLOWER SHALL START AND RUN CONTINUOUSLY UNTIL THE STOP MODE IS ACTIVATED AT WHICH POINT THE SYSTEM WILL AUTOMATICALLY RETURN TO THE AUTO START READY MODE WITHIN A MAXIMUM THREE SECOND TIME PERIOD. THE LED INDICATOR LIGHT SHALL BE FAVORED OVER FILAMENT TYPE PILOT
- LIGHTS, DUE TO THEIR LONGEVITY AND DURABILITY. G. SYSTEM INDICATOR LED'S: SHOW SYSTEM STATUS AT ALL TIMES.
- 1. AUTO START INDICATOR: INDICATE THE SYSTEM IS IN THE FULLY AUTOMATIC
- MODE OF OPERATION AND THAT POWER IS ON TO THE CONTROLLER. 2. FAN ON INDICATOR: INDICATE THAT POWER IS BEING APPLIED TO THE SYSTEM

- BLOWER AND THE CONTROLLER IS OPERATING NORMALLY.
- 3. FILTER STATUS INDICATOR: INDICATE, IF FLASHING, EXCESSIVE PRESSURE LOSS ACROSS THE FILTER BANK MEDIA. CONSEQUENTLY THE FILTER MUST BE SERVICED TO MAINTAIN OPTIMUM EFFICIENCY OF THE SYSTEM.
- 4. STOP INDICATOR: INDICATE THE FAN HAS BEEN MANUALLY DE-ENERGIZED AND WILL RETURN TO THE AUTO START READY SEQUENCE IN LESS THAN THREE SECONDS TO PREVENT THE SYSTEM BLOWER FROM BEING LEFT IN THE OFF
- 5. MANUAL RUN INDICATOR: INDICATE THE FAN IS OPERATING IN A CONTINUOUS RUN MODE UNTIL INTERRUPTED BY THE STOP MODE ACTIVATION.
- H. CONTROLLER TRANSFORMER: UL LISTED INDUSTRIAL CONTROL CIRCUIT TRANSFORMER SIZED TO PROPERLY SUPPLY ALL COMPONENTS SO THAT ONLY ONE TRANSFORMER SHALL BE REQUIRED. TRANSFORMER SHALL BE PROVIDED WITH MULTI-TAP PRIMARY FOR 115, 208, 240, 277, 400, 480, AND 600VAC, AND 24, 120, 230VAC SECONDARY OPERATING ON 50 OR 60 HERTZ WITH A CAPACITY OF 90 VOLT
- CONTROL CIRCUIT PROTECTION: BY THE USE OF PRIMARY AND SECONDARY FUSES (NEC CODE REF. 430-72) TO MEET UL REQUIREMENTS. THE PRIMARY SHALL BE PROTECTED BY A PAIR OF FLQ STYLE FUSES RATED AT 1.6 AMPS FOR VOLTAGES UNDER 400V AND A PAIR OF .75 AMP FUSES FOR VOLTAGES OVER 400V. THE PRIMARY FUSE HOLDER SHALL HAVE A STANDARD INDICATOR LIGHT FEATURE TO AID IN TROUBLESHOOTING BLOWN FUSES. A SINGLE GLASS FUSE RATED AT 3 AMPS AT 250V SHALL PROTECT THE SECONDARY SIDE OF THE CONTROL CIRCUIT.
- THE REPLACEMENT OF A CONTROL CIRCUIT CARD SHALL BE THE FAVORABLE METHOD OF COMPONENT REPLACEMENT. CONTROLLERS USING PUSHBOTTONS AND MULTIPLE COMPONENTS TO MAKE UP THE LOGIC CIRCUIT SHALL BE UNACCEPTABLE DUE TO HIGHER MAINTENANCE AND TROUBLESHOOTING COSTS IF A FAILURE SHOULD
- J. ELECTRONIC CONTROL CIRCUIT CARD: SOLID STATE PRINTED CIRCUIT BOARD. THE SOFT CONTROLS SHALL BE AN INTEGRAL PART OF THE CONTROL CIRCUIT CARD. THE CONTROL CIRCUIT CARD SHALL UTILIZE A POTENTIOMETER TO ADJUST THE LENGTH OF THE TIMING CYCLE FROM 7 TO 360 SECONDS. IT SHALL INCORPORATE SEVERAL DIFFERENT MODES OF OPERATION AND OPTIONAL FEATURES.
- THE CONTROLLER SHALL BE COMPATIBLE WITH SEVERAL DIFFERENT TYPES OF ACTIVATION DEVICES AND UPGRADEABLE WITHOUT THE COST OF REPLACING THE WHOLE CONTROLLER, SYSTEMS CONNECTED TO THE APPARATUS ELECTRICAL SYSTEM AND TRANSMITTING A SIGNAL WHILE THE VEHICLE IS RUNNING WILL NOT BE ACCEPTABLE. SYSTEMS OPERATING ON THE POPULAR 390MHZ FOR RESIDENTIAL GARAGE DOOR OPERATORS WILL NOT BE ACCEPTABLE DUE TO POTENTIAL LIABILITIES. K. ACTIVATION DEVICES:
- ENGINE START SWITCH: AN ENGINE PRESSURE SENSING TYPE, CAPABLE OF RECOGNIZING THE OUTPUT PRESSURE OF ANY TYPE OF MOTOR VEHICLE EXHAUST. THE ELECTRICAL CONTACT SHALL BE DRY TYPE OR NOT TO EXCEED 24V AC. THERE SHALL BE ONE SENSOR PER VEHICLE,
- 2. THERMAL START SWITCH: TEMPERATURE SENSING SWITCH OF THE SNAP DISC TYPE AND ADJUSTABLE FROM 90 DEGREES F (32 DEGREES C) TO 130 DEGREES F (55 DEGREES C) TO CONFIGURE THE SYSTEM BASED ON DIFFERENT EXHAUST TEMPERATURES. THERE SHALL BE ONE SENSOR PER VEHICLE.
- REMOTE CONTROL TRANSMITTER AND RECEIVER: SHALL BE AN OPTIONAL FEATURE WITH THREE INDEPENDENT CHANNELS OF CONTROL. THE RECEIVER SHALL OPERATE ON 12V TO 24 V AC OR DC. THE HANDHELD TRANSMITTER SHALL BE MOLDED OUT OF A HIGHLY VISIBLE ORANGE COMPOSITE WITH A VISOR CLIP ON THE BACK MAKING IT RUGGED AND EASY TO LOCATE. IT SHALL BE POWERED BY A 9 VOLT BATTERY FOR EASE OF REPLACEMENT AND COST SAVINGS. UTILIZING THREE SETS OF NORMALLY OPEN AND NORMALLY CLOSED CONTACTS ALLOWS THE DEVICE TO BE USED TO CONTROL THREE SEPARATE FUNCTIONS FROM UP TO ONE QUARTER OF A MILE AWAY.
- a. CHANNEL A: SHALL BE CAPABLE OF STARTING AND STOPPING THE EXHAUST SYSTEM BLOWER.
- b. CHANNEL B: SHALL BE CAPABLE OF OPERATING THE APPARATUS BAY DOOR UPON ENTERING OR LEAVING THE FIRE STATION, IF DESIRED.
- c. CHANNEL C: SHALL BE CAPABLE OF REMOTELY CONTROLLING THE TRAFFIC SIGNAL IN FRONT OF THE FIRE STATION, IF SO EQUIPPED.
- L. CLEAN FILTER INDICATOR ALARM: USED IN CONJUNCTION WITH THE OPTIONAL UNIFILTER FOR FILTERING DIESEL EXHAUST PARTICULATE BEFORE RELEASE TO THE ATMOSPHERE. THE CLEAN FILTER INDICATOR SHALL MONITOR THE PRESSURE LOSS ACROSS THE FILTER BANK MEDIA. ONCE THE USEFUL LIFE OF THE FILTER HAS BEEN DEPLETED THE PRESSURE DIFFERENTIAL SWITCH WILL SIGNAL A HIGH-PRESSURE LOSS AND FLASH THE "FAN ON" INDICATOR WHILE THE EXHAUST BLOWER IS RUNNING.
- M. REMOTE ALARM: SHALL BE AN OPTIONAL FEATURE TO MONITOR THE SYSTEM AND ADVISE WHEN A PRESET NUMBER OF EMERGENCY RUNS ON THE SYSTEM HAVE
- N. NO AIRFLOW ALARM: SHALL BE AN OPTIONAL FEATURE TO MONITOR THE SYSTEM AND ADVISE WHEN THE EXHAUST FAN IS NOT FUNCTIONING PROPERLY.
- O. CARBON MONOXIDE ALARM: SHALL BE AN OPTIONAL FEATURE TO MONITOR THE CARBON MONOXIDE LEVELS INSIDE THE APPARATUS BAY AREA. P. ELECTRICAL WIRING: RUN IN WIRE CHANNEL TO ALLOW FOR EASIER IDENTIFICATION

OF THE WIRING CIRCUITS AND FOR A NEAT APPEARANCE. ALL WIRING CIRCUITRY

- SHALL MEET INTERNATIONAL ELECTRICAL CODE AND UL STANDARDS FOR PROPER SIZE, BENDING RADIUSES (INTERNATIONAL ELECTRICAL CODE) AND TERMINATIONS. Q. ELECTRICAL TERMINAL BLOCK: 600 V, UL RATED AND RECOGNIZED. IT SHALL PROVIDE INDIVIDUAL CONNECTION POINTS FOR REMOTE CONTROLS, CLEAN FILTER INDICATOR AND POWER CONNECTIONS. THE PRIMARY AND SECONDARY CONTROL
- WIRING FUSES SHALL BE INCORPORATED INTO THE TERMINAL BLOCK AS ONE UNIT. R. PRODUCT MANUAL: SHALL BE PROVIDED WITH EACH ELECTRICAL CONTROL BOX SUPPLIED. THE PRODUCT MANUAL SHALL INCLUDE A DESCRIPTION OF COMPONENTS WITH PART NUMBERS INCLUSIVE TO THE CONTROLLER. IT SHALL INCLUDE A WIRING SCHEMATIC SHOWING ALL INTERNAL CIRCUITRY AS WELL AS ALL
- FIELD INSTALLED WIRING CONNECTIONS TO THE CONTROLLER. S. ELECTRICAL INTERFERENCE: TO PROTECT THE APPARATUS AND COMMUNICATIONS. DESIGNS THAT ALLOW ANY POSSIBILITY OF ELECTRICAL BACK-FEED OR INDUCED CURRENT WHICH MAY INTERFERE WITH A CENTRAL SERVICES COMMUNICATION OR ONBOARD VEHICLE COMPUTER LOGIC OR NAVIGATIONAL EQUIPMENT WILL NOT BE

#### ACCEPTED. 2.16 ELECTRICAL SYSTEM

- A. STATION ELECTRIC SUPPLY PANEL: THE POWER CIRCUIT FOR THE "EMERGENCY RESPONSE VEHICLE EXHAUST REMOVAL SYSTEM" SHALL ORIGINATE IN A CIRCUIT BREAKER PANEL BOARD OF THE APPROPRIATE SIZE TO HANDLE THE LOAD. FAN CIRCUIT SHALL BE SUPPLIED BY A UL LISTED, HACR RATED CIRCUIT BREAKER (HACR RATING IS SPECIFICALLY FOR MOTOR TYPE LOADS) OF THE SAME TYPE AS ÍNDICATED BY THE MANUFACTURER OF THE CIRCUIT BREÁKER PANEL OR A DUAL ELEMENT TIME DELAY FUSE FOR FUSE STYLE PANELS. THE CIRCUIT SHALL BE CLEARLY MARKED ON AN ENGRAVED LEDGER PLATE OR IN INK ON THE PANEL SCHEDULE AS "EMERGENCY RESPONSE VEHICLE EXHAUST REMOVAL SYSTEM". DUE O INCOMPATIBILITY OF COMPONENTS OUTSOURCING OR THIRD PARTY
- MANUFACTURERS WILL BE UNACCEPTABLE. B. OS-3 AUTOMATIC CONTROLLER: BUILT AND SUPPLIED BY A UL RECOGNIZED AND LISTED EXHAUST SYSTEM MANUFACTURER. CONTROLLER SHALL CARRY THE UL -CUL LISTING LABEL AS AN "ENCLOSED INDUSTRIAL CONTROL PANEL". INDIMIDUAL COMPONENTS LISTED BY UL SHALL NOT SATISFY THE ABOVE REQUIREMENT. MANUFACTURER MUST UNDERGO MONTHLY INSPECTIONS BY UL TO VERIFY ALI REQUIREMENTS AND STANDARDS ARE MET AS OUTLINED BY UL. THE CONTROLLER SHALL BE DELIVERED AS AN OPERATING SYSTEM THREE SERIES CONTROLLER OR AN APPROVED EQUAL TO THE SPECIFICATIONS IN 2.17 ELECTRICAL CONTROLLERS. THE CONTROLLER SHALL BE MOUNTED 6 FEET (1829 MM)TO THE TOP OF THE CABINET AFF (ABOVE FINISHED FLOOR). A SAFETY DISCONNECTING MEANS MUST BE WITHIN SIGHT OF THE CONTROLLER FOR SERVICING AND FOR SAFETY REASONS. IF THE SUPPLY PANEL IS NOT WITHIN SIGHT, A SEPARATE DISCONNECTING MEANS IS REQUIRED BESIDE THE CONTROLLER (NEC CODE REF. 430-102 (A). SAFETY DISCONNECT SHALL BE CAPABLE OF BEING LOCKED IN THE OFF AND ON POSITION TO FOLLOW LOCKOUT, TAG OUT PROCEDURES. SEE ATTACHED TABLE 1-1 FOR PROPER SQUARE D PART NUMBER OF SAFETY DISCONNECT SWITCH.

- C. POWER WIRING CONDUIT: MINIMUM OF EMT UTILIZING COMPRESSION TYPE FITTINGS FOR DAMP LOCATIONS SUCH AS APPARATUS WASH DOWN AREAS (INTERNATIONAL ELECTRICAL CODE). CONDUIT SHALL BE SUPPORTED WITH A CONDUIT STRAP EVERY 10 FEET (3 M) AND WITHIN 3 FEET (914.4 MM) OF EACH BOX OR TERMINATION, (INTERNATIONAL ELECTRICAL CODE AND LOCAL MODIFIERS.) THIS SHALL BE USED FOR ALL SUPPLY VOLTAGES FROM 120V THROUGH 480V SINGLE OR THREE PHASE APPLICATIONS VOLTAGE DROP SHALL BE TAKEN INTO
- CONSIDERATION WHEN SIZING CONDUCTORS AND SHALL NOT EXCEED 3 PERCENT, SEE ATTACHED TABLE 1-1 FOR PROPER WIRE GAUGE (AWG) BASED ON LENGTH OF RUN FROM TERMINAL TO TERMINAL. D. POWER WIRING FROM SUPPLY PANEL TO OS-3: THHN STRANDED COPPER WIRE
- CONSISTING OF A FLAME RETARDANT, HEAT-RESISTANT THERMOPLASTIC INSULATION WITH A NYLON JACKET FOR ABRASION, GAS, AND OIL RESISTANCE AND RATED UP TO 600 VOLTS.
- E. LOW VOLTAGE CONTROL WIRING: MINIMUM OF A 14/2 MULTI-CONDUCTOR SHIELDED CABLE (ANIXTER PART NUMBER #2AS-1401POS OR EQUIVALENT) TO MEET UL STANDARDS FOR THE CONTROLLER'S LOW VOLTAGE FIELD WIRING. TERMINATION PROCEDURE SHALL BE AS FOLLOWS; THE SHIELDED CABLE SHALL BE STRIPPED BACK INSIDE THE CONTROL CABINET, THE MYLAR FOIL SHIELD AND SILVER DRAIN WIRE ARE TO BE TWISTED TOGETHER AND SECURED UNDER THE SCREW IN THE GROUNDING LUG INSIDE THE CONTROL CABINET, TERMINATIONS AT EACH SENSOR MUST LEAVE FOIL SHIELDING AND DRAIN WIRE INTACT AND AT NO POINT SHALL I COME INTO CONTACT WITH GROUND. THERE SHALL BE ONLY ONE CONNECTION TO
- F. LOW VOLTAGE CONTROL: ENCASED IN A MINIMUM OF 1/2 INCH (12.7 MM) EMT FROM THE OS-3 CONTROLLER TO THE ATTIC OR BUILDING STEEL WHERE IT SHALL TERMINATE WITH A EMT CONNECTOR WITH A THREADED PLASTIC BUSHING, CONDUIT: SUPPORTED WITH A CONDUIT STRAP EVERY 10 FEET (3048 MM) AND WITHIN 3 FEET (914.4 MM) OF EACH BOX OR TERMINATION (INTERNATIONAL ELECTRICAL CODE). THE 14/2 MULTI-CONDUCTOR SHIELDED CABLE (ANIXTER PART NUMBER #2AS-1401POS OR EQUIVALENT) SHALL BE SUPPORTED BY THE BUILDING STRUCTURE AND RAN IN A MANNER THAT THE CABLE WILL NOT BE DAMAGED BY NORMAL BUILDING USE (INTERNATIONAL ELECTRICAL CODE AND LOCAL MODIFIERS.) SECURELY FASTENING IT WITH NYLON TIE WRAPS EVERY 24 INCHES (609.6 MM) TO 36 INCHES (914.4 MM). DRAPING OF THE CABLE PERPENDICULAR TO BUILDING STEEL OR SUPPORT MEMBERS WILL BE UNACCEPTABLE.
- G. POWER WIRING FROM OS-3 TO FAN MOTOR: MINIMUM OF EMT UTILIZING COMPRESSION TYPE FITTINGS FOR DAMP LOCATIONS SUCH AS APPARATUS WASH DOWN AREAS (NEC CODE REF.348-10). CONDUIT SHALL BE SUPPORTED WITH A CONDUIT STRAP EVERY 10 FEET (3048 MM) AND WITHIN 3 FEET 914.4 MM) OF EACH BOX OR TERMINATION (INTERNATIONAL ELECTRICAL CODE AND LOCAL MODIFIERS.). CONDUIT SHALL EXTEND THROUGH THE OUTSIDE WALL THROUGH A HOLE OF THE PROPER SIZE AND TERMINATE DIRECTLY INTO THE BACK OF THE SAFETY DISCONNECT WITH THE APPROPRIATE CONNECTOR AND SEALED WITH A SILICON SEALER OR CEMENT MORTAR. (USING FAN MODEL NUMBER SELECT APPROPRIATE WIRE AND CONDUIT SIZE FROM TABLE 1-1).
- H. FAN SAFETY DISCONNECT: SQUARE D, NON-FUSIBLE, NEMA 3R RATED FOR WEI LOCATIONS, MOUNTED ADJACENT TO THE AMCA CERTIFIED BLOWER. SAFETY DISCONNECT SHALL BE CAPABLE OF BEING LOCKED IN THE OFF AND ON POSITION TO FOLLOW LOCKOUT, TAG OUT PROCEDURES. (USING FAN MODEL NUMBER SELECT APPROPRIATE SAFETY DISCONNECT FROM ATTACHED TABLE 1-1)
- LIQUID TIGHT FLEXIBLE METAL CONDUIT: UL LISTED LIQUID TIGHT FLEXIBLE METALLIC CONDUIT (SEALTITE), CONDUIT WILL ENCASE THE LOAD WIRES AND GROUND WIRE FROM THE SAFETY DISCONNECT SWITCH TO THE BLOWER MOTOR. CONDUIT LENGTH NOT TO EXCEED 4 FEET (1219.2 MM) FROM DISCONNECT TO BLOWER MOTOR. THE APPROPRIATE LISTED TERMINAL FITTINGS SHALL BE USED. (NEC CODE REF.351-7) (USING FAN MODEL SELECT APPROPRIATE CONDUIT SIZE FROM ATTACHED TABLE
- J. SPARK RESISTANT BLOWER: AMCA CERTIFIED, DESIGNED AND INSTALLED AS A DIRECT DRIVE SPARK RESISTANT BLOWER (IMC CODE REF. 503.2) THE MOTOR SHALL MEET CURRENT EPACT STANDARDS FOR ENERGY SAVINGS. FANS UTILIZING STEEL HOUSINGS AND IMPELLERS WILL NOT BE ACCEPTED.
- K. TEMPERATURE SWITCH: ONE FOR EACH APPARATUS CONNECTED TO THE SYSTEM THE TEMPERATURE SWITCH SHALL BE OF THE SNAP DISC TYPE AND ADJUSTABLE FROM 90 DEGREES F (32 DEGREES C) TO 130 DEGREES F (54 DEGREES C). IT SHALL BE MOUNTED ON THE DUCTWORK 2 INCHES (50.8 MM) ABOVE THE PRESSURE SWITCH BY DRILLING A 1 INCH (25.4 MM) HOLE, SEALING THE SWITCH WITH SILICON SEALANT AND SECURING WITH 2 TEK SCREWS. ELECTRICAL CONNECTION SHALL BE MADE WITH TERMINALS PROVIDED OR SOLDER LESS TYPE SUCH AS THOMAS & BETTS PART NO. 14RB-2577 OR EQUIVALENT
- PRESSURE SWITCH: ONE FOR EACH APPARATUS CONNECTED TO THE SYSTEM. THE PRESSURE SWITCH SHALL OPERATE AT A MAXIMUM OF 24VAC, PRE-CALIBRATED AT .18 IN. OF WATER COLUMN. MOUNTING SHALL BE ACCOMPLISHED BY DRILLING A 3/8 INCH (9.5 MM) HOLE 3 INCHES 76.2 MM) ABOVE THE RISER BRACKET AND TO THE LEFT OF THE REGULATOR AND THREADING THE SWITCH INTO THE DUCT. THE ELECTRICAL CONNECTIONS SHALL BE MADE WITH A 0.020 INCH (.5 MM) BY 0.187 INCH (4.8 MM) FEMALE QUICK DISCONNECT TERMINALS, SUCH AS THÓMAS & BETTS PART NO. 14RBD-18277 OR EQUIVALENT.

		J.	nsta	illatio		rable 1- ui <b>pme</b>		ing Cha	art	
Single Phase	e HP	Name	Dieto	08-3	Circuit	Wire Size	I Longth of	Wire in Feet	Conduit	Non-fusible
Manufacturer.	Rating	Voltage	FLA	Model	Breaker	THHN	-	to Finish	Size	Disconnec
Model	Manuf.	- Junge		Number	Size	AWG	From	T To	EMT	Sq. D Part
No										No.
67001	1hp	115V	12A	706031	20A	#10	(0 m)	115' (35 m)	1/2" (12.7 mm)	DU221RB
	Leeson					#8	116' (35 m)	184'(56 m)	1/2" (12.7 mm)	DU221RB
		230V	6A	706032	15A	#14	(0 m)	183' (56 m)	1/2" (12.7 mm)	DU221RB
						#12	184' (56 m)	(88 m)	1/2" (12.7 mm)	DU221RB
67003	3hp	230V	16A	706036	20A	#12	(0 m)	135' (41 m)	1/2" (12.7 mm)	DU221RB
	Leeson					#10	136' (41 m)	215' (66 m)	1/2" (12.7 mm)	DU221RB

MANUFACTURER ASSUMES NO LIABILITY FOR ANY ELECTRIC INSTALLATION; ALL LOCAL, CITY, AND THE NATIONAL ELECTRIC CODE MUST BE FOLLOWED. THIS CHART WAS CALCULATED FOR A MAXIMUM VOLTAGE DROP OF 3% AND IS TO BE USED AS A GUIDELINE.

# 2.17 AIR MOVING DEVICES

- A. CENTRIFUGAL FANS: DIRECT DRIVE CENTRIFUGAL TYPE, HIGH PRESSURE, SINGLE WIDTH, SINGLE INLET AS REQUIRED OR INDICATED. IMPELLER WHEELS: RADIAL DESIGN FOR HIGH STATIC PRESSURE PERFORMANCE, SPARK RESISTANCE AND MADE OF ALMAG MATERIAL TO PREVENT STATIC ELECTRICITY BUILD UP. THE IMPELLER SHALL BE DYNAMICALLY AND STATICALLY BALANCED AND OF THE NON-OVERLOADING TYPE TO PROVIDE MAXIMUM EFFICIENCY WHILE ACHIEVING QUIET, VIBRATION-FREE OPERATION. THE FAN HOUSING SHALL BE MANUFACTURED FROM A NONFERROUS MATERIAL - ALMAG (OR) APPROVED EQUIVALENT. THE OUTLET CONFIGURATION SHALL BE TOP HORIZONTAL, BOTTOM HORIZONTAL, OR UP-BLAST. THE HOUSING SHALL BE CAPABLE OF FIELD RECONFIGURATION IN THE EVENT THE MOUNTING POSITION NEEDS TO BE CHANGED FOR UNFORESEEN REASONS. FOR AESTHETIC REASONS THE FAN MOTOR AND ASSEMBLY SHALL BE MOUNTED ON A WELDED TYPE 304 STAINLESS STEEL (ASTM A240/A240M) MOUNTING BASE TO PREVENT RUST STAINS ON THE EXTERIOR OF THE BUILDING. THE FAN HOUSING AND MOTOR MOUNTING HARDWARE SHALL BE TYPE 304 STAINLESS STEEL (ASTM A240/A240M) FOR SERVICEABILITY REASONS. THE BASE SHALL HAVE FOUR (4) PRE PUNCHED OPENINGS AT BOTTOM OF FAN BASE FOR FIELD ATTACHMENT TO EITHER AN EXTERIOR WALL OR ROOF MOUNTING STRUCTURE.
- B. FAN MOTOR AND BEARING: ALL 1 HORSEPOWER (746 WATTS) TO 15 HORSEPOWER (11190 WATTS) MOTORS SHALL BE TOTALLY ENCLOSED FAN COOLED (TEFC) CONTINUOUS DUTY RATED. THE MOTORS SHALL BE DUAL VOLTAGE WHERE APPLICABLE. MOTORS SHALL COMPLY WITH THE GOVERNMENT MANDATED "ENERGY POLICY AND CONSERVATION ACT (EPACT) AS OUTLINED BY THE DEPARTMENT OF ENERGY. THE BEARINGS SHALL BE SELF-ALIGNED, BALL BEARING TYPE PERMANENTLY SEALED AND LUBRICATED. THE EXHAUST DISCHARGE OUTLET SHALL BE IN COMPLIANCE WITH CALIFORNIA MECHANICAL CODE AND ACGIH RECOMMENDATIONS. AIR INTAKES, WINDOWS, CASCADE SYSTEMS, PREVAILING

CURRENTS, COMMUNICATION EQUIPMENT AND BUILDING AESTHETICS SHALL BE CONSIDERED IN THE FINAL LOCATION OF THE FAN.

