INVITATION FOR BIDS (IFB) 3-2208 BOOK 1 OF 2

RESTORATION OF A COMMERCIAL PROPERTY



ORANGE COUNTY TRANSPORTATION AUTHORITY

550 South Main Street P.O. Box 14184 Orange, CA 92863-1584 (714) 560-6282

Key IFB Dates

Issue Date: March 13, 2023

Pre-Bid Conference/Site Visit: March 22, 2023

Questions/Approved Equal Submittal: March 24, 2023

Bid Submittal Date: April 12, 2023

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SUBJECT: NOTICE INVITING SEALED BIDS

IFB 3-2208, "RESTORATION OF A COMMERCIAL

PROPERTY"

TO: ALL BIDDERS

FROM: ORANGE COUNTY TRANSPORTATION AUTHORITY

The Orange County Transportation Authority (Authority) invites sealed bids for **RESTORATION OF A COMMERCIAL PROPERTY**.

Please note that by submitting a Bid, Bidder certifies that it is not subject to any Ukraine/Russia-related economic sanctions imposed by the State of California or the United States Government including, but not limited to, Presidential Executive Order Nos. 13660, 13661, 13662, 13685, and 14065. Any individual or entity that is the subject of any Ukraine/Russia-related economic sanction is not eligible to submit a Bid. In submitting a Bid, all Bidders agree to comply with all economic sanctions imposed by the State or U.S. Government.

The description of this project is restoration of the exterior and interior of a commercial building as well as restoration of the parking lot to provide the required pedestrian access in accordance with Americans with Disabilities Act standards.

The estimated cost for this project is \$1,314,000. Bidders will be required to hold a valid State of California B license.

Bids must be submitted at or before 11:00 a.m., April 12, 2023.

Bids delivered in person or by a means other than the U.S. Postal Service shall be submitted to the following:

Orange County Transportation Authority Contracts Administration and Materials Management 600 South Main Street, (Lobby Receptionist) Orange, California 92868

Attention: Megan Bornman, Senior Contract Administrator

Or bids delivered using the U.S. Postal Service shall be addressed as follows:

Orange County Transportation Authority Contracts Administration and Materials Management 550 South Main Street P.O. Box 14184

Orange, California 92863-1584

Attention: Megan Bornman, Senior Contract Administrator

Bids and amendments to bids received after the date and time specified above will be returned to the bidders unopened.

Bidders interested in obtaining a copy of this Invitation for Bids (IFB) may do so by downloading the IFB from CAMM NET, the Authority's on-line website at https://cammnet.octa.net.

All bidders and subcontractors interested in doing business with the Authority are required to register their business on-line at CAMM NET. The website can be found at https://cammnet.octa.net. From the site menu, click on CAMM NET to register.

To receive all further information regarding this IFB, bidders and subcontractors must be registered on CAMM NET with at least one of the following commodity codes for this solicitation selected as part of the vendor's on-line registration profile:

Category: Commodity:

Construction Construction (General)

General Contractor Construction - Electrical

Installation

Drywall / Plastering Electrical Contractor Flooring Contractor

Plumbing Concrete

Landscape Contractor Roofing Contractor

Facility; Equipment, Supplies Asphalt

Parking Lot Equipment

Fire - Protection Equipment &

Supplies

Construction Materials

A pre-bid conference will be held via teleconference on March 22, 2023, at 12:30 p.m. Prospective bidders may join or call-in using the following credentials:

Microsoft Teams Link

OR Call-in Number: 916-550-9867Conference ID: 382 544 139#

An on-site/in-person conference will not be held. A copy of the presentation slides and pre-bid conference registration sheet(s) will be issued via addendum prior to the date of the pre-bid conference. All prospective bidders are encouraged to attend the pre-bid conference and the job walk.

On March 22, 2023 at 3:00 p.m., a job walk will be conducted at 16585 Magnolia Street, Westminster, California 92683.

All bidders are encouraged to subcontract with small businesses to the maximum extent possible.

Bidders will be required to submit the name, business address, and California contractor license number of each subcontractor who will perform work or labor or render service to the bidder in or about the work in an amount in excess of one-half of one percent (1/2 of 1 %) of the bidder's total bid. If a subcontractor's California contractor license number is submitted incorrectly, it will not be grounds for filing a bid protest or grounds for considering the bid nonresponsive if the corrected subcontractor's California contractor license number is submitted to the Authority within 24 hours after the bid opening.

The successful Bidder will be required to comply with all applicable equal opportunity laws and regulations.

Award of this contract is subject to receipt of federal, state and/or local funds adequate to carry out the provisions of the agreement including the project specification.

All bidders must register with the Department of Industrial Relations pursuant to Labor Code Section 1725.5. A bidder is exempt from this requirement pursuant to Labor Code Section 1771.1(a) if the bidder submits a bid authorized by Section 7029.1 of the Business and Professions Code or by Section 10164 or 20103.5 of the Public Contract Code, provided the bidder is registered to perform public work pursuant to Section 1725.5 at the time the contract is awarded.

A bid submitted by a contractor or subcontractor will not be accepted or entered into without proof of the contractor or subcontractor's current registration to perform public work pursuant to Labor Code Section 1725.5.

SECTION I: INSTRUCTIONS TO BIDDERS

SECTION I. INSTRUCTIONS TO BIDDERS

A. PRE-BID CONFERENCE/SITE VISIT

A pre-bid conference will be held via teleconference on March 22, 2023, at 12:30 p.m. Prospective bidders may join or call-in using the following credentials:

Microsoft Teams Link

OR Call-in Number: 916-550-9867Conference ID: 382 544 139#

By investigation of the work site, bidder shall be satisfied as to the nature and location of the work and shall be fully informed as to the conditions and matters, which can in any way affect the work or the cost thereof. Prospective bidders should familiarize themselves with Authority safety rules that require that pedestrians must wear approved safety vests.

On March 22, 2023 at 3:00 p.m., a job walk will be conducted. All prospective bidders are strongly encouraged to attend. Safety vests are required for the job walk.

The job walk will be held at 16585 Magnolia Street, Westminster, California 92683.

An on-site/in-person conference will not be held. A copy of the presentation slides and pre-bid conference registration sheet(s) will be issued via addendum prior to the date of the pre-bid conference. All prospective bidders are encouraged to attend the pre-bid conference and the job walk.

Please bring a safety vest for the job walk.

B. EXAMINATION OF DOCUMENTS

By submitting a bid, the bidder represents that it has thoroughly examined and become familiar with the work required under this IFB and that it is capable of performing quality work to achieve the authority's objective.

A Bid Booklet has been furnished as Book 2 of this IFB.

C. ADDENDA

The Authority reserves the right to revise the IFB documents. Such, if any, will be made by written addendum to this IFB. Any written addenda issued pertaining to this IFB shall be incorporated into the terms and conditions of any resulting Agreement. The Authority will not be bound to any modifications to or deviations from the requirements set forth in this IFB as the result of oral instructions. Bidders shall acknowledge receipt of Addenda in their bids. Failure to acknowledge receipt

of Addenda may cause the bid to be deemed non-responsive to this IFB and be rejected.

D. AUTHORITY CONTACT

All communication and/or contacts with Authority staff regarding this IFB are to be directed to the following Contract Administrator:

Megan Bornman, Senior Contract Administrator Contracts Administration and Materials Management Department 600 South Main Street P.O. Box 14184

Orange, CA 92863-1584

Phone: 714.560. 5064, Fax: 714.560.5792

Email: mbornman@octa.net

Commencing on the date of the issuance of this IFB and continuing until award of the contract or cancellation of this IFB, no bidder, subcontractor, lobbyist or agent hired by the proposer shall have any contact or communications regarding this IFB with any Authority's staff; member of the evaluation committee for this IFB; or any contractor or consultant involved with the procurement, other than the Contract Administrator named above or unless expressly permitted by this IFB. Contact includes face-to-face, telephone, electronic mail (e-mail) or formal written communication. Any bidder, subcontractor, lobbyist or agent hired by the bidder that engages in such prohibited communications may result in disqualification of the proposer at the sole discretion of the Authority.

E. CLARIFICATIONS OF SPECIFICATIONS AND APPROVED EQUALS

1. Specifications Review

Should a bidder find discrepancies in, or omissions from, the drawings or specifications, or be in doubt as to their meaning, the bidder shall notify the Authority in writing in accordance with item 3 ("Submitting Requests"), below. Should it be found that the point in question is not clearly and fully set forth; a written addendum clarifying the matter will be sent to all firms registered on CAMM NET under the commodity codes specified in the IFB.

2. Preference for Materials

In accordance with the California Public Contract Code Section 3400, reference to any equipment, material, article or patented process, by trade name, make, or catalog number, shall not be construed as limiting competition. In those cases where the specifications call for a designated material, product, or service by specific brand or trade name and there is only one brand or trade name listed, the item involves a unique or novel product application required to be used in the public interest or is the only brand or trade name known to the Authority.

Where the specifications or drawings identify any material, product or service by one or more brand names, whether or not "or equal" is added, and the bidder wishes to propose the use of another item as being equal, approval shall be requested as set forth in below.

3. Submitting Requests

- **a.** All requests for approved equals, clarification of specifications, or questions must be put in writing and must be received by the Authority no later than 5:00 p.m., on March 24, 2023.
- **b.** Requests for approved equals, clarifications, questions must be clearly labeled, "Written Questions". The Authority is not responsible for failure to respond to a request that has not been labeled as such.
- **c.** Any of the following methods of delivering written questions are acceptable as long as the questions are received no later than the date and time specified above:
 - 1. U.S. Mail: Orange County Transportation Authority, P.O. Box 14184, Orange, California 92863-1584.
 - Courier/Overnight: Orange County Transportation Authority, 600 South Main Street, Lobby Receptionist, Orange, California 92868
 - 3. Facsimile: (714) 560-5792.
 - 4. E-Mail: mbornman@octa.net
- d. Any request for an approved equal or clarification of the specifications must be fully supported with technical data, test results, or other pertinent information as evidence that the substitute offered is equal to or better than the specification requirements. The burden of proof as to the equality, substitutability, and the compatibility of proposed alternates or equals shall be upon the bidder, who shall furnish all necessary information at no cost to the Authority. The Authority shall be the sole judge as to the equality, substitutability and compatibility of the proposed alternatives or equals.

4. Authority Responses

Responses from the Authority will be posted on CAMM NET, no later than five (5) calendar days before the scheduled date of bid opening. Bidders may download responses from CAMM NET at https://cammnet.octa.net, or request responses may be sent via U.S. Mail by e-mailing or faxing the request to Megan Bornman, Senior Contract Administrator.

To receive e-mail notification of Authority responses when they are posted on CAMM NET, bidders and their subcontractors must be registered on CAMM NET with at least one of the following commodity codes for this solicitation selected as part of the vendor's on-line registration profile:

<u>Category:</u> <u>Commodity:</u>

Construction Construction (General)
General Contractor

Construction - Electrical

Installation

Drywall / Plastering Electrical Contractor Flooring Contractor

Plumbing Concrete

Landscape Contractor Roofing Contractor

Facility; Equipment, Supplies Asphalt

Parking Lot Equipment

Fire - Protection Equipment &

Supplies

Construction Materials

Inquiries received after 5:00 p.m. on March 24, 2023, will not be responded to.

F. SUBMISSION OF BIDS

1. Date and Time

Bids must be submitted at or before 11:00 a.m., April 12, 2023.

Bids received after the time due will be rejected without consideration or evaluation.

Bids will be publicly opened in the Authority's Administration Office, 600 South Main Street, Orange, California 92863 at the submission time indicated above.

2. Address

Bids delivered in person or by a means other than the U.S. Postal Service shall be submitted to the following:

Orange County Transportation Authority
Contracts Administration and Materials Management (CAMM)

600 South Main Street, (Lobby Receptionist)
Orange, California 92868
Attention: Megan Bornman, Senior Contract Administrator

Or bids delivered using the U.S. Postal Services shall be addressed as follows:

Orange County Transportation Authority
Contracts Administration and Materials Management (CAMM)
P.O. Box 14184
Orange, California 92863-1584
Attention: Megan Bornman, Senior Contract Administrator

3. Bid Booklet and Identification of Bids

Bids must be submitted on the forms provided in the Bid Booklet (Book 2 of 2) that accompanies this IFB. Bids shall include properly completed bidding forms. The bid forms must be enclosed in a sealed package clearly marked as follows:

IFB 3-2208, "RESTORATION OF A COMMERCIAL PROPERTY"

Bidder shall be entirely responsible for any consequences, including disqualification of the bid, resulting from any inadvertent opening of unsealed or improperly identified packages. It is the bidder's sole responsibility to see that its bid is received as required.

G. PRE-CONTRACTUAL EXPENSES

The Authority shall not, in any event, be liable for any pre-contractual expenses incurred by bidder in the preparation of its bid. Bidder shall not include any such expenses as part of its bid.

Pre-contractual expenses are defined as expenses incurred by bidder in:

- 1. Preparing a bid in response to this IFB;
- 2. Submitting that bid to the Authority:
- 3. Negotiating with the Authority any matter related to this bid; and
- 4. Any other expenses incurred by bidder prior to date of award, if any, of the Agreement.

H. JOINT BIDS

Where two or more firms desire to submit a single bid in response to this IFB, they should do so on a prime-subcontractor basis rather than as a joint venture. The Authority intends to contract with a single firm and not with multiple firms doing business as a joint venture.

I. TAXES

Bids are subject to State and Local sales taxes. However, the Authority is exempt from the payment of Federal Excise and Transportation Taxes. Contractor is responsible for payment of all taxes for any goods, services, processes, and operations incidental to or involved in the contract.

J. BID SECURITY FORMS

Bids shall be accompanied by a certified or cashier's check, or an acceptable bid bond for an amount not less than ten percent (10%) of the bid, made payable to the order of the Orange County Transportation Authority. A corporate surety (not an individual surety), registered in the state of California and registered to do business in the county of Orange must issue bid bonds. Said check or bond shall be given as a guarantee that the bidder will enter into a contract if awarded the work and in case of refusal or failure to enter into said contract, the check or bond, as the case may be, shall be forfeited to the Authority.

K. WITHDRAWAL OF BIDS

Bidders may withdraw its bid at any time prior to the time set for opening of bids by means of written request signed by the bidder or its proper authorized representative. Such written request shall be delivered to the Contracts Administrator at the address noted in the cover notice of this IFB.

L. PREVAILING WAGES

This project is funded under a financial assistance contract by the U.S. Department of Transportation and is subject to all conditions of the Davis-Bacon Act (40 U.S.C. 3141–48), as supplemented by the Department of Labor regulations 29 CFR part 5, and the Labor Code of the State of California commencing in Section 1770 et. seq. It is required that all mechanics and laborers employed or working at the site be paid not less than the current basic hourly rates of pay and fringe benefits. Wage schedules are available at the Authority's Offices or on the internet at:

http://www.dir.ca.gov/OPRL/statistics_research.html and http://www.access.gpo.gov/davisbacon/.

Bidders shall utilize the relevant prevailing wage determinations in effect on the first advertisement date of the Notice Inviting Sealed Bids. In the event there are any differences between the minimum wage rates as determined by the United States Secretary of Labor and those determined by the State of California, the highest rate must be paid.

This Agreement is subject to compliance monitoring and enforcement by the Department of Industrial Relations. The Department of Industrial Relations shall monitor and enforce compliance with applicable prevailing wage requirements for this Agreement. The reporting requirements may be found at

https://www.dir.ca.gov/Public-Works/Contractors.html. Bidder is responsible for complying with all requirements of the Department of Industrial Relations, including filing electronic payroll reports.

A contractor or subcontractor will not be qualified to bid on, be listed in a bid proposal, or engage in the performance of any contract for public work on a public works project unless registered with the Department of Industrial Relations pursuant to Labor Code Section 1725.5. A contractor or subcontractor will be exempt from this requirement pursuant to Labor Code Section 1771.1(a) if it submits a bid authorized by Section 7029.1 of the Business and Professions Code or by Section 10164 or 20103.5 of the Public Contract Code, provided the contractor is registered to perform public work pursuant to Section 1725.5 at the time the contract is awarded.

A contractor or subcontractor will not be awarded a contract for public work on a public works project unless registered with the Department of Industrial Relations pursuant to Labor Code Section 1725.5.

A bid submitted by a contractor or subcontractor will not be accepted or entered into without proof of the contractor or subcontractor's current registration to perform public work pursuant to Labor Code Section 1725.5.

M. SUBCONTRACTORS AND ASSIGNMENTS

The successful bidder shall perform work equivalent to at least ten percent (10%) of the total amount of the construction work at the site; and, perform the work on the site with its own staff.

Pursuant to the provisions of the California Public Contract Code Section 4104, every bidder shall in the bid set forth:

- The name, business address, and California contractor license number of each subcontractor who will perform work or labor or render service to the bidder in or about the work in an amount in excess of one-half of one percent (1/2 of 1 %) of the bidder's total bid; and
- 2. The portion of the work that will be done by each subcontractor. The bidder shall list only one subcontractor for each portion of work as defined by the bidder in its bid.
- 3. The dollar amount of the work, which will be done by each such subcontractor.

Bidder shall complete Exhibit D "List of Subcontractors" with the above requested information.

If a subcontractor's California contractor license number is submitted incorrectly in the bid, it will not be grounds for filing a bid protest or grounds for considering the bid nonresponsive if the corrected subcontractor's California contractor license number is submitted to the Authority within 24 hours after the bid opening.

If the bidder fails to specify a subcontractor for any portion of the work to be performed under the contract in excess of one-half of one percent (1/2 of 1 %) of the bidder's total bid, or if the bidder specifies more than one (1) subcontractor for the same portion of the work to be performed under the contract in excess of one-half of one percent (1/2 of 1 %) of the bidder's total bid, the bidder agrees to perform that portion. The successful bidder shall not, without the express written consent of the Authority, either:

- 1. Substitute any person, firm, or corporation as subcontractor in place of the subcontractor designed in the original bid; or
- 2. Permit any subcontract to be assigned or transferred; or
- 3. Allow it to be performed by anyone other than the original subcontractor listed in the bid.

Each Bidder shall set forth in its bid the name and location of the place of business address of each subcontractor who will perform work or labor or render service to the prime contractor in connection with the performance of the contract.

Bidder shall not assign any interest it may have in any Agreement with the Authority, nor shall bidder assign any portion of the work under any such Agreement with a value in excess of one-half of one percent (1/2 of 1%) of Agreement price to be sub-contracted to any one other than these subcontractors listed in Exhibit D in the "List of Subcontractors," except by prior written consent of Authority. Authority's consent to any assignment shall not be deemed to relieve bidder of its obligations to fully comply with its obligations under its Agreement with the Authority. Bidder with its own forces shall perform minimum of ten percent (10%) calculated as a percentage of the total cost of the project under this Agreement. Bidder shall also include in its subcontract agreements the provisions of its Agreement with Authority including the stipulation that each subcontractor shall maintain adequate insurance coverage compatible to the insurance coverage required of the bidder.

N. BIDDER'S LICENSING REQUIREMENTS

In conformance with the current statutory requirements of Section 7028.15 of the Business and Professions Code of the State of California, regarding submission of a bid without a license, the bidder shall provide as part of the bid a valid State of California license number, class or type and date of expiration.

Furthermore, the bidder shall ensure that all subcontractors fully comply with the appropriate licensing requirements. The bidder shall also certify that all information provided and representations made in the bid are true and correct, and made under penalty of perjury. Bidders shall provide this information on Exhibit D,

"List of Subcontractors" presented in the IFB. Failure to provide the information on the certification form or elsewhere as part of the bid shall render the bidder nonresponsive to this solicitation and will result in the rejection of the bid.

O. PERMITS AND INSPECTION COSTS

Successful bidder shall procure all permits and licenses; pay all charges, assessments and fees, as may be required by the ordinances and regulations of the public agencies having jurisdiction over the areas in which the work is located, and shall comply with all the terms and conditions thereof and with all lawful orders and regulations of each such public agency relating to construction operations under the jurisdiction of such agency.

P. LIQUIDATED DAMAGES

In the event bidder, after entering into an Agreement with the Authority, fails to complete the work within the time specified in the Agreement, the bidder will be required to pay the Authority the amount of \$2,300.00 per calendar day of delay as agreed to liquidated damages.

Q. PROTEST PROCEDURES

The Authority has on file a set of written protest procedures applicable to this solicitation that may be obtained by contacting the Contract Administrator responsible for this procurement. Any protest filed by a bidder in connection with this IFB must be submitted in accordance with the Authority's written procedures.

R. CONTRACT AWARD

Any contract awarded as a result of this IFB, will be awarded to the lowest responsive and responsible bidder and shall be on a lump sum basis, in accordance with the requirements of this IFB. The contract to be awarded is the Agreement presented in Section VI of this IFB.

S. EXECUTION OF CONTRACT

The successful bidder shall submit to the Authority the required contract bonds, "Guaranty" and acceptable insurance certificates within ten (10) calendar days after notification of contract award from the Authority. Failure to sign the contract and submit applicable bonds, "Guaranty", and acceptable insurance certificates within the specified time shall be cause to cancel the award and the forfeiture of the Bid Bond. Transfers of contract, or of interest in contracts, are prohibited.

T. AUTHORITY'S RIGHTS

1. The Authority reserves the right to accept or reject any and all bids, or any item or part thereof, or to waive any informalities or irregularities in bids.

- 2. The Authority reserves the right to withdraw or cancel this IFB at any time without prior notice. The Authority makes no representations that any contract will be awarded to any bidder responding to this IFB.
- 3. The Authority reserves the right to issue a new IFB for the project.
- 4. The Authority reserves the right to postpone the bid opening for its own convenience.
- 5. Each bid will be received with the understanding that acceptance by the Authority of the bid to provide the goods and services described herein shall constitute a contract between the bidder and Authority which shall bind the bidder on its part to furnish and deliver at the prices given and in accordance with conditions of said accepted bid and specifications.
- 6. The Authority reserves the right to investigate the qualifications of any bidder, and/or require additional evidence of qualifications to perform the work.
- 7. Submitted IFBs are not to be copyrighted.

U. PUBLIC RECORDS AND INFORMATION

Bids received by Authority are considered public information and will be made available to the public if requested to do so.

V. CONFLICT OF INTEREST

All bidders responding to this IFB must avoid organizational conflicts of interest, which would restrict full and open competition in this procurement. An organizational conflict of interest means that due to other activities, relationships or contracts, a bidder is unable, or potentially unable to render impartial assistance or advice to the Authority; a bidder's objectivity in performing the work identified in the Project Specifications is or might be otherwise impaired; or a bidder has an unfair competitive advantage. Conflict of Interest issues must be fully disclosed in the bidder's bid.