- 1. TEFLON SHAFT SEAL: THE FAN SHAFT SHALL BE STEEL AND ROTATE IN A NON-SPARKING TEFLON SEAL TO PREVENT LEAKAGE AND TO PREVENT HOT EXHAUST GASES FROM COMING INTO CONTACT WITH THE MOTOR BEARINGS.
- 2. VARIABLE SPEED DRIVE: THE MOTOR SHALL BE COMPATIBLE WITH A VARIABLE SPEED DRIVE UNIT.
- C. PERFORMANCE: THE DELIVERED VOLUME SHALL TAKE INTO ACCOUNT ALL THE STATIC REGAIN OF VEHICLE ENGINE EXHAUST (BASED ON AN AIRTIGHT CONNECTION AT THE TAILPIPE), LENGTHS OF DUCTWORK, ELBOWS, BRANCHES, SHUT OFF, WYES, ETC. WHICH ACCUMULATE THE STATIC PRESSURE AT THE FIELD INLET. THE MANUFACTURER'S PROVIDED FAN(S) SHALL BE PERFORMANCE GUARANTEED FAN CAPACITY: THE FAN CAPACITY SHALL BE SIZED AS SUCH AS TO DELIVER THE REQUIRED CFM AT EACH HOSE DROP TO WHICH THE VEHICLE IS ATTACHED.
- 1. THE 4 INCH (101.6 MM) HOSE SYSTEM SHALL BE DESIGNED TO DELIVER A MINIMUM OF 500 CFM (2.9 M/SECOND) AT A VELOCITY OF 5800 FPM (33.6 M/SECOND) AT THE HOSE AND NOZZLE CONNECTION.
- 2. THE 5 -INCH (127 MM) HOSE SYSTEM SHALL BE DESIGNED TO DELIVER A MINIMUM OF 750 CFM (4.4 M/SECOND) AT A VELOCITY OF 5800 FPM (33.6 M/SECOND) AT THE HOSE AND NOZZLE CONNECTION.
- 3. THE 6 INCH (152.4 MM) SYSTEM SHALL BE DESIGNED TO DELIVER A MINIMUM OF 1100 CFM (6.4 M/SECOND) AT A VELOCITY OF 5800 FPM (33.6 M/SECOND) AT THE HOSE AND NOZZLE CONNECTION.

#### 2.18 DUCTWORK SYSTEM

- A. DUCTWORK TYPE AND MATERIALS: UMC CLASS 2 OR SMACNA CLASS II PRODUCT CONVEYING DUCT. MEET OR EXCEED CRITERIA FOR CONSTRUCTION AND PERFORMANCE AS OUTLINED IN ROUND INDUSTRIAL DUCT CONSTRUCTION STANDARDS, SMACNA, MATERIALS OF CONSTRUCTION UNLESS OTHERWISE SPECIFIED FOR ALL DUCTWORK AND FITTINGS SHALL BE A MINIMUM G-90 GALVANIZED SHEET METAL (ASTM A653/A653M). ONLY WHEN SPECIFIED, TYPE 304 STAINLESS STEEL (ASTM A240/A240M) SHALL BE PROVIDED.
- B. DUCTWORK SIZING AND GAUGES: ROUND PIPE CONSTRUCTION, WITH THE RANGE OF AVAILABLE SIZES NOT TO EXCEED 10 INCHES (254 MM) IN DIAMETER. DUCT GAUGE SHALL DEPEND ON DIAMETER AND A MINIMUM OPERATING PRESSURE OF 8 INCHES WATER GAUGE (1990 PA). ACCEPTABLE GAUGE AND REINFORCEMENT REQUIREMENTS: INNER DUCT DIAMETER 4 INCHES (101.6 MM) THROUGH 11 INCHES (279.4 MM) DIAMETER SHALL BE 22 GAUGE STANDARD PIPE (INTERNATIONAL MECHANICAL CODE).
- C. DUCTWORK FITTINGS: ROUND AND HAVE A WALL THICKNESS 2 GAUGES (ONE EVEN GAUGE NUMBER) HEAVIER THAN THE LIGHTEST ALLOWABLE GAUGE OF THE DOWNSTREAM SECTION OF DUCT TO WHICH THEY ARE CONNECTED (INTERNATIONAL MECHANICAL CODE). AIR DUCT BRANCH ENTRANCES: FACTORY FABRICATED FITTINGS OR FACTORY FABRICATED DUCT /TAP ASSEMBLIES. FITTINGS: CONSTRUCTED SO THAT AIR STREAMS CONVERGE AT ANGLES NO GREATER THAN 45 DEGREE (INTERNATIONAL MECHANICAL CODE). ALL SEAMS: CONTINUOUS STITCH WELDED AND IF NECESSARY INTERNALLY SÉALED TO ENSURE AIR TIGHTNESS. TURNING ELBOWS SHALL BE STITCH-WELDED AND USED FOR ALL DIAMETERS AND PRESSURES. THEY SHALL BE FABRICATED OF 24 GAUGE GALVANIZED STEEL AND CONSTRUCTED AS TWO PIECE WITH CONTINUOUS WELDED SEAM CONSTRUCTION FITTINGS SIMILAR TO THOSE PROVIDED BY LINDAB INC. TAPERED BODY FITTINGS: USED WHEREVER PARTICULAR FALLOUT IS ANTICIPATED AND WHERE AIR FLOW IS INTRODUCED TO THE TRANSPORT DUCT MANIFOLD.
- D. DUCTWORK DESIGN VELOCITIES: MINIMUM OF 3500 FPM (20.3 M/SECOND) TO 4000 FPM (23.2 M/SECOND) TRANSPORT VELOCITY. CAPTURE VELOCITY: 5500 FPM (31.9 M/SECOND) TO 6000 FPM (34.8 M/SECOND) TO EXTRACT 100 PERCENT OF THE EXHAUST GASES.
- E. EXTERNAL DUCTWORK: SIZED FOR THE EXACT INLET AND OUTLET OF THE EXHAUST FAN BLOWER. AN EXHAUST RAIN CAP SHALL BE SUPPLIED AND MANUFACTURED IN ACCORDANCE WITH EPA STANDARD FOR FREE DRAFT RAIN CAP REQUIREMENTS. INCLUDED AS AN INTEGRAL PART OF THIS RAIN CAP SHALL BE A BACK DRAFT DAMPER TO PROVIDE PROTECTION FROM RAIN AND OTHER INCLEMENT WEATHER.

# PART 3 EXECUTION

# 3.01 INSTALLATION

- A. EXAMINE AREAS AND CONDITIONS, WITH INSTALLER PRESENT, FOR COMPLIANCE WITH REQUIREMENTS FOR INSTALLATION TOLERANCES, SERVICE-UTILITY CONNECTIONS, AND OTHER CONDITIONS AFFECTING INSTALLATION AND PERFORMANCE OF EQUIPMENT. DO NOT PROCEED WITH INSTALLATION UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED
- B. PROVIDE SURFACE/SUBSTRATE PREPARATION AS REQUIRED BY THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS. DO NOT PROCEED WITH INSTALLATION IS IN PROPER CONDITION TO RECEIVE VEHICLE EXHAUST INSTALLATION
- C. INSTALL VEHICLE EXHAUST SYSTEM IN ACCORD WITH MANUFACTURER'S WRITTEN INSTRUCTIONS, ORIGINAL DESIGN AND REFERENCED STANDARDS.
- D. ADJUST VEHICLE EXHAUST SYSTEM FOR PROPER OPERATION. REPLACE ANY PARTS THAT PREVENT THE SYSTEM FROM OPERATING PROPERLY.
- E. REMOVE ALL DEBRIS CAUSED BY INSTALLATION OF THE VEHICLE EXHAUST SYSTEM. CLEAN ALL EXPOSED SURFACES TO AS FABRICATED CONDITION AND APPEARANCE.
- F. PROVIDE PROTECTION OF THE COMPLETED INSTALLATION UNTIL COMPLETION OF THE PROJECT. REPAIR ANY DAMAGE AT NO ADDITIONAL COST TO OWNER.
- G. PROVIDE THE END USER A MINIMUM OF ONE HOUR OF HANDS-ON DEMONSTRATION AND OPERATION OF THE VEHICLE EXHAUST SYSTEM AND RELATED EQUIPMENT. H. PROVIDE MANUFACTURERS WRITTEN WARRANTY FOR A PERIOD OF TWO YEAR FROM
- DATE OF SHIPMENT WILL BE PROVIDED.

# 3.02 TRAINING

- A. PROVIDE TRAINING TO FIRE DEPARTMENT PERSONNEL IN THE DAILY USE AND MAINTENANCE OF THE VEHICLE EXHAUST REMOVAL SYSTEM THAT HAS BEEN INSTALLED AND SPECIFIED HEREIN. THE FIRE DEPARTMENT SHALL BE NOTIFIED AT LEAST 7 DAYS PRIOR TO THE DATE SCHEDULED FOR THE TRAINING COURSE. TRAINING SHALL BE FOR ALL PERSONNEL INVOLVED WITH THE OPERATION OF THE EXHAUST REMOVAL SYSTEM TO INCLUDE ALL SHIFTS REQUIRED TO MAN THE PARTICULAR FACILITY. A RECOGNIZED REPRESENTATIVE OF THE MANUFACTURER OF THE EXHAUST REMOVAL SYSTEM SHALL PERFORM THE TRAINING SESSION IN PERSON. IN ADDITION, A TRAINING VIDEO SHALL BE PROVIDED TO THE FIRE
- B. PROVIDE TRAINING TO ALL SHIFTS DURING THEIR NORMAL SHIFT PERIOD.

END OF SECTION 15838

N8PECTOR \_\_\_\_

MECHANICAL SPECIFICATIONS

# PLANS FOR THE CONSTRUCTION OF SKYLINE TEMPORARY FIRE STATION 7180 SKYLINE DR. SAN DIEGO, CALIFORNIA 92114

PARCEL ID. NO. 581-290-11-00

	NG AND CAP	GO, CAL ITAL PROJECTS D OF 40 SHEET	EPARTMENT	wss. S-00687		
APPROVED: Shirt Culo	2	1:	2/19/20	14	SUBMITTED BY:  ROWAIDA JADAN	
CITY ENGINEER	-		DATE		ASSOCIATE ENGINEER	
DESCRIPTION	BY	APPROVED	DATE	FILMED	MICHAEL RAMIREZ PROJECT MANAGER	
					194-1755 ccs27 coordinate	
	1 45 3 4				1834-6315 ccs83 coordinate	
CONTRACTOR		DATE STARTE	D			

\_\_\_\_ DATE COMPLETED .

IF THIS BAR DOES NOT MEASURE 1 THEN DRAWING IS NOT TO SCALE.

WARNING

APPROVAL NO.

CITY OF SAN DIEGO PUBLIC WORKS PROJECT







T-SQUARED E-Mail adminutes PROFESSIONAL ENGINEERS, INC.

SPECIAL INSPECTION NO.

CITY CONTRACT

340 SPECIALTY DR. /ISTA, CA 92081 #14101 760) 560-0100 10-07-14 (760) 560-0101 -Mail admin@tsqeng.com

TEMPORARY BMP CONSTRUCTION SITE STORM WATER PRIORITY: HIGH\_\_\_\_\_ MEDIUM \_\_\_\_ LOW\_\_

ED MD DP ED

C.I.P. NO.00-000.0

SPEC NO. 0-00-0000-000-0-0

NUMBER FOR EVERY FIRE ALARM SYSTEM COMPONENT.

C. PROVIDE SINGLE LINE, RISER AND POINT-TO-POINT WIRING DIAGRAMS.

IS REQUIRED FOR THE HEARING IMPAIRED.

AND WHETHER THE SYSTEM IS POWER LIMITED OR NON-POWER

G. PROVIDE FLOOR PLANS SHOWING LOCATIONS OF ALL FIRE ALARM EQUIPMENT. INTERCONNECT WIRING, REMOTE POWER SUPPLIES,

H. INDICATE WHETHER THE SYSTEM IS INDEPENDENT OR

PROVIDE VOLTAGE DROP CALCULATIONS FOR THE LONGEST RUN

AND THE CIRCUITS WITH THE LARGEST LOAD REQUIRED FOR BOTH INITIATION AND SIGNAL CIRCUITS.

SPECIFICATIONS, AND ENGINEERING CALCULATIONS HAVE BEEN ACCEPTED AND APPROVED BY THE STATE FIRE MARSHAL. CONTRACTOR SHALL PROVIDE APPROVED COPY TO THE ARCHITECT

# BRANCH CIRCUIT WIRING NOTE:

FOR RECEPTACLE CIRCUITS & 120V BRANCH CIRCUITS, UNLESS NOTED OTHERWISE, PROVIDE THE FOLLOWING CONDUCTORS: (1) #12 CONDUCTOR FOR EACH PHASE (i.e. CIRCUIT NUMBER) & (1) SEPARATE DEDICATED #12 NEUTRAL CONDUCTOR FOR EACH SINGLE 120 VOLT CIRCUIT OR FOR 2 TO 3 CIRCUITS PROVIDED THEY ARE OF DIFFERENT PHASES; (1) EQUIPMENT GROUNDING CONDUCTOR, SIZED PER CEC. FOR CIRCUITS TO COMPUTER/DATA EQUIPMENT, PROVIDE DEDICATED NEUTRAL FOR EACH

PROJECT NOTES

17. USE ONLY COMPETENT AND SKILLED PERSONNEL AND PERFORM ALL WORK, INCLUDING AESTHETIC AS WELL AS ELECTRICAL AND MECHANICAL ASPECTS TO STANDARDS

19. WHERE IT BECOMES NECESSARY TO DRILL INTO OR CUT THROUGH ANY EXISTING SLABS, WALKWAYS OR DRIVES TO PERMIT THE INSTALLATION OF ANY WORK UNDER THIS

CONTRACT, OR TO REPAIR ANY DEFECTS THAT MAY APPEAR TO THE EXPIRATION OF THE WARRANTY, SUCH CUTTING AND PATCHING SHALL PERFORMED BY TRADESMAN

EXPERIENCED IN THE WORK REQUIRED. CONTRACTOR SHALL PAY FOR ALL COSTS REQUIRED FOR CUTTING OR REPAIRING. ALL FINISHES SHALL MATCH EXISTING OR NEW

21. ALL SUBSTITUTIONS SHALL BE SUBMITTED IN WRITING TO THE ARCHITECT TEN (10) DAYS PRIOR TO BID. SUBMITTAL SHALL INCLUDE, BUT NOT BE LIMITED TO, COST SAVINGS, WRITTEN REASON FOR SUBSTITUTION AND A WRITTEN STATEMENT THAT IF THE SUBSTITUTION IS APPROVED, THERE WILL BE NO DELAY IN DELIVERY, CONSTRUCTION TIME OR

22. PROVIDE ENGRAVED PLASTIC NAMEPLATES FOR ALL MAJOR PIECES OF EQUIPMENT. PLATES SHALL BE 3 PLY, BLACK FACE, WHITE CORE WITH 1/4" HIGH CONDENSED GOTHIC

24. WHERE A CONFLICT OCCURS BETWEEN THESE DRAWINGS AND THE SPECIFICATIONS ISSUED AS PART OF THESE DOCUMENTS, THE MORE STRINGENT REQUIREMENTS SHALL

25. COORDINATE ALL ELECTRICAL WORK WITH THE OTHER TRADES. THE OWNER WILL MAKE NO SUBSEQUENT ALLOWANCE FOR ELECTRICAL WORK REQUIRED BY OTHER TRADES.

26. ALL FINAL CONNECTIONS TO OWNER-FURNISHED EQUIPMENT SHALL BE MADE BY THE CONTRACTOR. CONNECTIONS TO ALL EQUIPMENT FURNISHED BY OTHERS SHALL BE

27. NOTIFY THE OWNER'S REPRESENTATIVE WHEREVER A DISCREPANCY IN QUANTITY OR SIZE OF CONDUIT, WIRE, EQUIPMENT DEVICES, CIRCUIT BREAKERS, TRANSFORMERS

COORDINATED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH EQUIPMENT MANUFACTURER PRIOR TO ROUGHING IN ALL CONDUIT TO THIS EQUIPMENT

GROUND FAULT PROTECTION SYSTEMS, ETC. (ALL MATERIALS) THAT ARISES ON THE DRAWINGS AND/OR SPECIFICATIONS. PROVIDE AND INSTALL ALL MATERIAL AND SERVICES

REQUIRED BY THE STRICTEST CONDITIONS NOTED ON DRAWINGS AND/OR IN THE SPECIFICATIONS TO INSURE COMPLETE AND OPERABLE SYSTEMS AS REQUIRED BY THE

29. TRENCH AND BACKFILL AS REQUIRED TO PERFORM UNDERGROUND WORK. USE EXTREME CAUTION WHEN TRENCHING SO AS NOT TO INTERFERE WITH EXISTING UNDERGROUND

31. CONDUIT SHALL NOT BE RUN THROUGH ANY STRUCTURAL MEMBER OF THE BUILDING, EXCEPT AS SPECIFICALLY DIRECTED BY THE OWNER'S REPRESENTATIVE. UNDER NO

32. FOR ADDITIONAL ROUGH-IN AND WIRING REQUIREMENTS SEE MANUFACTURER'S INSTALLATION PLANS, WHICH ARE SUPPLEMENTAL TO AND PART OF THE ELECTRICAL WORK.

33. EXACT ROUTING OF ALL FEEDERS, CONDUITS, ETC. SHALL BE FIELD VERIFIED AND APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION. COORDINATE THE

36. CONTRACTOR SHALL VERIFY EXACT LOADS OF HVAC EQUIP. W/MECHANICAL ENGINEER AND HVAC UNIT MANUFACTURER PRIOR TO START OF WORK. IN CASE OF ANY

38. ALL ELECTRICAL EQUIPMENT SHALL BE BRACED OR ANCHORED TO RESIST A HORIZONTAL FORCE ACTING IN ANY DIRECTION USING THE FOLLOWING CRITERIA:

37. PIPES, DUCTS AND CONDUITS SHALL BE SUPPORTED AND BRACED PER THE S.M.A.C.N.A. "GUIDELINES FOR SEISMIC RESTRAINT OF MECHANICAL SYSTEMS AND PLUMBING &

C. FOR FLEXIBLY MOUNTED EQUIPMENT USED FOUR (4) TIMES THE ABOVE VALUES, AND FOR SIMULTANEOUS VERTICAL FORCE USE ONE-THIRD (1/3) TIMES THE HORIZONTAL

WHERE ANCHORAGE DETAILS ARE NOT SHOWN ON THE DRAWINGS THE FIELD INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER AND

DISCREPANCIES OR POTENTIAL CONFLICTS, INFORM ARCHITECT AND ELECTRICAL ENGINEER IN WRITING PRIOR TO PROCEEDING ANY FURTHER.

28, ALL FEEDER AND BRANCH CIRCUITS SHALL BE PROVIDED WITH AN EQUIPMENT. GROUNDING CONDUCTOR SIZED PER CEC. AND RUN IN THE SAME RACEWAY OR CONDUIT

23. PROVIDE THE OWNER WITH ONE (1) SET OF COMPLETE ELECTRICAL "AS-BUILTS" AT THE COMPLETION OF THE JOB, SHOWING ACTUAL DEPTHS AND LOCATIONS.

18. ALL ELECTRICAL SYSTEM CONDUCTORS SHALL BE INSTALLED IN APPROVED RACEWAYS. NON-METALLIC SHEATHED CABLE IS NOT APPROVED.

20. ALL BROCHURES, OPERATING MANUAL, CATALOGS, ETC. SHALL BE TURNED OVER TO THE OWNER AT JOB COMPLETION.

OBTAIN ALL OTHER PERTINENT INFORMATION REQUIRED TO MEET ACTUAL BUILDING OR FIELD CONDITIONS

30. PATCH AND REPAIR WALLS OR CEILINGS WHICH HAVE BEEN DAMAGED BECAUSE OF ELECTRICAL WORK.

D. THE ABOVE VALUES ARE FOR AN IMPORTANCE FACTOR I = 1.0 AND SEISMIC ZONE Z = 0.4

34. REFER TO ARCHITECTURAL PLANS FOR LOCATIONS OF RECESSED, SURFACE OR PENDANT MOUNTED LIGHT FIXTURES.

CIRCUMSTANCE SHALL CONDUIT RUN THROUGH COLUMNS. FOOTINGS OR GRADE BEAMS.

35. COLD WATER PIPE GROUNDING BOND SHALL BE LOCATED WITHIN 5' OF BUILDING ENTRANCE.

FOR LIGHTING BRANCH CIRCUITS, PROVIDE THE FOLLOWING CONDUCTORS: (1) #12 CONDUCTOR FOR EACH PHASE (i.e. CIRCUIT NUMBER); (1) #12 NEUTRAL CONDUCTOR FOR A SINGLE, 120 OR 277 VOLT CIRCUIT, OR (1) #12 NEUTRAL CONDUCTOR FOR 2 TO 3 CIRCUITS WHERE EACH CIRCUIT IS ON A DIFFERENT PHASE; (1) EQUIPMENT GROUNDING CONDUCTOR, SIZED PER C.E.C. ART. #250 (DO NOT USE A COMMON NEUTRAL FOR MULTIPLE CIRCUITS ON SAME PHASE) (1) INTERCONNECTING CONDUCTOR BETWEEN EACH 3-WAY AND/OR 4-WAY SWITCH

CITY CONTRACT

SPECIAL INSPECTION NO.

SWGR SWITCHGEAR TYP YPICAL, UNLESS OTHERWISE NOTED, OF MANY U.O.N UNLESS OTHERWISE NOTED OR INDICATED WEATHERPROOF EXISTING TO REMAIN EXISTING TO BE RELOCATED NEW LOCATION OF RELOCATED EQUIPMENT EXISTING TO BE REMOVED XFMR TRANSFORMER FIRE ALARM DEFERRED APPROVAL NOTES

**ABBREVIATIONS** 

AMP FUSE (SIZE), AMP FRAME (SIZE)

ARC FAULT CURRENT INTERRUPT

CONDUIT ONLY, WITH PULL LINE

ELECTRIC DRINKING FOUNTAIN

ABOVE FINISH FLOOR

AMP SWITCH (SIZE)

CIRCUIT BREAKER

EMERGENCY POWER

BARE COPPER

CONDUIT

CIRCUIT

AFCI

AFF

BC

CB

EDF

EXP

GND

ISC

LCL

MAX

MCB

MLO

NEC

NKE

NOM

PH OR

PNL

REQ'D

RGS

SFM

SWBD

POLE

PHASE

PANEL

NTS

THE FIRE ALARM SYSTEM DRAWINGS WHEN REQUIRED SHALL BE APPROVAL PROCESS.

PROVIDED BY THE FIRE ALARM CONTRACTOR UNDER A DEFERRED

2. FIRE ALARM SHOP DRAWINGS SHALL BE SUBMITTED TO THE STATE FIRE MARSHAL FOR APPROVAL WITHIN 14 CALENDAR DAYS AFTER NOTICE TO PROCEED. THE FIRE ALARM SHOP DRAWINGS SHALL

A. INDICATE WHAT TYPE OF SYSTEM IS BEING PROVIDED

B. PROVIDE CATALOG DATA, SFM LISTING NUMBER, AND MODEL

D. AN EMERGENCY WARNING SYSTEM WITH VISUAL STROBE DEVICES

E. INDICATE THE CONDUIT SIZES, QUANTITY AND TYPE CONDUCTORS,

F. PROVIDE BATTERY CALCULATIONS FOR THE ENTIRE SYSTEM (24 HOUR STANDBY, 5 MINUTE ALARM TIME).

AND ANNUNCIATORS.

INTERCONNECTED TO THE EXISTING FIRE ALARM SYSTEM.

THE WORK SHALL NOT BE STARTED UNTIL THE DETAILED DRAWINGS,

E0. ELECTRICAL LEGEND AND NOTES

SKYLINE TEMPORARY FIRE STATION 7180 SKYLINE DR. SAN DIEGO, CALIFORNIA 92114

WBS. S-00687

38317 - 32D

PLANS FOR THE CONSTRUCTION OF

PARCEL ID. NO. 581-290-11-00

DATE STARTED

DATE COMPLETED

**ENGINEERING AND CAPITAL PROJECTS DEPARTMENT** SHEET 32 OF 40 SHEETS 12/19/2014 DATE PPROVED DATE DESCRIPTION

CITY OF SAN DIEGO, CALIFORNIA

VERIFY EXISTING SITE CONDITIONS, ELECTRICAL SERVICE REQUIREMENTS, DIMENSIONS, ELEVATIONS, POINTS OF CONNECTION AND PROJECT CONSTRUCTION LIMITS BEFORE SUBMITTING BID. SUBMITTAL OF BID INDICATES CONTRACTOR IS COGNIZANT OF ALL JOB SITE CONDITIONS AND WORK TO BE PERFORMED. ANY DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE THESE DRAWINGS ARE DIAGRAMMATIC AND ONLY INDICATE THE INTENT OF OUTLETS, DEVICES, ETC., TO BE CONNECTED AND THE CIRCUIT NUMBERS TO WHICH THEY ARE TO BE CONNECTED TO. CONTRACTOR SHALL INSTALL ALL REQUIRED J-BOXES ETC., AS REQUIRED FOR A COMPLETE AND OPERATING SYSTEM WHICH FALLS WITHIN ALL LOCAL a,b = INDICATES ROOM SWITCHING CIRCUITS AND NUMBER OF SWITCHES AND NATIONAL GOVERNING CODES. 3. ALL EXTERIOR EQUIPMENT SHALL BE WEATHERPROOF. 4. LOCATIONS OF ALL EQUIPMENT SHALL BE VERIFIED PRIOR TO ROUGH-IN. 5. EACH CONDUCTOR OF EVERY SYSTEM SHALL BE PERMANENTLY TAGGED IN COMPLIANCE WITH OSHA. 6. P.V.C. CONDUIT, WITH CODE SIZED GROUND, SHALL BE USED UNDERGROUND ONLY, IF APPROVED BY LOCAL CODE. INSTALL PER LOCAL CODE REQUIREMENTS. CONDUIT RISERS AND STUBS ABOVE GRADE SHALL BE I.M.C. WITH HALF-LAPPED TAPE COVERING OR PVC COATING. CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, INSURANCE, EQUIPMENT, INSTALLATION, CONSTRUCTION TOOLS, TRANSPORTATION, ETC. FOR A COMPLETE AND PROPERLY ALL MATERIALS SHALL BE NEW, AND OF THE SAME MANUFACTURER FOR EACH CLASS OR GROUP OF EQUIPMENT. MATERIALS SHALL BE LISTED AND APPROVED BY UNDERWRITERS' LABORATORIES, AND SHALL BEAR THE INSPECTION LABEL WHERE SUBJECT TO SUCH APPROVAL. MATERIAL SHALL MEET WITH THE APPROVAL OF THE DIVISION OF INDUSTRIAL SAFETY, AND ALL GOVERNING BODIES HAVING JURISDICTION. MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH APPLICABLE STANDARDS ESTABLISHED BY A.N.S.I., U.L., N.E.M.A. AND N.B.F.U. INSTALL PER MANUFACTURERS' RECOMMENDATIONS. 9. ALL CONDUIT SHALL BE INSTALLED CONCEALED WHERE PHYSICALLY POSSIBLE. ALL EXPOSED CONDUIT SHALL BE INTERMEDIATE METAL CONDUIT AND INSTALLED PARALLEL TO OR AT RIGHT ANGLES WITH THE BUILDING WALLS. IF VIEWED BY THE PUBLIC, PAINT TO MATCH SURFACE TO WHICH IT IS ATTACHED. 10. CONTRACTOR SHALL CARRY OUT HIS WORK IN ACCORDANCE WITH ALL GOVERNING STATE, COUNTY, LOCAL CODES, O.S.H.A. AND THE PRESENTLY ADOPTED NATIONAL ELECTRICAL CODE (N.E.C.). 11. THE COMPLETE ELECTRICAL SYSTEM SHALL BE GROUNDED IN ACCORDANCE WITH THE 2013 C.E.C., ART. # 250. 12. ALL ELECTRICAL PENETRATIONS THROUGH FIRE RATED AREA SEPARATION AND CORRIDOR ASSEMBLIES INCLUDING CONDUITS AND PIPING SHALL BE TIGHTLY AND SOLIDLY SEALED WITH FIRESTOPPING WALLBOARD COMPOUND AND SHALL BE AN APPROVED MATERIAL AS REQUIRED BY LOCAL ENFORCING AGENCY. 13. ELECTRICAL CONTRACTOR SHALL SECURE ALL NECESSARY BUILDING PERMITS, UTILITY CHARGES AND PAY FOR SAME. COORDINATE AND PAY FOR ALL ELECTRICAL SERVICE CHARGES WITH THE BUILDING DEPARTMENT, SERVING UTILITY AND OWNER. 14. COMPLETE JOB SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR AFTER AFTER DATE OF ACCEPTANCE BY OWNER, ANY WORK, MATERIAL OR EQUIPMENT FOUND TO BE FAULTY DURING THAT PERIOD SHALL BE CORRECTED AT ONCE, UPON WRITTEN NOTIFICATION, AT THE EXPENSE OF THE ELECTRICAL CONTRACTOR. 15. CONDUCTORS SHALL BE CODE GRADE, 600 VOLT CLASS, COPPER (UNLESS OTHERWISE NOTED) MARKED 24" ALONG IT'S LENGTH SHOWING MANUFACTURER'S NAME, MAXIMUM ALLOWABLE VOLTAGE AND SIZE. GENERAL PURPOSE WIRING SHALL BE SOLID COPPER CONDUCTORS #10 AND SMALLER, STRANDED COPPER CONDUCTORS FOR #8 AND LARGER, TYPE 'THWN-2'(WET) OR 'THHN'(DRY). FOR SPECIAL PURPOSE WIRE TYPES REFER TO EQUIPMENT MANUFACTURER'S PLANS. 16. ALL CONDUIT ONLY (C.O.) SHALL HAVE A PULL WIRE OR ROPE.

PREVAIL.

OWNER AND ENGINEER.

CONSISTENT WITH THE BEST PRACTICES OF THE TRADE.

LETTERING. SCREW-ON ATTACHMENT ONLY. NO CEMENT.

SUPPLYING SUCH FEEDER OR BRANCH CIRCUIT

A. EQUIPMENT ON GRADE - 20% OF OPERATING WEIGHT

B. EQUIPMENT ON STRUCTURE - 30% OF OPERATING WEIGHT

39. ALL OUTLET RATINGS SHALL BE 20A UNLESS OTHERWISE NOTED.

INSTALLATION WITH OTHER TRADES.

THE FIELD INSPECTOR.

UTILITIES. REPAIR ANY DAMAGES CAUSED BY UNDERGROUND TRENCHING.

Signal Systems TELEPHONE OR TERMINAL BACKBOARD  $\geq \leq$ TELEPHONE OR TERMINAL CABINET, WITH PLYWOOD BACKBOARD PAGING SPEAKER, WALL MOUNT PAGING SPEAKER, CEILING MOUNT WITH BACKBOX INTRUSION INFRARED SENSOR. TIME-OF-DAY CLOCK OUTLET AND CLOCK, AT +96" AFF, U.O.N. CABLE TELEVISION OUTLET. AT +18" AFF. U.O.N. CLOCK AND SPEAKER COMBINATION DATA JUNCTION BOX, AT +18" AFF U.O.N., WITH 1-1/4" CONDUIT ONLY WITH PULLSTRING UP TO NEAREST CABLE TRAY OR ACCESSIBLE TO CEILING SPACE. TELE/DATA JUNCTION BOX AT +18" AFF, U.O.N., WITH (2)1-1/4" CONDUIT ONL WITH PULLSTRING UP TO NEAREST CABLE TRAY OR ACCESSIBLE CEILING SPACE. W = WALL MOUNT AT +42° AFF, U.O.N. CEILING MOUNTED DATA AT T-BAR CEILING NOT TO BE MOUNTED IN CEILING SPACE, WITH 1" CONDUIT AND (1) CAT 6 CABLE TO INTERMEDIATE DISTRIBUTION FRAME AS INDICATED ON DWGS. PROJECTOR SHOWN FOR REFERENCE ONLY

DESCRIPTION

LIGHT SWITCH, WALL MOUNTED AT +42" AFF, U.O.N.

OC = OCCUPANCY SENSOR, DUAL TECHNOLOGY

P = PILOT LIGHT, LIGHTED IN THE OFF POSITION.

2 = TWO POLE

4 = FOUR WAY

D = DIMMER

3 = THREE WAY

BP = BYPASS TIMER

WP = WEATHERPROOF

T = TIMER SWITCH

S = SOLATUBE CONTROL

F = FAN SWITCH

LV = LOW VOLTAGE

SOME SYMBOLS IN THIS LEGEND MAY OR MAY NOT BE USED IN THIS PROJECT. FLOOR

PLANS SHALL DICTATE WHICH SYMBOLS ARE APPLICABLE.

SYMBOL

# **DEMOLITION NOTES**

DATA OUTLET, FLUSH FLOOR MOUNTED, WITH HINGED COVER, U.O.N.

- THE CONTRACTOR SHALL VISIT THE SITE SPECIFICALLY INCLUDING ALL AREAS INDICATED ON THE DRAWINGS. THE CONTRACTOR SHALL THOROUGHLY FAMILIARIZE THEMSELVES WITH THESE EXISTING CONDITIONS. AND BY SUBMITTING A BID ACCEPTS CONDITIONS UNDER WHICH THEY WILL BE REQUIRED TO PERFORM THEIR WORK.
- THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO DISCONNECT AND REMOVE ALL EXISTING LIGHTING FIXTURES, RECEPTACLES, ELECTRICAL EQUIPMENT, ETC., AFFECTED BY THE REMODELED AREA. THIS WILL INCLUDE REPOUTING, OR THE EXTENSION OF, EXISTING CONDUIT AND FEEDERS WHERE NECESSARY TO MAINTAIN THE CONTINUITY OF EXISTING EQUIPMENT REMAINING.
- NUMBERS AND EXISTING CONDUIT HOMERUNS SHOWN ON THESE DRAWINGS WERE TAKEN FROM EXISTING RECORD DRAWINGS. IT IS THIS CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATIONS OF HOMERUNS, AND ADJUST CIRCUIT NUMBERS ACCORDING TO EXISTING CONDITIONS IF REQUIRED.
- WHERE EXISTING WALLS HAVE BEEN REMOVED, AND THERE ARE EXISTING CONDUIT FEEDS WHICH HAVE BEEN CUT-OFF AND CAPPED FLUSH WITH FLOOR, IT IS THE CONTRACTOR'S RESPONSIBILITY TO IDENTIFY AND DIMENSION ALL SUCH CONDUITS ON THE "AS-BUILT"
- DRAWINGS UNLESS OTHERWISE NOTED. 5. IT SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR TO MAINTAIN CONTINUITY OF ALL ELECTRICAL SYSTEMS. EQUIPMENT. ETC.. REMAINING IN OPERATION WHICH ARE BEING FED BY AN ABANDONED OUTLET. MAINTAINING CONTINUITY SHALL CONSIST OF REROUTING CONDUIT,
- WHERE NEW CIRCUITS ARE SHOWN TO EXISTING PANELS, INSTALL NEW BREAKERS (MINIMUM 20
- AMP, SINGLE POLE) AS CALLED FOR ON DRAWINGS. IDENTIFY EACH NEW CIRCUIT ON PANEL
- EXISTING CONDUIT MAY BE REUSED IF ADEQUATELY SIZED, BUT IN NO CASE SHALL ANY EXISTING CONDUCTORS BE REUSED. 8. ALL ABANDONED OUTLETS INCLUDING LIGHT, RECEPTACLES, TELEPHONE, ETC., SHALL BE COVERED AND PATCHED TO MATCH THE FINISH OF SURROUNDING WALL OR CEILING TO THE
- SATISFACTION OF THE OWNER. 9. ALL LIGHTING FIXTURES REMOVED TO ACCOMPLISH DEMOLITION WORK SHALL BE REINSTALLED SIMILAR TO NEW WORK

# APPLICABLE CODES

- 2013 CALIFORNIA ADMINISTRATIVE CODE (CAC), PART 1, TITLE 24 C.C.R.
- 2013 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 C.C.R. (2012 EDITION
- INTERNATIONAL BUILDING CODE WITH 2013 CALIFORNIA AMENDMENTS) 2013 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 C.C.R. (2011 EDITION NATIONAL ELECTRICAL CODE WITH 2013 CALIFORNIA AMENDMENTS)
- 2013 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 C.C.R. (2012 EDITION IAPMO UNIFORM MECHANICAL CODE WITH 2013 CALIFORNIA AMENDMENTS)
- 2013 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 C.C.R. (2012 EDITION IAPMO UNIFORM PLUMBING CODE WITH 2013 CALIFORNIA AMENDMENTS)
- 2013 CALIFORNIA ENERGY CODE, PART 6, TITLE 24, C.C.R. (2008 EDITION CALIFORNIA ENERGY COMMISSION BUILDING ENERGY EFFICIENCY STANDARDS)
- 2013 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24, C.C.R. (2012 EDITION OF INTERNATIONAL FIRE CODE WITH 2013 CALIFORNIA AMENDMENTS)
- 2013 CALIFORNIA GREEN CODE, PART 11, TITLE 24, C.C.R. 2013 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24, C.C.R.
- WARNING

CITY OF SAN DIEGO







TEMPORARY BMP CONSTRUCTION SITE STORM WATER PRIORITY: HIGH MEDIUM LOW 1340 SPECIALTY DR. SUITE E ■ VISTA, CA 92081 TEL: (760) 560-0100 FAX: (760) 560-0101 -Mail admin@tsqeng.com T-SQUARED Www.tsqeng.com ROFESSIONAL ENGINEERS, INC.

11-05-14 ED MD DP ED

#14101

C.I.P. NO.00-000.0

OROFESSION No. E18809 ELECTRICAL EXP. 6-30-15 OF CALIF

SPEC NO. 0-00-0000-000-0-0 ROWAIDA JADAN ASSOCIATE ENGINEER MICHAEL RAMIRI PROJECT MANAGER 194-1755 CC\$27 COORDINATI 1834-6315 CCS83 COORDINATI

CONSTRUCTION CHANGE / ADDENDUM AFFECTED OR ADDED SHEET NUMBERS CHANGE APPROVAL NO.

ELECTRICAL SYMBOL LEGEND

CONDUIT/WIRING, EXPOSED.

CONDUIT, FLEXIBLE CONNECTION

FLUORESCENT LIGHTING FIXTURE

NUMBER = CIRCUIT NUMBER

LIGHT FIXTURE DESIGNATION

EMERGENCY POWER SYSTEM.

LL = LOW LEVEL

FUSED SWITCH

TIME CLOCK

CIRCUIT BREAKER

GROUND

TRACK LIGHTING WITH FIXTURES.

INDICATES DIRECTION OF FACE ARROW.

DESCRIPTION

LOWER CASE LETTER(S) = ROOM SWITCHING CIRCUITS AND NUMBER OF

SWITCHES

NOTE: THIS LABELING SCHEME IS TYPICAL FOR ALL LIGHT FIXTURES.

FLUORESCENT LIGHTING FIXTURE WITH EMERGENCY BATTERY PACK OR

POLE MOUNTED LIGHT FIXTURE WITH POLE AND FOUNDATION. NUMBER AND

LIGHTING FIXTURE WITH EMERGENCY BATTERY PACK OR CONNECTED TO

EXIT LIGHT FIXTURE. DARKENED AREA INDICATES FIXTURE FACE. ARROW

JUNCTION BOX, HANDHOLE OR PULLBOX WITH COVER, SIZE PER NEC, ART.

LIGHTING/POWER PANEL - FLUSH MOUNT UNLESS OTHERWISE INDICATED

PROVIDE TIME-DELAY TYPE FUSE(S) SIZED PER EQUIPMENT MANUFACTURERS

COMBINATION MOTOR STARTER WITH FUSED SWITCH. WITH THERMAL OVERLOAD

DUPLEX RECEPTACLE ABOVE COUNTERTOP BACKSPLASH, VERIFY REQ'D HEIGHT

CEILING MOUNTED DUPLEX RECEPTACLE AT T-BAR CEILING NOT TO BE MOUNTED

DUPLEX RECEPTACLE, FLUSH FLOOR MOUNTED, WITH HINGED COVER, U.O.N.

CORD SUSPENDED CEILING RECEPTACLE, WITH STRAIN RELIEF ASSEMBLY

SOLID STATE, ELECTRONIC, ADJUSTABLE TRIP CIRCUIT BREAKER WITH LSIG.

SURFACE MOUNTED DOUBLE DUPLEX RECEPTACLE +18" AFF, U.O.N.

PROTECTOR AND DUAL ELEMENT FUSES. (30=AMPS, 3=POLES 0=STARTER SIZE)

MANUAL MOTOR STARTER SWITCH WITH THERMAL OVERLOAD PROTECTOR

DUPLEX RECEPTACLE, +18" AFF, U.O.N.; NEMA 5-20R, U.O.N.; NUMBER

GFIF = GROUND FAULT INTERRUPTION, FEED-THRU TYPE

POWER RECEPTACLE, SEE POWER RECEPTACLE SCHEDULE FOR NEMA

MAGNETIC MOTOR STARTER WITH THERMAL OVERLOAD PROTECTOR

MOTOR OR MECHANICAL EQUIPMENT, WITH FLEXIBLE CONNECTION

CONDUIT HOMERUN WITH PANEL DESIGNATION AND CIRCUITS INDICATED.

CONDUIT/WIRING, INSTALLED IN OR BELOW FLOOR SLAB.

CONDUIT/WIRING CONCEALED IN WALL OR CEILING SPACE.

WET LOCATIONS - LIQUIDTIGHT FLEXIBLE STEEL CONDUIT

DRY LOCATIONS - FLEXIBLE STEEL CONDUIT

UPPER CASE LETTER(S) = FIXTURE TYPE

FLUORESCENT, WALL MOUNTED LIGHT FIXTURE.

CONNECTED TO EMERGENCY POWER SYSTEM.

FLUORESCENT STRIP OR UNDERCABINET TASK LIGHT

ORIENTATION OF LUMINAIRES AS SHOWN ON DRAWINGS.

LIGHTING FIXTURE, SURFACE OR RECESSED MOUNTED.

MOTION SENSOR, DUAL TECHNOLOGY, CEILING MOUNTED

UTILITY COMPANY APPROVED CT/METER PROVISIONS

LIGHTING/POWER PANELBOARD DESIGNATION

DISCONNECT SWITCH (30=AMPS 3=POLES)

MECHANICAL EQUIPMENT DESIGNATION

NEMA 3R IN WET LOCATIONS

PUSHBUTTON OR SHUNT TRIP STATION

GFI = GROUND FAULT INTERRUPTION.

DOUBLE DUPLEX RECEPTACLE, +18" AFF, U.O.N.

DUPLEX RECEPTACLE, PEDESTAL MOUNTED

DUCT MOUNTED SMOKE DETECTOR

POWER POLE, WITH NUMBER OF RECEPTACLES INDICATED

SURFACE MOUNTED DUPLEX RECEPTACLE +18" AFF, U.O.N.

INDICATES CIRCUIT NUMBER.

CONFIGURATION AND SIZE.

IN CEILING SPACE.

WP = WEATHERPROOF

NEMA 1 INDOORS

F = FUSED

NAMEPLATE RATING.

LIGHTING FIXTURE, WALL OR BRACKET MOUNTED.

SYMBOL

\_\_\_\_\_

mmmm

4

**M**3

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A-1.3

IF THIS BAR DOES

NOT TO SCALE.

PUBLIC WORKS PROJECT NOT MEASURE THEN DRAWING IS

	VI INE TEMPORARY FIRE STATION
	λχ'S.