W. CODE OF CONDUCT

Bidders agree to comply with the Authority's Code of Conduct as it relates to Third-Party contracts, which is hereby referenced and by this reference is incorporated herein. Bidders agree to include these requirements in all of its subcontracts.

X. SAFETY

The complete safety requirements for this IFB are included in Section IV: Agreement Exhibit H. The Contractor will be required to demonstrate compliance with all requirements of the Safety Specifications after Notice to Proceed but prior to mobilization. These requirements include, but are not limited to, an onsite Health

Safety and Environmental (HSE) representative to be present at all times during construction. The representative must have a current Board of Certified Safety Professionals (BCSP) certification and a minimum of five years of experience enforcing HSE compliance. BCSP certification requirements may be found at: https://www.bcsp.org/Safety-Certifications.

SECTION II: INSTRUCTIONS TO BIDDING FORMS

SECTION II. INSTRUCTIONS TO BIDDING FORMS

The Bidder shall complete all the forms identified below, and contained in the Bid Booklet Book 2 of this IFB. The bid may not contain exceptions to or deviations from the requirements of this IFB.

A. BID FORM

The bidder must complete the Bid Form which must be submitted in its entirety. Failure to submit the Bid Form in its entirety will result in the bid being non-responsive. In addition to providing the lump sum bid, the bidder affirms the Bid Form statements.

B. BID SECURITY FORM - BID BOND

The bidder shall include the Bid Security Form and include the appropriate bid bond or cashier check with the bid.

C. INFORMATION REQUIRED OF BIDDER

Bidder must provide all the information requested in this form.

D. NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246) (NO FORM REQUIRED)

The bidder shall include the Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity provides notice to Bidder regarding the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications".

E. BIDDER'S CERTIFICATE OF COMPLIANCE - WORKERS' COMPENSATION INSURANCE

In conformance with current statutory requirements of Section 1860, et. seq., of the Labor Code of the State of California, bidder shall execute the bidder's Certificate of Compliance Regarding Workers' Compensation Insurance.

F. BIDDER'S CERTIFICATE OF COMPLIANCE - BUSINESS AND PROFESSIONS CODE SECTION 7028

Bidder shall execute the Bidder's Certificate of Compliance Regarding State of California Business and Professions Code Section 7028.15.

G. LIST OF SUBCONTRACTORS FORM

Bidder shall complete Exhibit D, which lists all subcontractors performing work in excess of one-half of one percent (½ of 1%) of the bid amount per the instructions set forth in Section I "Instructions to Bidders".

H. STATUS OF PAST AND PRESENT CONTRACTS FORM

Bidder is required to complete and sign the form entitled "Status of Past and Present Contracts" provided in this IFB and submit as part of the bid. Bidder shall identify the status of past and present contracts where the firm has either provided services as a prime vendor or a subcontractor during the past five (5) years in which the contract has been the subject of or may be involved in litigation with the contracting authority. This includes, but is not limited to, claims, settlement agreements, arbitrations, administrative proceedings, and investigations arising out of the contract. Bidder shall have an ongoing obligation to update the Authority with any changes to the identified contracts and any new litigation, claims, settlement agreements, arbitrations, administrative proceedings, or investigations that arise subsequent to the submission of the bid.

A separate form must be completed for each identified contract. Each form must be signed by the Bidder confirming that the information provided is true and accurate. Bidder is required to submit one copy of the completed form(s) as part of its bid.

I. CERTIFICATION OF NON-COLLUSION

This form requires the Bidder to certify that the bid is not collusive or a sham. This form is to be signed, dated and is part of the bid package in Book 2 of 2.



BID FORM

The undersigned hereby proposes to perform all work for which a contract may be awarded and to furnish any and all plant, labor, services, material, tools, equipment, supplies, transportation, utilities, and all other items and facilities necessary therefore as required in the IFB 3-2208, "RESTORATION OF A COMMERCIAL PROPERTY", and to do everything required therein; and further proposes that, if this bid is accepted, will contract in the form and manner stipulated to perform all the work in strict conformity therewith within the time limits set forth therein, and will accept as full payment therefore, the following price:

<u>Description</u>	Total Lump Sum <u>Bid Amount</u>
	\$
	d bond (circle applicable term) properly Transportation Authority, hereinafter vner, for the sum of
bid, is attached hereto and is given a execute the Agreement and furnish "Certificate of Insurance", if awarded do so within the time provided, (a) forfeited to the Authority; or (b) suret	ercent (10%) of the total amount of this is a guarantee that the undersigned will in the required bonds, "Guaranty" and it the contract, and in case of failure to the proceeds of said check shall be y's liability to the Authority for forfeiture be considered as established [circle (a)

The undersigned hereby represents that:

BID FORM, PAGE 2

- Bidder has thoroughly examined and become familiar with the work required and documents included under this IFB. The bidder understands that the award of the contract, if it is awarded, will be based on the lowest total bid submitted by a responsive and responsible bidder, and further, that the amounts and the total on the Bid Form will be subject to verification by the Authority.
- 2. By investigation at the site of the work and otherwise, it is satisfied as to the nature and location of the work and is fully informed as to all conditions and matters, which can in any way affect the work or the cost thereof.
- 3. Bidder fully understands the scope of the work/specifications and has checked carefully all words and figures inserted in said Invitation For Bids (IFB) and further understands that the Authority will in no way be responsible for any errors or omissions in the preparation of this bid. Bidder further asserts that it is capable of performing quality work to meet Authority's requirements.
- 4. Bidder will execute the Agreement and furnish the required Performance and Payment Bonds, Guaranty and proof of insurance coverage within ten (10) calendar days after notice of acceptance of bid by the Authority; and further, that this bid may not be withdrawn for a period of 120 calendar days after the date set for the opening thereof, unless otherwise required by law. If any bidder shall withdraw its bid within said period, the bidder shall be liable under the provisions of the Bid Security, or the bidder and the surety shall be liable under the Bid Bond, as the case may be.
- 5. Bidder hereby certifies that this bid is genuine and not a sham or collusive or made in the interest or on behalf of any person not herein named, and the undersigned has not directly or indirectly induced or solicited any other bidder to put in a sham bid, or any other person, firm, or corporation to refrain from bidding; the undersigned has not in any manner sought by collusion to secure for himself an advantage over any other bidder.
- 6. In conformance with current statutory requirements of Section 1860, et. seq., of the Labor Code of the State of California, the Bidder shall execute the document included in this IFB entitled "Bidder's Certificate of Compliance Regarding Workers' Compensation Insurance."
- 7. Bidder hereby further certifies that each, and every representation made in this bid are true and correct and made under penalty of perjury.

BID FORM, PAGE 3

- 8. Bidder shall permit the authorized representative of the Authority to inspect and audit all data and records of bidder relating to this bid, and if awarded a contract resulting from this bid, shall permit such inspection and audit of all data and records of bidder related to bidder's performance of such contract.
- 9. Bidder does not employ anyone who is now, or for one (1) year immediately prior to the date of this offer was, a director, officer, member, or employee of the Orange County Transportation Authority. The undersigned has not agreed to pay a fee contingent upon the award of a contract resulting from this bid to anyone who is now, or for one (1) year immediately prior to the date of this bid was, a director, officer, member, or employee of the Orange County Transportation Authority. No member of or delegate to the Congress of the United States shall be admitted to any share of the contract or to any benefit arising therefrom.
- 10. If awarded a contract resulting from this bid, bidder shall not discriminate against any employee or applicant for employment because of race, religion, color, sex, age or national origin. The bidder shall take affirmative action to ensure that applicants are employed, and that employees are treated during their employment, without regard to their race, religion, color, sex, age or national origin. Such actions shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.
- 11. Bid will be in effect for 120 calendar days after the bid closing date.

BID FORM, PAGE 4

Now: In compliance with the **Invitation For Bids 3-2208**, "**RESTORATION OF A COMMERCIAL PROPERTY**", the undersigned, with full cognizance thereof, hereby proposes to perform the entire work in strict compliance with all of the said requirements and provisions for the prices set forth herein upon which award of contract is made. The undersigned affirms that the information provided herein is true and accurate and that any misrepresentations are made under penalty of perjury.

_)

BID SECURITY FORM BID BOND

KNOW ALL MEN BY THESE PRESENTS:

That,			_ as principal
and Bidder and		as	Surety, are held
and firmly bound unto the	e Orange County	Transportation Author	rity, of State of
California, hereinafter	referred to as	"Authority," in	the sum of
	Dollars (\$),	, to be paid to
the Authority, its successo	ors, and assigns; fo	r which payment, wel	l and truly to be
made, bind themselves, t	heir heirs, execute	ors, administrators, s	uccessors, and
assigns, jointly and seve	rally, firmly by the	se presents, this am	ount being ten
percent (10%) of the total	amount of the Bid.		
THE CONDITION OF TH		3 SUCH , that if the ce	ertain bid of the
above named bounder	າ principal		· · · · · · · · · · · · · · · · · · ·
for			the Orange
	Transportation	at	the Orange Authority's
County	rransportant		y set forth in
documents entitled IFB	3-2208 "REST		
PROPERTY ", shall not be			
the date set for the ope		•	•
notwithstanding the award			
accepted by the Authorit			
	nd if	the	above
bounden	iid ii	u io	its heirs,
executors, administrators,	successors and a	assigns shall execute	
such construction and de		-	
"Guaranty," and proof of i	•		
notification of contract awa			
null and void; otherwise it			
IN WITNESS WHEREOF,	we hereunto set o	ur hands and spale th	is day
of		ui nanus and seals tri 202 .	isuay
<u> </u>	, 4	-v <i>_</i>	
		W	

NOTE: The standard printed bond form of any bonding company acceptable to the Authority may be used in lieu of the foregoing approved sample bond form provided the security stipulations protecting the Authority are not in any way reduced by use of the security company's printed standard form.

BID SECURITY FORM CHECK TO ACCOMPANY BID

(NOTE: The following form shall be used in case check accompanies bid)

Accompanying this bid is a Certified or Cashiers check (circle the appropriate one) payable to the order of Orange County Transportation Authority, hereinafter referred to
As "Authority" for
dollars (\$), this amount being ten percent (10%) of the total
amount of the Bid submitted in response to IFB 3-2208, "RESTORATION OF A
COMMERCIAL PROPERTY". The proceeds of this check shall become the property of
Authority provided this bid shall be accepted by Authority through action of its legally
constituted contracting authorities and the undersigned shall fail to execute a contract
and furnish the required Guaranty Form, Performance and Payment Bonds and proof of
insurance coverage within ten (10) calendar days after date of notification of contract
award from the Authority. The proceeds of this check shall also become the property of
the Authority if the undersigned bidder withdraws the bid within the period of 120 days after the date set for the opening thereof, unless otherwise required by law, and
notwithstanding the award of the contract to another bidder. Otherwise, the check shall
be returned to the undersigned.
Bidder:
Signature:
Date:

NOTE: If the bidder desires to use a bond instead of check, the Bid Bond form shall be executed and the sum of this bond shall be ten percent [10%] of the total amount of the bid.

INFORMATION REQUIRED OF BIDDER

The bidder is required to supply the following information. Additional sheets may be attached if necessary.

1.	Name of Bidder:
2.	Business Address:
3.	Telephone () Fax ()E-Mail
4.	Type of Firm - Individual, Partnership or Corporation:
5.	Corporation organized under the laws of state of:
6.	Contractor's License No.: ClassYears of Experience:
7.	Expiration Date of License:
8.	Is your firm a certified small business in California? Yes No
9.	List the names and addresses of all owners of the firm or names and titles of all officers of the corporation:

INFORMATION REQUIRED OF BIDDER, PAGE 2

10. Please list the following: a) All prior and current license numbers that the current owner(s) or officers possess or have possessed in the last five years and the current status of those license; b) any prior company names that the owner(s) had in operation during the previous five years.

Current Officers or Owners Name	Prior Company Names (During the last 5 years)	Prior and Current License Numbers	Status of License

Note: If additional space is required to detail the information requested, please attach another page. All information requested must be included. Failure to identify all of the information may result in your bid being found non-responsive and your bid being rejected.

11. List all construction projects (public and private) for which Bidder has provided general contractor services for the past three years:

Contract Type (Public or Private)	Project Description	Dates of Service	Total Cost	Name and Address of Owner	Contact Name and Phone Number

Note: If additional space is required to detail the information requested, please attach another page. All information requested must be included. Failure to identify all of the information, may result in your bid being found non-responsive and your bid being rejected.

12.List the name	e, address and pho	one numb	per of Supe	erintendent for this	s project:
	truction projects rices as a Superin	••	•	•	perintendent has
Contract Type (Public or Private)	Project Description	Dates of Service	Total Cost	Name and Address of Owner	Contact Name and Phone Number
Bidder hereby ce	ertifies that it:				
financial data, or an appraisal of it	•	itaged Bu ity, bidde and refe condition	usiness En er shall fur erences รเ า.	ufficiently comprel	d herein. ancial statement,
Signature				_	
Name				_	
Title				_	
Company	Name			_	
Telephone	e Number			_	
Fax Numb	per			_	
Email Add	Iress			_	

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246)

- 1. The Bidders' attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.
- 2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate <u>work force</u> in each trade on all construction work in the covered area, are as follows:

Timetable Goals for Minority Participation for Each Trade (11.9)

Goals for Female Participation in Each Trade (6.9)

These goals are applicable to all the Contractor's construction work (whether or not it is federal or federally assisted) performed in the covered area.

The Contractor's compliance with the Executive Order and the regulations in 41 C.F.R. Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 C.F.R. 60-4.3 (a), and its efforts to meet the goals established for the geographical area where the contract resulting from this solicitation is to be performed. The hours of minority and female employment and training must be uniform throughout the length of the contract, and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from contractor to contractor or from project to project for the sole purpose of meeting the contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 C.F.R. Part 60-4. Compliance with the goals will be measured against the total work hours performed.

- 3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within ten (10) working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor; employer identification number; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the contract is to be performed.
- 4. As used in this Notice, and in the contract resulting from this solicitation, the "covered area" includes the County of Orange, California.

BIDDER'S CERTIFICATE OF COMPLIANCE REGARDING WORKERS' COMPENSATION INSURANCE

In conformance with current statutory requirements of Section 1860, et. seq., of the Labor Code of the State of California, the undersigned confirms the following certification:

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

Name of Bidder/Contractor:	
Signature:	
Title:	
Date:	

BIDDER'S CERTIFICATE OF COMPLIANCE REGARDING STATE OF CALIFORNIA BUSINESS AND PROFESSIONS CODE SECTION 7028.15

Contractor License Number:	
Expiration Date of Contractor's License:	
Each, every and all of the representatio and correct.	ns made by Bidder in the attached bid are true
Name of Bidder/Contractor:	
Signed:	<u>.</u>
Subscribed to and sworn before me, a N California, on	•
Notary	Public
My cor	mmission expires on:
	, 202_
	(NOTARY SEAL

LIST OF SUBCONTRACTORS (EXHIBIT D)

List only the subcontractors, which will perform work or labor or render services to the bidder in <u>excess of one-half of one percent</u> (1/2 of 1%) of the bidder's total bid amount. Do not list alternative subcontractors for the same work. (Use additional sheets if necessary.)

Name & Address Under Which Subcontractor is Licensed	License Number	DIR Registration No.	Specific Description of Work to be Rendered	Small Business Y/N	Туре	Dollar Amount
						\$
						\$
						\$
						\$
						\$
						\$
	TOTAL V	ALUE OF SUBCONTRAC	CTED WORK	1		\$

Bidder's Name

STATUS OF PAST AND PRESENT CONTRACTS FORM

On the form provided below, Offeror/Bidder shall list the status of past and present contracts where the firm has either provided services as a prime vendor or a subcontractor during the past five (5) years in which the contract has been the subject of or may be involved in litigation with the contracting authority. This includes, but is not limited to, claims, settlement agreements, arbitrations, administrative proceedings, and investigations arising out of the contract.

A separate form must be completed for each contract. Offeror/Bidder shall provide an accurate contact name and telephone number for each contract and indicate the term of the contract and the original contract value. Offeror/Bidder shall also provide a brief summary and the current status of the litigation, claims, settlement agreements, arbitrations, administrative proceedings, or investigations. If the contract was terminated, list the reason for termination.

Offeror/Bidder shall have an ongoing obligation to update the Authority with any changes to the identified contracts and any new litigation, claims, settlement agreements, arbitrations, administrative proceedings, or investigations that arise subsequent to the submission of the bid. Each form must be signed by an officer of the Offeror/Bidder confirming that the information provided is true and accurate.

Project city/agency/other:			
Contact Name: Phone:	Phone:		
Project Award Date: Original Contract Value:			
Term of Contract:			
(1) Litigation, claims, settlements, arbitrations, or investigations associate	ed with contract:		
(2) Summary and Status of contract:			
(3) Summary and Status of action identified in (1):			
(4) Reason for termination, if applicable:			
By signing this Form entitled "Status of Past and Present Contracts," I am af information provided is true and accurate.	irming that all of the		
Name Signature			

Revised. 03/16/2018

Non-Collusion Affidavit

To the Orange County Transportation Authority

In accordance with Title 23 United States Code Section 112 and Public Contract Code 7106 the bidder declares that the bid is not made in the interest of, or on the 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, 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 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.

Name of Bidder:_	- ::	 	
Signature:		 	
Date:			

SECTION III: ADDITIONAL CONTRACTUAL EXHIBITS

SECTION III. ADDITIONAL CONTRACTUAL EXHIBITS

The following Exhibits will be attached to and incorporated into the signed Agreement resulting from this IFB.

A. PERFORMANCE BOND

The successful bidder shall furnish at its own expense a Performance Bond (Exhibit E) satisfactory to the Authority in the amount of one hundred percent (100%) of the full amount of the contract as a guarantee of good faith on behalf of the Contractor that the terms of the contract, including all warranty provisions, shall be complied with in every particular. The bond shall be issued by a corporation surety (not an individual surety) required in the state of California and registered to do business in the county of Orange. The bond shall not be issued from a corporation surety that requires a funds control, funds disbursement, or funds administration company for the issuance of the performance bond.

The bond shall specifically provide that if the Contractor, or its subcontractor, fails to fully perform that the surety or sureties will pay for the same in an amount not exceeding the amount specified in the bond and in case suit is brought against the Authority, that the surety will undertake the defense of same.

B. PAYMENT BOND

The successful bidder shall furnish a Payment Bond (Exhibit F) satisfactory to the Authority in the amount of one hundred percent (100%) of the full amount of the contract. Such bonds shall be in effect during the entire term of the contract and warranty and shall be issued directly by a corporate surety (not an individual surety) registered in the state of California and registered to do business in the county of Orange. The bond shall not be issued from a corporation surety that requires a funds control, funds disbursement, or funds administration company for the issuance of the performance bond.

The bond shall specifically provide that if the Contractor fails to pay for amounts due under the Employment Insurance Act that the surety or sureties will pay for the same in an amount not exceeding the amount specified in the bond and in case suit is brought against the Authority, that the surety will undertake the defense of same.

Pursuant to California Civil Code sections 9550 through 9554, in conjunction with the Bond and Undertaking Law (Code of Civil Procedure sections 995.010, et. seq.), Bidders must provide the following information as part of their payment bond; a certificate of Authority from the Orange County Clerks Office indicating that the insurer has not been surrendered, revoked, canceled, annulled, or suspended or, in the event that it has, that renewed Authority has been granted.

C. GUARANTY

The successful bidder shall also submit to the Authority the executed and notarized Guaranty form (Exhibit G) in this IFB.

All forms must be completed and submitted to the Contract Administrator responsible for this procurement within ten (10) calendar days of award notice by the Authority. Failure to submit the completed and signed forms will result in cancellation of the award.

D. CONTRACT CHANGE ORDER

The Authority's Contract Change Order form (Exhibit I) will be attached to and incorporated into the signed Agreement resulting from this IFB.

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS:	
That we, hereinafter referred to as "Contractor", as prince as surety, are held and firmly bound unto the State of California, in the sum Dollars, (\$), lawfu for the payment of which sum, well and truly to severally, firmly by these presents.	Orange County Transportation Authority.
The condition of the foregoing obligation is suc	h that,
WHEREAS, said Contractor has been awarde Agreement with the Orange County Transp "RESTORATION OF A COMMERCIAL PROF which is incorporated herein to this bond by refe said Agreement to give this bond in connection	portation Authority for the IFB 3-2208, PERTY," as specified in said Agreement, erence, and is required under the terms of
NOW THEREFORE, if the said Contractor shat covenants and obligations of said Agreement of times and in the manner specified herein, the otherwise it shall be and remain in full force an fails to fully perform all requirements in accorda Agreement, then surety shall enforce perform Orange County Transportation Authority for the amount specified in this bond; and, further, if in then said surety shall pay the Orange County attorneys' fees to be fixed by the court;	n his part to be done and performed at the en this obligation shall be null and void, and effect; and in the event said Contractor ance with the terms and conditions of said lance by the Contractor or shall pay the same in an amount not exceeding the on the event suit is brought upon this bond.
PROVIDED , that any changes in the work to whether or not made pursuant to the terms of seither the Contractor or the surety there under, under the provisions of said contract release notice of such changes or extensions of the co	said contract, shall not in any way release , nor shall any extensions of time granted either the Contractor or the surety, and
WITNESS our hands this day of	, 202
(SEAL)	(Contractor)
Approved:	
	(Title)
(SEAL)	(Surety)

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS:

That we,	
hereinafter referred to as "Contractor",	as principal, and
as surety, are held and firmly bound ι	into the Orange County Transportation Authority
State of California, in the sum	
Dollars, (\$),	lawful money of the United States of America, for
the payment of which sum, well and severally, firmly by these presents.	truly to be made, we bind ourselves, jointly and

The Condition of the foregoing obligation is such that,

WHEREAS, said Contractor has been awarded and is about to enter into the annexed Agreement with the ORANGE COUNTY TRANSPORTATION AUTHORITY for the IFB 3-2208, "RESTORATION OF A COMMERCIAL PROPERTY," as specified in said Agreement, which is incorporated herein to this bond by reference, and is required under the terms of said Agreement to give this bond in connection with the execution thereof;

NOW, THEREFORE, if said Contractor or a subcontractor fails to pay any of the persons named in Section 9100 of the Civil Code of the State of California, or amounts due under the Unemployment Insurance Code with respect to work or labor performed under the contract, or for any amounts required to be deducted, withheld and paid over to the Employment Development Department from the wages of employees of said Contractor and subcontractors pursuant to Section 13020 of the Unemployment Insurance Code with respect to such work and labor, then said surety will pay for the same, in an amount not exceeding the sum specified in this bond, and also, in case suit is brought upon this bond, a reasonable attorney's fee, to be fixed by the court. This bond shall inure to the benefit of all persons named in Section 9100 of the Civil Code of the State of California so as to give a right of action to such persons or their assigns in any suit brought upon this bond. This bond shall be subject to and include all of the provisions of Title 3 of Part 64 of Division 4 of the Civil Code of California relating to Payment Bond for Public Works, including but not confined to, Civil Code Sections 8150 – 8154, inclusive and Sections 9550 - 9566, inclusive.