E0.2

38317 - 33D

1			
STATE OF CALIFORNIA INDOOR LIGHTING GEC-NRGC-LTF-01-E (Revised 06/13) CALIFORNIA ENERGY COMMISSION	STATE OF CALIFORNIA INDOOR LIGHTING CEC-NRGC-LTI-01-E (Revised 06/13) CALIFORNIA ENERGY COMMISSION	STATE OF CALIFORNIA INDOOR LIGHTING CEC-NRCC-LTI-01-E (Revised 05/13) CALIFORNIA ENERGY COMMISSION	STATE OF CALIFORNIA INDOOR LIGHTING CEC-NRCG-LTI-01-E (Revised 06/13) CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE – USER INSTRUCTIONS  Indoor Lighting  Project Name: Skyline Fire Station  Date Prepared: 9/8/2014	CERTIFICATE OF COMPLIANCE – USER INSTRUCTIONS  Indoor Lighting  Project Name: Skyline Fire Station  Date Prepared: 9/8/2014	CERTIFICATE OF COMPLIANCE – USER INSTRUCTIONS  Indoor Lighting  Project Name: Skyline Fire Station  Date Prepared: 9/8/2014	CERTIFICATE OF COMPLIANCE — USER INSTRUCTIONS  Indoor Lighting  Project Name: Skyline Fire Station  Date Prepared: 9/8/2014
Climate Zone: Conditioned Floor Area: 0	5. Complies ONLY if Installed ≤ Allowed   Complies ONLY if Installed ≤ Allowed   Complies ONLY if Installed ≤ Allowed	A separate Lighting Schedule Must Be Filled Out for Conditioned and Unconditioned Spaces. Installed Lighting Power listed on this Lighting Schedule is only for:  CONDITIONED SPACE  UNCONDITIONED SPACE	A separate Lighting Schedule Must Be Filled Out for Conditioned and Unconditioned Spaces. Installed Lighting Power listed on this Lighting Schedule is only for:  CONDITIONED SPACE  UNCONDITIONED SPACE
Unconditioned Floor Area: 1,179   General Information   Building Type:   Nonresidential   High-Rise Residential   Hotel/Motel	Allowed Lighting Power 6. Conditioned NRCC-LTI-03-E, page 1 0 Unconditioned NRCC-LTI-03-E, page 1 1,061	A. INDOOR LIGHTING SCHEDULE and FIELD INSPECTION ENERGY CHECKLIST	A. INDOOR LIGHTING SCHEDULE and FIELD INSPECTION ENERGY CHECKLIST
☐ Schools     ☐ Relocatable Public Schools     ☐ Conditioned Spaces     ☐ Unconditioned Spaces       Phase of Construction:     ☐ New Construction     ☐ Addition     ☐ Alteration       Method of Compliance:     ☐ Complete Building     ☐ Area Category     ☐ Tailored	Declaration of Required Installation Certificates – Declare by selecting yes for all Installation Certificates that will be submitted. (Retain copies and verify forms are completed and signed.)  YES NO Form/Title	☐ The actual indoor lighting power listed on this page and on the next page includes all installed permanent and planned portable lighting systems.  ☐ When Complete Building Method is used for compliance, list each different type of luminaire on separate lines.  ☐ When Area Category Method or Tailored Method is used for compliance, list each different type of luminaire by each different function area on separate lines.  ☐ Also include track lighting in schedule, and submit the track lighting compliance form (LTG-5C) when line-voltage track lighting is installed.	<ul> <li>□ The actual indoor lighting power listed on this page and on the next page includes all installed permanent and planned portable lighting systems.</li> <li>□ When Complete Building Method is used for compliance, list each different type of luminaire on separate lines.</li> <li>□ When Area Category Method or Tailored Method is used for compliance, list each different type of luminaire by each different function area on separate lines</li> <li>□ Also include track lighting in schedule, and submit the track lighting compliance form (LTG-5C) when line-voltage track lighting is installed.</li> </ul>
LIGHTING COMPLIANCE DOCUMENTS (select yes for each document included)  For detailed instructions on the use of this and all Energy Efficiency Standards compliance documents, refer to the Nonresidential Manual published by the Colifornia Energy Commission.  YES NO FORM TITLE	YES NRCI-LTI-01-E - Must be submitted for all buildings  NRCI-LTI-02-E - Must be submitted for a lighting control system, or for an Energy Management Control System (EMCS), to be recognized for compliance.	B. Installed Portable Luminaires in Offices – Exception to Section 140.6(a)  This section shall be filled out ONLY for portable luminaires in offices (As defined in §100.1). All other planned portable luminaires shall be documented on next page of this compliance form.	B. Installed Portable Luminaires in Offices – Exception to Section 140.6(a)  This section shall be filled out ONLY for portable luminaires in offices (As defined in §100.1). All other planned portable luminaires shall be documented on next page of this compliance form.
YES NRCC-LIT-01-E Certificate of Compliance. All Pages required on plans for all submittals.  YES NRCC-LIT-02-E Lighting Controls, Certificate of Compliance, and PAF Calculation. All Pages required on plans for all submittals.  YES NRCC-LIT-03-E Indoor Lighting Power Allowance  NO NRCC-LIT-04-E Tailored Method Worksheets	NRCI-LTI-03-E - Must be submitted for a line-voltage track lighting integral current limiter, or for a supplementary overcurrent protection panel used to energize only line-voltage track lighting, to be recognized for compliance.  NRCI-LTI-04-E - Must be submitted for two interlocked systems serving an auditorium, a convention center, a conference room, a multipurpose room, or a theater to be recognized for compliance.	☐ This section is used to determine if greater than 0.3 watts of portable lighting is planned for any office ☐ Fill out a separate line for each different office. Small offices that are typical (having the same general and portable lighting) may be grouped together. This allowance shall not be traded between offices having different lighting systems.  Office Portable Luminaire  Office Installed Portable Luminaire Watts Per Square  Accountabl  Office Location  Field	☐ This section is used to determine if greater than 0.3 watts of portable lighting is planned for any office ☐ Fill out a separate line for each different office. Small offices that are typical (having the same general and portable lighting) may be grouped together. This allowance shall not be traded between offices having different lighting systems.  Office Portable Luminaire Office Installed Portable Luminaire Watts Per Square Accountabl Office Location
NO NRCC-LIT-05-E Line Voltage Track Lighting Worksheets  Summary of Allowed Lighting Power	NRCI-LTI-05-E - Must be submitted for a Power Adjustment Factor (PAF) to be recognized for compliance.    Field Inspector	Schedule         Foot         e Watts         Inspector           A         B         C         D         E         F         G         H         I         J           Installed         Installed         Installed         Installed         Installed         Installed	Schedule
Conditioned and Unconditioned space Lighting must not be combined for compliance  Indoor Lighting Power for Conditioned Spaces  Indoor Lighting Power for Unconditioned Spaces  Watts  Installed Lighting  O  Installed Lighting  O  O  O  O  O  O  O  O  O  O  O  O  O	Declaration of Required Certificates of Acceptance – Declare by checking all of the Certificates of Acceptance that will be submitted. (Retain copies and verify forms are completed and signed.)  YES NO Form/Title	Complete Luminaire Description  (i.e., LED, under cabinet, furniture mounted direct/indirect)  Watts per better zero; by containing the square containing	Complete Luminaire Description  (i.e., LED, under cabinet, furniture mounted direct/indirect)  Luminaire  (B x C)  (D / E)  (F - 0.3)  (Identify Office area in which these portable luminaires are installed
1. NRCC-LTI-01-E, page 4 + NRCC-LTI-01-E, page 4 + NRCC-LTI-01-E, page 4 + NRCC-LTI-01-E, page 4 + NRCC-LTI-01-E, page 5 + NRCC-LTI-01-E, page 5 + NRCC-LTI-01-E, page 5 + NRCC-LTI-01-E, page 6 + NRCC-LTI-01-E, page 7 + NRCC-LTI-01-E, page 8 + NRCC-LTI-01-E, page 9 + NRC	YES  NRCA-LTI-02-E - Must be submitted for occupancy sensors and automatic time switch controls.  NRCA-LTI-03-E - Must be submitted for automatic daylight controls.		
3. NRCC-LTI-01-E, page 2  4. Adjusted Installed Lighting Power (row 1 plus row 2 minus row 3)  1	NO NRCA-LTI-04-E - Must be submitted for demand responsive lighting controls.	Total installed portable luminaire watts that are greater than 0.3 watts per square foot per office:  Enter sum total of all pages into NRCC- LTI-01-E; Page 2	Total installed portable luminaire watts that are greater than 0.3 watts per square foot per office:  Enter sum total of all pages into NRCC- LTI-01-E; Page 2
CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance June 2013	CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance  June 2013	CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance  June 2013	CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance June 2013
STATE OF CALIFORNIA INDOOR LIGHTING GEORGICL TUBLE (Revised 1993) CALIFORNIA ENERGY COMMISSION NRCC-LTI-01-E	STATE OF CALIFORNIA INDOOR LIGHTING CEGINROGI TIMILE (Revised 08VIS) CERTIFICATE OF COMPILIANCE — USER INSTRUCTIONS  NRCC-LTI-01-E	STATE OF CALIFORNIA INDOOR LIGHTING - LIGHTING CONTROLS GENROC-LTH-02-E (Revised 6913) CERTIFICATE OF COMPLIANCE  NRCC-LTI-02-E	STATE OF CALIFORNIA  INDOOR LIGHTING - LIGHTING CONTROLS  CEC-NRCC-LIT-02-E (Revised 08/15)  CERTIFICATE OF COMPLIANCE  CALIFORNIA ENERGY COMMISSION  NRCC-LIT-02-E
Indoor Lighting  Project Name: Skyline Fire Station  NRCC-LTI-01-E  [Page 4 of 5]  Project Name: Skyline Fire Station	Indoor Lighting  Project Name: Skyline Fire Station  Date Prepared: 9/8/2014	Indoor Lighting - Lighting Controls (Page 1 of 3)  Project Name: Skyline Fire Station (Page 1 of 3)	Indoor Lighting - Lighting Controls  Project Name: Skyline Fire Station  Date Propagated: 9/8/2014
A separate Lighting Schedule Must Be Filled Out for Conditioned and Unconditioned Spaces. Installed Lighting Power listed on this Lighting Schedule is only for:  CONDITIONED SPACE  UNCONDITIONED SPACE	DOCUMENTATION AUTHOR'S DECLARATION STATEMENT  1. I certify that this Certificate of Compliance documentation is accurate and complete.  Documentation Author Name: Ed David  Company: T-Squared Professional Engineers, Inc.  Signature Date: 9/8/2014	The NRCC-LTI-02-E shall be used to document all mandatory and prescriptive lighting controls that are applicable to the project.  A. Mandatory Lighting Control Declaration Statements Indicate if the measure applies:	A separate document must be filled out for Conditioned and Unconditioned Spaces. This page is used only for the following:  CONDITIONED SPACES  UNCONDITIONED SPACES
C. INDOOR LIGHTING SCHEDULE and FIELD INSPECTION ENERGY CHECKLIST  Luminaire Schedule Installed Watts Location Field Inspector 1	Address: 1340 Specialty Dr., Ste E: CEA/HERS Certification (if applicable):  Gity/State/Zip: Vista, CA 92081 Phone: (760) 560-0100	YES NO Control Requirements  Lighting shall be controlled by self-contained lighting control devices which are certified to the Energy Commission according to the Title 20 Appliance YES Efficiency Regulations in accordance with Section 110.9.	MANDATORY AND PRESCRIPTIVE INDOOR LIGHTING CONTROL SCHEDULE, PAF CALCULATION, and FIELD INSPECTION CHECKLIST  PAF Credit Calculation 2  Test Account 1  Field 1  Field 1  Field 2  Field 2  Field 2  Field 3  Field 3  Field 3  Field 3  Field 4  Field 4  Field 4  Field 5  Field 5  Field 7  Fiel
A B C D E F G H  How wattage was determined	I certify the following under penalty of perjury, under the laws of the State of California:  The information provided on this Certificate of Compliance is true and correct.  and eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).	Lighting shall be controlled by a lighting control a system or energy management control system in accordance with §110.9. An Installation Certificate  YES shall be submitted in accordance with Section 130.4(b).  One or more Track Lighting Integral Current Limiters shall be installed which have been certified to the Energy Commission in accordance with §110.9 and	Standards Complying With   Lighting Control Schedule  Standards Complying With   Standards Complying
Complete Luminaire Description  Watts p from N A 8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.  4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.  5. Uniform the complete diseased course this Certificate of Compliance shall be made, with the building permit application.	NO §130.0. An Installation Additionally, an Installation Certificate shall be submitted in accordance with Section 130.4(b).  A Track Lighting Supplementary Overcurrent Protection Panel shall be installed in accordance with Section 110.9 and Section 130.3. Additionally, an Installation Certificate shall be installed in accordance with Section 130.4(b).	Type/ Description of Lighting Control (i.e.: occupancy sensor, # 13 95 13 14 15 13 14 15 15 15 15 15 15 15 15 15 15 15 15 15
F1       F1-2 Lamp 4 ft 78 Energy Saving Elec       59.0       □       □       4       236       Police/Fire Station       □       □         F2       F2-4 Lamp 8 ft 78 Energy Saving Elec       118.0       □       □       6       708       Police/Fire Station       □       □         □       □       □       □       □       □       □       □	5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.  Responsible Designer Name: Ed David  Responsible Designer Signature:	All lighting controls and equipment shall comply with the applicable requirements in §110.9 and shall be installed in accordance with the manufacturer's instructions in accordance with Section 130.1.  YES All luminaires shall be functionally controlled with manually switched ON and OFF lighting controls in accordance with Section 130.1(a).	Location in Building automatic time switch, of 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.
	Company: T-Squared Professional Engineers, Inc.   Date Signed: 9/8/2014	General lighting shall be separately controlled from all other lighting systems in an area. Floor and wall display, window display, case display, ornamental, and special effects lighting shall each be separately controlled on circuits that are 20 amps or less. When track lighting is used, general, display, ornamental, and special effects lighting shall each be separately controlled; in accordance with Section 130.0(a)4.  The general lighting of any enclosed area 100 square feet or larger, with a connected lighting load that exceeds 0.5 watts per square foot shall meet the	Fire Station         Dimming w/Occ Sensor         ✓ 236         0.25         59         ✓ □         □           Fire Station         Dimming w/Occ Sensor         708         0.25         177         □         □
INSTALLED WATTS PAGE TOTAL: 944 Enter sum total of all pages into		YES multi-level lighting control requirements in accordance with Section 130.1(b).  YES All installed indoor lighting shall be equipped with controls that meet the applicable Shut-OFF control requirements in Section 130.1(c).	
NRCC-LTI-01-E; Page 2		NO  Lighting in all Daylit Zones shall be controlled in accordance with the requirements in Section 130.1(d) and daylit zones are shown on the plans.  Lighting power in buildings larger than 10,000 square feet shall be capable of being automatically reduced in response to a Demand Responsive Signal in accordance with Section 130.1(e).	INSTALLED WATTS PAGE TOTAL: 236  IF MULTIPLE PAGES ARE USED, ENTER SUM TOTAL OF ALL PAGES HERE: 236  1. §130.1(a) = Manual area controls; §130.0(b) = Multi Level; §130.1(c) = Auto Shut-Off; §130.1(d) = Mandatory Daylight; §130.1(e) = Demand Responsive; §140.6(d) =
		Before an occupancy permit is granted for a newly constructed building or area, or a new lighting system serving a building, area, or site is operated for normal use, indoor lighting controls serving the building, area, or site shall be certified as meeting the Acceptance Requirements for Code Compliance in accordance with Section 130.4.(a). The controls required to meet the Acceptance Requirements include automatic daylight controls, automatic shut-OFF	Additional lighting controls installed to earn a PAF; \$140.6(d) = Prescriptive Secondary Sidelit Daylight Controls.  2. Check Table 140.6-A for correct Factor. PAFs shall not be traded between conditioned and unconditioned spaces. As a condition to earn a PAF, an Installation Certificate is also required to be filled out, signed, and submitted.
CA Building Energy Efficiency Standards ~ 2013 Nonresidential Compliance  June 2013	CA Building Energy Efficiency Standards ~ 2013 Nonresidential Compliance  June 2013	YES controls, and demand responsive controls.  Registration Number: Registration Date/Time: HERS Pilovider:  CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance June 2013	Registration Number: Registration Date/Time: HERS Provider: CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance June 2013
STATE OF CALIFORNIA INDOOR LIGHTING - LIGHTING CONTROLS CEC-NRCC-LTI-02-E (Revised 08/13) CERTIFICATE OF COMPLIANCE NRCC-LTI-02-E	STATE OF CALIFORNIA INDOOR LIGHTING POWER ALLOWANCE CEC-NRC-(LT)-03-E (Revised 08/13)  CALIFORNIA ENERGY COMMISSION	STATE OF CALIFORNIA INDOOR LIGHTING POWER ALLOWANCE CEC.NRCC-LT1-03-E (Revised 69/15) CALIFORNIA ENERGY COMMISSION	STATE OF CALIFORNIA INDOOR LIGHTING POWER ALLOWANCE CEC-NRCC-LTV-03-E (Revised 06/15) CALIFORNIA ENERGY COMMISSION
Indoor Lighting - Lighting Controls (Page 3 of 3)  Fraject Name: Skyline Fire Station (Page 3 of 3)	CERTIFICATE OF COMPLIANCE  Certificate of Compliance - Indoor Lighting Power Allowance  (Page 1 of 4)  Project Name Skyline Fire Station  Date Prepared: 9/8/2014	CERTIFICATE OF COMPLIANCE  Certificate of Compliance - Indoor Lighting Power Allowance  (Page 2 of 4)  Project Name: Skyline Fire Station  Date Properties 9/8/2014	CERTIFICATE OF COMPLIANCE  Certificate of Compliance - Indoor Lighting Power Allowance  (Page 4 of 4)  Propert Name: Skyline Fire Station:  One Propert 9/8/2014
DOCUMENTATION AUTHOR'S DECLARATION STATEMENT  1. I certify that this Certificate of Compliance documentation is accurate and complete.  Documentation Author Name: Ed David  Documentation Author Signature: Educado Color	ALLOWED LIGHTING POWER (Chose Method)  A separate page must be filled out for Conditioned and Unconditioned Spaces. This page is only for:   CONDITIONED spaces  UNCONDITIONED spaces	A separate page must be filled out for Conditioned and Unconditioned Spaces. This page is only for:   CONDITIONED spaces  UNCONDITIONED spaces  C -2 AREA CATEGORY METHOD GENERAL LIGHTING POWER ALLOWANCE	
Company: T-Squared Professional Engineers, Inc Signature Date: 9/8/2014  Address: 1340 Specialty Dr., Ste E CEA/HERS Certification (if applicable):	A. SUMMARY TOTALS OF LIGHTING POWER ALLOWANCES  If using Complete Building Method for compliance, use only the total in column (a) as total allowed building watts.	Do not include portable lighting for offices. Portable lighting for offices shall be documented only in section B of NRCC-LTI-01-E.  Separately list lighting for each primary function area as defined in §100.1 of the Standards.	DOCUMENTATION AUTHOR'S DECLARATION STATEMENT  1. I certify that this Certificate of Compliance documentation is accurate and complete.  Documentation Author Name: Ed David  Documentation Author Signature: Educade Ca David
City/State/Zip: Vista, CA 92081  RESPONSIBLE PERSON'S DECLARATION STATEMENT  I certify the following under penalty of perjury, under the laws of the State of California:	If using Area Category Method, Tailored Method, or a combination of Area Category and Tailored Method for compliance, use only the total in column (b) as the total allowed building watts	AREA CATEGORY (From §140.6 Table 140.6-C)  Location in Building Primary Function Area per Table 140.6-C PER (ft²) X AREA (ft²) = WATTS	Company: T-Squared Professional Engineers, Inc.  Signature Date: 9/8/2014  Address: 1340 Specialty Dr., Ste E.  CEA/HERS Certification (if applicable):
<ol> <li>The information provided on this Certificate of Compliance is true and correct.</li> <li>I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).</li> <li>The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of</li> </ol>	1. Complete Building Method Allowed Watts. Documented in section B of NRCC-LTI-03-E (below on this page) 2. Area Category Method Allowed Watts. Documented in section C-1 of NRCC-LTI-03-E (below on this page) 1,061	Fire Station Police/Fire Station 0.90 1,179 1,061	City/State/Zep: Vista, CA 92081 Priorie: (760) 560-0100  RESPONSIBLE PERSON'S DECLARATION STATEMENT  Lettify the following under penalty of perjury, under the laws of the State of California:
Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.  4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.	3. Tailored Method Allowed Watts. Documented in section A of NRCC-LTI-04-E  TOTAL ALLOWED BUILDING WATTS. Enter number into correct cell on NRCC-LTI-01, Page 2, Row 1  Check here if building contains both conditioned and unconditioned areas.		<ol> <li>The information provided on this Certificate of Compliance is true and correct.</li> <li>I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).</li> <li>The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of</li> </ol>
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit (s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.  Responsible Designer Name: Ed David  Responsible Designer Name: Ed David	B. COMPLETE BUILDING METHOD LIGHTING POWER ALLOWANCE		Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.  4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
Company: T-Squared Professional Engineers, Inc.  Date Signed: 9/8/2014  Address: 1340 Specialty, Suite E License: E18809	A B C D  WATTS COMPLETE ALLOWED  TYPE OF BUILDING (From §140.6 Table 140.6-B) PER (ft²) X BLDG. AREA = WATTS		5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.  Responsible Designer Signature:  Glavid  Responsible Designer Signature:  Glavid
Gity/State/Zip: Vista, CA 92081 Phone: (760) 560-0100	Total Area:		Company: T-Squared Professional Engineers, Inc.  Date Signed: 9/8/2014  Address: 1340 Specialty, Suite E  License: E18809
	Total Watts. Enter Total Watts into section A, row 1 (Above on this page)		Vista; CA 92081 Proble: (760) 560-0100
	C -1 AREA CATEGORY METHOD TOTAL LIGHTING POWER ALLOWANCES (C-2 plus C-3)  Total from section C-2 . 1,061  Total from section C-3 . 0	TOTALS 1,179 1,061	
Registration Number: Registration Date/Time: HERS Provider: CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance June 2013	Total Watts. Enter Total Watts into section A, row 2 (Above on this page) . 1,061  Registration Number: Registration Date/Time: HERS Provider:  CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance June 2013	Enter sum total Area Category allowed watts into section C-1 of NRCC-LTI-03-E (this compliance form)  Registration Number: CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance  Registration Date/Time:  HERS Provider: June 2013	Registration Number: Registration Date/Time: HERS Provider: CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance June 2013
			ELECTRICAL TITLE 24
			PLANS FOR THE CONSTRU SKYLINE TEMPORARY FIRE
			7180 SKYLINE TEMPORARY FIRE

Y FIRE STATION ), CALIFORNIA 92114 PARCEL ID. NO. 581-290-11-00

		G AND CAP	GO, CAL TAL PROJECTS D OF 40 SHEET	EPARTMENT		wbs. S-00687
SPEC NO. 0-00-0000-000-0-0 STAMP & SKINATURE PROFESSION	APPROVED: Sky Culmonia City Engineer		1	2/19/20 DATE	)14	SUBMITTED BY:  ROWAIDA JADAN  ASSOCIATE ENGINEER
EE JEOU A. DAILY	DESCRIPTION	BY	APPROVED	DATE	FILMED	MICHAEL RAMIREZ
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IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

WARNING

APPROVAL NO.

CONSTRUCTION CHANGE / ADDENDUM

AFFECTED OR ADDED SHEET NUMBERS

CHANGE DATE

CITY OF SAN DIEGO PUBLIC WORKS PROJECT





CITY CONTRACT SPECIAL INSPECTION NO.

#14101 11*-*05-14 ED MD DP ED

C.I.P. NO.00-000.0

SKYI INE TEMPORARY FIRE STATION

June 2013

E0.3

Dutdoor Lighting Zone (OLZ)  The OLZ is:  Default in accordance with Defaul	Addition  OLZ-2  with §10-114, or Amen- accurate and complete.  Documentation Author Signature:  Signature Date: 9/8/2014  CEA/ HERS Certification Identification (if	Alteratio  OLZ-3  ended by the A	ated Hardscape A 4,047 on OLZ-4		Proge	Lighting Power A		Date Prepared:								
General Information  Phase of Construction:  Dutdoor Lighting Zone (OLZ)  The OLZ is:  Default in accordance of Default i	Addition I OLZ-2	Alteratio  OLZ-3  ended by the A	4,047 on □ OLZ-4 AHJ		Su	Lighting Power A	Outdoor Lightin		9/8/2014							
Phase of Construction:    New Construction   Dutdoor Lighting Zone (OLZ)   Default in accordance with the OLZ is:   Def	□ OLZ-2 □ Amen  accurate and complete.  Documentation Author Signature:  S, Inc Signature Date: 9/8/2014  CEA/ HERS Certification Identification (if Phone: (760) 560-0100	OLZ-3 ended by the A	□ OLZ-4		3	Lighting Power A	Power Allowed for	ing Power or General Hardscape - NRCC-LTO-03-E +	Watts 2,034							
Default in accordance of Default in accordance	with §10-114, or Amendaccurate and complete.  Documentation Author Signature:  S, Inc Signature Date: 9/8/2014  CEA/ HERS Certification Identification (if Phone: (760) 560-0100	ended by the A	АНЈ				Allowed for Specific	c Application per Application - NRCC-LTO-03-E + c Application per Unit Length - NRCC-LTO-03-E +	0							
COCUMENTATION AUTHOR'S DECLARATION STATEMENT  I certify that this Certificate of Compliance documentation is accommendation Author Name:  Ompany: T-Squared Professional Engineers,  address: 1340 Specialty Dr., Ste E  Vista, CA 92081  RESPONSIBLE PERSON'S DECLARATION STATEMENT  I certify the following under penalty of perjury, under the laws  The information provided on this Certificate of Compliance is to  I am eligible under Division 3 of the Business and Professions Compliance.	accurate and complete.  Documentation Author Signature:  Signature Date: 9/8/2014  CEA/ HERS Certification Identification (if Phone: (760) 560-0100	Edwardo (	- F821		3	Lighting Power A	Allowed for Specific	c Application for Ornamental - NRCC-LTO-03-E + c Application per Square Foot - NRCC-LTO-03-E +	0							
I certify that this Certificate of Compliance documentation is accumentation Author Name:  T-Squared Professional Engineers,  ddress:  1340 Specialty Dr., Ste E  Ty/State/Zip:  Vista, CA 92081  ESPONSIBLE PERSON'S DECLARATION STATEMENT  I certify the following under penalty of perjury, under the laws The information provided on this Certificate of Compliance is to a meligible under Division 3 of the Business and Professions C	Documentation Author Signature:  Signature Date: 9/8/2014  CEA/ HERS Certification Identification (if Phone: (760) 560-0100		apm			St. J. Stran Land	Sum Total of ALLO	DWED Outdoor Lighting Power =	2,034	CERTIFICATE	E OF COMPLIANCE					
ity/state/Zip: Vista, CA 92081  RESPONSIBLE PERSON'S DECLARATION STATEMENT  I certify the following under penalty of perjury, under the laws  The information provided on this Certificate of Compliance is to  I am eligible under Division 3 of the Business and Professions Compliance.	S <sub>x</sub> Ino Signature Date: 9/8/2014  CEA/ HERS Certification Identification (if Phone: (760) 560-0100					, INST	M	les ONLY if Installed ≤ Allowed  ghting from NRCC-LTI-01-E, page 3 390	<b>.</b>	Outdoor Lig	hting Skyline Fire Station					Date Prepared 9/8/20*
Vista, CA 92081  RESPONSIBLE PERSON'S DECLARATION STATEMENT  I certify the following under penalty of perjury, under the laws  The information provided on this Certificate of Compliance is t  I am eligible under Division 3 of the Business and Professions C	Phone: (760) 560-0100	In apparent 1.						Certificates – Declare by checking all Installati	ion Certificates that will							
I certify the following under penalty of perjury, under the laws  The information provided on this Certificate of Compliance is t  I am eligible under Division 3 of the Business and Professions C					be	submitted. (Retain	n copies and veri	rify forms are completed and signed.)	4	A. OUTD	OOR LIGHTING SCHEDULE and FIELD	INSPECTION				1 2 2
. I am eligible under Division 3 of the Business and Professions C					120 12			ted for all buildings ted for a lighting control system, or for an	☐ Field Inspector ☐ Field Inspector	A	Luminaire Schedule	С	Insta	alled Wa	E F	Location
identified on this Certificate of Compliance (responsible design	Code to accept responsibility for the b	building design	n or system design	n				(EMCS), to be recognized for compliance. of Acceptance – Declare by checking all of the	e Certificates of				How watta	Sales Daniel	Wat	
<ul> <li>The energy features and performance specifications, materials design identified on this Certificate of Compliance conform to Regulations.</li> </ul>	ls, components, and manufactured de the requirements of Title 24, Part 1 a	levices for the b and Part 6 of th	building design or he California Code	system e of	Ac	ceptance that will b	be submitted. (R	Retain copies and verify forms are completed a ted for outdoor lighting controls.	No. 141	Name or Item Tag	Complete Luminaire Description	Watts pe	from	Accor §130	(CxE)  Number	Primary Function area in wh these luminaires are install
<ul> <li>The building design features or system design features identification provided on other applicable compliance documents, workshe</li> </ul>								700 122				ri ir	efault NA8	ding to 0.0(c)	area leo	
agency for approval with this building permit application.  I will ensure that a completed signed copy of this Certificate of the building, and made available to the enforcement agency for					5500	me or Symbol		n the outdoor lighting power requirements in of exempt luminaire in accordance with the ex	(int)	S1 S2	\$1-65w LED \$2-65w LED	65.0 65.0	0 0		2 130 4 260	Automotive Hardscape Automotive Hardscape
this Certificate of Compliance is required to be included with the sponsible Designer Name: Ed David	Responsible Designer Signature:	ides to the build	ding owner at occi										0			
ompany: T-Squared Professional Engineers, ddress: 1340 Specialty, Suite E	s, Inc Date Signed: 9/8/2014												0			
Vista, CA 92081	E18809	760) 560-0100	00					n the cutoff requirements in §130.2(b)					0			
					Na	me or Symbol	Description o	of exempt luminaire in accordance with the ex	kemptions				0			
GHTING COMPLIANCE DOCUMENTS (check box for each documents)																
r detailed instructions on the use of this and all Energy Efficiency Siblished by the California Energy Commission.		efer to the Nonr	residential Manua	al .		V/00 V/01 D		n the outdoor lighting control requirements in					0			
NRCC-LTO-01-E Certificate of Compliance  NRCC-LTO-02-E Outdoor Lighting Controls	s Certificate of Compliance				Na	me or Symbol	Description o	of exempt luminaire in accordance with the ex	emptions							
☑ NRCC-LTO-03-E Outdoor Lighting Power Al	Allowance Certificate of Compliance															
							1						TALLED WA	TTS PAGE	TOTAL: 390	Enter sum total of all page
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Building Energy Efficiency Standards - 2013 Nonresidential Compli											1.	INS	TALLED WA			01-E; Page 2
STATE OF CALIFORNIA OUTDOOR LIGHTING CONTROLS	bliance			June 2013		uilding Energy Efficiency S	: 19	STATE OF CALIFORNIA	June 2013	CA Building Ene	rgy Efficiency Standards - 2013 Nonresidential Com	pliance	TALLED WA	9	STATE OF CALIFORNI,	4
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CEC-NRCC-LTO-02-E (Revised 08/13) CERTIFICATE OF COMPLIANCE Outdoor Lighting Controls Presed Name: Skyline Fire Station  MANDATORY OUTDOOR LIGHTING CONTROL SO  Outdoor Lighting Control Sch	CHEDULE and FIELD INSPECT		CKLIST  Standards	ce Propured 9/8/20 Complying With or enter 'E' if Ex	14	Y COMMISSION NRCC-LTO-02-E		STATE OF CALIFORNIA OUTDOOR LIGHTING CONTROLS CEC-NRCC-LTO-02-E (Revised 06r15) CERTIFICATE OF COMPLIANCE Outdoor Lighting Controls Project Name: Skyline Fire Station  DOCUMENTATION AUTHOR'S DECLARATION STATEMENT 1. I certify that this Certificate of Compliance documentation Author Name: Ed David Company: T-Squared Professional En Address: 1340 Specialty Dr., Ste E City/State/Zip: Vista, CA 92081  RESPONSIBLE PERSON'S DECLARATION STATEMENT I certify the following under penalty of perjury, under 1. The information provided on this Certificate of Comp	r ation is accurate and complete.  Documentation Author Signat  Igineers, Inc.  Signature Date: 9/8/2014  CEA/ HERS Certification Identi  Phone: (760) 560-011  If the laws of the State of California:  Iliance is true and correct.	ire: Edwardo Crip lication (if applicable):	CALIFORNIA ENERGY COMM	MISSION NRCC-LTO-02-E (Page 3 of 3)			OUTDOOR LICEC-NROC-LTO-03-E ( CERTIFICATE OF C Outdoor Lighting Project filamie: Skylin  A. OUTDOOR  1. General Hardsca 2. Additional Specific determined in Section FER APPLICAT From Section  0 3. Total Allowed Out	A GHTING POWER ALL Revised 08/13) OMPLIANCE Power Allowances the Fire Station  LIGHTING POWER ALLOV the Lighting Power Allowance (Site ic "use it or lose it" Lighting Power on C-1 to C-4 of NRCC-LTI-04-E.  ION SALES FF C-1 from Se + 0  Itdoor Lighting Wattage (add row
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al Speci	ic "use it or los	se it" Lighting Powe	r Allowances listed in e	each of these cells	shall be identical to	total allowed watts			THOR'S DECLARATION STATEMENT	
d in Sect	ion C-1 to C-4 o	of NRCC-LTI-04-E.						Coertify that this of Documentation Author Name	Certificate of Compliance documentation is accurate and comple:  Ed David	Documentation Author Signature: Educardo Cabar
PPLICAT	[설문설명]	SALES FR		ORNAMENTA	A STATE OF THE STA	PER SPECIFIC AREA		Company:	T-Squared Professional Engineers, Inc.	Signature Date: 9/8/2014
Section	C-1	from Sec	tion C-2	from Sect	tion C-3	from Section C-4.	2. 0	Address:	1340 Specialty Dr., Ste E	CEN/ HERS Certification Identification (If applicable):
owed O	itdoor Lighting	Wattage (add rows	1 and 2)	<u> </u>		19	3. 2,034	City/State/Zip:	Vista, CA 92081	Phone: (760) 560-0100
								RESPONSIBLE PERSON	N'S DECLARATION STATEMENT	
RAL H	ARDSCAPE	LIGHTING POV	VER ALLOWANCE	FROM TABL	E 140.7-A				wing under penalty of perjury, under the laws of the State of Ca	llifornia:
rea Wat	age Allowance	AWA)	linear	Wattage Allowand	re (IWA)	Initial Wattage Allowance	Total General Hardscape Lighting		provided on this Certificate of Compliance is true and correct.	ponsibility for the building design or system design identified on this Certificate of Compliance
1		continue;	1240000	ALPRO PONTENCE DE PONT	Self-Self-Self-Self-Self-Self-Self-Self-	(IWA)	Allowance	(responsible desi		pointoning for the building design or system design mentioned on this certainate of compliance
0.02	В	C	D	E	F	G	Н	Compliance confi	orm to the requirements of Title 24, Part 1 and Part 6 of the Cal	
ed Area	AWA Per Square Foot	AWA (A x B)	Perimeter Length of General Hardscape	5.07	LWA (D x E)	IWA (Watts)	C+F+G			ate of Compliance are consistent with the information provided on other applicable compliance enforcement agency for approval with this building permit application.
=	0.090	1,264	0	0,600	0	770	2,034			be made available with the building permit(s) issued for the building, and made available to the d signed copy of this Certificate of Compliance is required to be included with the documentation
-	$\vdash$			_					to the building owner at occupancy.	10 40 6 6 6
								Responsible Designer Name	Ed David	Responsible Designer Signature: Educardo G. Dun
$\dashv$	$\vdash$	-	1		<del>                                     </del>	+		Company :	T-Squared Professional Engineers, Inc.	Date Signed: 9/8/2014
二								Address:	1340 Specialty, Suite E	License: E18809
$\dashv$				-	1	-	-	City/State/Zip:	Vista, CA 92081	Phone: (760) 560-0100
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Energy E	fficiency Stand	lards - 2013 Nonres	idential Compliance				June 2013	CA Building Energy Effic	iency Standards - 2013 Nonresidential Compliance	
								COA COLUMNIA DE SE SE SE SUCCESSOR DE SE		

The NRCC-LTO-02-E shall be used to document all mandatory outdoor lighting controls that are applicable to the project.

Part-Night Outdoor Lighting Controls, as defined in Section 100.1, shall meet the requirements in Section 110.9(b)5

Backlight, Uplight, and Glare (collectively referred to as "BUG") in accordance with Section 130.2(b)

Lighting shall be controlled by self-contained lighting control devices which are certified to the Energy Commission according to the Title 20 Appliance

Lighting shall be controlled by a lighting control a system or energy management control system in accordance with §110.9. An Installation Certificate

All lighting controls and equipment shall comply with the applicable requirements in §110.9 and shall be installed in accordance with the manufacturer's

All outdoor incandescent luminaires rated over 100 watts, determined in accordance with Section 130.0(c), shall be controlled by a motion sensor.