PROVIDED, that any changes in the work to be done or the material to be furnished, whether or not made pursuant to the terms of said contract, shall not in any way release either the Contractor or the surety thereunder, nor shall any extensions of time granted under the provisions of said contract release either the Contractor or the surety, and notice of such alterations or extensions of the contract is hereby waived by the surety.

PAYMENT BOND, PAGE 2

WITNESS our hands this	day of	, 202
(SEAL)	(Contractor)	
	Ву	
	(Title)	
Approved:	(Surety)	
(SEAL)	By	

GUARANTY

The undersigned, as "Contractor," guarantees to the Orange County Transportation Authority that the materials furnished and the completed installation work, and the related work performed by the Contractor pursuant to Agreement No. C-3-2208, "RESTORATION OF A COMMERCIAL PROPERTY".

- A. For a period of one (1) year from the date of completion, as evidenced by the date of final acceptance of the work by the Authority, the Contractor warrants to the Authority that work performed and materials furnished under this Contract conforms to the Contract requirements and shall be free from any defect in design, material or workmanship performed by the Contractor or its subcontractors or suppliers. Notwithstanding the foregoing, Contractor shall not be liable for any defects of design, material or equipment provided by Authority.
- B. Under this guaranty, the Contractor shall remedy at its own expense any such failure to conform or any such defect.
- C. Nothing in the above intends or implies that this warranty shall apply to work, which has been abused or neglected by the Authority.
- D. This guaranty shall be in addition to the other guarantees and warranties specified in the Agreement and shall be enforceable concurrently with, or in lieu of, said other guarantees.

Should any of the materials or equipment prove defective or should the work as a whole prove defective, due to faulty workmanship, material furnished or methods of installation, or should the work or any part thereof fail to operate properly as originally intended and in accordance with the plans and specifications, due to any of the above causes, all within twelve (12) months after the date on which the work is accepted by the Authority, the undersigned agrees to reimburse the Authority, upon demand, for its expenses incurred in restoring any such equipment or materials replaced and the cost of removing and replacing any other work without cost to the Authority so that said work will function correctly as originally contemplated.

The Authority shall have the unqualified option to make any needed replacements or repairs itself or to have such replacements or repairs done by the undersigned. In the event the Authority elects to have said work performed by the undersigned, the undersigned agrees that the repairs shall be made and such materials as are necessary shall be furnished and installed within a reasonable time after the receipt of demand from the Authority. If the undersigned shall fail or refuse to comply with its obligations under this guaranty, the Authority shall be entitled to all costs and expenses, including attorneys' fees, reasonably incurred by reasons of the said failure or refusal.

GUARANTY, PAGE 2

Subscribed and sworn to before me		
	Name	
this day of, 202_		
	Title	
Seal of Notary		
•	Signature	
Notary Public	Date	

SECTION IV: AGREEMENT

AGREEMENT NO. C-3-2208

BETWEEN

ORANGE COUNTY TRANSPORTATION AUTHORITY

AND

THIS AGREEMENT is effective this _____ day of _______, 20__ ("Effective Date"), by and between the Orange County Transportation Authority, 550 South Main Street, P.O. Box 14184, Orange, CA 92863-1584, a public corporation of the State of California (hereinafter referred to as "AUTHORITY"), and , , , (hereinafter referred to as "CONTRACTOR").

WITNESSETH:

WHEREAS, AUTHORITY has determined that it requires restoration of a commercial property for the Interstate 405 Improvement Project from State Route 73 to Interstate 605; and

WHEREAS, said work cannot be performed by the regular employees of AUTHORITY; and WHEREAS, CONTRACTOR has represented that it has the requisite personnel, experience,

WHEREAS, CONTRACTOR wishes to perform these services; and

material, and equipment and is otherwise qualified to perform such services; and

WHEREAS, the AUTHORITY's Board of Directors authorized this Agreement on .

NOW, THEREFORE, it is mutually understood and agreed by AUTHORITY and CONTRACTOR as follows:

ARTICLE 1. COMPLETE AGREEMENT

A. This Agreement, including all exhibits and other documents incorporated herein and made applicable by reference, constitutes the complete and exclusive statement of the terms and conditions of the agreement between AUTHORITY and CONTRACTOR and it supersedes all prior representations, understandings and communications. The invalidity in whole or in part of any term or condition of this Agreement shall not affect the validity of other terms or conditions.

Page 1 of 30

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25 26 CONTRACTOR shall be responsible for having taken steps reasonably necessary to ascertain the nature and location of the work, and the general and local conditions, which can affect the work or the cost thereof. Any failure by CONTRACTOR to do so will not relieve it from responsibility for successfully performing the work without additional expense to AUTHORITY.

C. AUTHORITY assumes no responsibility for any understanding or representations concerning

B. AUTHORITY's failure to insist in any one or more instances upon the performance of any

terms or conditions of this Agreement shall not be construed as a waiver or relinquishment of

AUTHORITY's right to such performance by CONTRACTOR or to future performance of such terms or

conditions and CONTRACTOR's obligation in respect thereto shall continue in full force and effect.

conditions made by any of its officers, employees or agents prior to the execution of this Agreement, unless such understanding or representations by AUTHORITY are expressly stated in this Agreement.

D. Time shall be of the essence hereunder; but CONTRACTOR shall perform work hereunder only to the minimum extent consistent with requirements herein.

E. Changes to any portion of this Agreement shall not be binding upon AUTHORITY except when specifically confirmed in writing by an authorized representative of AUTHORITY and issued in accordance with the provisions of this Agreement.

ARTICLE 2. AUTHORITY DESIGNEE

The Chief Executive Officer of AUTHORITY, or designee, shall have the authority to act for and exercise any of the rights of AUTHORITY as set forth in this Agreement.

ARTICLE 3. SCOPE OF WORK

CONTRACTOR shall provide all labor, equipment, materials and facilities necessary for all work related to at the AUTHORITY's in strict compliance with all the requirements specified herein and in:

Exhibit A, entitled "General Provisions";

Addendum No's ;

Exhibit B, entitled "Specifications";

Exhibit C, entitled "List of Drawings";

Exhibit D, entitled "List of Subcontractors";

Exhibit E, entitled "Performance Bond";

Exhibit F, entitled "Payment Bond";

Exhibit G, entitled "Guaranty";

Exhibit H, entitled "Safety Specifications" and

Exhibit I, entitled "Contract Change Order";

all of which documents are attached to and, by this reference, incorporated in and made a part of this Agreement. By this reference, also incorporated in and made a part of this Agreement are all applicable provisions of IFB and all representations made by CONTRACTOR in its original bid to AUTHORITY, including, but not limited to, CONTRACTOR's certifications relative to Workers' Compensation Insurance, and compliance with Section 7028.15 of the State of California Business and Professions Code.

ARTICLE 4. DELIVERY / RECOVERY SCHEDULE

A. CONTRACTOR shall fully complete the herein above described work within (150) calendar days from the effective date of written Notice to Proceed (NTP) issued by AUTHORITY. CONTRACTOR shall give AUTHORITY not less than seventy-two (72) hours advance notice of the start of any work. Within five (5) calendar days after said notice, CONTRACTOR shall provide any construction schedules as may be requested by AUTHORITY.

B. If at any time, the critical path schedule reflects -30 or a greater negative number of days of total float, then CONTRACTOR, within ten days after CONTRACTOR first becomes aware of such schedule delay, shall prepare and submit to AUTHORITY for review and approval a Recovery Schedule demonstrating CONTRACTOR's proposed plan to regain lost schedule progress and to achieve the original contractual milestones in accordance with the Contract. AUTHORITY shall notify CONTRACTOR within ten days after receipt of each such Recovery Schedule whether the schedule is deemed accepted or rejected. Within five days after AUTHORITY's rejection of the schedule, CONTRACTOR will resubmit a revised Recovery Schedule incorporating AUTHORITY's comments. When AUTHORITY accepts CONTRACTOR's Recovery Schedule, CONTRACTOR shall, within five

days after AUTHORITY's acceptance, incorporate and fully include such schedule into the Project Schedule and deliver it to AUTHORITY.

- C. All costs incurred by CONTRACTOR in preparing, implementing and achieving the Recovery Schedule shall be borne by CONTRACTOR and shall not result in a change to the contract price.
- D. In the event that CONTRACTOR fails to provide an acceptable Recovery Schedule within 30 days of CONTRACTOR's receipt of a notice to do so, CONTRACTOR shall have no right to receive progress payments until CONTRACTOR has prepared and AUTHORITY has approved such Recovery Schedule.

ARTICLE 5. START OF WORK

CONTRACTOR shall incur no costs, and shall not perform or furnish any work, services, materials or equipment under this Agreement, unless and until a written Notice to Proceed has been given to CONTRACTOR by AUTHORITY. Conditions precedent to AUTHORITY issuing said Notice to Proceed are CONTRACTOR furnishing the Exhibit E "Performance Bond," Exhibit F "Payment Bond," Exhibit G "Guaranty," and certificates of insurance as set forth in Article 10 hereunder. CONTRACTOR shall furnish said documents within ten (10) calendar days after notification of contract award from AUTHORITY. Upon receipt of acceptable bonds, guaranty, and insurance certificates, AUTHORITY will within ten (10) working days thereafter issue the written Notice to Proceed.

ARTICLE 6. PAYMENT

- A. For CONTRACTOR's full and complete performance of its obligations under this Agreement, and subject to the maximum cumulative payment obligation provision set forth in Article 7, AUTHORITY shall pay CONTRACTOR the firm fixed sum of Dollars (\$.00).
- B. Progress payments and the final payment will be made by AUTHORITY to CONTRACTOR in accordance with the terms as set forth in Exhibit A, "General Provisions," under the "Progress Payments" and "Final Payment and Claims" sections therein. The acceptance by CONTRACTOR of AUTHORITY's final payment hereunder shall constitute a waiver of all claims against AUTHORITY under or arising out of this herein Agreement, as such may from time to time be amended.

C. Failure by AUTHORITY to pay amount in dispute shall not alleviate, diminish or modify in any respect the CONTRACTOR's obligation to achieve final acceptance of and all work in accordance with the contract documents, and CONTRACTOR shall not cease or slow down its performance under this Agreement on account of any such amount in dispute. CONTRACTOR shall proceed as directed by AUTHORITY pending resolution of dispute. Upon resolution of dispute, each party shall promptly pay any amount owing.

ARTICLE 7. MAXIMUM OBLIGATION

Notwithstanding any provisions of this Agreement to the contrary, AUTHORITY and CONTRACTOR mutually agree that AUTHORITY's maximum cumulative payment obligation hereunder (including obligation for CONTRACTOR 's profit), shall be ____ Dollars (\$.00), which shall include all amounts payable to CONTRACTOR for its subcontracts, leases, materials and costs arising from, or due to termination of, this Agreement.

ARTICLE 8. NOTICES

All notices hereunder and communications regarding the interpretation of the terms of this Agreement, or changes thereto, shall be effected by delivery of said notices in person or by depositing said notices in the U.S. mail, registered or certified mail, returned receipt requested, postage prepaid and addressed as follows:

AGREEMENT NO. C-3-2208

1	To CONTRACTOR:	To AUTHORITY:
2		Orange County Transportation Authority
3		550 South Main Street
4		P.O. Box 14184
5	,	Orange, CA 92863-1584
6	ATTENTION:	ATTENTION: Megan Bornman
7	Title:	Title: Senior Contract Administrator
8	Phone:	Phone: (714) 560 - 5064
9	Email:	Email: mbornman@octa.net
10		Cc: Dennis Mak
11		Program Manager
12		Phone: (714) 560 – 5826
13		Email: <u>dmak@octa.net</u>

ARTICLE 9. INDEPENDENT CONTRACTOR

A. CONTRACTOR's relationship to AUTHORITY in the performance of this Agreement is that of an independent contractor. CONTRACTOR's personnel performing work under this Agreement shall at all times be under CONTRACTOR's exclusive direction and control and shall be employees of CONTRACTOR and not employees of AUTHORITY. CONTRACTOR shall pay all wages, salaries and other amounts due its employees in connection with this Agreement and shall be responsible for all reports and obligations respecting them, such as social security, income tax withholding, unemployment compensation, workers' compensation and similar matters.

B. Should CONTRACTOR's personnel or a state or federal agency allege claims against AUTHORITY involving the status of AUTHORITY as employer, joint or otherwise, of said personnel, or allegations involving any other independent contractor misclassification issues, CONTRACTOR shall defend and indemnify AUTHORITY in relation to any allegations made.

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ARTICLE 10. INSURANCE

- A. CONTRACTOR shall procure and continuously maintain in full force and effect through contract completion, insurance coverages specified herein. Coverages shall not be subject to self-insurance provisions. CONTRACTOR shall provide the following insurance coverage:
- 1. Commercial General Liability, to include Products/Completed Operations, Independent Contractors', Contractual Liability, and Personal Injury, and Property Damage with a minimum limit of \$1,000,000 per occurrence and \$2,000,000 general aggregate.
- 2. Automobile Liability to include owned, hired and non-owned autos with a combined single limit of \$1,000,000 each accident;
- 3. Workers' Compensation with limits as required by the State of California, including waiver of subrogation, in favor of AUTHORITY, its officers, directors, employees and agents.
- 4. Builders All Risk policy or course of construction including earthquake and flood coverage with minimum limits of \$1,314,000.
 - 5. Employers' Liability with minimum limits of \$1,000,000.
- B. Prior to commencement of any work hereof, CONTRACTOR shall furnish to AUTHORITY's Contract Administrator broker-issued insurance certificate showing the required insurance coverages and further providing that:
- AUTHORITY, its officers, directors, employees and agents must be named as additional insured on Commercial General Liability and Automobile Liability policy with respect to performance hereunder; and
- 2. The coverage shall be primary and noncontributory as to any other insurance with respect to performance hereunder; and
- 3. Thirty (30) days prior written notice of cancellation or material change be given to AUTHORITY.

In addition, CONTRACTOR shall provide insurance policy blanket endorsement.

- C. "Occurrence," as used herein, means any event or related exposure to conditions, which result in bodily injury or property damage.
- D. The Certificate of Insurance shall reference Agreement Number C-3-2208and, the Contract Administrator's Name, .
- E. Upon AUTHORITY's request, certified, true and exact copies of each of the insurance policies shall be provided to AUTHORITY.
- F. AUTHORITY shall notify CONTRACTOR in writing of any changes in the requirements to insurance required to be provided by CONTRACTOR. Except as set forth in this Article, any additional cost from such change shall be paid by AUTHORITY and any reduction in cost shall reduce the contract price pursuant to a change order.
- G. CONTRACTOR shall also include in each subcontract the stipulation that subcontractors shall maintain coverage in the amounts required as provided in this Agreement.
- H. CONTRACTOR shall be required to immediately notify AUTHORITY of any modifications or cancellation of any required insurance policies.

ARTICLE 11. BONDS

- A. By submitting Exhibit E, entitled "Performance Bond," and Exhibit F, entitled "Payment Bond," CONTRACTOR shall satisfy AUTHORITY's requirements that CONTRACTOR deposit with AUTHORITY bonds with values in the sum of 100 percent of this Agreement's price to cover CONTRACTOR's failure to fully perform hereunder and CONTRACTOR's failure to pay its labor, material or failure to comply with Article 32 of this Agreement, in performing hereunder. If the contract price is increased in connection with a Change Order, the AUTHORITY may, in its sole discretion, require a corresponding increase in the amount of the Performance and Payment bonds or new bonds covering the Change Order work.
- B. Notwithstanding any other provision set forth in this Agreement, performance by a Surety or Guarantor of any obligations of CONTRACTOR shall not relieve CONTRACTOR of any of its obligations thereunder.

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ARTICLE 12. ORDER OF PRECEDENCE

Conflicting provisions hereof, if any, shall prevail in the following descending order of precedence: (1) the provisions of this Agreement, including its exhibits; (2) the provisions of IFB including all Addendums; (3) the bid submitted to AUTHORITY by CONTRACTOR in response to said IFB; and (4) any other documents, cited herein or incorporated by reference. In the event of conflicting provisions of Exhibit B ("Specifications"), and Exhibit C ("List of Drawings"), Project Specifications shall take precedence.

ARTICLE 13. CHANGES

A. By written notice or order, AUTHORITY may, from time to time, order work suspension and/or make any change in the general scope of this Agreement, including, but not limited to, changes in the drawings, specifications, schedules (either deceleratory or acceleratory) or any other particular of the specifications or provisions of this Agreement. If any such work suspension or change causes an increase or decrease in the price or time required for performance, CONTRACTOR shall promptly notify AUTHORITY thereof and assert its claim for adjustment within ten (10) calendar days after the change or work suspension is ordered, and an equitable adjustment shall be negotiated. However, nothing in this clause shall excuse CONTRACTOR from proceeding immediately with the Agreement as changed. Changes will be made in accordance with the terms as set forth in Exhibit A, "General Provisions," paragraph F, Extra Work and Changes, by written Change Order.

- B. No claims by CONTRACTOR for equitable adjustment hereunder shall be allowed if asserted after final payment under this Agreement.
- C. Any work done beyond the technical provisions specified in this Agreement, or any extra work done without AUTHORITY's written authority, will be considered unauthorized work and will not be paid for. Upon order of AUTHORITY's Engineer or its designee, unauthorized work shall be remedied, removed or replaced at CONTRACTOR's expense.

ARTICLE 14. MODIFICATION PROPOSALS-PRICE BREAKDOWN

CONTRACTOR, in connection with any proposal it makes for an agreement modification, shall furnish a price breakdown, itemized as required by AUTHORITY. Unless otherwise directed, the breakdown shall be in sufficient detail to permit an analysis of all material, labor, equipment, subcontract and overhead costs, as well as profit, and shall cover all work involved in the modification, whether such work was deleted, added or changed. Any amount claimed for subcontracts shall be supported by a similar price breakdown. In addition, if the proposal includes a time extension, a justification therefore shall also be furnished. The proposal, together with the price breakdown and time extension justification, shall be furnished by the date specified by AUTHORITY.

ARTICLE 15. DISPUTES

A. Except as otherwise provided in this Agreement, when a dispute arises between CONTRACTOR and AUTHORITY, the project managers shall meet to resolve the issue. If project managers do not reach a resolution, the dispute will be decided by AUTHORITY's Director of Contracts Administration and Materials Management (CAMM), who shall reduce the decision to writing and mail or otherwise furnish a copy thereof to CONTRACTOR. The decision of the Director, CAMM, shall be the final and conclusive administrative decision.

B. Pending final decision of a dispute hereunder, CONTRACTOR shall proceed diligently with the performance of this Agreement and in accordance with the decision of AUTHORITY's Director, CAMM. Nothing in this Agreement, however, shall be construed as making final the decision of any AUTHORITY official or representative on a question of law, which questions shall be settled in accordance with the laws of the State of California.

ARTICLE 16. TERMINATION FOR CONVENIENCE

A. AUTHORITY may terminate this Agreement for its convenience at any time in whole or in part, by giving CONTRACTOR written notice thereof. AUTHORITY shall terminate by delivering to CONTRACTOR a written Notice of Termination for Convenience specifying the extent of termination and its effective date. Upon termination, AUTHORITY shall pay CONTRACTOR its allowable costs incurred

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to date of that portion terminated. The rights, duties and obligations of the parties shall be construed in accordance with the applicable provisions of CFR Title 48, Chapter 1, Part 49, of the Federal Acquisition Regulation (FAR) and specific subparts and other provisions thereof applicable to termination for convenience. If AUTHORITY sees fit to terminate this Agreement for convenience, said notice shall be given to CONTRACTOR in accordance with the provisions of the FAR referenced above and Article 8, herein. Upon receipt of said notification, CONTRACTOR shall immediately proceed with all obligations, regardless of any delay in determining or adjusting any amounts due under this Article, and agrees to comply with all applicable provisions of the FAR pertaining to termination for convenience.

ARTICLE 17. TERMINATION FOR DEFAULT-DAMAGES FOR DELAY-TIME EXTENSIONS

A. If CONTRACTOR refuses or fails to prosecute the work, or any separable part thereof, with such diligence as will ensure its completion within the time specified in this Agreement, or any extension thereof, or fails to complete said work within such time, AUTHORITY may, by written notice to CONTRACTOR, terminate CONTRACTOR's right to proceed with the work or such part of the work as to which there has been delay. In such event, AUTHORITY may take over the work and prosecute the same to completion, by Agreement or otherwise, and may take possession of and utilize in completing the work such materials, appliances and plant as may be on the site of the work and necessary therefore. Whether or not CONTRACTOR's right to proceed with the work is terminated, it and its sureties shall be liable for any damage to AUTHORITY resulting from its refusal or failure to complete the work within the specified time.

B. If AUTHORITY so terminates CONTRACTOR's right to proceed, the resulting damage will consist of such liquidated damages as set forth in the Article 31 in this Agreement entitled "Liquidated Damages," until such reasonable time as may be required for final completion of the work together with any increased costs occasioned AUTHORITY in completing the work. If AUTHORITY does not so terminate CONTRACTOR's right to proceed, the resulting damage will consist of such liquidated damages until the work is completed or accepted.

C. CONTRACTOR's right to proceed shall not be so terminated nor the CONTRACTOR charged with resulting damage if:

- 1. The delay in completing the work arises from unforeseeable causes beyond the control and without the fault or negligence of CONTRACTOR, including but not restricted to, acts of God, acts of the public enemy, acts or omissions of AUTHORITY, acts of another CONTRACTOR in the performance of an Agreement with AUTHORITY, fires, floods, epidemics, quarantine restrictions, freight embargoes, unusually severe weather, or delays of subcontractors or suppliers arising from unforeseeable causes beyond the control and without the fault or negligence of both CONTRACTOR and such subcontractors or suppliers; and
- 2. CONTRACTOR, within ten (10) calendar days from the beginning of any such delay, notifies AUTHORITY in writing of the causes of delay. AUTHORITY shall ascertain the facts and the extent of the delay and extend the time for completing the work when, in its judgment, the findings of fact justify such an extension, and its findings of fact shall be final and conclusive on the parties, subject only to appeal as provided in the "Disputes" clause of this Agreement. Any such time extensions will not become effective until approved by AUTHORITY's Engineer in writing. AUTHORITY's Engineer will furnish CONTRACTOR a weekly statement showing the number of calendar days charged to the Agreement for the preceding week, the number of calendar days of time extensions being considered or approved, the number of calendar days originally specified for the completion of this Agreement and the number of calendar days remaining to complete this Agreement, and the extended date for completion thereof.
- 3. Should at any time extensions be included by AUTHORITY's Engineer on the Weekly Statement of Contract Calendar Days, a change order covering the sum total of the time extensions will be issued to CONTRACTOR at periodic intervals during the project.
- D. If, after notice of termination of CONTRACTOR's right to proceed under the provisions of this clause, it is determined for any reason that CONTRACTOR was not in default under the provisions of this clause, or that the delay was excusable under the provisions of this clause, the rights and obligations of

the parties shall be the same as if the notice of termination had been issued pursuant to Article 16, entitled "Termination for Convenience."