All outdoor luminaires rated for use with lamps greater than 150 lamp watts, determined in accordance with Section 130.0(c), shall comply with

All installed outdoor lighting shall be controlled by a photocontrol or outdoor astronomical time-switch control in accordance with Section 130.2(c)1 All installed outdoor lighting shall be circuited and independently controlled from other electrical loads by an automatic scheduling control in

All installed outdoor lighting, where the bottom of the luminaire is mounted 24 feet or less above the ground, shall be controlled with automatic

Some of the state of the state

For Building Facade, Ornamental Hardscape and Outdoor Dining lighting, an automatic lighting control in accordance with Section 130.2(c)5 Before an occupancy permit is granted for a newly constructed building or area, or a new lighting system serving a building, area, or site is operated for normal use, indoor lighting controls serving the building, area, or site shall be certified as meeting the Acceptance Requirements for Code Compliance in accordance with §130.4.(a). Outdoor lighting controls shall comply with the applicable requirements of Section 130.2(c) and Reference Nonresidential

Date Prepared: 9/8/2014

OUTDOOR LIGHTING CONTROLS
CEC-NRCC-LTO-02-E (Revised 08/13)

Mandatory Outdoor Lighting Control Declaration Statements

Efficiency Regulations in accordance with §110.9.

shall be submitted in accordance with §130.4(b).

lighting controls in accordance with Section 130.2(c)3

instructions in accordance with §130.1

accordance with Section 130.2(c)2

Appendix NA7.8

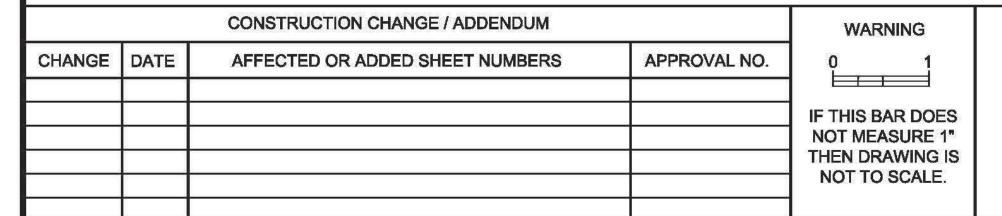
CERTIFICATE OF COMPLIANCE

Outdoor Lighting Controls Project Name: Skyline Fire Station

Check all that apply:

NRCC-LTO-01-E

(Page 3 of 3)



CITY OF SAN DIEGO PUBLIC WORKS PROJECT





CITY CONTRACT

SPECIAL INSPECTION NO.

#14101 11-05-14

ED MD DP ED

C.I.P. NO.00-000.0

BPEC NO. 0-00-0000-000-0-0

WBS. S-00687 ENGINEERING AND CAPITAL PROJECTS DEPARTMENT SHEET 34 OF 40 SHEETS 12/19/2014 ROWAIDA JADAN ASSOCIATE ENGINEER APPROVED DATE FILMED PROJECT MANAGER 194-1755 CC\$27 COORDINATE 1834-6315 CCS83 COORDINATE 38317 - 34D

PLANS FOR THE CONSTRUCTION OF

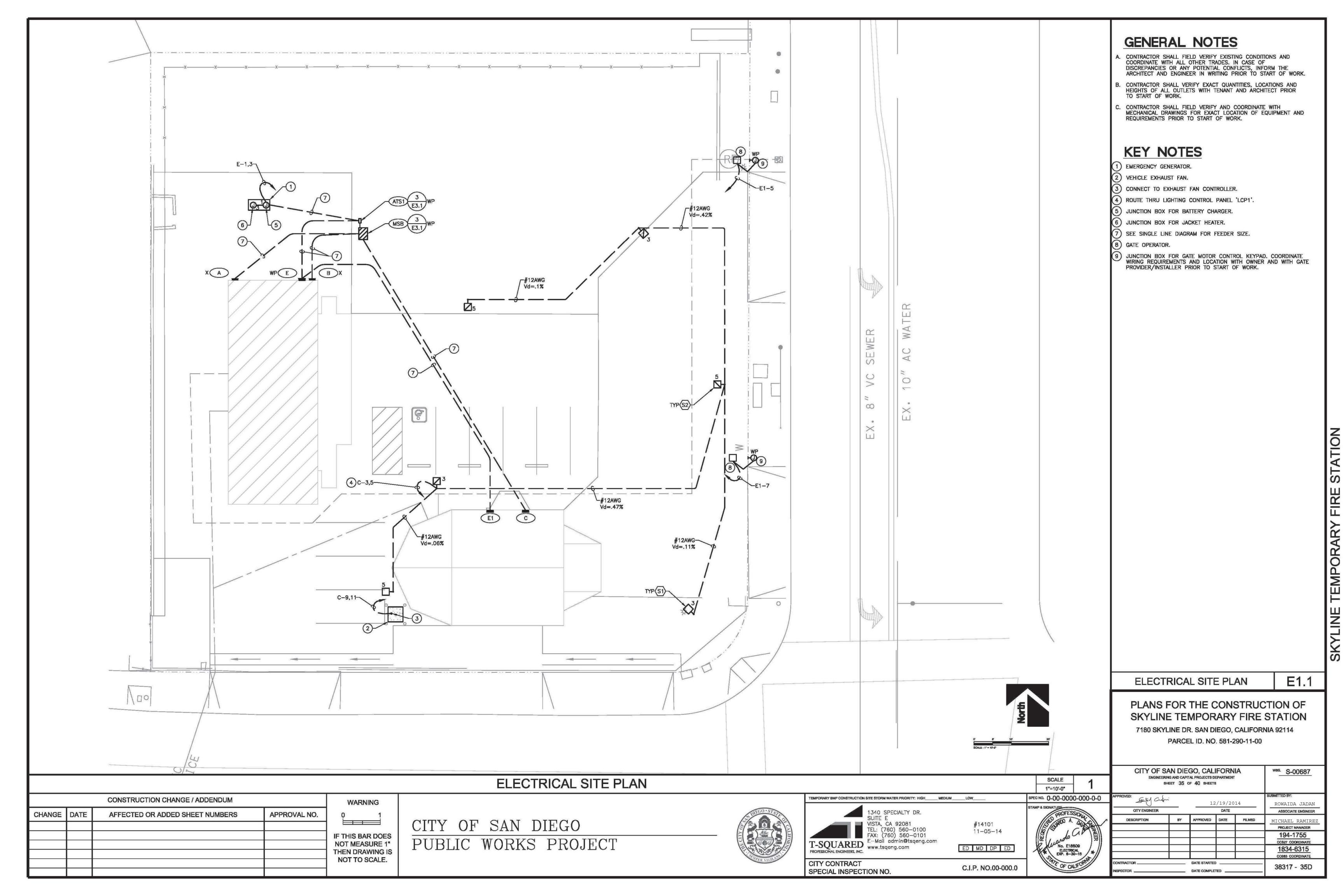
SKYLINE TEMPORARY FIRE STATION

7180 SKYLINE DR. SAN DIEGO, CALIFORNIA 92114

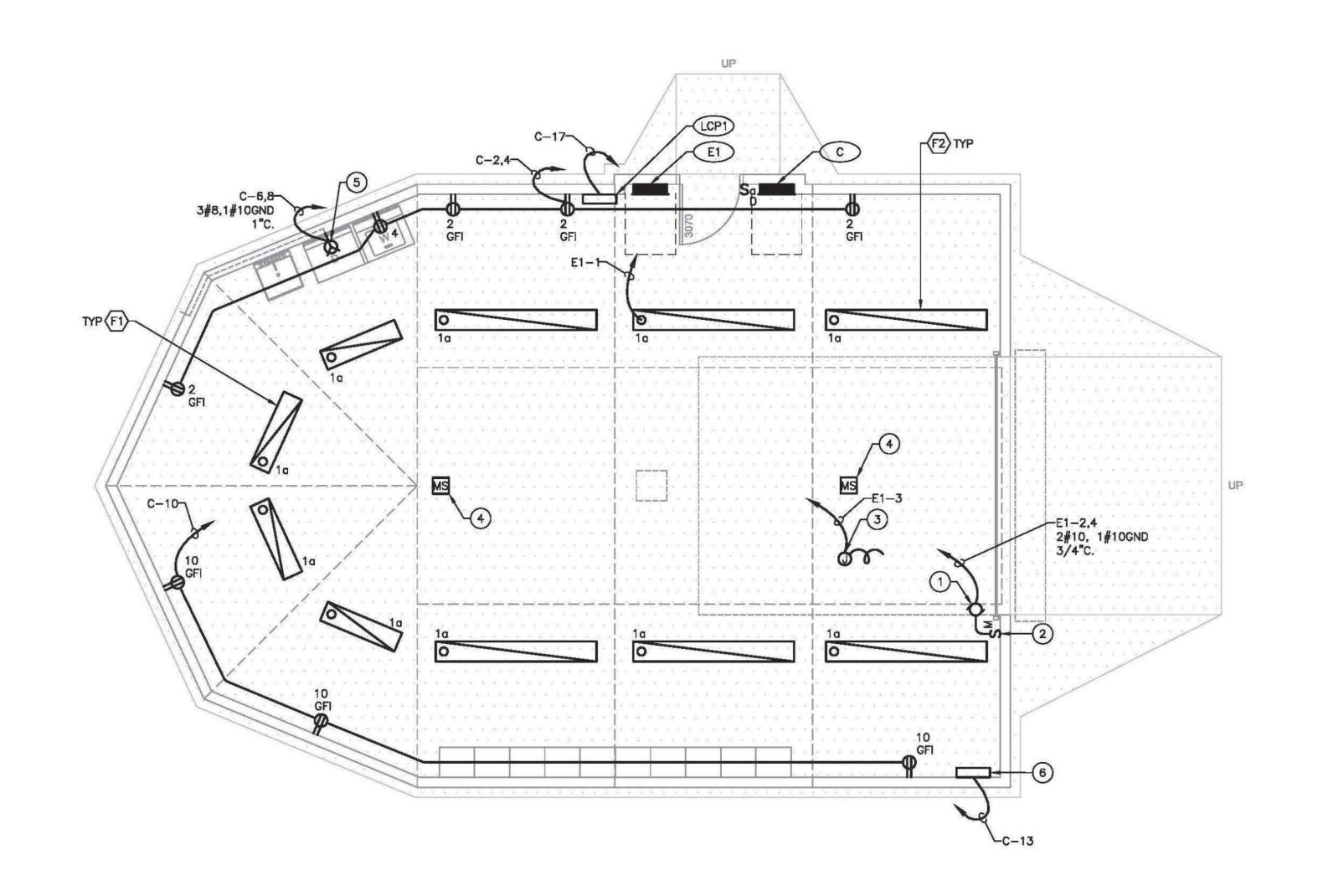
PARCEL ID. NO. 581-290-11-00

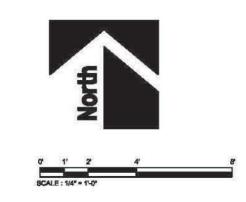
**ELECTRICAL TITLE 24** 

CITY OF SAN DIEGO, CALIFORNIA



E2.1





**ELECTRICAL FLOOR PLAN** 

PLANS FOR THE CONSTRUCTION OF SKYLINE TEMPORARY FIRE STATION

7180 SKYLINE DR. SAN DIEGO, CALIFORNIA 92114 PARCEL ID. NO. 581-290-11-00

ELECTRICAL	SPRUNG	STRUCTUR	E FLOOR PLAN

CONSTRUCTION CHANGE / ADDENDUM WARNING CHANGE DATE AFFECTED OR ADDED SHEET NUMBERS APPROVAL NO. IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

CITY OF SAN DIEGO PUBLIC WORKS PROJECT



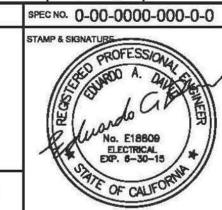


CITY CONTRACT

SPECIAL INSPECTION NO.

#14101 11-05-14

ED MD DP ED C.I.P. NO.00-000.0



ENGINEER	CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS DEPARTMENT SHEET 36 OF 40 SHEETS								
APPROVED: Sky ask	APPROVED: 12/19/2014								
CITY ENGINEER	100-		DATE	ASSOCIATE ENGINEER					
DESCRIPTION	BY	APPROVED	DATE	FILMED	MICHAEL RAMIREZ				
					PROJECT MANAGER				
	4				194-1755				
					CC\$27 COORDINATE				
					1834-6315 CCS83 COORDINATE				
CONTRACTOR	38317 - 36D								

4 HIGH BAY MOTION SENSOR BY WATTSTOPPER, CATALOG #HB300B-L3, OR EQUAL.

MOTORIZED DOOR CONTROL SWITCH.

**GENERAL NOTES** 

CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND COORDINATE WITH ALL OTHER TRADES. IN CASE OF DISCREPANCIES OR ANY POTENTIAL CONFLICTS, INFORM THE ARCHITECT AND ENGINEER IN WRITING PRIOR TO START OF WORK.

. CONTRACTOR SHALL FIELD VERIFY AND COORDINATE WITH MECHANICAL DRAWINGS FOR EXACT LOCATION OF EQUIPMENT AND REQUIREMENTS PRIOR TO START OF WORK.

PROVIDE AND INSTALL DROP CORD FOR ENGINE BLOCK HEATER.
CEILING MOUNTED 360 DEGREE SWIVEL INDUSTRIAL CORD REEL,
APPLETON #RL103J-123-30, WITH RECEPTACLE TO MATCH TRUCK

B. CONTRACTOR SHALL VERIFY EXACT QUANTITIES, LOCATIONS AND HEIGHTS OF ALL OUTLETS WITH TENANT AND ARCHITECT PRIOR

5 COORDINATE RECEPTACLE NEMA CONFIGURATION WITH DRYER PROVIDER/INSTALLER PRIOR TO START OF WORK.

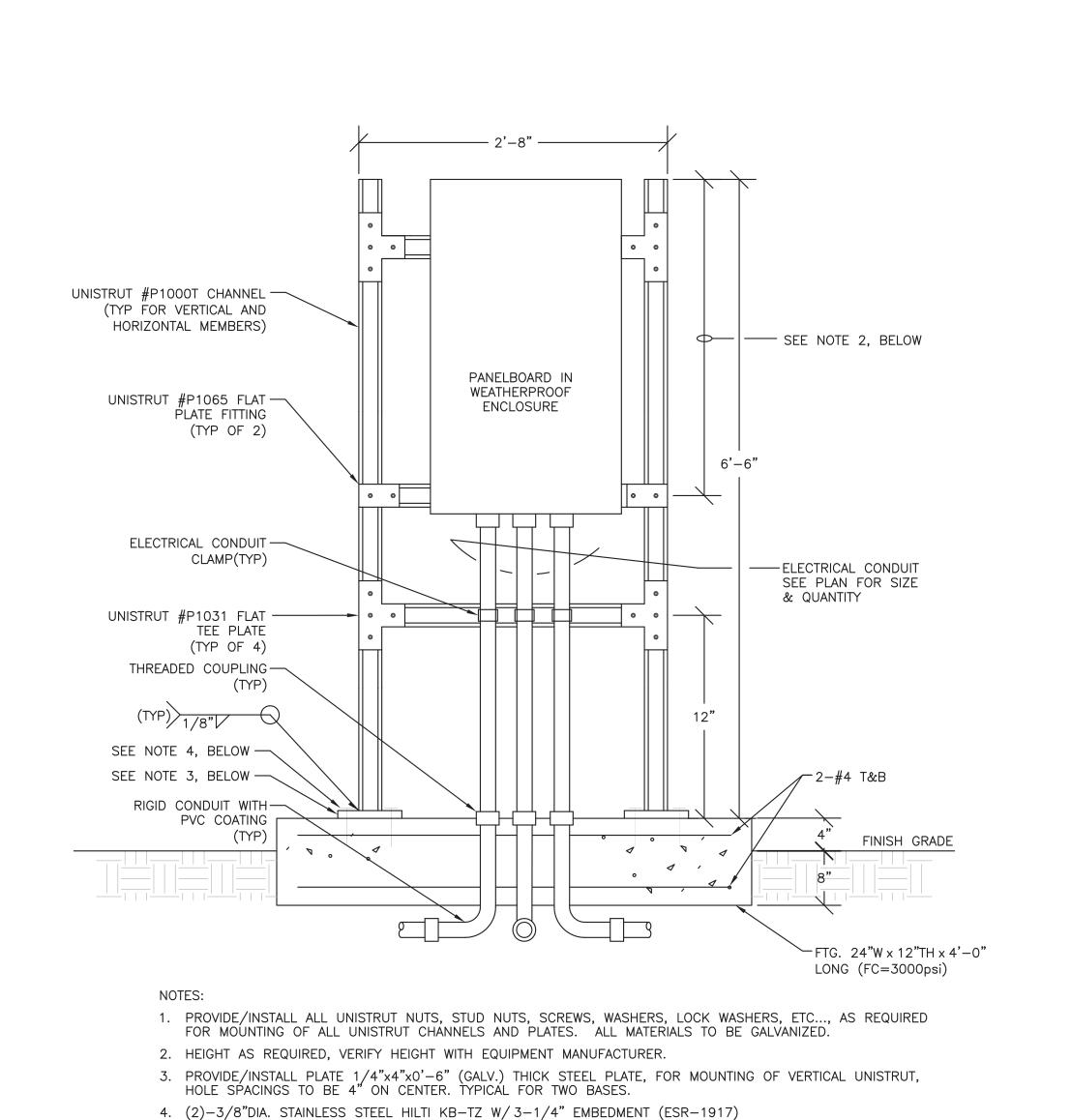
(6) VEHICLE EXHAUST CONTROLLER.

TO START OF WORK.

**KEY NOTES** 

(1) MOTORIZED DOOR.





5. STRUT STRUCTURE MUST BE INSTALLED A MINIMUM OF 36" FROM THE EXISTING SWITCHBOARD ENCLOSURE TO

MAIN: 60A/2P

blank or N=NON-CONTINUOUS, L=LONG CONTINUOUS, R=RECEPT (NEC ART. 220-3), K=KITCHEN CODE BKR P # VA PHASE VA # P BKR CODE DESCRIPTION

20 1 3 600 B 1200 4

L 20 1 1 944 A 1200 2 2 20 MOTORIZED DOOR

CONNECTED VA (N) 5328 PANEL CONN. AMPS WITH LCL 27.12 PANEL DEMAND KVA WITH LC

CONNECTED VA (L) 944 CONNECTED VA WITH LCL (L) 1180 PANEL DEWAND AMPS WITH LCL 27.12

FEED: BOTTOM

MTG: SURFACE

SPACE

SPACE

DEWAND VA (R) 0 PANEL CONNECTED AMPS 26.13

DEMAND VA (K) 0 HIGH Ø AMPS WITH LCL 29.53

6 SPACE
8 SPACE
10 SPACE
12 SPACE
14 SPACE

20 SPACE

SPECIAL NOTES:

STRUT MOUNTED PANEL DETAIL

MAINTAIN WORKING CLEARANCE.

PANEL: E1

PHASE:

SPARE SPACE SPACE SPACE

SPACE

SPACE

SPACE CONNECTED VA Ø A

CONNECTED VA Ø B

TOTAL VA

LISTED HANDLE TIE.

NOTE DESCRIPTION

LTG - CARPORT

1a GATE OPERATOR 1a GATE OPERATOR

VOLTAGE: 240 / 120

FIRE ENGINE BLOCK HEATER

LOCATION: SEE PLANS

AIC RATING: 10000 AMPS

20 1 5 1164 A 20 1 7 1164 20 1 9 A 20 1 11

CONNECTED VA (R)

CIRCUIT CODE:



- A. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND COORDINATE WITH ALL OTHER TRADES. IN CASE OF DISCREPANCIES OR ANY POTENTIAL CONFLICTS, INFORM THE ARCHITECT AND ENGINEER IN WRITING PRIOR TO START OF WORK.
- B. ALL WORK SHOWN LIGHT IS EXISTING AND ALL WORK SHOWN DARK IS NEW UNLESS OTHERWISE NOTED.



15kW/15KVA,

120/240V,

1PH, 3W.

 $-\frac{2P}{10}$  GENERATOR (9)10

70AT

TO GROUND

ROD

- (1) 3/4"X10' LONG COPPER CLAD STEEL GROUND ROD. SEE DETAIL ON SHEET E3.2.
- (2) 1#6 AWG CU TO GROUND ROD.
- 3 PROVIDE 1#6 AWG CU BOND TO COLD WATER SERVICE AND BUILDING STEEL.
- (4) COORDINATE QUANTITY, TYPE, AND METHOD OF INSTALLATION OF CONDUITS WITH SDG&E PLANNER PRIOR TO START OF WORK.
- 5 GENERATOR REMOTE ANNUNCIATOR. COORDINATE LOCATION IN LIVING QUARTERS WITH OWNER REPRESENTATIVE.
- 6 PROVIDE AND INSTALL WIRING IN 1-1/4' CONDUIT. VERIFY WIRING REQUIREMENTS WITH GENERATOR MANUFACTURER/INSTALLER.
- 7 PROVIDE AND INSTALL CONTROL WIRING TO ATS1 IN 1-1/4" CONDUIT. VERIFY WIRING REQUIREMENTS WITH GENERATOR
- MANUFACTURER/INSTALLER. (8) PANEL PROVIDED BY LIVING QUARTERS PROVIDER, SEPARATE PERMIT.
- 9 15kW/15KVA, 120/240V, 1PH, 3W, DIESEL GENERATOR BY KOHLER, MODEL #15REOZDC OR EQUAL IN WEATHERPROOF SOUND ATTENUÄTED ENCLOSURE WITH 40 GALLONS BASE TANK, BATTERY CHARGER AND BLOCK HEATER. WIRING SHALL BE INSTALLED PER CEC ARTICLE 700. CONTRACTOR SHALL PROVIDE CERTIFICATE OF APPROVAL FROM SCAQMD FOR ENGINE EXHAUST EMISSIONS, FIRE DEPARTMENT/HAZMAT AND OTHER AGENCY REQUIREMENTS. SECURE PERMIT TO INSTALL AND OPERATE AND PAY ALL INITIAL FEES
  - (10) PROVIDE GROUNDING AND NEUTRAL BOND AT THE GENERATOR PER CEC 250.26.
  - (11) 1#8AWG CU. TO GROUND ROD.

REQUIRED BY THE AGENCY.

- 12) PROVIDE 1#8 AWG CU. BOND TO COLD WATER SERVICE AND BUILDING STEEL.
- CONTRACTOR TO COORDINATE CONNECTING THESE EXISTING LOADS FROM EXISTING PANELS TO NEW PANEL 'E' WITH LIVING QUARTER PROVIDER/INSTALLER.

# ELECTRICAL SINGLE LINE DIAGRAM

'MSB' 400AMPS 120/240V 1ø, 3W 42kAIC NEMA 3R

─3#1, 1#6 GND,

Vd=0.41%

ISC=9,672 AMPS

23.57 kVA

17.16 kVA

13.23 kVA

13.17 kVA

67.13 kVA

279.72 AMPS

PANEL

125AF 125AT

─3#1,1#6 GND,

1-1/2°C.

(ISC=11,991 AMPS

8

Vd = 0.19%

PANEL: E LOCAT			LOCATION: SEE PLANS						70A/2P			BUS: 125A NEMA 3R		
	VOLTAGE: 240 / 120	AIC R	ATING:		22000	AMPS		FEED:	вотто	М		MTG:	SURFACE	
	PHASE: 1	CIRCU	JIT COE	DE:										
	WIRE: 3	blank	or N=N	ON-	CONTINU	JOUS, L=	LONG CO	NTINUOUS	S, R=REG	CEP.	T (NEC	ART.	220-3), K=KITCHEN	
NOTE	DESCRIPTION	CODE	BKR	Р	#	VA	PHASE	VA	#	Р	BKR	CODE	DESCRIPTION	NOTE
2d	GEN BATTERY CHARGER		20	1	1	500	А	1200	2	1	20		REFRIGERATOR	1,2a
2d	GEN BLOCK HEATER		20	1	3	1000	В	1200	4	1	20		REFRIGERATOR	1,2a
	SPARE		20	1	5		Α	500	6	1	20		LTG - LIVING QTR - FROM A-2 CKT	1,2b
	SPARE		20	1	7		В	640	8	1	20		LTG - LIVING QTR - FROM A-4 CKT	1,2b
	SPARE		20	1	9		А	960	10	1	20		LTG - LIVING QTR - FROM B-2 CKT	1,2c
	SPARE		20	1	11		В	900	12	1	20		LTG - LIVING QTR - FROM B-4 CKT	1,2c
	SPACE				13		А		14				SPACE	
	SPACE				15		В		16				SPACE	
	SPACE				17		А		18				SPACE	
	SPACE				19		В		20				SPACE	
	SPACE				21		А	3308	22	2	60		PANEL E1	
	SPACE				23		В	2964	24				-	
CO	NNECTED VA Ø A 6468	3	CONN	ECTE	DVA (N)	13172	PANEL C	ONN. AMPS	WITH LCL		54.88	PANE	L DEMAND KVA WITH LCL 13.1	7
CONNECTED VA Ø B 6704			CONNECTED VA (L)			0	CONNECTED VA WITH LCL (L) 0					PANEL DEMAND AMPS WITH LCL 54.88		
			CONNECTED VA (R)		0	DEMAND VA (R) (					PANEL CONNECTED AMPS 54.88			
	TOTAL VA 13172	2	CONNECTED VA (K)			0		DEMA	ND VA (K)		0		HIGH Ø AMPS WITH LCL 55.8	37
1	EXISTING LOAD FROM LIVING QUARTER	PANELS.		6			•		;	SPE	CIAL NO	OTES:	·	

ISC=42,000 AMPS UTILITY CONTRIBUTION

TO ĞROUND

ROD

LOAD SUMMARY

SWITCHBOARD 'MSB'

PANEL C

PANEL E

TOTAL LOAD

**EXISTING PANEL A** 

**EXISTING PANEL B** 

67.13 kVA @ 120V/240V, 1PH, 3W

**400AT** 

	VOLTAGE: 240 / 120	AIC RATING: 10000 AMPS							FEED: BOTTOM				MTG: SURFACE		
	PHASE: 1	CIRCL	CIRCUIT CODE:												
	WIRE: 3	blank	or N=N	ON-	CONTINU	JOUS, L=	LONG CO	NC	TINUOUS	, R=REC	CEP	T (NEC	ART.	220-3), K=KITCHEN	
NOTE	DESCRIPTION	CODE	BKR	Р	#	VA	PHASE	=	VA	#	Р	BKR	CODE	DESCRIPTION	١
	SPARE		20	1	1		А		720	2	1	20	R	RECEPT - APP BAY	
2b	LTG - EXTERIOR POLES	L	20	1	3	312		В	1200	4	1	20		RECEPT - WASHER	
2b	LTG - EXTERIOR POLES	L	20	1	5	208	А		3600	6	2	40		RECEPT - DRYER	
	SPARE		20	1	7			В	3600	8		-		-	
	VEHICLE EXHAUST FAN		30	2	9	960	А		540	10	1	20	R	RECEPT - CONV	
	-		-		11	960		В		12	1	20		SPARE	
	VEHICLE EXHAUST CONTROLLER		20	1	13	500	А			14	1	20		SPARE	
	SPARE		20	1	15			В		16	1	20		SPARE	
	LCP1		20	1	17	500	А			18	1	20		SPARE	
	SPARE		20	1	19			В		20	1	20		SPARE	
	SPARE		20	1	21		А			22	1	20		SPARE	
	SPARE		20	1	23			В		24	1	20		SPARE	
	SPACE				25		А			26				SPACE	
	SPACE				27			В		28				SPACE	
	SPACE				29		А			30				SPACE	
	SPACE				31			В		32				SPACE	
	SPACE				33		А	T		34				SPACE	
	SPACE				35			В		36				SPACE	
	SPACE				37		А			38				SPACE	
	SPACE				39			В		40				SPACE	
	SPACE				41		А			42				SPACE	
CC	NNECTED VA Ø A 7028	3	CON	ECTE	DVA (N)	11320	PANEL	. CC	ONN. AMPS	WITH LCL		55.13	PANE	L DEMAND KVA WITH LCL	13.23
CC	NNECTED VA Ø B 6072			CONNECTED VA (L)		520	CONNE	ECT	ED VA WITI	H LCL (L)		650			55.13
				IECTE	DVA (R)	1260			DEMAN	ND VA (R)	'A (R) 1260				54.58
	TOTAL VA 13100	CONNECTED VA (K)			0			DEMAN	VD VA (K)		0		HIGH Ø AMPS WITH LCL		
1	COORDINATE CIRCUIT BREAKER AND WIF	RESIZE									SPE	CIAL NO	TES:		

**70AT** 

-3#4, 1#8 GND,

Vd = 0.42%

-3#6, 1#10 GND,

Vd = 1.15%

X ISC=2,346 AMPS

K ISC=10,383 AMPS

**PANEL** 

**PANEL** 

100AT

─3#2, 1#8 GND,

12(11)—

100A 3P

NEMA 3R

42kAIC L

1-1/4°C.

(ISC=5,795 AMPS

PANEL

Vd=0.84%

ELECTRICAL SINGLE LINE DIAGRAM

PLANS FOR THE CONSTRUCTION OF

E3.1

S-00687

SCALE

NO SCALE

SKYLINE TEMPORARY FIRE STATION 7180 SKYLINE DR. SAN DIEGO, CALIFORNIA 92114 PARCEL ID. NO. 581-290-11-00

PANEL SCHEDULES	

WARNING	CONSTRUCTION CHANGE / ADDENDUM									
0 1	APPROVAL NO.	AFFECTED OR ADDED SHEET NUMBERS	DATE	CHANGE						
IF THIS BAR DOES										
NOT MEASURE 1" THEN DRAWING IS										
NOT TO SCALE.										
1	1									

CITY OF SAN DIEGO PUBLIC WORKS PROJECT

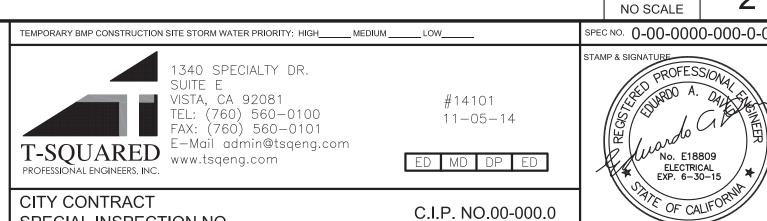
SCALE

NO SCALE

2 LISTED HANDLE TIE.



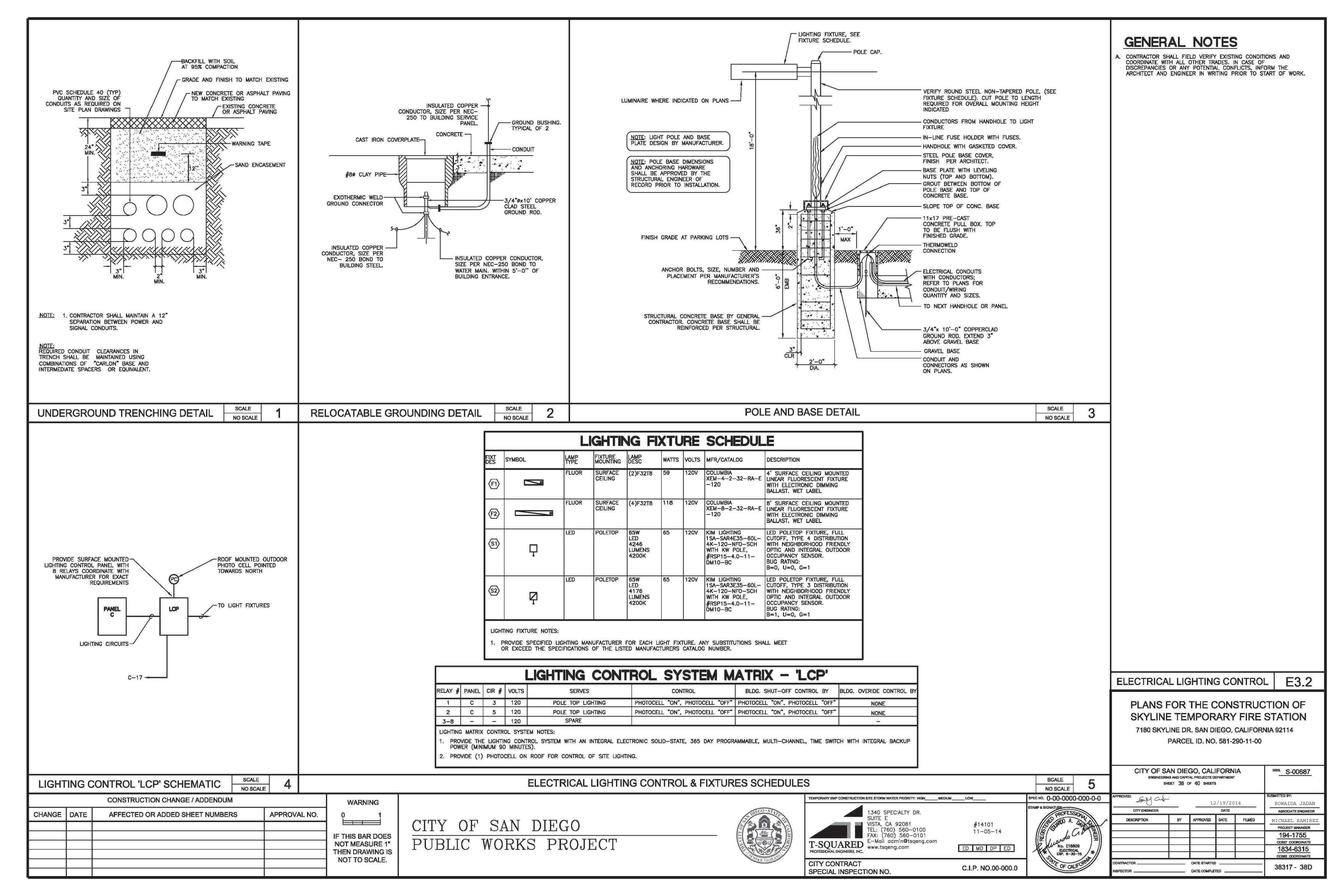
SPECIAL INSPECTION NO.



SCALE	2	ENGINEERIN SH					
NO SCALE		S.,,					
0-00-0000 R SIGNATURE PROFES		APPROVED: Say Calor  CITY ENGINEER	12	2/19/2( DATE	SUBMITTED BY:  ROWAIDA JADAN  ASSOCIATE ENGINEER		
THE WHOO A.	On Since	DESCRIPTION	ВҮ	APPROVED	DATE	FILMED	MICHAEL RAMIREZ PROJECT MANAGER
E (1.100000							194-1755 ccs27 coordinate
ELECTRIC EXP. 6–30	CAL /*//						1834-6315 ccs83 coordinate
STATE OF CA	LIFORTUP	CONTRACTOR	DATE STARTED		38317 - 37D		

CITY OF SAN DIEGO, CALIFORNIA

ENGINEERING AND CAPITAL PROJECTS DEPARTMENT



16130 WIRE CONNECTION ACCESSORIES

16140 WIRING AND CONTROL DEVICES

16170 CIRCUIT AND MOTOR DISCONNECTS

16420 SERVICE ENTRANCE AND METERING EQUIPMENT

16450 GROUNDING AND BONDING

16470 CIRCUIT BREAKERS, PANELBOARDS AND LOAD CENTERS

16475 OVERCURRENT PROTECTIVE DEVICES

16510 INTERIOR LIGHTING

16520 EXTERIOR LIGHTING

# SECTION 16050 - BASIC ELECTRICAL REQUIREMENTS

A. MAKE THE INSTALLATION IN ACCORDANCE WITH RECOGNIZED GOOD PRACTICES FOR THIS TYPE OF WORK. USE THE PROPER MATERIALS AND THE PROPER METHODS. WHETHER OR NOT THESE ARE DESCRIBED IN DETAIL HEREIN. PROVIDE ALL LABOR AND MATERIALS NECESSARY FOR A COMPLETE, OPERABLE INSTALLATION.

#### CODES, PERMITS AND DRAWINGS

- CONFORM TO APPLICABLE CALIFORNIA ELECTRICAL CODE, APPLICABLE NATIONAL ELECTRIC SAFETY CODE AND TO APPLICABLE STATE/LOCAL CODES. WHERE THE DRAWINGS AND SPECIFICATIONS EXCEED THE REQUIREMENT OF THE CODE, COMPLY WITH THE DRAWINGS AND SPECIFICATIONS.
- B. OBTAIN AND PAY ALL COSTS FOR REQUIRED PERMITS AND INSPECTIONS FOR ALL WORK INCLUDED HEREIN.
- C. THE DRAWINGS AND SPECIFICATION ARE INTENDED TO COMPLY WITH LISTED CODES, ORDINANCES, REGULATIONS AND STANDARDS, WHERE DISCREPANCIES OCCUR BETWEEN DRAWINGS, SPECIFICATIONS, CODE REQUIREMENTS AND ACTUAL FIELD CONDITIONS. NOTIFY THE ARCHITECT IMMEDIATELY AND ASK FOR AN INTERPRETATION. SHOULD INSTALLED MATERIALS OR WORKMANSHIP FAIL TO COMPLY. THE CONTRACTOR IS RESPONSIBLE FOR CORRECTING THE IMPROPER INSTALLATION AT NO ADDITIONAL COST TO THE OWNER.
- D. THE CONTRACTOR SHALL APPLY FOR AND OBTAIN POWER SERVICE FROM THE LOCAL ELECTRICAL UTILITY IN HIS NAME, AND PAY FOR THE POWER SERVICE UNTIL THE PROJECT IS ACCEPTED BY THE OWNER, AT WHICH TIME THE SERVICE BILLING WILL BE TRANSFERRED OVER TO THE OWNER. THE COST FOR POWER SERVICE AND CONSUMPTION SHALL BE INCLUDED IN THE BID.

WHERE THE UNDERWRITERS' LABORATORIES (UL) HAVE ESTABLISHED STANDARDS AND HAVE ISSUED LABELS FOR A PARTICULAR GROUP, CLASS OR TYPE OF MATERIAL, APPARATUS, APPLIANCE OR DEVICE, THE UL LABEL SHALL BE REQUIRED ON ALL SUCH ITEMS IN THAT CATEGORY INCORPORATED INTO THE

- A. SUBMIT FOR APPROVAL SHOP DRAWINGS ON THE FOLLOWING:
- CIRCUIT BREAKERS
- 2. DISCONNECT SWITCHES
- WIRE AND CABLES 4. RACEWAYS AND FITTINGS
- LIGHTING FIXTURES
- 6. WIRING DEVICES
- 7. PANELBOARDS
- 8. LOAD CENTERS
- SWITCHBOARDS
- 10. MOTOR STARTERS

A. ALL DEFECTIVE MATERIAL AND WORKMANSHIP DISCLOSED AS THE RESULT OF TESTS REQUIRED IN OTHER PORTIONS OF THESE SPECIFICATIONS SHALL BE CORRECTED. IT SHALL BE SHOWN BY DEMONSTRATION IN SERVICE, THAT ALL CIRCUITS AND DEVICES ARE IN GOOD OPERATING CONDITION.

# WARRANTY

- WARRANTY REQUIREMENTS FOR DIVISION 16 SHALL BE IN ACCORDANCE WITH DIVISION 1 EXCEPT AS MODIFIED HEREIN. B. ALL MATERIALS AND EQUIPMENT PROVIDED SHALL BE WARRANTED FOR A
- MINIMUM PERIOD OF ONE (1)-YEAR FROM THE OFFICIAL DATE OF COMPLETION. IN ADDITION, PROVIDE TWO (2)-YEAR EXTENDED WARRANTY, FOR A TOTAL TO THREE (3)-YEARS, FOR THE FOLLOWING ITEMS:
- DISTRIBUTION SWITCHBOARDS.
- DISCONNECT SWITCHES.
- PANELBOARDS.
- CIRCUIT BREAKERS.
- THE CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIALS REQUIRED TO CORRECT PROBLEMS WHICH DEVELOP DURING THE WARRANTY PERIOD DUE TO DEFECTIVE MATERIALS OF FAULTY WORKMANSHIP, THE LABOR AND MATERIALS TO DO THIS WORK SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE
- D. WITHIN ONE (1)-MONTH PRIOR TO THE EXPIRATION OF THE WARRANTY PERIOD, THE CONTRACTOR SHALL CORRECT ANY AND ALL DEFECTS COVERED BY THE WARRANTY. THIS SHALL INCLUDE TIGHTENING TO ORIGINAL SPECIFICATIONS OF ALL BOLTED CONNECTIONS.
- WARRANTY CERTIFICATES SHALL BE MADE OUT TO OWNER AND SHALL BE DELIVERED TO THE ARCHITECT AT THE COMPLETION OF THE INSTALLATION.
- . ALL EQUIPMENT SHALL BE GUARANTEED TO BE SUPPORTED IN SUCH A WAY AS TO BE FREE FROM OBJECTIONABLE VIBRATION AND NOISE.
- G. ADDITIONAL WARRANTY REQUIREMENT SHALL BE AS INDICATED IN THE FOLLOWING SECTIONS OF DIVISION 16.

# ELECTRICAL IDENTIFICATION

DATE

CHANGE

- IDENTIFICATION DEVICES: A SINGLE TYPE OF IDENTIFICATION FOR EACH APPLICATION CATEGORY. USE COLORS PRESCRIBED BY ANSI A13.1 AND NFPA
- B. RACEWAY AND CABLE LABELS: COMPLY WITH ANSI A13.1. TABLE 3, FOR MINIMUM SIZE OF LETTERS FOR LEGEND AND MINIMUM LENGTH OF COLOR FIELD FOR EACH RACEWAY AND CABLE SIZE.

CONSTRUCTION CHANGE / ADDENDUM

AFFECTED OR ADDED SHEET NUMBERS

#### C. NAMEPLATES, TAGS, AND LABELS:

- 1. FURNISH AND INSTALL 1-INCH (HIGH) MINIMUM BY 3-INCH (WIDE) MINIMUM BY 3/32 INCH (THICK) MATTE BLACK (FOR NORMAL POWER) AND RED (FOR EMERGENCY POWER), LAMINATED PHENOLIC NAMEPLATES WITH 1/4 INCH WHITE CHARACTERS ENGRAVED IN THE PLASTIC FOR ALL ITEMS OF ELECTRICAL EQUIPMENT INCLUDING, BUT MOTOR CONTROL CENTERS, FEEDER CIRCUIT BREAKERS, RELAYS, TIME SWITCHES, DISCONNECT SWITCH EXPOSED PULL OR JUNCTION BOXES, AND ALL CONTROL EQUIPMENT. NAME PLATES SHALL BE ATTACHED WITH TWO (2) CADMIUM-PLATED SCREWS. ADHESIVE ATTACHMENT WILL NOT BE ACCEPTABLE. PUNCH STRIP TAPE TYPE NAMEPLATES WITH CARD HOLDERS IN ANY FORM ARE PROHIBITED
- 2. BRANCH CIRCUITS SHALL BE TAGGED IN THE OUTLETS BOXES, PANELBOARDS, AND IN ALL JUNCTION BOXES WHERE CIRCUITS TERMINATE. FEEDERS SHALL BE TAGGED AT EACH END. TAGS SHALL BE APPLIED IMMEDIATELY AFTER WIRE IS INSTALLED.
- 3. EACH BRANCH CIRCUIT DEVICE COVER PLATE SHALL BE LABELED (ENGRAVED OR SILK SCREEN) TO INDICATE THE BRANCH CIRCUIT, DEVICES SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING:
- a) TOGGLE/ROCKER SWITCHES.

#### b) RECEPTACLES.

CHECKING AND TESTING OF EQUIPMENT

- A. SWITCHBOARDS, PANELBOARDS, DISCONNECTS, AND ALL OTHER OPERABLE EQUIPMENT WORKED ON UNDER THIS CONTRACT SHALL BE INSPECTED FOR DEFECTS, AND TESTED FOR PROPER OPERATION.
- B. SYSTEMS SHALL BE TESTED FOR SHORT CIRCUITS, OPEN CIRCUITS, WRONG CONNECTIONS, AND GROUNDS. ALL SYSTEMS SHALL BE FREE FROM MECHANICAL AND ELECTRICAL DEFECTS.
- C. CIRCUITS SHALL BE TESTED FOR PROPER NEUTRAL AND GROUND CONNECTIONS.
- D. WHERE REQUIRED OR DIRECTED, SYSTEMS SHALL BE TESTED IN THE PRESENCE OF THE ARCHITECT TO DEMONSTRATE THAT EQUIPMENT FURNISHED, INSTALLED, OR CONNECTED FUNCTIONS IN THE MANNER INTENDED.
- E. THE CONTRACTOR SHALL FURNISH ALL NECESSARY INSTRUMENTS AND EQUIPMENT REQUIRED FOR TESTING AND SHALL IMMEDIATELY CORRECT ANY DEFECTIVE WORK AT NO ADDITIONAL CHARGE. SHOULD THE CONTRACTOR REFUSE OR NEGLECT TO MAKE TESTS NECESSARY TO SATISFY THE ARCHITECT THE HE OR SHE HAS CARRIED OUT THE TRUE INTENT AND MEANING OF THE SPECIFICATIONS. THE ARCHITECT MAY HAVE SUCH TESTS MADE AND CHARGE THE EXPENSE THERE OF TO THE CONTRACTOR TO BE RETAINED OUT OF FULL
- F. BOLTED CONNECTIONS SHALL BE TORQUE—TIGHTENED TO MANUFACTURER'S SPECIFICATIONS. THE CONTRACTOR SHALL TORQUE ALL CONNECTIONS WITH A WRENCH THAT HAS BEEN CALIBRATED WITHIN THE LAST THREE (3) MONTHS. SUBMIT PROOF OF CALIBRATION TO THE OWNER'S REPRESENTATIVÉ.
- G. GROUND-FAULT CIRCUIT INTERRUPTER TESTS: TEST EACH BRANCH CIRCUIT HAVING GROUND FAULT CIRCUIT PROTECTION TO ENSURE THAT THE GROUND FAULT CIRCUIT INTERRUPTER WILL NOT OPERATE WHEN SUBJECTED TO A GROUND FAULT CURRENT OF LESS THAN 4 MILLIAMPERES AND WILL OPERAT WHEN SUBJECTED TO A GROUND FAULT CURRENT EXCEEDING 6 MILLIAMPERES. PERFORM TESTS USING AN INSTRUMENT SPECIFICALLY DESIGNED AND MANUFACTURED FOR TESTING GROUND FAULT CIRCUIT INTERRUPTERS. APPLY THE TEST TO THE RECEPTACLE WHICH IS THE GREATEST DISTANCE FROM THE GROUND FAULT INTERRUPTER. IF GROUND-FAULT INTERRUPTER TYPE RECEPTACLES ARE INSTALLED, TEST EACH RECEPTACLE FOR PROPER OPERATION. "TEST" BUTTON OPERATION WILL NOT BE ACCEPTABLE AS A SUBSTITUTE FOR THIS TEST.
- H. FOR ADDITIONAL CHECKING AND TESTING OF SPECIAL SYSTEMS, SEE THE SECTION WHERE THOSE SYSTEMS ARE SPECIFIED.

#### EQUIPMENT CONNECTIONS

- A. POWER WIRING: MAKE WIRING CONNECTIONS TO ALL MECHANICAL EQUIPMENT BEING INSTALLED AS PART OF THE CONTRACT.
- B. CONTROL WIRING: EXCEPT FOR THAT SPECIFIED IN MECHANICAL SECTION, PROVIDE ALL CONTROL AND INTERLOCK WIRING, AS MAY BE REQUIRED FOR CONTROL OF EQUIPMENT BEING INSTALLED AS PART OF THE CONTRACT.

### END OF SECTION 16050

SECTION 16110 - RACEWAYS, BOXES, CABINETS AND CABLE TRAYS

A. MINIMUM SIZES: MINIMUM SIZES ARE TO BE 3/4". THE MINIMUM SIZE OF FLEXIBLE CONDUIT SHALL BE 3/4"

#### PRODUCTS A. RACEWAYS

- 1. RIGID GALVANIZED STEEL (RGS) AND FLEXIBLE STEEL CONDUIT SHALL BE HOT DIP GALVANIZED AS MANUFACTURED BY TRIANGLE, PWP PIPE OR AN APPROVED SUBSTITUTE.
- 2. ELECTRICAL METALLIC TUBING (EMT) SHALL BE ZINC-COATED STEEL AS MANUFACTURED BY TRIANGLE, PWP PIPE OR AN APPROVED SUBSTITUTE.
- 3. LIQUID—TIGHT FLEXIBLE METAL CONDUIT SHALL HAVE A GALVANIZED STEEL CORE AND GRAY THERMOPLASTIC COVER BY ALFLEX OR AN APPROVED
- 4. PVC CONDUIT SHALL BE SCHEDULE 40 TYPE AS MANUFACTURED BY CARLON OR AN APPROVED SUBSTITUTE.

# B. FITTINGS

- 1. FOR RGS, FITTING SHALL BE MALLEABLE IRON AND FORGED STEEL WITH CADMIUM OR ZINC COATING.
- IN WET AREAS INDOORS/OUTDOORS: CAST OR MALLEABLE IRON OR FORGED STEEL, CADMIUM OR ZINC-COATED.
- INDOORS ON EMT: SET SCREW OR COMPRESSION—TYPE DIE—CAST STEEL.
- 4. FITTINGS ON FLEXIBLE CONDUIT SHALL BE COMPRESSION TYPE SCREW-IN CONNECTORS ARE NOT PERMITTED.
- 5. PVC CONDUIT FITTINGS SHALL BE SCHEDULE 40 GLUED TYPE.
- 6. PROVIDE ALL CONNECTORS, TEES, ELBOWS, ETC. REQUIRED, TO INSURE A RIGID COMPLETE INSTALLATION.
- 7. PROVIDE DEVICE BRACKETS, BLANK COVERS, UTILITY BOXES, ETC., AT THE LOCATIONS SHOWN ON THE DRAWINGS AND ELSEWHERE AS NECESSARY. INSTALLATION

# A. CONCEALED RACEWAY:

WARNING

1. INSIDE BUILDING

APPROVAL NO.

- B. INSTALL EMT IN CEILING CAVITIES AND IN DRY WALL TYPE CONSTRUCTION. C. INSTALL FLEXIBLE METAL CONDUIT FOR ALL FINAL CONNECTIONS TO LIGHTING
- D. CONDUIT SHALL BE RUN IN THE MOST DIRECT/PRACTICAL MANNER POSSIBLE, AVOIDING WORK OF OTHER DISCIPLINES, AND GENERALLY FOLLOWING BUILDING

#### E. EXPOSED RACEWAY:

- 1. RGS TO 8 FEET ABOVE THE FLOOR WHERE SUBJECT TO MECHANICAL
- 2. INSIDE OF BUILDING: IMC UP TO 8'-0" AND EMT ABOVE 8'-0" OR
- SURFACE METAL RACEWAY AS SHOWN ON DRAWINGS. 3. CONNECTIONS TO MECHANICAL EQUIPMENT SHALL BE MADE WITH FLEXIBLE
- 4. RUN ALL CONDUITS PARALLEL TO WALLS, CEILINGS OR STRUCTURAL MEMBERS IN A MANNER TO PRESENT A NEAT APPEARANCE. BEFORE INSTALLATION IN AWKWARD AREAS OR CONFINED AREAS, EXPLAIN TO THE ARCHITECT THE PROPOSED METHOD OF ROUTING AND OBTAIN APPROVAL.

METAL CONDUIT IN LENGTHS NOT EXCEEDING 6 FEET

- 1. FURNISH AND INSTALL COMPLETE, ADEQUATE AND STURDY SUPPORT FOR ALL PARTS OF THE RACEWAY SYSTEM.
- 2. ALL CONDUITS MUST BE SUPPORTED WITH MATERIALS SPECIFICALLY MADE FOR THIS PURPOSE, DO NOT USE WIRE HANGERS, USE MALIFABLE IRON CONDUIT CLAMP, TRAPEZE SUPPORTS OR CADDY FASTENERS. MULTIPLE RUNS SHALL BE SUPPORTED BY 'UNISTRUT' OR APPROVED SUBSTITUTE
- G. CONTINUITY: MAKE ALL JOINTS AND CONNECTIONS IN A MANNER WHICH WILL INSURE MECHANICAL STRENGTH AND ELECTRICAL CONTINUITY.
- H. PULL BOX LOCATIONS: AS REQUIRED FOR SATISFACTORY AND DAMAGE-FREE INSTALLATION OF WORK.
- OPENINGS: KEEP ALL RACEWAY OPENINGS CLOSED IN A MANNER TO PREVENT ENTRY OF MOISTURE AND FOREIGN MATERIALS UNTIL CONDUCTORS ARE INSTALLED. BLOW AND SWAB OUT ALL RACEWAYS BEFORE PULLING IN CONDUCTORS. IN EACH RACEWAY PULL AL CONDUCTORS SIMULTANEOUSLY.