- E. The rights and remedies of AUTHORITY provided in this clause are in addition to any other rights and remedies provided by law or under this Agreement.
- F. As used in paragraph C.1 of this Article, the term "subcontractors or suppliers," means subcontractors or suppliers at any tier.

ARTICLE 18. INDEMNIFICATION

CONTRACTOR shall indemnify, defend, and hold harmless AUTHORITY, its officers, directors, employees and agents from and against any and all claims (including attorneys' fees and reasonable expenses for litigation or settlement) for any loss, costs, penalties, fines, damages, bodily injuries, including death, damage to or loss of use of property, arising out of, resulting from, or in connection with the performance of CONTRACTOR, its officers, directors, employees, agents, subcontractors or suppliers under the Agreement. Notwithstanding the foregoing, such obligation to defend, hold harmless, and indemnify AUTHORITY, its officers, directors, employees and agents shall not apply to such claims or liabilities arising from the sole or active negligence or willful misconduct of AUTHORITY.

ARTICLE 19. ASSIGNMENTS AND SUBCONTRACTS

- A. Neither this Agreement nor any interest herein nor claim hereunder may be assigned by CONTRACTOR either voluntarily or by operation of law. CONTRACTOR shall not have the right to make any substitutions of any subcontractor listed in Exhibit D, entitled "List of Subcontractors," except in accordance with the provisions of the Subletting and Subcontractors Fair Practices Act, Public Contract Code section 4100 et. seq. AUTHORITY's consent shall not be deemed to relieve CONTRACTOR of its obligation to fully comply with the requirements of this Agreement.
- B. CONTRACTOR shall be fully responsible to AUTHORITY for all acts and omissions of its own employees, and of subcontractors and their employees. CONTRACTOR shall coordinate the work performed by subcontractor.

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C. AUTHORITY shall have the right, but not the obligation, to review the form of subcontract used by CONTRACTOR for the project and to require modifications thereto to conform to the requirements set forth herein.

ARTICLE 20. AUDIT AND INSPECTION OF RECORDS

CONTRACTOR shall provide AUTHORITY, or other agents of the AUTHORITY, such access to CONTRACTOR's accounting books, records, payroll documents and facilities of the CONTRACTOR which are directly pertinent to this Agreement for the purposes of examining, auditing and inspecting all accounting books, records, work data, documents and activities related hereto. CONTRACTOR shall maintain such books, records, data and documents in accordance with generally accepted accounting principles and shall clearly identify and make such items readily accessible to such parties during CONTRACTOR's performance hereunder and for a period of four (4) years from the date of final payment by AUTHORITY, except in the event of litigation or settlement of claims arising from the performance of this Agreement, in which case CONTRACTOR agrees to maintain same until AUTHORITY, or any of their duly authorized representatives, have disposed of all such litigation, appeals, claims or exceptions related thereto. AUTHORITY's right to audit books and records directly related to this Agreement shall also extend to all first-tier subcontractors. CONTRACTOR shall permit any of the foregoing parties to reproduce documents by any means whatsoever or to copy excerpts and transcriptions as reasonably necessary.

ARTICLE 21. CONFLICT OF INTEREST

CONTRACTOR agrees to avoid organizational conflicts of interest. An organizational conflict of interest means that due to other activities, relationships or contracts, the CONTRACTOR is unable, or potentially unable to render impartial assistance or advice to the AUTHORITY; CONTRACTOR's objectivity in performing the work identified in the Scope of Work is or might be otherwise impaired; or the CONTRACTOR has an unfair competitive advantage. CONTRACTOR is obligated to fully disclose to the AUTHORITY in writing Conflict of Interest issues as soon as they are known to the CONTRACTOR. All disclosures must be submitted in writing to AUTHORITY pursuant to the Notice provision herein. This

disclosure requirement is for the entire term of this Agreement.

ARTICLE 22. CODE OF CONDUCT

CONTRACTOR agrees to comply with the AUTHORITY's Code of Conduct as it relates to Third-Party contracts which is hereby referenced and by this reference is incorporated herein. CONTRACTOR agrees to include these requirements in all of its subcontracts.

ARTICLE 23. PROHIBITION ON PROVIDING ADVOCACY SERVICES

CONTRACTOR and all subcontractor performing work under this Agreement, shall be prohibited from concurrently representing or lobbying for any other party competing for a contract with AUTHORITY, either as a prime consultant or subconsultant. Failure to refrain from such representation may result in termination of this Agreement.

ARTICLE 24. FEDERAL, STATE AND LOCAL LAWS

CONTRACTOR warrants that in the performance of this Agreement it shall comply with all applicable federal, state and local laws, statutes and ordinances and all lawful orders, rules and regulations promulgated thereunder.

ARTICLE 25. EQUAL EMPLOYMENT OPPORTUNITY

In connection with its performance under this Agreement, CONTRACTOR agrees that it shall not discriminate against any employee or applicant for employment because of race, religion, color, sex, age or national origin. CONTRACTOR shall take affirmative action to ensure that applicants are employed, and that employees are treated during their employment, without regard to their race, religion, color, sex, age or national origin. Such actions shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

ARTICLE 26. FINISHED AND PRELIMINARY DATA

A. All of CONTRACTOR's finished technical data, including but not limited to illustrations, photographs, tapes, software, software design documents, including without limitation source code, binary code, all media, technical documentation and user documentation, photoprints and other graphic

information required to be furnished under this Agreement, shall be AUTHORITY's property upon payment and shall be furnished with unlimited rights and, as such, shall be free from proprietary restriction except as elsewhere authorized in this Agreement. CONTRACTOR further agrees that it shall have no interest or claim to such finished, AUTHORITY-owned, technical data; furthermore, said data is subject to the provisions of the Public Records Act.

B. It is expressly understood that any title to preliminary technical data is not passed to AUTHORITY but is retained by CONTRACTOR. Preliminary data includes roughs, visualizations, software design documents, layouts and comprehensives prepared by CONTRACTOR solely for the purpose of demonstrating an idea or message for AUTHORITY's acceptance before approval is given for preparation of finished artwork. Preliminary data title and right thereto shall be made available to AUTHORITY if CONTRACTOR causes AUTHORITY to exercise Article 17, and a price shall be negotiated for all preliminary data.

ARTICLE 27. PRIVACY ACT

CONTRACTOR shall comply with, and assures the compliance of its employees with, the information restrictions and other applicable requirements of the Privacy Act of 1974, 5 U.S.C. §552a. Among other things, CONTRACTOR agrees to obtain the express consent of the Federal Government before CONTRACTOR or its employees operate a system of records on behalf of the Federal Government. CONTRACTOR understands the requirements of the Privacy Act, including the civil and criminal penalties for violation of that Act, apply to those individuals involved, and that failure to comply with the terms of the Privacy Act may result in termination of the underlying Agreement.

ARTICLE 28. OWNERSHIP OF REPORTS AND DOCUMENTS

A. The originals of all letters, documents, reports and other products and data produced under this Agreement shall be delivered to, and become the property of AUTHORITY. Copies may be made for CONTRACTOR'S records but shall not be furnished to others without written authorization from AUTHORITY. Such deliverables shall be deemed works made for hire and all rights in copyright therein shall be retained by AUTHORITY.

B. All ideas, memoranda, specifications, plans, manufacturing, procedures, drawings, descriptions, and all other written information submitted to CONTRACTOR in connection with the performance of this Agreement shall not, without prior written approval of AUTHORITY, be used for any purposes other than the performance under this Agreement, nor be disclosed to an entity not connected with the performance of the project. CONTRACTOR shall comply with AUTHORITY's policies regarding such material. Nothing furnished to CONTRACTOR, which is otherwise known to CONTRACTOR or is or becomes generally known to the related industry shall be deemed confidential. CONTRACTOR shall not use AUTHORITY's name, photographs of the project, or any other publicity pertaining to the project in any professional publication, magazine, trade paper, newspaper, seminar or other medium without the express written consent of AUTHORITY.

C. No copies, sketches, computer graphics or graphs, including graphic artwork, are to be released by CONTRACTOR to any other person or agency except after prior written approval by AUTHORITY, except as necessary for the performance of services under this Agreement. All press releases, including graphic display information to be published in newspapers, magazines, etc., are to be handled only by AUTHORITY unless otherwise agreed to by CONTRACTOR and AUTHORITY.

ARTICLE 29. CONVICT LABOR

In connection with the performance of work under this Agreement, CONTRACTOR agrees not to employ any person undergoing sentence of imprisonment at hard labor. This does not include convicts who are on parole or probation.

ARTICLE 30. NOTICE OF LABOR DISPUTE

Whenever CONTRACTOR has knowledge that any actual or potential labor dispute may delay its performance under this Agreement, CONTRACTOR shall immediately notify and submit all relevant information to AUTHORITY. CONTRACTOR shall insert the substance of this entire clause in any subcontract hereunder as to which a labor dispute may delay performance under this Agreement. However, any subcontractor need give notice and information only to its next higher-tier subcontractor.

ARTICLE 31. LIQUIDATED DAMAGES

If CONTRACTOR fails to complete the work within the time specified in Article 4 of this Agreement, or any AUTHORITY authorized extension thereof, the actual damage to AUTHORITY for the delay will be difficult or impossible to determine. Therefore, in lieu of actual damages, CONTRACTOR shall pay to AUTHORITY as fixed, agreed-to liquidated damages for each calendar day of delay the sum of Two Thousand and Three Hundred Dollars (\$2,300.00). Alternatively, AUTHORITY may terminate this Agreement in whole or in part as provided in Article 16 of this Agreement, and in that event, CONTRACTOR shall be liable, in addition to the excess costs provided in Article 16 of this Agreement, for such liquidated damages accruing until such time as AUTHORITY may reasonably obtain delivery or performance of similar supplies or services from a different source. CONTRACTOR shall not be charged with liquidated damages when the delay is determined to be excusable in accordance with Article 45 hereunder. AUTHORITY shall ascertain the facts and extent of the delay and shall extend the time for performance of the Agreement when in its judgment, the findings of fact justify an extension.

ARTICLE 32. WARRANTY

A. In addition to any other warranties set forth in this Agreement, whether expressed or implied, CONTRACTOR warrants that (1) all work performed and all equipment and material provided under this Agreement by CONTRACTOR or any of its subcontractors or suppliers at any tier, conforms to the requirements herein and is free of any defects; (2) equipment furnished by CONTRACTOR or any of its subcontractors or suppliers at any tier, shall be of modern design, in good working condition and fit for use of its intended purpose; and (3) all work shall meet all of the requirements of this Agreement. Such warranty shall continue for a period of one (1) year from AUTHORITY's acceptance as shown in Article 34 hereunder. Under this warranty, CONTRACTOR shall remedy at its own expense any such failure to conform or correct any such defect. In addition, CONTRACTOR shall remedy at its own expense any damage to AUTHORITY owned or controlled real or personal property, when that damage is the result of CONTRACTOR's failure to conform to Agreement requirements or any such defect of equipment, material, workmanship or design. CONTRACTOR shall also restore any work damaged in fulfilling the

terms of this clause. CONTRACTOR's warranty with respect to work repaired or replaced hereunder will run for one year from the date of such repair or replacement.

B. AUTHORITY shall notify CONTRACTOR in writing within a reasonable time after the discovery of any failure, defect or damage. CONTRACTOR has seven days from receipt of notice from AUTHORITY to respond to AUTHORITY's notification and indicate how CONTRACTOR will remedy the failure, defect, or damage. If AUTHORITY is not satisfied with the remedy proposed by CONTRACTOR, CONTRACTOR and AUTHORITY shall meet and mutually agree when and how CONTRACTOR shall remedy such violation. In the case of an emergency requiring immediate corrective action, CONTRACTOR shall implement such action, as it deems necessary and shall notify AUTHORITY in writing of the urgency of a decision and action taken. CONTRACTOR and AUTHORITY shall, then promptly meet in order to agree on a remedy. If CONTRACTOR and AUTHORITY fail to agree on the remedy within a five-day period, AUTHORITY, after notice to CONTRACTOR, shall have the right to perform or have performed by third parties the necessary remedy, and the costs thereof shall be borne by CONTRACTOR.

- C. Should CONTRACTOR fail to remedy any failure, defect or damage described in paragraph A above within a reasonable time after receipt of notice thereof, AUTHORITY shall have the right to replace, repair or otherwise remedy such failure, defect or damage at CONTRACTOR's expense and CONTRACTOR shall be liable for all damages, including, but not limited to, actual or consequential damages and cost of any suit to enforce AUTHORITY's rights hereunder, including reasonable attorney's fees.
- D. In addition to the other rights and remedies provided by this clause, all subcontractors, manufacturers, and suppliers' warranties, expressed or implied, respecting any work and materials furnished hereunder, shall, at the direction of AUTHORITY, be enforced by CONTRACTOR for the benefit of AUTHORITY. In such case if CONTRACTOR's warranty under paragraph A above has expired, any suit directed by AUTHORITY shall be at the expense of AUTHORITY. CONTRACTOR shall obtain any warranties, which the subcontractors, manufacturers or suppliers would give in normal commercial

practice and shall cause all subcontractor or supplier warranties to be extend to AUTHORITY.

- E. If directed by AUTHORITY, CONTRACTOR shall require any such warranties to be executed in writing to AUTHORITY.
- F. Notwithstanding any other provision of this clause, unless such a defect is caused by the negligence of CONTRACTOR or its subcontractors or suppliers at any tier, CONTRACTOR shall not be liable for the repair of any defects of material or design furnished by AUTHORITY nor for the repair of any damage which results from any such defect in AUTHORITY furnished material or design.
- G. The warranty specified herein shall not limit AUTHORITY's rights under the Inspection and Acceptance clause of this Agreement with respect to latent defects, gross mistakes or fraud.
- H. Defects in design or manufacture of equipment specified by AUTHORITY on a "brand name and model" basis shall not be included in this warranty. CONTRACTOR shall require any subcontractors, manufacturers or suppliers thereof to execute their warranties in writing directly to AUTHORITY.
- I. Any disagreement between AUTHORITY and CONTRACTOR relating to this section shall be subject to dispute resolution in accordance with Article 15.

ARTICLE 33. GENERAL WAGE RATES

A. All laborers and mechanics employed by CONTRACTOR or subcontractor at any tier working on the construction site, will be paid unconditionally and not less often than once a week and without any subsequent deduction or rebate on any account (except such payroll deductions as are permitted or required by federal, state or local law, regulation or ordinance), the full amounts due at the time of payment computed at wage rates and per diem rate not less than the aggregate of the highest of the two basic hourly rates and rates of payments, contributions or costs for any fringe benefits contained in the current general prevailing wage rate(s) and per diem rate(s), established by the Director of the Department of Industrial Relations of the State of California, (as set forth in the Labor Code of the State of California, commencing at Section 1770 et. seq.), regardless of any contractual relationship which may be alleged to exist between CONTRACTOR or subcontractor and their respective mechanics, laborers, journeypersons, workpersons, craftspersons or apprentices. Copies of the current General Prevailing

Wage Determinations and Per Diem Rates are on file at AUTHORITY's offices and will be made available to CONTRACTOR upon request. CONTRACTOR shall post a copy thereof at each job site at which work hereunder is performed.

B. In addition to the foregoing, CONTRACTOR agrees to comply with all other provisions of the Labor Code of the State of California, which are incorporated herein by reference, pertaining to workers performing work hereunder including, but not limited to, those provisions for work hours, payroll records and apprenticeship employment and regulation program. CONTRACTOR agrees to insert or cause to be inserted the preceding clause in all subcontracts, which provide for workers to perform work hereunder regardless of the subcontractor tier.

ARTICLE 34. INSPECTION AND ACCEPTANCE

- A. All work (which term includes but is not restricted to materials, equipment, workmanship, and manufacture and fabrication of components) shall be subject to inspection and test by AUTHORITY at all reasonable times and at all places prior to acceptance. Any such inspection and test is for the sole benefit of AUTHORITY and shall not relieve CONTRACTOR of the responsibility of providing quality control measures to assure that the work strictly complies with requirements of this Agreement. No inspection or test by AUTHORITY or its representative shall be construed as constituting or implying acceptance. Inspection or test shall not relieve CONTRACTOR of responsibility for damage to or loss of the material prior to acceptance, nor in any way affect the continuing rights of AUTHORITY after acceptance of the completed work under the terms of paragraph F of this Article, except as herein above provided.
- B. CONTRACTOR shall, without charge, replace any material or correct any workmanship found by AUTHORITY not to conform to the requirements of this Agreement, unless in the public interest AUTHORITY consents to accept such material or workmanship with an appropriate adjustment in the price of this Agreement. CONTRACTOR shall promptly segregate and remove rejected material from the premises.
- C. CONTRACTOR shall furnish promptly, without additional charge, all facilities, labor, equipment and material reasonably needed for performing such safe and convenient inspection and test

 as may be required by AUTHORITY. All inspections and tests by AUTHORITY shall be performed in such manner as to not unnecessarily delay the work. AUTHORITY reserves the right to charge to CONTRACTOR any additional cost of inspection or test when material or workmanship is not ready at the time specified by CONTRACTOR for inspection or test or when reinspection or retest is necessitated by prior rejection.

D. If CONTRACTOR does not promptly replace rejected material or correct rejected workmanship, AUTHORITY (1) may, by Agreement or otherwise, replace such material or correct such workmanship and charge the cost thereof to CONTRACTOR, or (2) may terminate CONTRACTOR's right to proceed in accordance with the clause of this Agreement entitled "Termination for Default."

E. Should it be considered necessary or advisable by AUTHORITY at any time before acceptance of the entire work to make an examination of work already completed, by removing or tearing out same, CONTRACTOR shall, on request, promptly furnish all necessary facilities, labor and material. If such work is found to be defective or nonconforming in any material respect, due to the fault of CONTRACTOR or its subcontractors, CONTRACTOR shall pay all costs of such examination and of satisfactory reconstruction. If, however, such work is found to meet the requirements of this Agreement, an equitable adjustment shall be made in the Agreement price to compensate CONTRACTOR for the additional services involved in such examination and reconstruction and, if completion of the work has been delayed thereby, it shall in addition, be granted a suitable extension of time.

F. Unless otherwise provided in this Agreement, acceptance by AUTHORITY shall be made as promptly as practicable after completion and inspection of all work required by this Agreement, or that portion of the work that AUTHORITY determines can be accepted separately. Acceptance shall be final and conclusive except as regards latent defects, fraud, or such gross mistakes as may amount to fraud or as regards AUTHORITY's rights under the warranty provisions set forth herein.

ARTICLE 35. MATERIAL AND WORKMANSHIP

A. Unless otherwise specifically provided in this Agreement, all equipment, material, and articles incorporated in the work covered by this Agreement are to be new and of the most suitable grade for the

purpose intended. Unless otherwise specifically provided in this Agreement, reference to any equipment, material, article or patented process, by trade name, make or catalog number, shall be regarded as establishing a standard of quality and shall not be construed as limiting competition, and CONTRACTOR may, at its option, use any equipment, material, article or process which, in the judgment of AUTHORITY, is equal to that named. CONTRACTOR shall furnish to AUTHORITY for its approval the name of the manufacturer, the model number and other identifying data and information respecting the performance, capacity, nature and rating of the machinery and mechanical and other equipment, which CONTRACTOR contemplates incorporating in the work. When required by this Agreement or when called for by AUTHORITY, CONTRACTOR shall furnish AUTHORITY, for approval, full information concerning the material or articles, which it contemplates incorporating in the work. When so directed, samples shall be submitted for approval at CONTRACTOR's expense, with all shipping charges prepaid. Machinery, equipment, material and articles installed or used without required approval shall be at the risk of subsequent rejection.

B. All work under this Agreement shall be performed in a skillful and workmanlike manner. Notwithstanding the provisions of Article 3 hereof, AUTHORITY may, in writing, require CONTRACTOR to remove from the work any employee AUTHORITY deems incompetent, careless or otherwise objectionable.

ARTICLE 36. NON-CONFORMING WORK

A. Nonconforming work rejected by AUTHORITY shall be removed and replaced so as to conform to the requirements of this Agreement, at CONTRACTOR's cost and without a time extension; and CONTRACTOR shall promptly take all action necessary to prevent similar deficiencies from occurring in the future. The fact that AUTHORITY may not have discovered the nonconforming Work shall not constitute an acceptance of such nonconforming Work. If CONTRACTOR fails to correct any nonconforming work within ten days of receipt of notice from AUTHORITY requesting correction, or if such nonconforming work cannot be corrected within ten days, and CONTRACTOR fails to (1) provide to AUTHORITY a schedule for correcting any such nonconforming work acceptable to AUTHORITY

within such ten-day period, (2) commence such corrective work within such ten-day period and (3) thereafter diligently prosecute such correction in accordance with such approved schedule to completion, then AUTHORITY may cause the nonconforming work to be remedied or removed and replaced and may deduct the cost of doing so from any moneys due or to become due CONTRACTOR and/or obtain reimbursement from CONTRACTOR for such cost.

B. If AUTHORITY agrees to accept any Nonconforming Work without requiring it to be fully corrected, AUTHORITY shall be entitled to reimbursement of a portion of the Contract Price in an amount equal to the greater of the amount deemed appropriate by AUTHORITY to provide compensation for future maintenance and/or other costs relating to the Nonconforming Work, or 100% of CONTRACTOR's cost savings associated with its failure to perform the Work in accordance with Contract requirements. Such reimbursement shall be payable to AUTHORITY within ten days after CONTRACTOR's receipt of an invoice thereof. CONTRACTOR acknowledges and agrees that AUTHORITY shall have sole discretion regarding acceptance or rejection of Nonconforming Work and that AUTHORITY shall have sole discretion with regard to the amount payable in connection therewith.