#### END OF SECTION 16110

# SECTION 16120 - WIRE AND CABLE (600 VOLTS AND BELOW)

- A. FURNISH AND INSTALL A COMPLETE SYSTEM OF INSULATED CONDUCTORS FOR ALL POWER REQUIREMENTS AND FOR ALL OTHER SYSTEMS WHERE THE CONDUCTORS ARE NOT INCLUDED UNDER THAT SYSTEM'S SECTION, TESTED AND CONNECTED AT BOTH ENDS.
- SOFT DRAWN ANNEALED COPPER, NINETY-EIGHT (98%) PERCENT CONDUCTIVITY, CONTINUOUS FROM DEVICE TO DEVICE, WITHOUT WELDS, SPLICES OR JOINTS. MINIMUM WIRE SIZE IS NO. 12. CONDUCTOR SIZES SHOWN ON THE DRAWINGS ARE THE MINIMUM COPPER AWG CONDUCTOR SIZES REQUIRED.
- B. CONDUCTOR INSULATION 600 VOLT:
- ALL WIRE SHALL BE INSULATED FOR 600 VOLTS.
- CONTROL WIRING: THW, THWN—2 OR THN.
- POWER WIRING: THHN/THWN-2 OR XHHW
- 4. SITE LIGHTING: THW
- 5. ALL INSULATION IN AWG SIZES TEN (10) AND BELOW SHALL BE IMPREGNATED WITH COLOR ACCORDING TO THE FOLLOWING:
- a) PHASE A-BLACK (120/240 VOLTS), (120/208 VOLTS) b) PHASE B-RED (120/240 VOLTS), (120/208 VOLTS)
- c) PHASE C-BLUE (120/208 VOLTS)
- d) NEUTRAL-WHITE (120/240 VOLTS), (120/208 VOLTS)
- e) GROUND-GREEN

ON WIRE SIZES LARGER THEN (10) AND WHERE COLOR (OTHER THAN BLACK) IS NOT AN INTEGRAL PART OF INSULATION, USE 3M NO. 35 TAPES IN THE SAME COLOR CODE TO IDENTIFY BOTH ENDS OF CONDUCTORS. GROUND CONDUCTOR MUST HAVE GREEN INSULATION; GREEN TAPES ON OTHER COLORS OF INSULATION ARE NOT ACCEPTABLE

6. MANUFACTURERS: ANACONDA, COLLYER, GENERAL ELECTRIC, OKONITE, PHELPS DODGE, ROME, TRIANGLE, OR APPROVED SUBSTITUTE.

# INSTALLATION

- A. WIRE 600 VOLT:
- 1. DO NOT PULL ANY CONDUCTORS INTO CONDUITS UNTIL ALL WORK OF A NATURE WHICH MAY CAUSE INJURY TO CONDUCTORS IS COMPLETED. NO WIRE OR CABLE SHALL BE PULLED INTO CONDUIT THAT TERMINATES IN MAJOR EQUIPMENT, UNTIL SUCH EQUIPMENT HAS BEEN INSTALLED AND PERMANENTLY ANCHORED IN PLACE.
- 2. BLOW OUT AND SWAB CONDUITS BEFORE INSTALLING CONDUCTORS.
- 3. FEEDERS SHALL BE RUN THEIR ENTIRE LENGTH AS CONTINUOUS CONDUCTORS WITHOUT JOINTS OR SPLICES. HOWEVER, JOINTS AND SPLICES IN BRANCH CIRCUITS SHALL BE PERMITTED WHERE CIRCUITS DIVIDE (IN JUNCTION BOXES ONLY).
- 4. CARE SHALL BE EXERCISED WHEN INSTALLING WIRE IN CONDUIT SO AS NOT TO INJURE THE CONDUCTOR INSULATION. MECHANICAL MEANS OF PULLING SHALL NOT BE USED UNLESS APPROVED. OILS. GREASE. OR ANY OTHER INJURIOUS TYPE OF PULLING COMPOUND SHALL NOT BE USED WHEN PULLING CONDUCTORS.
- 5. IN EQUIPMENT AND PANELS, BUNCH FORM AND SECURE WIRE WITH BURNDY TYRAP'S OR APPROVED SUBSTITUTE, AT INTERVALS APPROPRIATE
- 6. THE USE OF JUNCTION BOXES TO GATHER SEVERAL HOMERUNS INTO A LARGER CONDUIT TO A PANELBOARD WILL NOT BE PERMITTED.
- 7. LEAVE ADEQUATE SPACE IN PANELBOARDS FOR FUTURE CIRCUITS AND FOR WIRING INSTALLED BY OTHERS.
- 8. ALL CONDUCTORS SHALL BE INSTALLED IN CONDUIT UNLESS OTHERWISE
- B. SPLICES: SPLICES IN 600 VOLT FEEDER WIRES WILL NOT BE PERMITTED.

# C. TESTS:

- WIRING SYSTEMS SHALL BE TESTED FOR INSULATION RESISTANCE AFTER ALL WIRING IS COMPLETED AND CONNECTED READY FOR THE ATTACHMENT OF EQUIPMENT AND AGAIN WHEN EQUIPMENT IS CONNECTED READY FOR
- 2. TESTS SHALL BE MADE WITH AN INSTRUMENT (MEGGER) CAPABLE OF MEASURING THE CORRECT INSULATION RESISTANCE AND HAVING A MINIMUM VOLTAGE RATING OF 500 VOLTS. READINGS TAKEN AFTER THE VOLTAGE HAS BEEN APPLIED SHALL VERIFY THAT THE INSULATION RESISTANCE BETWEEN CONDUCTORS AND ALSO BETWEEN EACH CONDUCTOR AND GROUND IS IN EXCESS OF 10 OHMS.
- 3. IN CASE OF FAILURE DURING THE MEGGER TEST, LOCATE AND REPLACE THE FAULTY TERMINATION OR CABLE SECTION AS NECESSARY AND REPEAT THE INSULATION TEST.
- 4. ADEQUATE MEANS SHALL BE TAKEN TO INSURE SAFETY DURING THE TESTS AND ALL SAFETY INSTRUCTIONS OF THE TEST OPERATOR SHALL BE

END OF SECTION 16120

### SECTION 16130 - WIRE CONNECTION ACCESSORIES

# GENERAL

- A. FURNISH AND INSTALL COMPLETE OUTLET BOX FOR ALL SWITCHES, RECEPTACLES, LIGHT FIXTURES AND MOTOR RATED SWITCHES AT LOCATIONS SHOWN ON THE DRAWINGS.
- B. BOTH ENDS OF EACH AND EVERY CONDUCTOR SHALL BE TERMINATED WITH A SUITABLE CONNECTOR OR TERMINATOR, OR CONNECTED TO A DEVICE OR APPARATUS TERMINAL, MEETING THESE SPECIFICATIONS.

#### MATERIALS (RECESSED BOXES)

- A. CONSTRUCTION: GALVANIZED STEEL, ONE-PIECE CONSTRUCTION HAVING THE NUMBER OF 'GANGS' REQUIRED FOR ALL DEVICES GROUPED AT A LOCATION, AND SUITABLE FOR INTENDED USE.
- B. TYPES OF VARIOUS LOCATIONS:
- 1. CEILINGS: 4 INCH OCTAGONAL, 2.125 INCHES DEEP
- 2. PLASTER WALLS: 4 INCH SQUARE, 2.125 INCH DEEP WITH RAISED PLASTER COVER. SET WITH FACE WITHIN APPROXIMATELY 1/8 INCH OF FINISHED
- 3. NON-PLASTER WALLS: STANDARD GALVANIZED SWITCH BOX, 2.75 INCHES
- 4. SPECIAL: WHERE ABOVE TYPES ARE NOT SUITABLE, PROVIDE BOX TO SUIT THE USE, TAKING INTO ACCOUNT THE SPACE THAT IS AVAILABLE, APPEARANCE AND THE CODE REQUIREMENT.

MANUFACTURER: APPLETON, RACO, STEEL CITY OR APPROVED SUBSTITUTE.

- THRU-THE-WALL BOXES ARE NOT PERMITTED.

A. INSTALL IN CONJUNCTION WITH SWITCH INSTALLED THEREIN AND THE RACEWAY

# B. RECESSED OUTLET BOX SHALL BE CONCEALED COMPLETELY BY THE DEVICE

DIRECTLY BELOW THE WIRING DEVICE WHEN NOT WITHIN SIGHT OF THE

PLATE/LIGHTING FIXTURE. C. CONTRACTOR SHALL SUPPLY WHITE-BLACK-WHITE PERMANENT PLASTIC LAMINATED NAMEPLATES DESCRIBING SWITCH FUNCTION, AND MOUNTED

#### EQUIPMENT CONTROLLED. MATERIALS (CONNECTORS)

- A. COPPER CONDUCTORS SHALL BE TERMINATED IN COPPER OR BRONZE MECHANICAL CONNECTORS, LUGS OR TOOL APPLIED COMPRESSION CONNECTORS MADE OF COPPER, FOR ALL CONNECTIONS, CONNECTORS OF THE TYPE NORMALLY FURNISHED WITH PANELS, BREAKERS, AND SWITCHES MAY BE USED IF THEY MEET THIS REQUIREMENT. ALUMINUM BODIED CONNECTORS EVEN IF UL LABELED FOR AL/CU, ARE NOT PERMITTED AND SHALL BE REMOVED AND REPLACED WITH THE SPECIFIED ITEM, IF FURNISHED.
- B. TOOLS FOR INSTALLING COMPRESSION CONNECTORS SHALL BE APPROVED BY THE MANUFACTURER OF THE INSTALLED CONNECTORS. FOLLOW MANUFACTURER'S INSTRUCTION IN THE SPACING AND OVERLAPPING OF
- COMPRESSION AREAS. C. BARRELS OF CONNECTORS SHALL BE INSULATED WITH AN INSULATING SLEEVE PROVIDED BY THE CONNECTOR MANUFACTURER, GE HEAT SHRINK INSULATION TUBE OR 3M TYPE PST TUBING. HAND TAPING WILL NOT BE PERMITTED.
- D. BRANCH CIRCUIT JOINTS OR SPLICES NO. 10 AND SMALLER SHALL BE MADE ELECTRICALLY AND MECHANICALLY SECURE WITH BUCHANAN PRESSURE CONNECTIONS AND NYLONS INSULATORS WITH IDEAL WING NUTS OR SCOTCH LOCK SPRING COMPRESSION CONNECTORS.
- E. SOLDERING OF CONNECTIONS OR THE USE OF RUBBER, PLASTIC OR FRICTION TAPES IS NOT PERMITTED.

# END OF SECTION 16130

5ma TRIP LEVEL.

# SECTION 16140 - WIRING AND CONTROL DEVICES

- A. ALL DEVICES MUST BE SUITABLE FOR USE INTENDED AND HAVE VOLTAGE AND CURRENT RATINGS ADEQUATE FOR LOADS SERVED. ALL RECEPTACLES SHALL HAVE A GROUNDED POLE.
- B. DUPLEX RECEPTACLES SHALL BE SPECIFICATION GRADE AND RATED FOR 20A. C. GROUND FAULT INTERRUPTING OUTLETS SHALL BE SOLID-STATE TYPE WITH
- D. NEMA STANDARD CONFIGURATION SHALL BE USED UNLESS NOTED OTHERWISE.
- E. WALL SWITCHES SHALL BE HEAVY DUTY, SPECIFICATION GRADE AND RATED FOR 20 AMPERES, 120/277 VAC UNLESS NOTED OTHERWISE ON THE DRAWINGS. WHITE OR IVORY IN COLOR (PER ARCHITECT)
- F. PLATES ON FLUSH MOUNTED DEVICES SHALL HAVE A SMOOTH FINISH WITHOUT EMBOSSING RIDGES OR TEXTURING AND SHALL BE SIERRA P-SERIES OR APPROVED SUBSTITUTE. WHITE OR IVORY IN COLOR (PER ARCHITECT) G. PLATES AT 'GANG' DEVICE LOCATIONS SHALL BE SINGLE PLATE, ON PIECE,

COMBINATION TYPE. OF MATERIAL TO EXACTLY MATCH THOSE REQUIRED FOR

- SINGLE DEVICES. MULTIPLE PLATES ON A GANGED OUTLET BOX ARE NOT H. TELEPHONE/DATA OUTLETS SHALL BE AT A MINIMUM, SINGLE GANG 2.125 INCH
- DEEP OUTLET BOXES WITH BLANK COVERPLATE, AND A 3/4 INCH STUBBED UP TO 6 INCHES ABOVE ACCESSIBLE CEILING UNLESS NOTED OTHERWISE. OUTLETS INSTALLED OUTDOORS SHALL HAVE GASKETED HINGED COVERPLATES
- TO PROVIDE A NEMA 3R ENCLOSURE, UNLESS NOTED OTHERWISE. J. ACCEPTABLE MANUFACTURERS SHALL BE ARROW—HART, BRYANT, HUBBELL PASS-SEYMOUR, G.E., LEVITON OR SIERRA. ALL DEVICES SHALL BE 'DECORA'

# TYPE STYLE.

- K. OCCUPANCY SENSORS CEILING-MOUNTING OR WALL MOUNTED UNITS: UNIT RECEIVES CONTROL POWER FROM A SEPARATELY MOUNTED AUXILIARY POWER AND CONTROL UNIT, AND OPERATES POWER SWITCHING CONTACTS IN THAT UNIT
- MICROPROCESSOR-BASED SYSTEMS: UNIT RECEIVES 24-V DC POWER FROM A REMOTE SOURCE AND, ON SENSING OCCUPANCY, CLOSES CONTACTS THAT PROVIDE SIGNAL INPUT THE LIGHTING CONTROL SYSTEM. 3. SWITCH-BOX-MOUNTING UNITS: UNIT RECEIVES POWER DIRECTLY FROM SWITCH

LEG OF THE 120- OR 277-V AC CIRCUIT IT CONTROLS AND OPERATES INTEGRAL

2. CEILING-MOUNTING UNITS FOR USE WITH PROGRAMMABLE,

- POWER SWITCHING CONTACTS RATED 800 W AT 120-V AC, AND 1000 W AT 277-V AC. MINIMUM. 4. OPERATION: TURN LIGHTS MANUALLY OR AUTOMATICALLY ON WHEN ROOM OR COVERED AREA IS OCCUPIED AND AUTOMATICALLY OFF WHEN UNOCCUPIED,
- UNLESS OTHERWISE INDICATED. a) TIME DELAY FOR TURNING LIGHTS OFF: ADJUSTABLE OVER A RANGE FROM 1 TO 15 MINUTES, MINIMUM.
- b) MANUAL OVERRIDE SWITCH FOR SWITCH-BOX MOUNTED UNITS: TURNS LIGHTS OFF MANUALLY REGARDLESS OF ELAPSED TIME DELAY.

c) ISOLATED RELAY CONTACT: OPERATES ON DETECTION OF OCCUPANCY OR

VACANCY, AS INDICATED, TO ACTIVATE AN INDEPENDENT FUNCTION.

TEMPORARY BMP CONSTRUCTION SITE STORM WATER PRIORITY: HIGH\_\_\_\_\_ MEDIUM \_\_\_\_\_ LOW\_\_\_

1340 SPECIALTY DR. SUITE E ■ VISTA, CA 92081 TEL: (760) 560-0100 FAX: (760) 560-0101

CITY CONTRACT

SPECIAL INSPECTION NO.

E-Mail admin@tsqeng.com Γ-SQUARED www.tsqeng.com PROFESSIONAL ENGINEERS, INC.

11-05-14

#14101 ED MD DP ED

C.I.P. NO.00-000.0

OROFESSION Na. E18809 ELECTRICAL EXP. 6-30-15

SPEC NO. 0-00-0000-000-0-0

OF CALIF

SKYLINE TEMPORARY FIRE STATION 7180 SKYLINE DR. SAN DIEGO, CALIFORNIA 92114

PLANS FOR THE CONSTRUCTION OF

CITY OF SAN DIEGO, CALIFORNIA WBS. S-00687 ENGINEERING AND CAPITAL PROJECTS DEPARTMENT SHEET 39 OF 40 SHEETS 12/19/2014 ROWAIDA JADAN DATE ASSOCIATE ENGINEER APPROVED DATE DESCRIPTION MICHAEL RAMIRI PROJECT MANAGER 194-1755 CC\$27 COORDINATI 1834-6315 CCS83 COORDINATI

6. DUAL-TECHNOLOGY TYPE: USES A COMBINATION OF PASSIVE-INFRARED AND ULTRASONIC DETECTION METHODS TO DISTINGUISH BETWEEN OCCUPIED AND

TUNGSTEN FILAMENT OR HIGH-INRUSH BALLAST LOAD.

a) RELAYS RATED FOR A MINIMUM OF 20-A NORMAL BALLAST LOAD OR 13-A

b) SENSOR POWER SUPPLY: RATED TO SUPPLY THE NUMBER OF CONNECTED

UNOCCUPIED CONDITIONS FOR AREA COVERED. PARTICULAR TECHNOLOGY OR

COMBINATION OF TECHNOLOGIES THAT CONTROLS EACH FUNCTION (ON OR OFF) IS

SELECTABLE IN THE FIELD BY SELECTION OF JUMPERS OR DIP-SWITCHES ON INSTALLATION TESTING

5. AUXILIARY POWER AND CONTROL UNITS: AS FOLLOWS:

FINISHED SURFACE ALL AROUND. 1. INSTALL RECEPTACLES AND TELEPHONE/DATA OUTLETS AT A HEIGHT OF 18

INCHES ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE. 2. INSTALL SWITCHES AT A HEIGHT OF 42 INCHES ABOVE FINISHED FLOOR

A. INSTALL PLUMB AND SQUARE. RECESSED BOXES SHALL BE SO NEARLY FLUSH

WITH FINISHED SURFACES THAT PLATES MAY BE IN CONTACT WITH THE

- UNLESS NOTED OTHERWISE. B. EACH RECEPTACLE INSTALLED SHALL BE TESTED BY THE CONTRACTOR TO
- PROVE THAT POWER IS AVAILABLE, CORRECTLY POLARIZED AND GROUNDED. C. USE A GROUND FAULT TESTER PROVIDED BY THE CONTRACTOR ON EACH GFI RECEPTACLE OR CIRCUIT OF RECEPTACLES FED BY A 'GFI' BREAKER, TO PROVE BOTH TRIP AND NON-TRIP VALUES OF GROUND FAULT CURRENT ARE

WITHIN THOSE REQUIRED OF THE RECEPTACLE/BREAKER. USE A TESTER EQUAL

D. INCLUDE IN THE CLOSEOUT DOCUMENTS CERTIFICATION FROM AN OFFICER OF THE CONTRACTOR THAT 100% OF THE RECEPTACLES AND START/STOP PUSH BUTTONS HAVE BEEN TESTED. ALL ARE PROPERLY WIRED, AND ALL ARE

#### END OF SECTION 16140

# SECTION 16170 - CIRCUIT AND MOTOR DISCONNECTS

OPERATING CORRECTLY.

A. FURNISH AND INSTALL FUSIBLE/NON-FUSIBLE DISCONNECT SWITCHES AS REQUIRED BY NEC AND WHERE SHOWN ON THE DRAWINGS.

2. TYPES. USE SWITCHES LISTED BY UL AS HEAVY-DUTY TYPE.

- 1. VOLTAGE. PROVIDE SWITCHES WITH A VOLTAGE RATING OF 250 OR 600 VOLTS AC, AS REQUIRED FOR THE INSTALLED SYSTEM VOLTAGE.
- 3. CONTACTS. FURNISH SWITCHES WITH QUICK-MAKE, QUICK-BREAK 4. INTERRUPTING RATING. PROVIDE HORSEPOWER RATED SWITCHES WHICH

HAVE A PUBLISHED INTERRUPTING RATING IN RMS AMPERES OR NOT LESS

- THAN 12 TIMES FOR 30 AMPERE SIZE. 5. OPERATING HANDLE. PROVIDE A HANDLE SUITABLE FOR PADLOCKING IN THE OFF POSITION WITH AS MANY AS THREE PADLOCKS OF 5/16 INCH DIAMETER SHANKS. USE A DEFEATABLE, FRONT ACCESSIBLE, COIN PROOF DOOR INTERLOCK TO PREVENT OPENING THE DOOR WHEN THE SWITCH IS
- WHEN THE DOOR IS OPEN. 6. POLES. UNLESS NOTED OTHERWISE, PROVIDE THREE POLE, VISIBLE BLADE

8. ENCLOSURES. USE NEMA 1 SWITCH ENCLOSURES FOR INDOOR

7. TERMINAL SHIELD. PROVIDE INCOMING LINE TERMINALS WITH AN INSULATED SHIELD SO THAT NO LIVE PARTS ARE EXPOSED WHEN THE DOOR IS OPEN.

IN THE 'ON' POSITION AND TO PREVENT TURNING THE SWITCH TO 'ON'

WASH DOWN INSTALLATIONS. B. INSTALL SWITCHES IN THE LOCATIONS SHOWN IN AN ACCEPTABLE MANNER AT A HEIGHT OF 48 INCHES FROM CENTERLINE OF OPERATING HANDLE TO THE

INSTALLATIONS, NEMA 3R FOR OUTDOOR INSTALLATIONS AND NEMA 4X FOR

C. MANUFACTURERS. GE, ITE, SQUARE D, SIEMENS, CUTLER-HAMMER OR APPROVED SUBSTITUTE.

FLOOR OR ROOF AS APPROPRIATE.

END OF SECTION 16170

**ELECTRICAL SPECIFICATIONS** 

PARCEL ID. NO. 581-290-11-00

DATE STARTED

DATE COMPLETED

38317 - 39D

IF THIS BAR DOES NOT MEASURE THEN DRAWING IS NOT TO SCALE.

CITY OF SAN DIEGO PUBLIC WORKS PROJECT

- A. ALL LABOR, MATERIALS, APPLIANCES, TOOLS, EQUIPMENT, FACILITIES, TRANSPORTATION AND SERVICES NECESSARY FOR AND INCIDENTAL TO PERFORMING ALL OPERATIONS IN CONNECTION WITH FURNISHING, DELIVERY AND INSTALLATION OF THE WORK OF THIS SECTION, COMPLETE, AS SHOWN ON THE DRAWINGS AND/OR SPECIFIED HEREIN. WORK INCLUDES BUT IS NOT NECESSARILY LIMITED TO THE FOLLOWING:
- 1. EXAMINE ALL OTHER SECTIONS FOR WORK RELATED TO THE OTHER SECTIONS AND REQUIRED TO BE INCLUDED AS WORK UNDER THIS SECTION.
- 2. COORDINATE ALL WORK IN THIS SECTION WITH RELATED TRADES.
- 3. MAIN SERVICE EQUIPMENT.
- B. METERING PROVISIONS AS REQUIRED, WITH WRITTEN APPROVAL OF LOCAL ELECTRIC UTILITY COMPANY.
- C. PERFORM ALL INCIDENTAL WORK NOT INDICATED ON THE DRAWINGS NOR MENTIONED IN THE SPECIFICATIONS THAT BELONG TO THE WORK DESCRIBED OR IS REQUIRED FOR A COMPLETED SYSTEM.

- A. THE FOLLOWING INFORMATION SHALL BE SUBMITTED FOR APPROVAL:
- MAIN SWITCHBOARD (INCLUDING ALL DEVICES).
- 2. UTILITY PULL SECTION.
- METERING EQUIPMENT.
- 4. FEEDER FUSED BREAKERS.
- SHOP DRAWINGS FOR SERVICE ENTRANCE EQUIPMENT SHALL BE SUBMITTED TO AND APPROVED BY THE UTILITY METERING SHOP PRIOR TO SUBMITTAL TO THE ARCHITECT. DOCUMENTATION OF UTILITY SHALL BE PROVIDED AS PART OF
- C. THE APPROVAL OF EQUIPMENT SPECIFIED IN THIS SECTION SHALL BE CONTINGENT UPON THE SUBMITTAL AND APPROVAL OF THE EQUIPMENT LAYOUT DRAWINGS REQUIRED BY SECTION 16010, "BASIC ELECTRICAL REQUIREMENTS"

#### **PRODUCTS**

- A. THE MAIN SERVICE EQUIPMENT AND ALL COMPONENTS SHALL BE THE LATEST STANDARD PRODUCT AS MANUFACTURED BY GENERAL ELECTRIC, CUTLER HAMMER-WESTINGHOUSE, SQUARE D, OR APPROVED SUBSTITUTE.
- B. UTILITY PULL SECTION AND LANDING COMPARTMENT PER REQUIREMENTS OF LOCAL ELECTRIC COMPANY.
- C. PROVISIONS FOR UTILITY METERING AS REQUIRED BY LOCAL ELECTRIC COMPANY
- D. MAIN PROTECTIVE DEVICE:
- THE MAIN CIRCUIT BREAKER SHALL BE MANUALLY OPERATED, FIXED MOUNTED AND U.L. LISTED FOR 100 PERCENT APPLICATION. THE CIRCUIT BREAKER SHALL BE EQUIPPED WITH A PROTECTIVE SYSTEM HAVING ADJUSTABLE LONG-TIME. SHORT-TIME DELAY TRIPPING CHARACTERISTICS AND BUILT-IN INDICATORS FOR SHORT CIRCUIT TRIP AND OVERLOAD TRIP. THE CIRCUIT BREAKER SHALL COMPLY WITH U.L. 489 AND BE U.L. LISTED.
- FEEDER CIRCUIT BREAKERS:
- FEEDER CIRCUIT BREAKERS IN THE MAIN SWITCHBOARDS SHALL BE MOLDED CASE AND SHALL COMPLY WITH THE REQUIREMENTS OF SECTION 16475, "OVERCURRENT PROTECTIVE DEVICES"
- 2. THE AMPERES INTERRUPTING CAPACITY (A.I.C.) AND THE SHORT TIME RATING OF ALL FEEDER CIRCUIT BREAKERS SHALL BE ADEQUATE FOR THE AVAILABLE FAULT CURRENT.
- 3. MAIN FEEDER FUSED SWITCHES SHALL COMPLY WITH THE REQUIREMENTS OF SECTION 16475, "OVERCURRENT PROTECTIVE DEVICES".

#### EXECUTION

- A. INSTALLATION
- SECURE SWITCHBOARD FIRMLY TO FLOOR WITH ANCHOR BOLTS AND SHIMS AS REQUIRED FOR A LEVEL INSTALLATION WITH NO STRAIN ON BUS BARS OR SUPPORTS.
- TAG ALL CONDUCTORS AT TERMINALS FOR PHASE INDICATION.
- INCLUDE NAMEPLATES AND WARNING SIGNS PER SECTION 16050.
- 4. PROVIDE CABLE TIES FOR CABLES FROM POINT OF ENTRANCE TO
- RESPECTIVE DEVICE TERMINALS.
- 5. TERMINATION OF CONDUITS ENTERING THE TOP OF SWITCHBOARDS SHALL CONSTITUTE A TIGHT AND CONTINUOUS METAL TO METAL CONTACT BY PENETRATING THE FINISH PAINT ON ENCLOSURES FOR CONTINUITY OF

# B. SEISMIC RESTRAINTS:

- ALL ELECTRIC EQUIPMENT SHALL BE BRACED OR ANCHORED IN ACCORDANCE WITH THE REQUIREMENTS OF UBC. SEISMIC ZONE IV.
- a) HORIZONTAL SEISMIC FORCES SHALL BE DETERMINED FROM THE APPLICABLE EQUATIONS OF THE GOVERNING CODE.
- b) PROVIDE ALL REQUIRED SEISMIC BRACING, SUPPORTS, BOLTS, WASHERS, NUTS, ETC. FOR CONDUITS AND CONDUIT SUPPORTS.
- c) PROVIDE AN INDEPENDENT SYSTEM TO SECURE ALL RECESSED LIGHTING FIXTURES. FIXTURES SHALL BE SUPPORTED DIRECTLY AND LATERALLY FROM THE BUILDING STRUCTURE ABOVE, USING NO. 9-GAUGE WIRE MINIMUM. THE CEILING SUSPENSION SYSTEM SHALL NOT BE USED FOR DIRECT SUPPORT.

# C. SPARE FUSES:

PROVIDE THREE (3) SPARE FUSES FOR EACH FUSE TYPE IN THE MAIN SWITCHBOARD. SEE SECTION 16475, "OVERCURRENT PROTECTIVE DEVICES" FOR REQUIREMENTS.

# D. TESTING:

EACH SWITCHBOARD ASSEMBLY SHALL BE FULLY TESTED IN ACCORDANCE WITH SECTION 16050.

# END OF SECTION 16420

# SECTION 16450 - GROUNDING AND BONDING

- **GENERAL** A. FURNISH AND INSTALL A GROUNDING SYSTEM WITH INTERCONNECTION TO ALL RACEWAY SYSTEMS AND METAL PARTS OF ALL EQUIPMENT WITH AN ELECTRICAL CONNECTION, GROUNDING MUST COMPLY WITH NEC REQUIREMENTS.
- B. PROVIDE A 100% RATED INSULATED GROUNDING CONDUCTOR FOR EVERY

#### BRANCH CIRCUIT IN EVERY RACEWAY. MATERIAL INSTALLATION

- A. EQUIPMENT ENCLOSURES
- MAKE FIRM GROUND CONNECTIONS TO RACEWAY SYSTEMS.

#### B. LIGHTING FIXTURES

TO THE OUTLET BOX.

- PROPERLY BOND LIGHTING FIXTURE ENCLOSURES TO OUTLET BOXES.
- 2. WHERE FLEXIBLE CONDUIT IS USED TO SERVE LIGHTING FIXTURES, ASSURE GROUNDING THROUGH THE FLEXIBLE CONDUIT FROM THE FIXTURE HOUSING

#### C. BUSHINGS

- 1. PROVIDE GROUNDING BUSHINGS, TB SERIES 3870 OR APPROVED SUBSTITUTE. WITH APPROPRIATELY SIZED COPPER GROUNDING WIRE CONNECTED TO THE GROUND BUS OR EQUIPMENT GROUND AT THE FOLLOWING LOCATIONS:
- a) SERVICE/LOAD END OF MOTOR SERVICE CONDUITS.
- b) BOTH ENDS OF NEW LIGHTING AND RECEPTACLE LOCATIONS.
- c) ANY CONDUIT ENDS NOT IN DIRECT CONTACT WITH THE ENCLOSURE. d) ANY CONDUIT ENDS RECONNECTED TO EXISTING RECEPTACLES.
- e) ALL FEEDER AND BRANCH CIRCUITS.

#### END OF SECTION 16450

# SECTION 16470 - CIRCUIT BREAKERS, PANELBOARDS AND LOAD CENTERS

A. FURNISH AND INSTALL COMPLETE LIGHTING/RECEPTACLE PANELBOARDS AND DISTRIBUTION PANELBOARDS, COMPLETE WITH ALL DEVICES, SPARES, FUTURE PROVISIONS, CONNECTIONS AND SUPPORT MATERIALS.

- A. CABINET SHALL BE SAFETY DEAD-FRONT TYPE CONSTRUCTION, MADE OF CODE GAUGE STEEL. MINIMUM GUTTER SPACE OF 4 INCHES ON THE SIDES. BUT NOT LESS THAN NEC REQUIREMENTS, AND HINGED DOOR WITH FLUSH TYPE COMBINATION LOCK AND LATCH. ALL PANELBOARDS SHALL BE KEYED ALIKE.
- B. BREAKERS.
- 1. GENERAL: QUICK-MAKE, QUICK-BREAK, TRIP-FREE THERMAL MAGNETIC TRIP: AUTOMATIC TRIPPING INDICATED BY HANDLE AT MID-POSITION; COMMON TRIP ON MULTI-POLE BREAKERS (HANDLE TIE OR SIMILAR DEVICES ARE NOT PERMITTED). RATINGS AS SHOWN ON THE DRAWINGS.
- 2. RMS SYMMETRICAL INTERRUPTING RATINGS SHALL BE 10,000 AMPERES MINIMUM AND OF A HIGHER VALUE WHERE SPECIFICALLY CALLED OUT ON THE DRAWINGS.
- 3. BREAKERS SHALL BE ONLY THE BOLTED TYPE

#### C. BUSSING

- COPPER, SIZED IN ACCORDANCE WITH NEMA TEMPERATURE RISE STANDARDS AND INSTALLED COMPLETELY THROUGHOUT PANEL FOR INSTALLATION OF REQUIRED AND FUTURE BREAKERS WHERE SCHEDULE SHOWS SPACE ONLY. INTERRUPTING CAPACITY OF THE PANELBOARD SHALL BE RATED AS COMPLETE UNIT THAT INCLUDES ALL PROTECTIVE DEVICES.
- 2. INCLUDE 100 PERCENT RATED COPPER GROUND BUS IN EACH PANELBOARD, BONDED TO ENCLOSURE.
- 3. INCLUDE 100 PERCENT RATED INSULATED NEUTRAL BUS IN EACH PANELBOARD, UNLESS NOTED OTHERWISE.

- 1. CONNECTORS ON LOAD TERMINAL OF BREAKERS SHALL BE ONLY COPPER OR BRONZE BODIED AND UL RATED FOR COPPER CONDUCTORS.
- 2. CONNECTORS FOR MAIN LUGS ON PANELBOARD BUSSES SHALL BE ONLY COPPER OR BRONZE BODIED AND UL RATED FOR COPPER CONDUCTORS.
- 3. CONNECTORS FOR LINE CONNECTIONS ON PANELBOARD MAIN BREAKERS OF SWITCHES SHALL BE ONLY COPPER OR BRONZE BODIED AND UL RATED FOR COPPER CONDUCTORS.

### E. ACCESSORIES

- 1. PROVIDE TYPE-WRITTEN DIRECTORY COMPLETED AT THE END OF THE JOB AND INSTALLED IN POUCH ON PANELBOARD DOOR, ACCURATELY DEPICTING ALL FINAL CONNECTIONS.
- 2. PROVIDE NAMEPLATES PER SECTION 16050.
- F. ACCEPTABLE MANUFACTURERS SHALL BE CUTLER-HAMMER, GENERAL ELECTRIC. SQUARE D, OR SIEMENS.

# END OF SECTION 16470

# SECTION 16475 - OVERCURRENT PROTECTIVE DEVICES

#### **GENERAL** A. MATERIALS

- 1. FURNISH AND INSTALL COMPLETE OVERCURRENT PROTECTIVE DEVICES FOR
- ALL CONDUCTORS/APPARATUS NOTED ON DRAWINGS. B. CIRCUIT BREAKERS SHALL BE AS COVERED UNDER SECTION 16470.
- 1. FUSES SHALL BE OF THE AMPERE RATINGS INDICATED ON THE PLANS AND SHALL HAVE A VOLTAGE RATING EQUAL TO OR GREATER THAN THE VOLTAGE AT THEIR INSTALLATION POINT. ALL FUSES SHALL BE OF THE SAME MANUFACTURER TO FACILITATE POSITIVE SELECTION/COORDINATION OF ALL THE PROTECTIVE DEVICES.
- 2. FUSES UNDER 600 AMPS SHALL BE OF DUAL ELEMENT CONSTRUCTION, INCORPORATING A THERMAL OVERLOAD ELEMENT TO PROVIDE THERMAL PROTECTION FOR THE FUSE AND FUSE HOLDER AND A SEPARATE SHORT CIRCUIT ELEMENT. THE DESIGN SHALL PROVIDE THE TIME DELAY OF NOT LESS THAN TEN SECONDS AT 500 PERCENT OF AMPERE RATING. THE INTERRUPTING RATING SHALL BE 200,000 AMPS RMS SYMMETRICAL. PEAK LET-THRU CURRENT (IP) AND ENERGY LET-THRU (I2T) SHALL NOT EXCEED THE VALUES ESTABLISHED BY UL.
- 3. DUAL ELEMENTS FUSES SHALL BE BUSSMAN MANUFACTURING 'LOW-PEAK' UL LABELED, CLASS RK-5.
- 4. INSTALL ALL FUSES IN THE FIELD JUST PRIOR TO ENERGIZING, DO NOT SHIP APPARATUS WITH FUSES INSTALLED. FUSE IDENTIFICATION LABELS SHOWING SIZE AND TYPE INSTALLED SHALL BE PLACED INSIDE THE COVER OF EACH SWITCH. INSERT FUSES SO THE RATING LABEL MAY BE EASILY AND FULLY READABLE UPON OPENING THE SWITCH DOOR.
- 5. SPARE FUSES SHALL BE PROVIDED IN THE AMOUNT OF 10 PERCENT OF EACH SIZE AND TYPE INSTALLED, BUT IN NO CASE SHALL BE LESS THAN THREE SPARES OF A SPECIFIC SIZE AND TYPE SUPPLIED. THESE SPARE FUSES SHALL BE DELIVERED TO THE OWNER AT THE TIME OF ACCEPTANCE

#### OF THE PROJECT. END OF SECTION 16475

WARNING

NOT TO SCALE.

### SECTION 16510 - INTERIOR LIGHTING

# **GENERAL**

A. FURNISH AND INSTALL ALL LIGHTING FIXTURES SHOWN, COMPLETELY WIRED SECURELY ATTACHED TO BUILDING SUPPORTS, CLEANED, AND ALL PARTS IN PLACE. LAMPED AND OPERATING. INCLUDE ALL NECESSARY ACCESSORIES AND SUPPORTING MATERIALS. FIXTURE MODELS SCHEDULED ARE TO SHOW GENERAL TYPES OF FIXTURES REQUIRED. CONTRACTOR MUST FURNISH ALL NECESSARY TRIM PIECES TO FIT TYPES OF FINISH IN WHICH FIXTURES ARE INSTALLED.

#### CONSTRUCTION

- A. UNLESS NOTED OTHERWISE. ALL FLUORESCENT STRIP HOUSINGS SHALL HAVE A COMPLETE COVERAGE OF WHITE REFLECTING ENAMEL, 85 PERCENT MINIMUM REFLECTIVITY, APPLIED BY EITHER A SPRAY OR DIP PROCESS, THEN BAKED IN A TEMPERATURE CONTROLLED OVEN UNTIL PAINT IS THOROUGHLY CURED.
- B. ALL EXPOSED METAL PARTS OF OTHER TYPES OF FIXTURES SHALL HAVE A BAKED ENAMEL FINISH OF THE COLOR NOTED, UNLESS NATURAL OR ANODIZED
- C. WHERE APPROPRIATE, NEW FIXTURES FURNISHED SHALL EXACTLY MATCH

EXISTING LIGHTING FIXTURES AND OPERATE AT EITHER 120V OR AS INDICATED.

- D. LAMPS PER THE FIXTURE SCHEDULE SHALL BE FURNISHED WITH EACH FIXTURE.
- E. PLASTIC DIFFUSERS SHALL BE LIGHT STABLE 100 PERCENT VIRGIN ACRYLIC PATTERN 12, TRANSLUCENT; 98% MINIMUM TRANSMISSION; CONFORMING TO MINIMUM STANDARDS OF IES-NEMA-SPI; AND A MINIMUM THICKNESS OF 0.125
- F. BALLASTS FOR T8 TYPE FLUORESCENT LAMPS SHALL BE ELECTRONIC, UL LISTED. HAVE A POWER FACTOR ABOVE 90%. A THD OF LESS THAN 20%. AND A BALLAST FACTOR OF BETTER THAN 80%. BALLASTS SHALL HAVE A MINIMUM THREE YEAR REPLACEMENT WARRANTY.
- G. H.I.D. BALLASTS SHALL BE HIGH POWER FACTOR TYPE, BY THE RESPECTIVE FIXTURE MANUFACTURER.
- H. ANY AND ALL FIXTURES INSTALLED OUTDOORS SHALL HAVE A UL DAMP OR WET LOCATION LISTING AS APPROPRIATE.
- EMERGENCY BATTERY SHALL BE MINIMUM OF 1100 LUMENS FOR LINEERA T-8, 900 LUMENS FOR COMPACT FLUORESCENT. INCLUDE TEST SWITCH AND AC ON INDICATOR LIGHT.

#### INSTALLATION

- A. SUPPORT 1. PROVIDE ADEQUATE AND STURDY SUPPORTS AS REQUIRED TO PREVENT
- ANY POSSIBILITY OF FIXTURES FALLING. 2. ATTACH #12 TIE-WIRES FROM EACH FIXTURE CORNER TO STRUCTURAL MEMBERS ABOVE.
- 3. SUPPORT SHALL BE DESIGNED FOR SEISMIC ZONE REQUIREMENTS FOR THE PROJECT LOCATION, BUT SHALL BE NO LESS THAN SEISMIC ZONE 4 AS A MINIMUM

- 1. ASSURE GROUNDING OF FIXTURE BODY TO THE BUILDING GROUNDING
- 2. WIRE AND CONNECT EACH FIXTURE TO ACCOMPLISH SWITCHING OBJECTIVES SHOWN ON THE DRAWINGS.
- C. NOTE: ALL LAMPS OF EACH TYPE, STYLE, WATTAGE, ETC. SHALL BE FROM ONE SINGLE MANUFACTURING BATCH TO ENSURE UNIFORM VISUAL APPEARANCE WHEN INSTALLED AND ENERGIZED. LAMPS DIFFERING IN VISUAL APPEARANCE WITH REGARD TO COLOR TEMPERATURE, ETC., EVEN IF AS SPECIFIED SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

#### END OF SECTION 16510

# SECTION 16520 - EXTERIOR LIGHTING

A. THIS SECTION SPECIFIES THE REQUIREMENTS FOR ALL EXTERIOR LIGHTING INCLUDING BUT NOT LIMITED TO WALKWAY LIGHTING. SITE LIGHTING. PARKING LOT LIGHTING, OUTDOOR SPORTS FIELD LIGHTING AND SIGNAGE LIGHTING.

# QUALITY ASSURANCE

**GENERAL** 

A. CODES, REGULATION, REFERENCE STANDARDS AND SPECIFICATIONS:

B. MANUFACTURER'S QUALIFICATIONS: FIRMS REGULARLY ENGAGED IN

1. RELEVANT CODES, REGULATION AND REFERENCE STANDARDS LISTED IN SECTION 16050.

MANUFACTURE OF EXTERIOR LIGHTING FIXTURES OF TYPES AND RATING

- REQUIRED. WHERE PRODUCTS HAVE BEEN IN SATISFACTORY USE IN SIMILAR SERVICE FOR NOT LESS THAN FIVE YEARS. C. INSTALLER'S QUALIFICATIONS: FIRMS WITH AT LEAST THREE YEARS OF
- SUCCESSFUL INSTALLATION EXPERIENCE ON PROJECTS WITH EXTERIOR LIGHTING FIXTURE WORK SIMILAR TO THAT REQUIRED FOR THIS PROJECT.

# LUMINAIRES:

A. PROVIDE LUMINAIRES COMPLETE WITH LAMPS OF THE NUMBER, TYPE AND WATTAGE INDICATED ON FIXTURE SCHEDULE, THE DETAILS, SHAPES AND DIMENSIONS ARE INDICATIVE OF THE GENERAL TYPE DESIRED, BUT ARE NOT INTENDED TO RESTRICT SELECTION TO LUMINAIRES OF ANY PARTICULAR MANUFACTURER UNLESS NOTED OTHERWISE, LUMINAIRES OF SIMILAR DESIGN AND EQUIPMENT, LIGHT DISTRIBUTION AND BRIGHTNESS CHARACTERISTICS, AND OF EQUAL FINISH AND QUALITY WILL BE ACCEPTABLE IF APPROVED.

# SUBMITTALS

- A. PRODUCT DATA: SUBMIT MANUFACTURER'S PRODUCT DATA AND INSTALLATION INSTRUCTIONS ON EACH TYPE OF EXTERIOR LIGHTING FIXTURE AND COMPONENT. DATA SHALL BE SUFFICIENT TO SHOW CONFORMANCE TO SPECIFIED REQUIREMENTS AND SHALL INCLUDE THE FOLLOWING:
- LUMINAIRES (EACH TYPE)
- 2. POLES
- 3. PHOTOCELL SWITCH

# B. SHOP DRAWINGS:

- 1. LUMINAIRES: SUBMIT FIXTURE SHOP DRAWINGS IN BOOKLET FORM WITH SEPARATE SHEETS FOR EACH FIXTURE, ASSEMBLED IN 'LUMINAIRE TYPE' ALPHABETICAL OR NUMERICAL ORDER WITH PROPOSED FIXTURE AND ACCESSORIES CLEARLY INDICATED ON EACH SHEET, INCLUDE DIMENSIONS, ACCESSORIES AND INSTALLATION AND CONSTRUCTION DETAILS. PHOTOMETRIC DATA SHALL INCLUDE ZONAL LUMEN DATA, AVERAGE AND MINIMUM RATIO.
- 2. POLES: INCLUDE DIMENSIONS, WIND LOAD DETERMINED IN ACCORDANCE WITH AASHTO LTS-1, POLE DEFLECTION, POLE CLASS AND OTHER APPLICABLE INFORMATION.
- C. WIRING DIAGRAMS: SUBMIT CONTROL WIRING DIAGRAMS FOR EXTERIOR LIGHTING.
- D. SAMPLES: SUBMIT SAMPLES AS REQUESTED.

E. ILLUMINATION DATA: PROVIDE COMPUTERIZED HORIZONTAL ILLUMINATION LEVELS IN FOOTCANDLES AT GROUND LEVEL, TAKEN EVERY TEN FEET WHICH SHOWS COMPOSITE VALUES OF ILLUMINANCE PROJECTED FROM THE ARRANGEMENT OF LIGHT SOURCES FROM INDICATED FIXTURE LOCATIONS AND HEIGHTS. INCLUDE AVERAGE MAINTAINED FOOTCANDLE LEVEL AND MAXIMUM/MINIMUM RATIO. SHOW ON THE GRAPHIC PLOTS THE LOCATIONS, SPACINGS AND HEIGHTS OF LUMINAIRES.

### DELIVERY, STORAGE AND HANDLING

- A. DELIVER EXTERIOR LIGHTING FIXTURES IN FACTORY-FABRICATED CONTAINERS OR WRAPPINGS WHICH PROPERLY PROTECT FIXTURES FORM CONSTRUCTION DEBRIS AND PHYSICAL DAMAGE.
- B. STORE EXTERIOR LIGHTING FIXTURES IN ORIGINAL WRAPPINGS IN A CLEAN DRY SPACE. PROTECT FROM WEATHER, DIRT, FUMES, WATER, CONSTRUCTION DEBRIS
- C. HANDLE EXTERIOR LIGHTING FIXTURE CAREFULLY TO PREVENT DAMAGE, BREAKING, AND SCORING. DO NOT INSTALL DAMAGED FIXTURES OR COMPONENTS; REMOVE UNITS FROM SITE AND REPLACE WITH NEW.

#### SEQUENCING AND SCHEDULING

- A. COORDINATE WITH OTHER ELECTRICAL WORK INCLUDING WIRES/CABLES, ELECTRICAL BOXES, FITTINGS AND RACEWAYS TO PROPERLY INTERFACE INSTALLATION OF EXTERIOR LIGHTING FIXTURES WITH OTHER WORK.
- B. SEQUENCE EXTERIOR LIGHTING INSTALLATION WITH OTHER CIVIL WORK TO REDUCE POSSIBILITY OF DAMAGE AND SOILING OF FIXTURES DURING REMAINDER OF CONSTRUCTION PERIOD.

#### **PRODUCTS**

- A. PROVIDE LIGHTING FIXTURES OF SIZES, TYPES AND RATINGS PER FIXTURE SCHEDULE; COMPLETE WITH, BUT NOT LIMITED TO HOUSINGS, LAMPS, ENERGY EFFICIENT BALLASTS, STARTERS AND WIRING.
- B. PROVIDE LAMPS AND BALLASTS PER SECTION 16510.
- C. WIRING: PROVIDE ELECTRICAL WIRING WITHIN FIXTURES SUITABLE FOR CONNECTION TO BRANCH CIRCUIT WIRING. PROVIDE WIRING PER SECTION

#### PHOTOCELL SWITCH

A. PHOTOCELL SWITCH TO BE HERMETICALLY SEALED CADMIUM-CELL WITH SINGLE THROW CONTACT RATED 1000 WATTS, 120 VOLTS AND 60 HERTZ. MOUNT SWITCH IN A CAST WEATHERPROOF ALUMINUM HOUSING WITH SWIVEL ARM DESIGNED TO MOUNT AT LOCATION SHOW. THE SWITCH SHALL TURN ON BELOW 3 FOOTCANDLES AND OFF AT 3-10 FOOTCANDLES, A TIME DELAY SHALL PREVENT ACCIDENTAL SWITCHING FROM TRANSIENT LIGHT SOURCES. MOUNT A DIRECTIONAL LENS IN FRONT OF THE CELL TO PREVENT FIXED LIGHT SOURCES FROM CREATING A TURNOFF CONDITION. AIM SWITCH ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. PHOTOCELL SWITCH TO BE UL LISTED.

#### **EXAMINATION**

A. EXAMINE AREAS AND CONDITIONS UNDER WHICH LIGHTING FIXTURES ARE TO BE INSTALLED, AND SUBSTRATE WHICH WILL SUPPORT LIGHTING FIXTURES. NOTIFY ENGINEER IN WRITING OF CONDITIONS DETRIMENTAL TO PROPER COMPLETION OF THE WORK, DO NOT PROCEED WITH WORK UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED IN A MANNER ACCEPTABLE TO THE ENGINEER.

#### INSTALLATION OF EXTERIOR LIGHTING FIXTURES

- A. INSTALL EXTERIOR LIGHTING FIXTURES AT LOCATIONS AND HEIGHTS AS INDICATED, IN ACCORDANCE WITH FIXTURE MANUFACTURER'S WRITTEN INSTRUCTIONS, APPLICABLE REQUIREMENTS OF NEC, NECA'S 'STANDARD OF INSTALLATION', NEMA STANDARDS AND WITH RECOGNIZED INDUSTRY PRACTICES TO ENSURE THAT LIGHTING FIXTURES FULFILL REQUIREMENTS.
- B. TIGHTEN CONNECTORS AND TERMINALS INCLUDING SCREWS AND BOLTS. IN ACCORDANCE WITH EQUIPMENT MANUFACTURER'S PUBLISHED TORQUE—TIGHTENING VALUES FOR EQUIPMENT CONNECTORS. WHERE MANUFACTURER'S TORQUING REQUIREMENTS ARE NOT INDICATED, TIGHTEN CONNECTORS AND TERMINALS TO COMPLY WITH TIGHTENING TORQUE'S SPECIFIED IN UL STANDARDS 486A AND B, AND THE NATIONAL ELECTRICAL

C. FASTEN ELECTRICAL LIGHTING FIXTURES AND BRACKETS SECURELY TO

- THAT INSTALLED FIXTURES ARE PLUMB AND LEVEL.
- GROUNDING A. PROVIDE EQUIPMENT GROUNDING CONNECTIONS FOR EXTERIOR LIGHTING FIXTURES AS INDICATED. TIGHTEN CONNECTIONS TO COMPLY WITH TIGHTENING TORQUES SPECIFIED IN UL STD 486A TO ASSURE PERMANENT AND EFFECTIVE

INDICATED STRUCTURAL SUPPORTS, INCLUDING POLES/STANDARDS AND ENSURE

# FIELD QUALITY CONTROL

- A. REPLACE DEFECTIVE AND BURNED OUT LAMPS FOR A PERIOD OF ONE YEAR FOLLOWING THE DATE OF SUBSTANTIAL COMPLETION
- B. AT THE DATE OF SUBSTANTIAL COMPLETION, REPLACE LAMPS IN EXTERIOR LIGHTING FIXTURES WHICH ARE OBSERVED TO BE NOTICEABLY DIMMED AFTER CONTRACTOR'S USE AND TESTING, AS JUDGED BY THE ARCHITECT.

1. REFER TO DIVISION 1 SECTIONS FOR THE REPLACEMENT/RESTORATION OF

LAMPS IN EXTERIOR LIGHTING FIXTURES. WHERE USED FOR TEMPORARY

# LIGHTING PRIOR TO DATE OF SUBSTANTIAL COMPLETION.

- ADJUSTING AND CLEANING A. AIM ADJUSTABLE LIGHTING FIXTURES AND LAMPS IN NIGHT TEST OF SYSTEM. VERIFY THAT MEASURED ILLUMINANT VALUES COMPLY WITH PLOT DIAGRAM
- B. CLEAN LIGHTING FIXTURES OF DIRT AND DEBRIS UPON COMPLETION OF
- DEMONSTRATION A. UPON COMPLETION OF INSTALLATION OF EXTERIOR LIGHTING FIXTURES, AND ASSOCIATED ELECTRICAL SUPPLY CIRCUITRY, APPLY ELECTRICAL ENERGY TO CIRCUITRY TO DEMONSTRATE CAPABILITY AND COMPLIANCE WITH REQUIREMENTS.

DEMONSTRATE COMPLIANCE; OTHERWISE, REMOVE AND REPLACE WITH NEW

WHERE POSSIBLE, CORRECT MALFUNCTIONING UNITS AT SITE, THEN RETEST TO

C. PROTECT INSTALLED FIXTURES FROM DAMAGE DURING CONSTRUCTION PERIOD.

#### UNITS, AND PROCEED WITH RETESTING. SPARE LAMPS

A. PROVIDE SPARE LAMPS IN FULL ACCORDANCE WITH SPECIFICATION SECTION

# END OF SECTION 16520

**ELECTRICAL SPECIFICATIONS** 

CITY OF SAN DIEGO, CALIFORNIA

SKYLINE TEMPORARY FIRE STATION 7180 SKYLINE DR. SAN DIEGO, CALIFORNIA 92114 PARCEL ID. NO. 581-290-11-00

PLANS FOR THE CONSTRUCTION OF

WBS. S-00687

ı	ENGINEERIN SH							
	APPROVED: Sky ash		12	2/19/20	SUBMITTED BY:  ROWAIDA JADAN  ASSOCIATE ENGINEER			
	CITY ENGINEER			DATE				
n	DESCRIPTION	ВУ	APPROVED	DATE	FILMED	MICHAEL RAMIREZ		
ı						194-1755 CCS27 COORDINATE		
ı					1834-6315 CCS83 COORDINATE			
ı	CONTRACTOR	38317 - 40D						

CHANGE DATE AFFECTED OR ADDED SHEET NUMBERS APPROVAL NO. IF THIS BAR DOES **NOT MEASURE 1** THEN DRAWING IS

CONSTRUCTION CHANGE / ADDENDUM

CITY OF SAN DIEGO PUBLIC WORKS PROJECT







SPECIAL INSPECTION NO.

TEMPORARY BMP CONSTRUCTION SITE STORM WATER PRIORITY: HIGH\_\_\_\_\_\_MEDIUM\_\_\_\_\_LOW\_\_\_\_

ED MD DP ED C.I.P. NO.00-000.0

#14101

11-05-14

SPEC NO. 0-00-0000-000-0-0

OROFESS/O

ELECTRICAL EXP. 6-30-15