ARTICLE 37. CONTRACTOR INSPECTION SYSTEM

CONTRACTOR shall maintain an adequate inspection system and perform such inspections as will assure that the work performed under this Agreement conforms to the specified requirements, and shall maintain and make available to AUTHORITY adequate records of such inspections.

ARTICLE 38. SUPERINTENDENCE BY CONTRACTOR

CONTRACTOR, at all times during performance and until the work is completed and accepted, shall give its personal superintendence to the work or have on the work a competent superintendent, satisfactory to AUTHORITY and with authority to act for and on behalf of CONTRACTOR.

ARTICLE 39. OTHER CONTRACTS

AUTHORITY may undertake or award other agreements for additional work, and CONTRACTOR shall fully cooperate with such other CONTRACTOR's and AUTHORITY's employees and carefully fit its own work to such additional work as may be directed by AUTHORITY. CONTRACTOR shall not commit

or permit any act, which will interfere with the performance of work by any other CONTRACTOR or by AUTHORITY.

ARTICLE 40. INSPECTION OF SITE

CONTRACTOR acknowledges that it has investigated and satisfied itself as to the conditions affecting the work including, but not restricted to, those bearing upon transportation, disposal, handling and storage of materials, availability of labor, water, electric power and roads and uncertainties of weather, river stages, tides or similar physical conditions at the site, the conformation and conditions of the ground, the character of equipment and facilities needed preliminary to and during prosecution of the work. CONTRACTOR further acknowledges that it has satisfied itself as to the character, quality and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, including all exploratory work done by AUTHORITY, as well as from information presented by the drawings and specifications made a part of this Agreement. Any failure by CONTRACTOR to acquaint itself with the available information will not relieve it from responsibility for the difficulty or cost of successfully performing the work. AUTHORITY assumes no responsibility for any conclusions or interpretations made by CONTRACTOR on the basis of the information made available by AUTHORITY.

ARTICLE 41. DIFFERING SITE CONDITIONS

A. CONTRACTOR shall immediately, and before such conditions are disturbed, notify AUTHORITY in writing of: (1) subsurface or latent physical conditions at the site which differ materially from those indicated in this Agreement, or (2) unknown physical conditions at the site, of an unusual nature, which differ materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in this Agreement. AUTHORITY will investigate the conditions within three business days of receipt of notification, and if it finds that such conditions do materially so differ and cause an increase or decrease in CONTRACTOR's cost of, or the time required for, performance of any part of the work under this Agreement, whether or not changed as a result of such conditions, an equitable adjustment shall be made and the Agreement modified in writing accordingly.

 B. No claim of CONTRACTOR under this Article shall be allowed unless CONTRACTOR has given the written notice required above; no claim by CONTRACTOR for an equitable adjustment hereunder shall be allowed if asserted after final payment under this Agreement.

ARTICLE 42. OPERATIONS AND STORAGE AREAS

- A. All operations of CONTRACTOR (including storage of materials and equipment) on AUTHORITY owned premises shall be confined to areas authorized or approved by AUTHORITY. CONTRACTOR shall hold AUTHORITY and its officers and agents free and harmless from liability of any nature occasioned by CONTRACTOR's operations.
- B. Temporary building (storage sheds, shops, offices, etc.) may be erected by CONTRACTOR with the written consent of AUTHORITY, and shall be built with labor and materials furnished by CONTRACTOR without expense to AUTHORITY. Such temporary buildings and utilities shall remain the property of CONTRACTOR and shall be removed by CONTRACTOR at its expense upon the completion of the work. With the written consent of AUTHORITY, such buildings and utilities may be abandoned and need not be removed.
- C. CONTRACTOR shall, under regulations prescribed by AUTHORITY, use only established roadways or construct and use such temporary roadways as may be authorized by AUTHORITY. Where materials are transported in the prosecution of work, vehicles shall not be loaded beyond the loading capacity recommended by the manufacturer of the vehicle or prescribed by any federal, state or local law or regulation. When it is necessary to cross curbing or sidewalks, protection against damage shall be provided by CONTRACTOR and any damaged roads, curbing or sidewalks shall be repaired by, or at the expense of, CONTRACTOR.

ARTICLE 43. PROTECTION OF VEGETATION, UTILITIES, IMPROVEMENTS

A. CONTRACTOR shall preserve and protect all existing vegetation such as trees, shrubs and grass on or adjacent to the site of work which is not to be removed and which does not unreasonably interfere with the construction work. Care will be taken in removing trees authorized for removal to avoid damage to vegetation to remain in place. Any limbs or branches of trees broken during such operations

or by the careless operation of equipment, or by workmen, shall be trimmed with a clean cut and painted with an approved tree pruning compound as directed by AUTHORITY.

B. CONTRACTOR shall protect from damage all existing improvements or utilities at or near the site of the work, the location of which is made known to it, and will repair or restore any damage to such facilities resulting from failure to comply with the requirements of this Agreement or the failure to exercise reasonable care in the performance of the work. If CONTRACTOR fails or refuses to repair any such damage promptly, AUTHORITY may have the necessary work performed and charge the cost to CONTRACTOR.

ARTICLE 44. CLEANING UP

- A. CONTRACTOR shall at all times keep the construction area, including storage areas used by it, free from accumulations of waste material or rubbish, and prior to completion of the work remove any rubbish from AUTHORITY owned premises and all tools, scaffolding, equipment and materials not the property of AUTHORITY. Upon completion of the construction, CONTRACTOR shall leave the work and premises in a clean, neat and workmanlike condition satisfactory to AUTHORITY.
- B. After completion of all work on the project, and before making application for acceptance of the work, CONTRACTOR shall clean the construction site, including all areas under the control of AUTHORITY, that have been used by CONTRACTOR in connection with the work on the project and remove all debris, surplus material and equipment, and all temporary construction or facilities of whatever nature, unless otherwise approved by AUTHORITY. Final acceptance of the work by AUTHORITY will be withheld until CONTRACTOR has satisfactorily complied with the foregoing requirements for final cleanup of the project site.
- C. Full compensation for conforming to the provisions in this Article, not otherwise provided for, shall be considered as included in price of this Agreement and no additional compensation will be allowed therefore.

ARTICLE 45. USE AND POSSESSION TO COMPLETION

AUTHORITY shall have the right to take possession of or use any completed or partially

completed part of the work. Prior to such possession or use, AUTHORITY shall furnish CONTRACTOR an itemized list of work remaining to be performed or corrected on such portions of the project as are to be possessed or used by AUTHORITY, provided that failure to list any item of work shall not relieve CONTRACTOR of responsibility for compliance with the terms of this Agreement. Such possession or use shall not be deemed an acceptance of any work under this Agreement. While AUTHORITY has such possession or use, CONTRACTOR shall be relieved of the responsibility for the loss or damage to the work resulting from AUTHORITY's possession or use. If such prior possession or use by AUTHORITY delays the progress of the work or causes additional expense to CONTRACTOR, an equitable adjustment in the Agreement price or the time of completion will be made and the Agreement shall be modified in writing accordingly.

ARTICLE 46. PROHIBITED INTERESTS

CONTRACTOR covenants that, for the term of this Agreement, no director, officer or employee of AUTHORITY, during his/her tenure in office or for one (1) year thereafter, shall have any interest, direct or indirect, in this Agreement or the proceeds thereof.

ARTICLE 47. CONTRACTOR PURCHASED EQUIPMENT

A. If during the course of this Agreement, additional equipment is required, which will be paid for by the AUTHORITY, CONTRACTOR must request prior written authorization from the AUTHORITY's project manager before making any purchase. As part of this purchase request, CONTRACTOR shall provide a justification for the necessity of the equipment or supply and submit copies of three (3) competitive quotations. If competitive quotations are not obtained, CONTRACTOR must provide the justification for the sole source.

- B. CONTRACTOR shall maintain an inventory record for each piece of equipment purchased that will be paid for by the AUTHORITY. The inventory record shall include the date acquired, total cost, serial number, model identification, and any other information or description necessary to identify said equipment or supply. A copy of the inventory record shall be submitted to the AUTHORITY upon request.
 - C. At the expiration or termination of this Agreement, CONTRACTOR may keep the equipment

and credit AUTHORITY in an amount equal to its fair market value. Fair market value shall be determined, at CONTRACTOR's expense, on the basis of an independent appraisal. CONTRACTOR may sell the equipment at the best price obtainable and credit AUTHORITY in an amount equal to the sales price. If the equipment is to be sold, then the terms and conditions of the sale must be approved in advance by AUTHORITY's project manager.

D. Any subcontractor agreement entered into as a result of this Agreement shall contain all provisions of this clause.

ARTICLE 48. HEALTH AND SAFETY SPECIFICATIONS

CONTRACTOR shall comply with all requirements set forth in Exhibit H, Level 3 Safety Specifications.

ARTICLE 49. FORCE MAJEURE

Either party shall be excused from performing its obligations under this Agreement during the time and to the extent that it is prevented from performing by an unforeseeable cause beyond its control, including but not limited to: any incidence of fire, flood; acts of God; commandeering of material, products, plants or facilities by the federal, state or local government; national fuel shortage; or a material act or omission by the other party; when satisfactory evidence of such cause is presented to the other party, and provided further that such nonperformance is unforeseeable, beyond the control and is not due to the fault or negligence of the party not performing.

AGREEMENT NO. C-3-2208

IN WITNESS WHEREOF, the parties hereto have caused this Agreement No. C-3-2208 to be 1 executed as of the date of the last signature below. 2 **ORANGE COUNTY TRANSPORTATION AUTHORITY CONTRACTOR** 3 4 By: ______ By: _____ 5 Darrell E. Johnson 6 License No: Chief Executive Officer 7 8 **APPROVED AS TO FORM:** 9 10 Ву: _____ 11 James M. Donich 12 **General Counsel** 13 14 15 **APPROVED:** 16 Ву: ______ 17 James G. Beil, P.E. 18 **Executive Director, Capital Programs** 19 20 21 22 23 24 25 26

SECTION V: GENERAL PROVISIONS - EXHIBIT A

SECTION V: GENERAL PROVISIONS

A. COST BREAKDOWN

Within 15 calendar days after "Notice to Proceed," the Contractor shall, upon request by the Authority, submit a cost breakdown of the lump sum Bid entered on the Bid Form for all construction work. This cost breakdown will form the basis for progress payments in accordance with these Specifications and shall show all of the major categories and subcategories of work and equipment requested by the Authority. Additionally, all cost shall be segregated between off-site and on-site costs. Mobilization costs shall not exceed 10% of total construction costs. Bonds and insurance costs will be identified as a separate line item. Such cost breakdown shall not be required if the Authority, at its sole discretion, elects to pay the Contractor in lump sum within thirty (30) calendar days of receipt of proper invoice following the Contractor's satisfactory completion and the Authority's acceptance of all work.

B. PROGRESS PAYMENTS

- The Authority, no later than the 25th day of each month, shall prepare a
 progress payment estimate based on the estimated percentage of completion
 of each Bid Item and on the Contractor's actually incurred allowable expenses
 on such Bid Items. The Authority will issue the progress payment, in the
 amount it deems appropriate, by approximately the 15th day of the following
 month.
- 2. For purposes of calculating the progress payments, Authority will use the cost breakdown submitted by the Contractor for each Bid Item at the start of this Agreement. In no event will the Authority make a progress payment that, when added to the prior progress payments, amounts to a sum more than the Contractor's actual aggregate incurred expenses, adjusted to include Contractor's overhead and profit as allocated to such incurred expenses.
- 3. The Authority will pay only 95% of each progress payment amount as determined above, retaining 5% as part security for the fulfillment of this Agreement by the Contractor.
- 4. The amount retained in accordance with paragraph B.3., hereinabove from the progress payments will be paid in full to the Contractor as part of the final payment upon Contractor's full completion of this Agreement, except that ½ of 1% of this Agreement's total price shall be retained for one (1) year beyond the date of the Notice of Completion filed for this Agreement as partial security for fulfillment of the warranty obligations by the Contractor under this Agreement.
- 5. No progress payments will be made for materials not installed.
- 6. Progress payments made by Authority in no way shall be deemed or construed as acceptance by the Authority of work or waiver by the Authority of any rights

hereunder.

- 7. The Contractor shall pay subcontractors, promptly upon receipt of each Authority progress payment; the respective amounts allowed the Contractor on account of the work performed by subcontractors, to the extent of each such subcontractor's interest therein. Such payments to subcontractors shall be based on estimates made pursuant to this Agreement. Any diversion by the Contractor of payments received for prosecution of a contract, or failure to reasonably account for the application or use of such payments, constitutes ground for termination of the Contractor's control over the work and for taking over the work, in addition to disciplinary action by the Contractor's State License Board. The subcontractor shall notify, in writing, the Contractor's State License Board and the Authority of any payment less than the amount or percentage approved for the class or item of work as set forth in this Agreement.
- 8. In addition to other amounts properly withheld under this Agreement, the Authority shall withhold all legally required sums for, but not necessarily limited to, stop notices, labor and tax liens, etc.

C. FINAL INSPECTION AND ACCEPTANCE

Promptly after Substantial Completion has occurred, Contractor shall perform all Punch List Work, if any, which was deferred for purposes of Project Completion, and shall satisfy all of its other contractual obligations under the contract documents.

When the Contractor determines that the work is fully completed, including satisfactory completion of all inspections, tests, and required documentation, Punch List and clean-up items, Contractor shall give the Authority a written request for Final Acceptance within ten (10) days thereafter, specifying that the work is completed and the date on which it was completed.

Within thirty (30) days after receipt of the request for Final Acceptance from Contractor, Authority will make a final inspection of the work and will either:

- Reject the request for Final Acceptance, specifying the defective or uncompleted work; or
- 2. Issue a written Final Acceptance and record Notice of Completion with County Recorder.

Substantial Completion is defined herein as; In the opinion of the Authority, that Work or portion thereof that is sufficiently complete and in accordance with the Contract, that it can be utilized by the Authority for the purpose for which it was intended. A determination of Substantial Completion does not waive, but may not require the prior completion of minor items, which do not impair the Authority's ability to safely occupy and utilize the Work for its intended purpose.

D. CLAIMS

Contractor is required to submit a written claim within ten (10) days after the event or occurrence first giving rise to the potential claim, or in the event of a denial of a request for change by the Authority. All claims shall include a detailed factual statement; including names, dates and specific events that took place. In addition, all claims shall include supporting documents in support of the claim, a detailed analysis of a request for a time extension, if applicable, and a detailed breakdown of a request for additional compensation. A revised construction schedule shall also be included identifying the impact of the delays, including proposals to minimize any of the impacts.

Authority shall respond in writing to a claim within forty-five (45) days of receipt of claim. Within thirty (30) days of receipt of claim, Authority, if necessary, may request additional documentation in support of said claim. If additional documentation is requested, Authority shall respond in writing to the claim within fifteen (15) days after receipt of additional documentation.

Claims filed by the Contractor shall be in sufficient detail to enable the Authority to ascertain the basis and amount of said claims. The Authority will consider and determine the Contractor's claims, and it will be the responsibility of the Contractor to furnish within a reasonable time such further information and details as may be required by the Authority to determine the facts or contentions involved in its claims. Failure to submit such information and details will be sufficient cause for denying the claim.

Claims submitted by the Contractor shall be accompanied by a notarized certificate containing the language listed below. Failure to submit the notarized certificate will be cause for denying the claim.

Certificate

Under the	penalt	y of law	for p	erjury	or falsi	fication	with sp	ecific re	fere	nce to	the
California	False	Claims	Act,	Gover	nment	Code	Section	12650	et.	Seq.,	the
undersign	ed,										

	(Name)	
	(Title)	
((Company)	
herby certifies that the claim for the a herein for the work on this Contract and time sough, and is fully docu between the parties	is a true statement of the	actual cost incurred
Dated:		
Signature:		
Subscribed and sworn before this _	day of	, 202
	Notary Public	
My Commission Expires:		

E. FINAL PAYMENT

- 1. After the filing of the Notice of Completion, the Authority will make a proposed final estimate, in writing, of the total amount payable to the Contractor, including therein an itemization of said amount, segregated as to contract item quantities, extra work and any other basis for payment, and shall also show therein all deductions made or to be made for prior payments and amounts to be kept or retained under the provisions of the contract. All prior estimates and payments shall be subject to correction in the proposed final estimate. Within 15 days after proposed final estimate has been submitted, Contractor shall submit to the Authority written approval of proposed final estimate and/or a written statement of all claims of the contract. No claim will be considered that was not included in written statement of claims, nor will any claim be allowed unless the Contractor has previously complied with the notice and protest requirements.
- 2. On the Contractor's approval, or if he files no claim within stated period,

Authority will issue a final written estimate, in accordance with the proposed final estimate submitted to the Contractor; and 35 days after the date of filing the Notice of Completion Authority will pay the entire sum found to be due. Such final estimate and payment thereon shall be conclusive and binding against the Contractor on all questions relating to the amount of work done and the compensation payable therefore, except as otherwise provided.

- 3. If the Contractor within said period of 15 days files claims, Authority will issue a semi-final estimate in lieu of the final estimate submitted to the Contractor; and 35 days after the date of filing of the Notice of Completion, the Authority will pay the sum found to be due. Such semi-final estimate and payment thereon shall be conclusive and binding against the Contractor on all questions relating to the amount of work done and the compensation payable therefore, except insofar as affected by the claims filed within the time and in the manner required hereunder and except as otherwise provided.
- 4. Upon final determination of any outstanding claims, the Authority shall then make and issue a final estimate in writing and within 30 days thereafter, the Authority will pay the entire sum, if any, found due. Such final estimate shall be conclusive and binding against the Contractor on all questions relating to the amount of work done and the compensation payable therefore, except as otherwise provided.

F. EXTRA WORK AND CHANGES

- 1. New and unforeseen work, which in the judgment of the Authority is found necessary or desirable for the satisfactory completion of the work, will be classified as extra work, as well as work specifically designated as such in the plans or specifications. The Contractor shall do such extra work and furnish material and equipment therefore as directed by the Engineer in writing by a change order. No extra work will be paid for or allowed unless the same was done upon written change order of the Engineer and after all legal requirements have been complied with. The Contractor agrees that he will accept as full compensation for extra work, so ordered, an amount to be determined by one of the following methods:
 - a. A price mutually agreed upon in writing by the Engineer and Contractor (hereafter Agreed Price).
 - b. Force Account as hereafter provided.
- 2. It is mutually agreed that on the agreed price, the Contractor and subcontractor(s) shall add not more than a total markup of 20% to be divided between the Contractor and subcontractor(s) as full compensation for all other expenses including overhead, profit, bond, superintendence, insurance and small tools.

3. When extra work is to be paid for on a force account basis, compensation will be determined as follows:

a. Materials

A sum equal to the actual cost to the Contractor of the materials furnished by him, as shown by paid receipts, plus not more than fifteen percent (15%). Only installed materials shall be paid for.

b. Labor

- The actual wages paid as shown on the certified copies of Contractor's payroll, for all labor directly engaged in the work and including the cost of any compensation insurance paid for by the Contractor, subsistence and travel allowance aid to such workmen as required by collective bargaining agreements plus not more than twenty percent (20%).
- 2. To the actual wages as described in 1 above will be added a labor surcharge of not more than seventeen percent (17%), and shall constitute full compensation for all other payments, including payments imposed by State and Federal laws.

c. Equipment

- 1. Equipment will be paid for as a rental charge whether owned by the Contractor or not, and said rental rates prevailing in the area for comparable equipment will be paid. To the direct costs of "Equipment Rental" will be added a not more than fifteen percent (15%) markup.
- 2. All extra work at Force Account shall be adjusted daily upon report sheets prepared by the Engineer, furnished to the Contractor and signed by both parties. Said daily reports shall thereafter be considered the true record of all extra work done. The decision of the Engineer as to whether extra work has in fact been performed shall be conclusive and binding upon both parties to the contract.
- 4. A contract change order approved by Authority may be issued to the Contractor at any time. Should the Contractor disagree with any terms or conditions set forth in the contract change order, the Contractor shall submit a written protest to the Authority within 15 days after the receipt of the contract change order. The protest shall state the points of disagreement and, if possible, the contract specification references, quantities and costs involved. If a written protest is not submitted within the above period, payment will be made as set forth in the approved contract change order and such payment shall constitute full compensation for all work included therein or required thereby. Such unprotested approved contract change orders will be considered as executed

contract change orders.

5. Contractor shall promptly notify the Authority in writing when it receives direction, instruction, interpretation or determination from any source other than the Authority or its designated representatives that may lead to or cause change in the work. Such written notification shall be give to the Authority before the Contractor acts on said direction, instruction, interpretation or determination.

G. EXTENDED FIELD OFFICE OVERHEAD COSTS

- 1. Within thirty (30) days after receipt of the Notice to Proceed, the Contractor shall submit a written statement to the Authority detailing its field office overhead costs which are time related. The Authority will review this cost submittal and reach a written agreement with the Contractor on a daily field office overhead cost rate which shall be issued as an agreed upon Change Order. The daily rate agreed to in this Change Order will be applicable throughout the duration of the Contract. No field office costs will be paid until such agreement is reached between the Authority and the Contractor and the Change Order concerning this daily rate is executed by both parties.
- 2. The individual cost components of the daily field office overhead rate shall represent costs which increase as a direct result of any time extension caused solely and exclusively by an act of the Authority. This listing may include such cost items as on-site project management, supervision, engineering and clerical salaries; on-site office utilities and rent; on-site company vehicles and their operating expenses: and site maintenance and security expenses. Field office overhead costs which are unaffected by increased time shall not be allowable costs in calculating the daily field office overhead rate. These non-time related costs include, but are not limited to, acquisition and installation of stationary equipment; temporary construction facilities; utilities and office furnishings (unless such items are rented or leased); the preparation of the site including grubbing, grading and fencing; mobilization demobilization costs; and the costs of permits, bonds and insurance coverage for the project.
- 3. The individual wage cost components used to calculate the daily field office overhead rate shall be supported by actual employee payroll records, not salary ranges or estimates. Hourly rates for management, supervisory, engineering and clerical employees shall be based upon 2,080 works hours per year and shall not include allowances for holidays, vacation or sick time.

4. The daily field office overhead rate shall be multiplied by the number of days the Contract is delayed or extended by Change Order and shall be added to the agreed upon Change Order cost. The days of delay shall be those caused solely by action of the Authority and documented by a time impact analysis prepared and submitted by the Contractor. In the event of a deductive Change Order is issued which reduces time under the Contract, the daily field office overhead rate shall be added to the deductive amount. No allowance for overhead costs and no profit allowance shall be added to the extended field office overhead cost.

H. ACCELERATION

- 1. Authority reserves the right to accelerate the work of the Contract at any time during its performance. In the event that the Authority directs acceleration, such directive will be given to the Contractor in writing. The Contractor shall keep cost and other Project records related to the acceleration directive separately from normal Project cost records and shall provide a written record of acceleration costs to the Authority on a daily basis.
- 2. In the event that the Contractor believes that some action or inaction on the part of the Authority constitutes an acceleration directive, the Contractor shall immediately notify the Authority in writing that the Contractor considers the actions or inactions an acceleration directive. This written notification shall detail the circumstances of the acceleration directive. The Contractor shall not accelerate their work efforts until the Authority responds to the written notification. If acceleration is then directed or required by the Authority, all cost records referred to in section (1) shall be maintained by the Contractor and provided to the Authority on a daily basis.
- 3. In order to recover additional costs due to acceleration, the Contractor must document that additional expenses were incurred and paid by the Contractor. Labor costs recoverable will only be overtime or shift premium costs or the cost of additional laborers brought to the site to accomplish the accelerated work effort. Equipment costs recoverable will only be the cost of added equipment mobilized to the site to accomplish the accelerated work effort.

I. VALUE ENGINEERING

Authority encourages the Contractor to submit Value Engineering Proposals (VEP's) whenever it identifies areas and/or instances in which improvements can be made, in order to avail the Authority of potential cost savings. Contractor and the Authority will share any savings in the manner described below.

A VEP applies to a Contractor developed and documented VEP that:

Requires a change to the contract.

- 2. Reduces the total contract price without impairing essential functions or characteristics of the work.
- 3. Results in an estimated total net savings to the Authority equal to or greater than \$1,000.

At a minimum, a VEP should include the following information:

- 1. A description of the existing contract requirements that are involved in the proposed change.
- 2. A description of the proposed change, and all specifications and/or plans necessary for the complete evaluation of the proposed change. Include a discussion of the differences between existing requirements and the proposed change, together with advantages and disadvantages of each changed item. All relevant back up documentation needs to be included to support proposed changes.
- Cost estimate for existing contract requirements correlated to the Contractors lump sum breakdown and the proposed changes in those requirements, including costs of development and implementation by the Contractor.

Contractor shall submit the VEP to the Authority. At its sole discretion, Authority may accept, in whole or in part and by change order, any VEP submitted pursuant to this section. Until a change order is issued on a VEP, Contractor shall remain obligated to perform in accordance with the contract. The decision of the Authority as to the rejection or acceptance of a VEP shall be at the sole discretion of the Authority.

If a VEP, submitted by the Contractor pursuant to this section is accepted by the Authority, the total contract price shall be adjusted based upon a sharing of the net savings by the Contractor and the Authority (50% Authority, 50% Contactor). Contractor's profit shall not be reduced by application of the VEP.

Net savings are defined as gross savings less the Contractor's costs and less the Authority's costs.

- 1. Contractors cost means reasonable costs incurred by the Contractor in preparing the VEP and making the change.
- 2. Authority's costs means reasonable costs incurred by the Authority for evaluating and implementing the VEP.
- Contractor is not entitled to share in either concurrent, collateral or future contract savings. Collateral savings are those measurable net reductions in the Authority's costs of operation that result from the VEP. Concurrent savings cover the reductions in the cost of performance of other contracts.

Contractor shall include appropriate VEP provisions in all subcontracts greater than \$25,000.

J. STOP NOTICES

The Authority, at its sole discretion, may, at any time, retain out of any amounts due the Contractor, sums sufficient to cover claims filed pursuant to Section 9358 et. seq. of the California Civil Code.

K. ORDER OF WORK

Contractor shall perform work hereunder at such places, and in such order or precedence, as may be determined necessary by the Engineer to expedite completion of the required work.

L. LABOR PROVISIONS

1. Prevailing Wages

Contractor shall comply with all applicable requirements of Division 2, Part 7, Chapter 1 of the Labor Code and all applicable federal requirements respecting prevailing wages. If there is a difference between the minimum wage rates predetermined by the Secretary of Labor and the wage rates determined by the Director of the Department of Industrial Relations (DIR) for similar classifications of labor, the Contractor and subcontractors shall not pay less than the higher wage rate. The DIR will not accept lower state wage rates not specifically included in the Federal minimum wage determination.

2. Minimum Wages

a. All mechanics and laborers employed or working upon the site of the work will be paid unconditionally, and not less often than once a week and without subsequent deduction or rebate on any account, the full amounts due at time of payment computed at wage rates not less than those specified in the General Wage Determinations referenced in this section regardless of any contractual relationship which may be alleged to exist between the Contractor and such laborers and mechanics; and the wage determination decision shall be posted by the Contractor at the site of the work in a prominent place where it can be easily seen by the workers. For the purpose of this clause, contributions made or cost reasonably anticipated under the Labor Code of the State of California on behalf of laborers or mechanics are considered wages paid by such Laborers or mechanics. Also for the purpose of this clause, regular contributions made or costs incurred for more than a weekly period under plans, funds or programs, but covering the particular weekly period, are deemed to be constructively made or incurred during such weekly period.

- b. Authority shall require that any class of laborers or mechanics, including apprentices and trainees, which is not listed in the General Wage Determinations and which is to be employed under this Contract, shall be classified conformably to such wage determinations. In the event the Authority does not concur in the Contractor's proposed classification or reclassification of a particular class of laborers and mechanics (including apprentices and trainees) to be used, the question, accompanied by the recommendation of the Authority, shall be referred to the State Director of Industrial Relations for determination.
- c. Authority shall require, whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly wage and the Contractor is obligated to pay a cash equivalent of such a fringe benefit, an hourly cash equivalent thereof to be established. In the event the interested parties cannot agree upon cash equivalent of the fringe benefit, the questions, accompanied by the recommendation of the Authority, shall be referred to the State Director of Industrial Relations for determination.
- d. All disputes concerning the payment of wages or the classification of workers under this Agreement shall be promptly reported to the Authority.

3. Deductions

Authority may deduct from each progress payment and the Final Payment the following:

- Any Authority or third party claims or losses for which Contractor is responsible hereunder or any Liquidated Damages which have accrued as of the date of the application for payment;
- b. If a notice to stop payment is filed with Authority, due to the Contractor's failure to pay for labor or materials used in the work, money due for such labor or materials, plus the 25% prescribed by law, will be withheld from payment to the Contractor. In accordance with Section 9358 of the Civil Code, Authority may accept a bond by a corporate surety in lieu of withholding payment;
- c. Any sums expended by or owing to Authority as a result of Contractor's failure to maintain the as-built drawings;
- d. Any sums expended by Authority in performing any of the Contractor's obligations under the Contract which Contractor has failed to perform; and

e. Any other sums which Authority is entitled to recover from Contractor under the terms of the Contract.

The failure by Authority to deduct any of these sums from a progress payment shall not constitute a waiver of Authority's right to such sums.

All amounts owing by Contractor to Authority under the Contract shall earn interest from the date on which such amount is owing at the lesser of (i) 10% per annum or (ii) the maximum rate allowable under applicable Governmental Rules.

4. Payrolls and Basic Records

- a. Payrolls and basic records relating thereto will be maintained during the course of the work and preserved for a period of three (3) years thereafter for all laborers and mechanics working at the site of the work. Such records will contain the name, address and social security number of each such worker, the correct classification, rates of pay, daily and weekly number of hours worked, deductions made and actual wages paid.
- b. Contractor will submit weekly a copy of all payrolls to the Authority as required in these "Labor Provisions." The copy shall be accompanied by a statement signed by the employer or its agent indicating that the payrolls are correct and complete, that the wage rates contained therein are not less than those determined by the State Director of Industrial Relations and that the classifications as set forth for each laborer or mechanic conform to the work performed. A submission of the "Weekly Statement of Compliance," which is required under this Contract, shall satisfy this requirement. The prime Contractor shall be responsible for the submission of copies of payrolls of all subcontractors. The Contractor will make the records required under the labor standard clauses of the contract available for the inspection by authorized representatives of the Authority, and will permit such representatives to interview employees during working hours on the job.

5. Apprentices and Trainees

a. Apprentices: Apprentices will be permitted to work at less than the predetermined rate for the work they perform when they are employed and individually registered in a bona fide apprenticeship program as defined in section 1777.5 of the Labor Code of the State of California. The allowable ratio of apprentices to journeymen in any craft classification shall not be greater than the ratio permitted to the Contractor as to his entire work force under the registered program. Any employee listed on a payroll at an apprentice wage rate who is not registered or otherwise employed as stated above, shall be paid the wage rate determined by the State Director

of Industrial Relations for the classification of work he actually performed. The Contractor or subcontractor will be required to furnish to the Authority or the State Director of Industrial Relations written evidence of the registration of his program and apprentices as well as the appropriate ratios and wage rates (expressed in percentages of the journeyman's rate contained in the applicable wage determination).

- Trainees: Except as provided in 29 CFR 5.15, trainees will not be permitted b. to work at less than the predetermined rate for the work performed unless they are employed pursuant to or individually registered in a program which has received prior approval, evidenced by formal certification, by the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training. The ratio of trainees to journeymen shall not be greater than that permitted under the plan approved by the Bureau of Apprenticeship and Training. Every trainee must be paid at not less than the rate specified in the approved program for his level of progress. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Bureau of Apprenticeship and Training shall be paid not less than the wage rate determined by the Secretary of Labor for the classification of work he actually performed. The Contractor or subcontractor will be required to furnish the contracting officer or a representative of the Wage-Hour Division of the U.S. Department of Labor written evidence of the certification of his program, the registration of the trainees, and the ratios and wage rates prescribed in that program. In the event the Bureau of Apprenticeship and Training withdraws approval of a training program, the Contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.
- c. Equal Employment Opportunity: The utilization of apprentices and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, 29 CFR Part 30, and 41 CFR Part 60.
- 6. Compliance With Copeland Regulations (29 CFR Part 3)

The Contractor shall comply with the Copeland "Anti-Kickback" Act (18 U.S.C. 874 and 40 U.S.C. 276c). The Contractor shall also comply with the Copeland Regulations (29 CFR Part 3) of the Secretary or Labor which are herein incorporated by reference.

7. Contract Termination; Debarment

A breach of item 1 through 6 may be grounds for termination of the contract, and for debarment as provided in 29 CFR Section 5.6.

8. Overtime Requirements

No Contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any laborer or mechanic in any work week in which he is employed on such work to work in excess of 8 hours a day or 40 hours in such work week unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of 8 hours a day or 40 hours in such work week.

9. Violation; Liability for Unpaid Wages

Pursuant to section 1775 of the Labor Code of the State of California, in the event that any workman employed on this public works project is paid less than the amount specified in the General Prevailing Wage Determinations or less than is required, relative to overtime, the Contractor and any subcontractor responsible therefore shall be liable to the affected workman for the unpaid wages. In addition, such Contractor and subcontractor shall be liable to the State of California or the Authority for liquidated damages. Such liquidated damages shall be computed with respect to each individual workman found to be underpaid and shall be in the amount of \$50 per calendar day that a workman was underpaid.

10. Withholding for Liquidated Damages

The Authority may withhold or cause to be withheld, from any monies payable on account of work performed by the Contractor or subcontractor, such sums as may administratively be determined to be necessary to satisfy any liabilities of such Contractor or subcontractor for liquidated damages as provided in this section.

11. Final Labor Summary

The Contractor and each subcontractor shall furnish to the Authority, upon the completion of the contract, a summary of all employment, indicating for the completed project, the total hours worked and the total amount earned.

12. Final Certificate

Upon completion of the contract, the Contractor shall submit to the Authority, with the voucher for a final payment for any work performed under the contract, a concerning wages and classifications for laborers and mechanics, including apprentices and trainees employed on the project, in the following form:

The undersigned, Contractor on	
(Co	ontract No.)

hereby certifies that all laborers, mechanics, apprentices and trainees employed by the Contractor or by a subcontractor performing work under the contract on the project have been paid wages at rates not less than those required by the contract provisions, and that the work performed by each such laborer, mechanic, apprentice or trainee conformed to the classifications set forth in the contract or training program provisions applicable to the wage rate paid.

Signature and Title

13. Notice to the Authority of Labor Dispute

Whenever the Contractor has knowledge that any actual or potential labor dispute is delaying or threatens to delay the timely performance of this contract, the Contractor shall immediately give notice thereof, including all relevant information with respect thereto, to the Authority.

14. Disputes Clause

- a. All disputes concerning the payment of prevailing wage rates or classifications shall be promptly reported to the Authority for its referral to DOT for decision or, at the option of the Authority, DOT referral to the Secretary of Labor. The decision of DOT or the Secretary of Labor, as the case may be, shall be final.
- b. All questions relating to the application or interpretation of the Copeland Act, the Contract Work Hours Standards Act, the Davis-Bacon Act, or Section 13 of the Act shall be sent to the Federal Transit Administration (FTA) for referral to the Secretary of Labor for ruling or interpretation, and such ruling or interpretation shall be final.

15. Convict Labor

In connection with the performance of work under this Contract, the Contractor agrees not to employ any person-undergoing sentence of

imprisonment at hard labor. This does not include convicts who are on parole or probation.

16. Insertion in Subcontracts

The Contractor shall set forth in item 1 through 15 of this Section so that all of the provisions of this section will be inserted in all construction subcontracts of any tier, and such other clauses as the Government may by appropriate instructions require.

17. Certified Payrolls

- a. The Authority shall obtain from the Contractor and each subcontractor a certified copy of each weekly payroll within seven (7) days after the regular payroll date. Following a review by the Authority for compliance with State and Federal labor laws, the payroll copy shall be retained at the project site for later review by FTA.
- b. Contractor may use the Department of Labor Form WH-347, "Optional Payroll Form," which provides for all the necessary payroll information and certifications.
- c. If, on or before the 20th of the month, the Contractor has not submitted satisfactory payrolls covering its work and the work of all subcontractors for all payroll periods ending on or before the 6th of that month, such payrolls will be considered to be delinquent. Regardless of the number of delinquent payrolls, an amount equal to 10% (but not less than \$1,000 or more than \$10,000) shall be deducted from the estimate. Deductions will be made separately for each estimate period in which a new delinquency appears and will be continued until payrolls have been submitted.
- d. Contractors employing apprentices or trainees under approved programs shall include a notation on the first weekly certified payrolls submitted to the Authority that their employment is pursuant to an approved program and shall identify the program.

M. TIME EXTENSION/DELAYS

a. Contractor may be granted an extension of time for any portion of a delay in completion of the work due to acts of God, the public enemy, wars, civil unrest, fires, quarantine restrictions, or weather more severe than normal, providing that (1) the aforesaid causes were not foreseeable and did not result from an act or omission by the Contractor, (2) Contractor has taken reasonable precautions to prevent further delays owing to such causes, and (3) Contractor notifies Authority in writing of the cause(s) for the delay within ten (10) days from the beginning of any such delay. No claims for additional compensation or damages for the foregoing delays shall be allowed to the Contractor, and the extension of time provided for herein shall be the sole remedy of the Contractor on account of any such delays.

- b. An extension of time will not be granted for a delay described in the above paragraph(s) caused by a shortage of materials, except if materials are furnished by Authority, unless the Contractor supplies the Authority with documented proof that every effort to obtain the materials from all known sources that (a) such materials could have been obtained only at exorbitant prices or (b) the prices were entirely inconsistent with current rates, taking into account the quantities; and (c) such facts could not have been known or anticipated at the time the Notice To Proceed was issued. Contractor shall also submit proof, that the inability to obtain such materials when originally planned, did in fact, cause a delay in completion of the work that could not be compensated for by revising the sequence of its operations. Only the physical shortage of material will be considered as a basis for an extension of time.
- c. An extension of time for weather more severe than normal shall be granted only to the extent the work is actually delayed as determined by the Authority. Normal is defined as the monthly average of the temperature and rainfall wherein the work was performed for the prior 20 years before the execution of the contract.
- d. In the event Contractor is actually and necessarily delayed by an act or omission on the part of the Authority, as determined by the Authority, the Contractor shall notify the Authority in writing within five (5) days from the beginning of any such delay. The time for completion of the work may be extended at the sole discretion of the Authority.
- e. Within 30 days after the last day of delay, Contractor shall provide Authority with detailed information concerning the circumstances of the delay, the number of days actually delayed, and the measures taken to minimize or prevent the delay. Failure to submit information shall be sufficient reason to deny the claim. Authority shall ascertain the facts and the extent of the delay; and provide the Contractor its written findings, which will be final and conclusive. Except for the additional compensation for herein and except as provided in Public Contract Code Section 7102, Contractor shall have no claim for damages or compensation for any delay or hindrance.
- f. No extension of time will be granted for any Authority caused delay or delay as defined in which (a) the performance of work would have been concurrently delayed by Contractor induced causes, including but not limited to an act or omission of the Contractor, or (b) remedies are included or excluded by any other contract provision. Only the actual delay necessarily resulting from the causes specified in this Article shall be

- grounds for extension of time. Should the Contractor be delayed at any time for any period by two or more of the causes specified in this article, Contractor shall only be entitled to one time extension for the entire delay.
- g. Any time extension granted to Contractor shall not release the Contractor or surety from its obligations. Work shall continue and be carried on in accordance with the contract provisions, unless formally suspended or terminated by the Authority.

N. NONDISCRIMINATION

During the performance of this Contract, the Contractor agrees as follows:

- 1. The Contractor will not discriminate against any employee or applicant for employment because of race, creed, color or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, religion, color, sex or national origin. Such action shall include, but not be limited to employment; upgrading; demotion; transfer; recruitment or recruitment advertising; layoff; termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post, in conspicuous places available to the employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.
- 2. The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, religion, color, sex or national origin.
- 3. The Contractor will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the Contractor's commitments under this Section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- 4. The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations and relevant orders of the Secretary of Labor. The Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations and orders.
- 5. In the event of the Contractor's noncompliance with the nondiscrimination

clauses of this Contract or with any of the said rules, regulations or orders, this Contract may be canceled, terminated or suspended in whole or in part, and the Contractor may be declared ineligible for further Government contracts or Federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation or order, of the Secretary of Labor, or as otherwise provided by law.

- 6. The Contractor will include the provisions of this Paragraph ("Nondiscrimination") in every subcontract or purchase order entered into under this Agreement unless exempted by rules, regulations or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance provided, however, that in the event a Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.
- 7. No person employed on the work covered by this Agreement shall be discharged or in any way discriminated against because he has filed any complaints or instituted or caused to be instituted any proceeding or has testified or is about to testify in any proceeding under or relating to the labor standards applicable hereunder to his employer.

O. TITLE VI OF THE CIVIL RIGHTS ACT OF 1964

Contractor agrees to comply with and ensure compliance by all subcontractors with all requirements of Title VI of the Civil Rights Act of 1964, as amended, 42 U.S.C. §2000d; 49 U.S.C. §5332 and Department of Transportation Regulations, "Nondiscrimination in Federally-Assisted Programs of the Department of Transportation-Effectuation of Title VI of the Civil Rights Act," 49 CFR Part 21.

P. AFFIRMATIVE ACTION

Contractors and subcontractors holding a value of work of \$10,000 or more must submit a Monthly Employment Utilization Report (Form 257) to the Authority Engineer by the 5th of each month or sanctions shall be applied for late submittal, non-submittal and incomplete forms returned to the Contractor and resubmitted after the due date.

The reporting period shall be for each calendar month.

The report shall include the information requested for each Contractor's aggregate work force (for all workers on all projects within Orange County) and not just for workers on this project.

If the form is not received by the 5th of the month, a deduction of 10% (with a minimum of \$1,000 and a maximum of \$10,000) will be withheld from the monthly estimate at the option of the Authority.

The Contractor shall designate an Equal Employment Officer for the project and notify the Authority in writing whom that person is prior to beginning of work. All workers shall also be informed who the EEO Officer is.

Q. STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION CONTRACT SPECIFICATIONS (EXECUTIVE ORDER 11246)

- 1. As used in these specifications:
 - a. "Covered area" means the geographical area described in the solicitation from which this Contract resulted;
 - b. "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates Authority;
 - c. "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941;
 - d. "Minority" includes persons who are citizens or lawful permanent residents of the United States and are one of the following:
 - 1) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
 - 2) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American, Portuguese American or other Spanish culture or origin, regardless of race);
 - 3) Asian and Pacific Islanders (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent or the Pacific Islands);
 - 4) American Indians and Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification);
 - 5) Women regardless of ethnicity.

- 2. In order for the nonworking training hours of apprentices to be counted in meeting the goals, such apprentices must be employed by the Contractor during the apprenticeship period, and the Contractor must have made a commitment to employ the apprentices at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.
- 3. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:
 - a. Ensure and maintain a working environment free of harassment, intimidation and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.
 - b. Establish and maintain a current list of disadvantaged and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organization's responses.
 - c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and disadvantaged or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefore, along with whatever additional actions the Contractor may have taken.
 - d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a disadvantaged person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.

- e. Develop on-the-site-training opportunities and/or participate in training programs for the area which expressly include minority and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 3.b. above.
- f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.
- g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with on-site supervisory personnel such as Superintendents, General Foreman, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed and disposition of the subject matter.
- h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and subcontractors with whom the Contractor does or anticipates doing business.
- i. Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractors' recruitment area and employment needs. Not later than one month prior to the date of the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the opening, screening, procedures and tests to be used in the selection process.

- j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of Contractor's work force.
- k. Validate all tests and other selection requirements where there is an obligation to do so under 41 C.F.R., Part 60-3.
- I. Conduct, at least annually, an inventory and evaluation of all minority and female personnel for promotional opportunities, and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.
- m. Ensure that seniority practices, job classifications, working assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.
- n. Ensure that all facilities and company activities are non-segregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.
- o. Document and maintain a record of all solicitations or offers for subcontracts from disadvantaged and female construction Contractors and suppliers, including circulation of solicitations, to disadvantaged and female Contractor associations and other business associations.
- p. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.
- 4. Contractors are encouraged to participate in voluntary associations, which assist in fulfilling one or more of their affirmative action obligations (3. (a) through (p)). The efforts of a Contractor association, joint Contractor-union, Contractor-community, or other similar group of which the Contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 3. (a) through (p) of these specifications provided that the Contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female work force participation, make a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the

Contractor's failure if such a group to fulfill an obligation, shall not be a defense for the Contractor's noncompliance.

- 5. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, male and female, and all women, both minority and nonminority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order 11246 if a specific minority group of women is underutilized.)
- 6. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex or national origin.
- 7. The Contractor shall not enter into any subcontract with a person or firm debarred from Government contracts pursuant to Executive Order 11246.
- 8. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.
- 9. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in item 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 C.F.R. 60-4.8.
- 10. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation, if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to

the degree of existing records satisfy this requirement; Contractor shall not be required to maintain separate records.

11. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

R. CONFLICT OF INTEREST

All Contractors responding to this Invitation For Bids must avoid organizational conflicts of interest which would restrict full and open competition in this procurement. An organizational conflict of interest means that due to other activities, relationships or contracts, a Contractor is unable, or potentially unable to render impartial assistance or advice to the Authority; a Contractor's objectivity in performing the work identified in the specifications is or might be otherwise impaired; or a Contractor has an unfair competitive advantage. Contractor is obligated to fully disclose to the Authority in writing any conflict of interest issues as soon as they are known. All disclosures must be disclosed at the time of bid submittal.

S. CODE OF CONDUCT

Contractor agrees to comply with the Authority's Code of Conduct as it related to Third-Party contracts, which is hereby referenced and by this reference is incorporated herein. Contractor agrees to include these requirements in all of it's subcontracts.

T. GOVERNMENT INSPECTIONS

The Authority or Federal Government representatives shall have access to the construction site and shall have the right to inspect all project works.

U. LICENSING, PERMITS AND INSPECTION COSTS

1. The Contractor warrants that it has all necessary licenses and permits required by the laws of the United States, State of California, the County of Orange, the Local Jurisdictions, and all other appropriate governmental agencies, and agrees to maintains these licenses and permits in effect for the duration of the Agreement. Further, Contractor warrants that its employees, agents, and Contractors and subcontractors shall conduct themselves in compliance with such laws and licensure requirements including, without limitation, compliance with laws applicable to nondiscrimination, sexual harassment and ethical behavior throughout the duration of this Agreement. Contractor further warrants that it shall not retain or employ an unlicensed subcontractor to perform work on this Project. Contractor shall notify the Authority immediately and in writing of its employees', agents', Contractors' or subcontractors' inability to obtain or maintain, irrespective of the pendency of any appeal, any

such licenses, permits, approvals, certificates, waivers, and exemptions. Such inability shall be cause for termination of this Agreement.

2. Contractor shall procure all permits and licenses; pay all charges, assessments and fees, as may be required by the ordinances and regulations of the public agencies having jurisdiction over the areas in which the work is located, and shall comply with all the terms and conditions thereof and with all lawful orders and regulations of each such public agency relating to construction operations under the jurisdiction of such agency.

V. HAZARDOUS SUBSTANCES

1. CAL-OSHA Requirements

All flammable, corrosive, toxic, or reactive materials being bid must have a complete CAL-OSHA Safety Data Sheet (SDS) accompanying the submitted bid.

2. South Coast Air Quality Management District (SCAQMD)

All materials (paints, coatings, inks, solvents, and adhesives) shall comply with the volatile organic compounds (VOC) content requirements of the applicable SCAQMD rules.

3. Notice of Hazardous Substances

Title 8, California Code of Regulations, Section 5194 (e) (c), states that the employer must inform any Contractor employers with employees working in the employer's workplace of the hazardous substances to which their employees may be exposed while performing their work. In compliance with this requirement, the Authority hereby gives notice to all bidders that the following general categories of hazardous substances are present on the Authority's premises:

- Adhesives, sealant, patching, and coating products
- Antifreezes, coolants
- Cleaners, detergents
- Paints, thinners, solvents
- Pesticides, Petroleum products (diesel and unleaded fuel, oil products)
- Printing, photocopying materials
- Propane Welding materials/compressed gases (e.g., acetylene, oxygen, nitrogen)

More specific information may be obtained from the Authority's Safety and Benefits office at (714) 560-5854, and from Safety Data Sheets (SDS) for individual products.

4. Hazardous Waste Labels

Containers containing hazardous substances must be labeled with the following information:

- Identity of hazardous substance-chemical name, not manufacturer or trade name;
- Appropriate health warning relative to health and physical hazard; and
- Name and address of manufacturer or other responsible party.

All containers containing hazardous substances may be rejected unless containers are properly labeled. Containers of 55 gallons or larger must have either weather resistant labels or the information should be painted directly on the containers.

W. CHANGES IN LAWS AND REGULATIONS

CONTRACTOR shall at all times comply with all applicable state and local regulations, policies, procedures and directives, including without limitation those listed directly or by reference in this Agreement. CONTRACTOR's failure to so comply shall constitute a material breach of contract.

X. MEDIA AND THE PUBLIC

Contractor shall immediately refer all inquires from the news media or other public sources to the Authority's Project Manager, or designated representative, relating to this project.

Y. COORDINATION AND ACCESS

Authority may undertake or award other contracts for additional work at the project site. Contractor is responsible for coordinating its work with the work of other Contractors as appropriate. The Contractor acknowledges that they do not have any exclusive access to the site or other work areas Authority may require that certain facilities and areas be used concurrently by the Contractors and others. Contractor shall cooperate fully with Authority Contractors/consultants that may be performing work in the construction area.

Z. UTILITIES RELATED DELAYS

If, due to interruptions caused by the undocumented utilities, Contractor sustains loss which could not have been avoided by the judicious handling of forces, equipment and plant, there shall be paid to the Contractor that amount that the Authority may find to be a fair and reasonable compensation for the part of the Contractor's actual loss, that, in the opinion of Authority was unavoidable, determined as follow: Compensation for idle time of equipment will be determined in the same manner as determinations are made for equipment used in the performance of extra work paid for on a force account basis, as provided in Section F. Extra Work and Changes, Item 3,c. Equipment with the following exceptions:

1. The utility related delay factor for each classification of equipment shown

in the Department of Transportation publication entitled Labor Surcharge And Equipment Rental Rates will be applied to that equipment rental rate.

- 2. The time for which the compensation will be paid will be the actual normal working time during which the delay condition exists, but in no case will exceed 8 hours in any one day.
- The days for which compensation will be paid will be the calendar days, excluding Saturdays, Sundays and legal holidays, during the existence of the delay, except that when the rented equipment can be returned or used elsewhere on the project, then no payment will be made for utilities related delays.

Actual loss shall be understood to include no items of expense other than idle time of equipment and necessary payments for idle time of workers, and cost of extra moving of equipment. Compensation for idle time of equipment will be determined as provided in this Section and compensation for idle time of workers will be determined as provided in Section F. Extra Work and Changes, Item 3, b. "Labor," and no markup will be added in either case for overhead and profit. The cost of extra moving of equipment will be paid for as extra work and changes as provided in Section F of General Provisions.

If performance of the Contractor's work is delayed as the result of the Utilities Related Delays, an extension of time determined pursuant to the provisions in Article 18. Termination for Default – Damages for Delay – Time Extensions will be granted.

AA. UTILITIES AND SUBSURFACE STRUCTURES

Contractor shall protect from damage utility and other subsurface structures that are to remain in place, be installed, relocated or otherwise rearranged (as used herein, rearranged includes installation, relocation, alteration or removal).

The right is reserved to the Authority, or their authorized agents, to enter upon the site for the purpose of making those changes that are necessary for the rearrangement of their facilities or for making necessary connections or repairs to their properties. Contractor shall cooperate with forces engaged in this work and shall conduct operations in such a manner as to avoid any unnecessary delay or hindrance to the work being performed by the other forces. Wherever necessary, the work of Contractor shall be coordinated with the rearrangement of utility or other non-highway facilities, and Contractor shall make arrangements with the owner of those facilities for the coordination of the work.

Attention is directed to the possible existence of underground main or trunk line facilities not indicated on the plans or in the special provisions and to the possibility that underground main or trunk lines may be in a location different from that which is indicated on the plans or in the special provisions. Contractor shall ascertain the exact location of underground main or trunk lines whose presence is indicated

on the plans or in the special provisions, the location of their service laterals or other appurtenances, and of existing service lateral or appurtenances of any other underground facilities which can be inferred from the presence of visible facilities such as buildings, meters and junction boxes prior to doing work that may damage any of the facilities or interfere with their service.

If Contractor cannot locate an underground facility whose presence is indicated on the plans or in the special provisions, the Contractor shall so notify the Authority in writing. If the facility for which the notice is given is in a substantially different location from that indicated on the plans or in the special provisions, the additional cost of locating the facility will be paid for as extra work as provided in Section F.

If Contractor discovers underground main, trunk lines or other structures and utilities not indicated on the plans or in the special provisions, Contractor shall immediately give the Authority and the Utility Company written notification of the existence of those facilities. Such facilities shall be located and protected from damage as directed by the Authority, and the cost of that work will be paid for as extra work as provided in Section F. Contractor shall, if directed by the Authority repair any damage which may occur to the main or trunk lines. The cost of that repair work, not due to the failure of the Contractor to exercise reasonable care, will be paid for as extra work as provided in Section F. Damage due to Contractor's failure to exercise reasonable care shall be repaired at the Contractor's cost and expense.

Where it is determined by the Authority that the rearrangement of an underground facility is essential in order to accommodate the project work and the plans and specifications do not provide that the facility is to be rearranged, AuthorityY will provide for the rearrangement of the facility by other forces or the rearrangement shall be performed by Contractor and will be paid for as extra work as provided in Section F.

When ordered by the Authority in writing, Contractor shall rearrange any utility or other subsurface structures necessary to be rearranged as a part of the project work and that work will be paid for as extra work as provided in Section F.

Should Contractor desire to have any rearrangement made in any utility facility, or other improvement, for the Contractor's convenience in order to facilitate the Contractor's construction operations, which rearrangement is in addition to, or different from, the rearrangements indicated on the plans or in the special provisions, the Contractor shall make whatever arrangements are necessary with the owners of the utility or other subsurface structure for the rearrangement and bear all expenses in connection therewith.

Contractor shall immediately notify the Authority of any delays to the Contractor's operations as a direct result of underground utilities or other structures which were not indicated on the plans or in the special provisions or were located in a position substantially different from that indicated on the plans or in the special provisions, (other than delays in connection with rearrangements made to facilitate the

Contractor's construction operations or delays due to a strike or labor dispute). These delays will be considered utilities related delays within the meaning of Section X., Utilities Related Delays and compensation for the delay will be determined in conformance with the provisions in Section M. Contractor shall be entitled to no other compensation for that delay.

BB. LOCATION OF UNDERGROUND FACILITIES (OFFSITE WORK ONLY)

Contractor is required to obtain digging permits prior to start of excavation by contacting the appropriate permitting agencies 15 calendar days in advance. For the Offsite work scan the construction site with electromagnetic or sonic equipment, and mark the surface of the ground where existing underground utilities are discovered. Verify the elevations of existing piping, utilities, and any type of underground obstruction not indicated or specified to be removed but indicated or discovered during scanning in locations to be traversed by piping, ducts, and other work to be installed. Verify elevations before installing new work closer than nearest manhole or other structure at which an adjustment in grade can be made. Perform potholing to confirm location of all the utilities along the construction alignment prior to start of the construction. The Contractor is responsible for all costs associated with these investigations including the cost of equipment, labor and materials required for any confined space entry.

CC. UNFORESEEN HAZARDOUS OR REGULATED MATERIALS

All known hazardous or regulated materials are indicated in the contract documents. If material that is not indicated in the contract documents is encountered that may be dangerous to human health upon disturbance during construction operations, stop that portion of work and notify Authority immediately. Intent is to identify materials such as PCB, lead paint, mercury, petroleum products, and friable and non-friable asbestos. Within 14 calendar days, the Authority will determine if the material is hazardous. If the material is not hazardous or poses no danger, the Authority will direct Contractor to proceed without change. If the material is hazardous and handling of the material is necessary to accomplish the work, Authority will contract with a qualified environmental remediation/hazardous materials removal Contractor for such remediation or removal as may be necessary. The remediation or removal will be performed in compliance with applicable State, Federal, and local environmental laws and regulations.

Contractor shall immediately notify the Authority of any delays to the Contractor's operations as a direct result of Unforeseen Hazardous and Regulated Materials These delays will be considered utilities related delays within the meaning of Section X., Utilities Related Delays and compensation for the delay will be determined in conformance with the provisions in Section M. Contractor shall be entitled to no other compensation for that delay.

SECTION VI: PROJECT SPECIFICATIONS - EXHIBIT B



ORANGE COUNTY TRANSPORTATION AUTHORITY

Commercial Property Restoration

16585 Magnolia Street Westminster, California

PROJECT SPECIFICATIONS

C-3-2208 EXHIBIT B March 2023

ORANGE COUNTY TRANSPORTATION AUTHORITY

COMMERCIAL RESTORATION 16585 MAGNOLIA ST. WESTMINSTER, CA 92683

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SECTION 01 11 00 SUMMARY OF WORK

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Contract documents: The Contractor shall obtain all copies of the Contract Drawings and Specifications including all addenda through the OCTA CAMMNET website, as required to perform the work. The cost for obtaining any additional documents required for the contractor shall be included in the bid price and no additional compensation will be allowed.
- B. All drawings, specifications, and other contract documents, and copies furnished by the Authority are its property. They are not to be used on other work and with the exception of signed contract sets are to be returned to the Authority upon request at the completion of the work. The location of the work, its general nature and extent, and the form and general dimensions of the project and appurtenant works are shown on the contract drawings which are hereby made a part of these specifications as listed herein.
- C. The general intent of the contract, specifications, drawings, and other contract documents is that the Contractor shall:
 - 1. Furnish tools, qualified labor, material, equipment, qualified superintendence, and services, assurances and guarantees, and assumptions of risk and responsibility, necessary for the performance of the Work as set forth in the contract documents unless otherwise specifically provided.
 - 2. Begin work promptly and proceed expeditiously and continuously without cessation or shutdown of Work unless otherwise specifically approved in writing by the OCTA Engineer, or directed by the contract documents.
 - 3. Perform, complete, and make ready for its intended purpose, within the times specified, including additional times provided for certain conditions, the work or parts thereof covered by the contract, all in accordance with drawings, specifications, and modifications thereto and directions or instructions the OCTA Engineer may give to supplement the drawings and specifications. The Contractor shall retain sole responsibility and expense for quality control of the work.
- D. Words and abbreviations which have well-known technical, or trade meanings are used in the contract documents in accordance with such recognized meanings.
- E. The organization of the specifications into divisions, sections, parts, and paragraphs, and the arrangement of the drawings, shall not control the Contractor in dividing the work among subcontractors or in establishing the extent of work to be performed by any trade. Study and compare the contract documents and immediately report to the

OCTA Engineer any error, inconsistency, or omission that may be discovered. Contractor shall be liable to OCTA for damage resulting from unreported errors, inconsistencies, or omissions in the contract documents.

- F. It will be the responsibility of the Contractor to stage the construction activities at the project site, using the Site-Specific Work Plan process (SSWP)
- G. Ownership of Materials:
 - 1. Materials furnished by the Contractor under this contract shall become the property of the OCTA.
- H. General Summary of Work:
 - 1. Work to be performed by Contractor shall consist of the construction of the work shown on the drawings and detailed in the specifications.
 - 2. The descriptions provided in this section are general in nature and are not meant to detail all work required by the contract documents.
 - 3. Project scope occurs at 16585 Magnolia Street, Westminster, California. The work under this contract consist of restoration work, including but not limited to asphalt paving, coating of entire parking lot and restriping, concrete walkway, hand railings, landscaping, irrigation, electrical and water infrastructure; building stucco, decorative parapet capping, storefront glazing systems, interior and exterior painting, electrical, mechanical, plumbing, fire alarm, ceiling systems, lighting, doors and hardware, drywall, roof patching, and overall restoration work as reflected within the project plans and specifications.
 - 4. This project is a facility modification project under OCTA Level 3 Health, Safety and Environmental Specifications and requirements.
- I. Other features of the work include, but are not limited to, the following:
 - 1. Entire restoration or replacement of mechanical, electrical, and plumbing (MEP) systems and associated seismic restraints.
 - 2. Replacement of acoustical ceiling systems.
 - 3. Rooftop mechanical systems replacement will require early procurement.
 - 4. Entire operational local and state compliant fire alarm system. Fire Alarm Control Panel will likely require early procurement,
 - 5. Complete mobilization and demobilization.
 - 6. Obtaining of necessary construction and related Trade Permits and Deferred Submittal permits (E.g., Fire Alarm) from various jurisdictional agencies.

Contractor shall be responsible for all related fees from various jurisdictional agencies.

- 7. Following OCTA's (Owner's) Acceptance and Substantial Completion of the project, Contractor shall provide for ninety (90) days of 24-hour, on-site security guard services to protect the property and associated Work. This service shall be broken-out as a line-item allowance in Contractor's proposal and subsequent contract schedule of values.
- 8. Obtain and pay for all licenses required by all jurisdictions associated with the approval and requirements of the project.

1.02 INTENT OF DRAWINGS AND SPECIFICATIONS

- A. The intent of the drawings and specifications is to prescribe the details for construction and completion of the work that the Contractor undertakes to perform in accordance with the terms of the Contract. Where the drawings or specifications describe portions of the work in general terms, but not complete detail, it is understood that only the best industry practice is to prevail and that only materials and workmanship of the first quality are to be used. Unless otherwise specified, the Contractor shall furnish all labor, materials, tools, equipment, and incidentals, and perform all the work involved in executing the contract in a satisfactory and workmanlike manner.
- B. Drawings and specifications are essential parts of the Contract, and a requirement indicated in one is binding as though indicated in all. They are intended to be complementary and to describe and provide for the complete work.
- C. Summaries or introductory descriptions of the work of individual sections do not limit requirements. The Contractor's responsibilities include all requirements for proper execution of the work.
- D. Division 01 of the specifications governs all divisions. Comply with Division 01 requirements whether or not referenced in individual sections in Divisions 02-49.
- E. References to the singular include the plural and do not imply that only one unit of a product is required.
- F. Unless an object or activity is specified to be less than the total, the quantity or amount is all of the object or activity.
- G. Unless a requirement is specified to apply for a limited time, it applies for the duration of the work.
- H. "Including," "such as," "as follows," and similar terms do not limit the meaning to only items listed. The phrase "but not limited to" is understood to follow these expressions.

I. All items in a list apply unless the items are specified as choices.

1.03 REFERENCE MATERIAL

A. Reference specifications or standards referred to in the plans or specifications shall be the most recent version developed as of Contract award. Where referenced standards refer to the "specifications" or the "special conditions," this shall be understood by Contractor to mean the drawings and specifications of this contract. Contractor is responsible to obtain all reference material at its own expense and to make itself familiar with the requirements therein.

1.05 PROJECT ACCESS AND CONTRACT LIMITS

- A. Contractor shall submit a Traffic Management Plan as required on Section 01 14 43 Environment Resource Protection, outlining access to the job site and maintaining the facility operational at all times.
- B. Construction activity shall be within the normal work hours between 7:00 am to 4:00 pm Monday through Friday. Construction area shall be cordoned off using temporary barriers and chain link fencing unless otherwise noted on Contract Drawings. See project plans for additional information on phasing and work windows.

PART 2 – PRODUCTS

Not Used

PART 3 – EXECUTION

Not Used

PART 4 - MEASUREMENT AND PAYMENT

No separate measurement or payment shall be made under this section.

END OF SECTION

SECTION 01 14 22

RULES AND HOURS OF OPERATION

PART 1 – GENERAL

1.01 SUMMARY

A. This section outlines rules and hours of operation to which Contractor shall conform during the execution of the work under this contract. It is Contractor's responsibility to ensure that these rules are acceptable to the Authority.

1.02 REFERENCE STANDARDS

- A. Comply with the provisions of applicable local, State, and Federal codes, standard plans and specifications, and recommended practices, and with OCTA policy, including:
 - 1. SSPWC: Public Works Standards, Inc., Standard Specifications for Public Works Construction.
 - 2. City of Westminster, California: Building Codes & Standard Guidelines.
 - 3. Caltrans: California Department of Transportation, Trenching and Shoring Manual.
 - 4. Cal/OSHA: California Department of Industrial Relations, Division of Occupational Safety and Health (Cal/OSHA) regulations.
 - 5. OSHA: Federal Occupational Safety and Health Administration regulations.

1.03 SUBMITTALS

A. Site Specific Work Plan (SSWP) containing the information specified herein.

1.04 PROJECT COORDINATION

- A. Cooperate with the Authority in all matters requiring coordination.
- B. Coordinate execution of the work with the Authority to eliminate or minimize to the greatest extent possible interference with other projects. Other Authority projects near the jobsite include, but are not limited to, Edison Vault Modifications in Magnolia Street, Magnolia Landscaping Improvements, and OC405 Improvements Project.

C. Keep the Authority fully informed regarding all work.

1.05 CONTRACTOR'S RESPONSIBILITY

- A. Perform work in accordance with the contract and all applicable codes, ordinances, rules, regulations, orders, and other legal requirements of governmental bodies and public agencies having jurisdiction, including the Authority.
- B. Damage caused by Contractor to third-party property, signal and communications equipment, or other facilities shall be repaired at Contractor's expense to a condition equal or better than the condition prior to Contractor entry and as accepted by the Authority. At the sole discretion of the Authority, the Authority may direct repairs to be performed by other contractors. Charges for those repairs shall be deducted from Contractor's payment due under this Contract.
- C. Items shown on the drawings to be protected in place, or not identified as part of demolitions, removals, or modifications, shall be protected in place in accordance with SSPWC Section 7-9, Protection and Restoration of Existing Improvements, at no additional cost to the Authority.
- D. Perform work within the operating envelope or which affects the operating system only after submitting a Site-Specific Work Plan (SSWP) and receiving written approval of the SSWP from the Authority.
- E. Furnish all labor, materials, and equipment as required to perform and complete the work within the work windows in accordance with the approved schedule in the SSWP.

<u>1.06 BEST MANAGEMENT PRACTICES (BMP) – GENERAL CONTRACTOR REQUIREMENTS</u>

- A. BMPs must be of sufficient details, clarity, and organization to permit easy review and approval by the Authority before the proposed work is performed. BMPs shall be submitted to the Authority as follows:
 - 1. At least 14 calendar days prior to start of work.
 - 2. List of approved proposed work plans to be performed under the BMP, with names and phone numbers of Contractor's supervisors in charge of BMP tasks.
- B. The Authority may request explanations and changes to the BMP. If the BMP is not acceptable, Contractor shall revise the BMP to make it acceptable. Contractor is responsible for submitting a revised BMP that can be reviewed and approved by the Authority at least seven days in advance of any work.

- C. Contractor will be informed if the BMP is acceptable not less than seven calendar days prior to the scheduled start of work within the operating envelope. Once the BMP is accepted, Contractor shall assemble the resources necessary to perform the work represented by the BMP, so that necessary resources are available one day before the work is to be accomplished. At that time, the Authority will make a final decision as to whether or not the work is to proceed as planned or will be canceled. The prime consideration will be the stage of readiness of Contractor, which Contractor shall demonstrate to the Authority.
- D. Contractor shall provide sufficient personnel, equipment, materials, and all other resources necessary to return impacted facilities to full service upon the conclusion of the approved work window.
- E. Contractor shall perform the work expeditiously and continuously with no gaps or breaks in work activities or substantive reductions in the labor force, equipment, and materials necessary to construct, reconstruct, or repair the impacted facility to full service upon conclusion of the approved work window.
- F. In general, open excavation areas shall be protected per OSHA regulations.

1.08 WORK WINDOWS - GENERAL

- A. Site-specific available work windows shall be as approved by the Authority under established procedures.
- B. Construction hours shall be limited to 7:00 am to 4:00 pm Monday through Friday unless approved in writing in advance by the Authority and appropriate regulatory agencies.
- C. Construction work shall not be performed on the following holidays unless formally specifically approved in writing due to special unreasonably avoidable circumstances. Specific non-working holidays include New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving, and Christmas Day.

PART 2 - PRODUCTS

Not Used

PART 3 – EXECUTION

Not Used

PART 4 – MEASUREMENT AND PAYMENT

No payment will be made to Contractor for work of this section.

END OF SECTION

SECTION 01 14 23

COORDINATION WITH OCTA (THE AUTHORITY) AND LOCAL AGENCIES

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Requirements for coordination with the Authority and Local Agencies.

1.02 REGULATIONS

A. If additional work is being performed by others, on or adjacent to the work site for this Contract, coordinate work with other activities in order to avoid conflicts.

1.03 COORDINATION

- A. Coordination: Contractor shall coordinate the Work as stated in the Conditions of the Contract.
- B. Relationship of Contract Documents: Drawings, Specifications and other Contract Documents are intended to be complementary. What is required by one shall be as if required by all. What is shown or required, or may be reasonably inferred to be required, or which is usually and customarily provided for similar work, shall be included in the Work.
- C. Discrepancies in Contract Documents: In the event of error, omission, ambiguity or conflict in the Drawings or Specifications, Contractor shall bring the matter to the Authority's attention in timely manner, for the Authority's determination and direction in accordance with provisions of the Conditions of the Contract.
- D. Construction Interfacing and Coordination: Layout, Phasing, and Sequencing of Work shall be solely the Contractor's responsibility. Contractor shall bring together the various parts, components, systems and assemblies as required for the correct interfacing and integration of all elements of Work. Contractor shall coordinate Work to correctly and accurately connect abutting, adjoining, overlapping and related elements, including utilities, for a complete operational system to the satisfaction of the Authority, agencies, and companies. Do not block non-construction areas.
- E. Contractor shall notify the Authority a minimum of three (3) working days before excavation begin. The work shall be construction in phases where indicated on the contract drawings or specifications. A phase shall be completed and operational before proceeding to the next phase.

- F. The Contractor shall cooperate fully with all forces of the Authority and Local Agencies. Contractor should note that additional work is being conducted on site with other construction contracts and work of this contract must be coordinated amounts the trades and not additional compensation will be allowed for this coordination work.
- G. Unless otherwise directed, provide twenty (20) days notice of all utility outages and shutdowns. Duration of outages and shutdowns shall not hinder normal operations and maintenance of the facility. In case of accidental damage to power or utility lines, repair power or utility line immediately, provide alternate source of power to keep facility operation during the repair period.

1.04 GENERAL REQUIREMENTS

- A. Adhere to work window rules detailed in the approved SSWP under Section 01 14 22, Rules and Hours of Operation and the specifications.
- B. See Section 01 14 22, Rules and Hours of Operation

PART 2 - PRODUCTS

Not Used

PART 3 – EXECUTION

Not Used

PART 4 - MEASUREMENT AND PAYMENT

No separate measurement or payment shall be made under this section.

END OF SECTION

SECTION 01 14 25

PROCEDURES IN CONSTRUCTION

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Procedures used in performance of work of a general nature, including work by Contractor, Contractor use of work site, work zone limitations of site, and pollution controls.

B. Related Sections:

- 1. Section 01 14 23, Rules and Hour of Operation.
- 2. Section 01 14 27, Legal Relations and Responsibility.

1.02 WORK BY CONTRACTOR

- A. Provide work reasonably inferred from the drawings and specifications as being required to produce the intended result whether or not specifically called for.
- B. Work, materials, or equipment described in words which have known technical, or trade meaning shall be deemed to carry the accepted meaning of recognized standards.
- C. Complete all work enumerated under the contract including but not limited to the following:
 - 1. Perform work set forth in the contract documents, including the drawings and specifications.
 - 2. Obtain required permits, inspections, and certifications for material compliance.

1.03 SUBMITTALS

- A. All required submittals per OCTA Level 3 Health, Safety and Environmental Specification.
- B. Material Safety Data Sheets (MSDSs).

1.04 STORM WATER MANAGEMENT

A. Contractor is responsible for preventing and/or mitigating potential chemical releases, erosion and sedimentation impacts associated with storm water runoff. Contractor shall comply with the Statewide General Permit for Storm Water Discharges Associated with Industrial Activities (IGP) order number 2014-0057-DWQ or the latest order (See link below). Contractor shall prepare and submit a best management practices (BMP) plan for OCTA's review and acceptance; and shall implement BMP plan and maintain the BMPs for the duration of the project. See Section 01 57 13, Temporary Erosion and Sedimentation Control, for additional requirements.

(http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2014/wgo2014_0057_dwg_rev_mar2015.pdf).

- B. Use best management practices (BMPs) Contractor proposes in connection with the execution of construction activity at the project site. Use BMPs included in the Construction Site Best Management Practices (BMP) Manual prepared by the California Stormwater Quality Association, www.cabmphandbooks.com.
- C. Provide copies of the contractor's BMP plan to subcontractors and keep a copy available onsite at the project office. Provide amendments to the BMP plan when there is a change in construction or operations, or where storm water runoff conditions may affect the discharge of significant quantities of pollutants to surface waters, groundwater, or separate municipal storm sewer systems. Submit the amended BMP plan to the Authority for review and acceptance as soon as practicable and retain the amended plan on site.
- D. Preparation and implementation of an OCTA accepted BMP plan does not relieve the Contractor or subcontractors of their responsibilities to comply with state, county, and local governmental requirements, including those for storm water management and non-point source runoff controls.

1.05 MATERIAL SAFETY DATA SHEETS (MSDS)

- A. Material Safety Data Sheets (MSDSs) are prepared by manufacturers and suppliers of products that contain hazardous materials. Hazardous material is defined as any substance which is a physical or health hazard or is included in the Cal/OSHA Director's List of Hazardous Substances or is listed by the California EPA Office of Environmental Health Hazard Assessment under Title 27 of the California Code of Regulations, Section 27001, Chemicals Known to the State to Cause Cancer or Reproductive Toxicity.
- B. No hazardous materials shall be delivered, stored, or used at any work site or facility unless they are properly labeled, tagged, or marked and a copy of the MSDS has been provided to the Authority. Provide a copy of any updated MSDS to the Engineer immediately.

- C. Maintain a file of MSDSs at the work site. Keep MSDS files current; add new or updated MSDSs immediately and provide a copy to the Authority.
- D. See Contract Documents for OCTA Level 3 Health, Safety, and Environmental Specifications for additional requirements.

1.06 CONTRACTOR USE OF WORK SITE

- A. Coordinate access, use, and preparation of facilities adjacent to project areas with owners and agencies. Coordination shall include but not be limited to the following:
 - 1. Staging and laydown areas for use under this Contract are as specified or shown on the Drawings. Staging and laydown areas not covered in the Contract Documents shall be requested in writing and approved by the Authority. The Authority may or may not grant approval. No equipment may be operated, or materials stored or placed for any period of time in unfenced areas. Provide a fence to enclose each laydown or staging area within the right-of-way. Furnish the Authority with photographs of all staging and laydown areas to document their condition prior to start of work.
 - 2. Contractor shall submit construction staging plan as a part of SSWP for review and approval by OCTA. The staging plan must be accepted by the Authority prior to undertaking work in accordance with the staging plan.
 - 3. Prior to demobilization, restore to full serviceability fences, walls, signs, and gates affected by Contractor's access to the right-of-way.
- B. Confine work site operations to areas permitted by law, ordinances, permits, and the contract.
- C. Consider the safety of the work, OCTA patrons and property on and adjacent to the work site when determining amount, location, movement, and use of materials and equipment on work site.
- D. Do not load work site with excessive amounts of material, equipment, or other items which have the potential to interfere with the work or emergency vehicle access or otherwise create jobsite hazards and potential for theft or vandalism.
- E. Protect products, equipment, and materials stored on work site.
- F. Coordinate operations and secure, at no additional cost to the Authority, additional storage or work areas needed for proper execution of the work. Adhere to the noise levels and work hours of local ordinances.
- G. Protect the general public from work-related activities, and do not unnecessarily inconvenience those persons by work activities.
- H. Submit proposed locations of staging areas for the Authority's approval.

- Preserve drainage facilities throughout the duration of the work so that there is no ponding or accumulation of water in any work site area, there is no flow of water diverted out of normal drainage channels. Maintain culvert inlets and outlets free of debris.
- J. Preserve existing right-of-way fences and walls, and replace any fences or walls damaged during the work to the satisfaction of the owner(s) of the fences or walls.
- K. Provide and maintain barriers and chain-link fence around the work area as shown on the contract drawings.

1.07 WORK ZONE LIMITATIONS OF SITE

- A. In addition to site utilization limitations and requirements indicated in contract documents, divide available space equitably among subcontractors and other entities needing access and space so as to provide best overall efficiency in performance of total work of the project.
- B. Schedule deliveries so as to minimize space and time requirements for storage of materials and equipment on site, with minimal disruption to adjoining property owners and operations. Pick-up and delivery shall be conducted only during normal working hours and as approved by the Authority. Contractor shall provide 48-hours' notice to the Authority prior to delivery of equipment or materials to the project site.

1.08 POLLUTION CONTROLS

A. Conduct operations for the execution of the project in compliance with applicable Federal, State, and local regulations controlling pollution and noise levels related to construction work, in accordance with Section 01 14 27, Legal Relations and Responsibility.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

Not Used

PART 4 - MEASUREMENT AND PAYMENT

No separate measurement or payment shall be made under this section.

END OF SECTION

SECTION 01 14 27

LEGAL RELATIONS AND RESPONSIBILITY

PART 1 – GENERAL

1.01 SUMMARY

A. Section Includes:

- 1. Laws to be observed, fire prevention, protection of premises, use of explosives, access roads, construction roads, waste control, public relations, and pollution controls.
- 2. This section complements requirements in other sections.

1.02 LAWS TO BE OBSERVED

- A. Keep fully informed of State and Federal laws; county, municipal, and other local ordinances; regulations; and orders of authorities having jurisdiction that affect those engaged in the work, materials used in the work, or conduct of the work.
- B. Observe and comply with laws, ordinances, regulations, and orders of authorities having jurisdiction over the work. Contractor's responsibilities include causing Contractor's agents, employees, subcontractors, and visitors to observe and comply with these laws, ordinances, regulations, and orders.
- C. Protect and indemnify the Authority and its officers and employees against claims and liabilities arising from or based on Contractor's violation of a law, ordinance, regulation, or order.
- D. Report to the Authority, in writing within two days of discovery, discrepancies or inconsistencies discovered in the drawings, specifications, or contract documents in relation to laws, ordinances, regulations, or orders.

1.03 COORDINATION WITH UTILITIES

- A. Coordinate with utility companies to ensure that utility locations are clearly marked for the duration of construction activities.
- B. Fully comply with California Dig Alert requirements prior to commencing any dig related activities. (Reference https://www.digalert.org)

1.04 FIRE PROTECTION

- A. Comply with Federal, State, county, municipal, and other laws and regulations pertaining to the prevention, control, and fighting of fire and to the conduct of welding and burning operations. Procure all related permits and licenses.
- B. Supply fire-fighting equipment, supplies, and personnel and perform work required by laws and regulations pertaining to fire protection. If loss or damage results from fire or other cause, promptly repair loss or damage at no expense to the Authority.

1.05 PROTECTION OF PREMISES

- A. Take precautions necessary and be responsible for maintaining lights, guards, signs, temporary passages, or other protection. Protection of the jobsite is the sole responsibility of the contractor, from mobilization through final project turnover and the Authority's formal final acceptance of the Work.
- B. Restore loss or damage to materials, tools, or other articles used or held for use in connection with the work at no expense to the Authority.
- C. Restore loss or damage as a result of theft, vandalism, fire or other cause attributable to Contractor or subcontractors at no expense to the Authority. Promptly repair damage and restore loss to materials, tools, or other articles used or held for use in connection with the work. Carry the work to completion without damage to or interference with other work or contiguous property.

1.06 {Paragraph is Not Applicable}

A. N/A

1.07 WORK SITES AND WASTE MATERIAL

A. Obtain required approvals and bear costs of location, construction, maintenance, operation, removal, and transportation of sanitation facilities and waste material from work sites. Sanitation shall conform to local, State, and Federal requirements. Maintain work sites in a neat and orderly condition.

Before starting work, submit to the Authority a contingency plan for cleanup of accidental spillage of toxic or detrimental materials and for restoration of soil damaged thereby to near-natural conditions. Conduct the handling, storage, and disposal of waste material so as to avoid pollution of rivers, streams, ponds, or wells, and in compliance with local, State, and Federal environmental laws and regulations.

1.08 PUBLIC RELATIONS, CONVENIENCE, AND NOTICE OF DAMAGE

- A. Conduct operations so as to offer the least possible obstruction and inconvenience to the public. Have under construction no greater length or amount of work than can be prosecuted properly with due regard to the rights of the public. Control temporary noise from construction equipment by using work hour controls and maintenance of muffler systems on machinery as necessary.
- B. Provide, at Contractor's expense, adequate safeguards, safety devices, and protective equipment, and take other needed action, both at Contractor's own volition and as the Authority may determine reasonably necessary, to protect property, life, health, and public safety in connection with the performance of the work covered by the contract.
- C. Notify the Authority in writing within 24 hours after causing injury to persons or damage to public or private property, including above and below ground structures. Contractor shall be responsible and liable for all damages and injuries.

1.09 ENVIRONMENTAL AND ANTI-POLLUTION

- A. Comply with Federal, State, county, municipal, and other local laws and regulations pertaining to the environment, including noise, aesthetics, air quality, water quality, and resources of archaeological significance. Refer also to Section 01 14 43 Environmental Resource Protection for additional requirements. Expense of compliance with these laws and regulations is included in the lump sum and unit prices. Provide water used for dust control, or for pre-wetting areas to be paved, as required; no payment will be made by the Authority for this water.
- B. Carry out grading and other work in a manner which will not create a pollution problem. Temporary construction roads, haul roads, and work areas shall be maintained free from excessive dust by an approved program of sprinkling, graveling, chemical treatment, temporary asphalt pavement, or combination thereof for the duration of the work.
- C. Give attention to the effect of work operations upon the landscape, and take care to maintain natural surroundings undamaged. Disturbances of land or waters outside the limits of construction shall be rehabilitated by Contractor at its expense, when and as directed by the Authority.
- D. Prevent pollution of storm drains, rivers, streams, irrigation ditches, and reservoirs with sediment or other harmful materials. Fuels, oils, bitumen, calcium chloride, cement, or other contaminants that would contribute to water pollution shall not be dumped into or placed where they will leach into storm drains, rivers, streams, irrigation ditches, or reservoirs. If operating equipment in streambeds or in and around open waters, protect the quality of ground water, wetlands, and surface waters.

- E. Protect adjacent properties and water resources from erosion and sediment damage throughout the duration of the contract. Comply with any applicable Environmental Protection Agency (EPA) or National Pollutant Discharge Elimination System (NPDES) permits and Best Management Practices (BMP) requirements. See Section 01 14 25, Procedures in Construction, and Section 01 57 13, Temporary Erosion and Sedimentation Control.
- F. Do not conduct construction activities outside the right-of-way during muddy or wet ground conditions.
- G. If archaeological remains are uncovered during construction, stop grading operations in the vicinity of the find and immediately notify the Authority. Refer to Section 01 14 43, Environmental and Resource protection for additional requirements.
- H. Costs associated with environmental and pollution control measures are considered incidental to the contract work, at no additional cost to the Authority.
- I. Take the following actions and others as necessary to control environmental pollution:
 - Reduce air pollution by minimizing dust, containing chemical vapors, and controlling engine exhaust gases. Limit idling of machinery as directed by the Authority.
 - 2. Reduce water pollution by control of sanitary facilities and proper storage of fuel and other contaminants.
 - 3. Reduce turbidity and siltation by controlling erosion and sedimentation.
 - 4. Minimize noise levels.
 - 5. Dispose of waste and spoil properly.
 - 6. Prevent landscape defacement and damage.
- J. Comply with South Coast Air Quality Management District (SCAQMD) Rule 403 to control fugitive dust emissions. In addition to the requirements contained therein, comply with the following:
 - 1. Water all land clearing/earth moving activity areas to control dust as required by the Authority. Areas shall remain visibly moist during active operations.
 - 2. Visually inspect construction equipment prior to leaving work sites. Wash off any loose dirt with wheel washers as necessary.
 - 3. Properly tune and maintain all construction equipment in accordance with manufacturer's specifications.

- 4. Maintain and operate construction equipment so as to minimize exhaust emissions. During construction activities, trucks and vehicles in loading and unloading queues shall have their engines turned off when not in use to reduce noise and exhaust emissions.
- 5. Establish on-site construction equipment staging areas and construction worker parking lots on either paved surfaces or unpaved surfaces treated with soil stabilization materials.
- 6. Use electricity from power poles where feasible, rather than temporary diesel or gasoline powered generators. Muffle noise from generators to the extent practical.
- 7. Use on-site mobile equipment powered by alternative fuel sources, such as ultralow sulfur diesel, methanol, natural gas, propane or butane.
- 8. Upon Contractor's completion and commissioning of electrical power system, in coordination with Southern California Edison (SCE), contractor shall be allowed to utilize power system for construction power, at which time the associated monthly power consumption billing from SCE shall be paid directly to SCE by the Authority as incentive for contractor to complete the associated work on or ahead of schedule.

PART 2 - PRODUCTS

Not Used

PART 3 – EXECUTION

Not Used

PART 4 – MEASUREMENT AND PAYMENT

- A. There will be no separate measurement for work of this section.
- B. Full compensation for all work involved shall be included in the various items of work, and no separate payment shall be allowed therefor.

END OF SECTION

SECTION 01 14 43

ENVIRONMENTAL RESOURCE PROTECTION

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Protection of species habitat.
 - 2. Protection of archaeological resources.
 - 3. Protection of paleontological resources (fossils).
 - 4. Protection of human remains.
 - 5. Protection from previously existing contamination.
 - 6. Prevention of fuel spills and hazardous material spills.
 - 7. Prevention of stored fuel leaks.
 - 8. Protection of stormwater quality and control of stormwater quantity.
 - 9. Prevention of traffic impacts.
 - 10. Prevention of road damage.
 - 11. Prevention of fugitive dust.
 - 12. SCAQMD requirements.
 - 13. Disposal of refuse.
- B. Related Sections:
 - 1. Section 01 14 25, Procedures in Construction.
 - 2. Section 01 14 27, Legal Relations and Responsibility.

1.02 SUBMITTALS

- A. Submit under Section 01 33 00, Submittal Procedures.
- B. Written commitment to clean up leaks of fuel or hazardous materials.

C. Traffic Management plan.

1.03 GENERAL

- A. Provisions of this section are required to reduce or avoid potential environmental impacts of the project, in accordance with environmental mitigation measures imposed by the Authority and other responsible agencies.
- B. This section summarizes required mitigation. Proceed with mitigation only after consultation with the Authority and Contractor's biological, archaeological, and geological consultants.

PART 2 - PRODUCTS

Not Used

PART 3 – EXECUTION

3.01 PROTECTION OF SPECIES HABITAT

- A. Avoid placement of construction equipment and personnel within environmentally sensitive habitat areas used by target species of concern. Activities that cannot be conducted without placement of construction equipment and personnel within sensitive habitats shall be timed to avoid the breeding season of the target species of concern. Coordinate such activities and their timing with the Authority.
- B. Locate equipment storage, fueling and staging areas to minimize risks of direct drainage or runoff into riparian areas or other environmentally sensitive habitats. Take every precaution to prevent the release of toxic substances into surface waters. Report immediately all project spills of hazardous materials to the Authority, US Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and Regional Water Quality Control Board (RWQCB). Immediately clean up hazardous materials and remove all contaminated soils; dispose of only at approved disposal sites.
- C. Stockpiling and staging of materials shall be limited to disturbed areas without native vegetation, areas to be impacted by the project or in non-sensitive habitats.
- D. Establish No-Fueling zones within a minimum of 10 meters (33 feet) from all drainages and fire-sensitive areas.
- E. Maintain project areas clean of debris to avoid attracting predators of the target species of concern. Enclose all food related trash in sealed containers and regularly

remove from site. Pets of construction personnel shall not be allowed on site where they may come into contact with any listed species.

- F. If dead or injured listed species are located, biologist, in consultation with the Authority, will notify the USFWS and the CDFG according to required protocols. Obtain instructions form the Authority on how to proceed following such discovery.
- G. Nesting avian species protected by the Migratory Bird Treaty Act (MBTA):
 - 1. For any construction activities or vegetation removal between February 15 and August 31, a nesting bird survey shall be conducted by contractor's qualified biologist of all habitats within 250 feet of the construction area. Surveys shall be conducted no less than 14 days and no more than 30 days prior to commencement of construction activities and vegetation removal. The nesting bird surveys will be conducted in accordance with CDFG protocol as applicable. If no active nests are identified on or within 250 feet of the construction site, no further mitigation is necessary. A copy of the pre-construction survey shall be submitted to the local agencies' jurisdiction. If an active nest of a MBTA protected species is identified onsite (per established thresholds) a 100-foot no-work buffer shall be maintained between the nest and construction activity. This buffer can be reduced in consultation with CDFW and/or USFWS.
 - 2. Completion of the nesting cycle shall be determined by qualified ornithologist or biologist.

3.02 PROTECTION OF ARCHAEOLOGICAL RESOURCES

A. If evidence of an archaeological site or other suspected historical resource as defined by CEQA Guidelines Section 15064.5, including darkened soil representing past human activity, that could conceal material remains (e.g., worked stone, fired clay vessels, faunal bone, hearths, storage pits, or burials) are discovered during any project-related earth-disturbing activities (including projects that would not encounter undisturbed soils), all earth-disturbing activity within 100 feet of the find shall be halted and the Authority shall be notified.

3.03 PROTECTION OF PALEONTOLOGICAL RESOURCES (FOSSILS)

A. Should paleontological resources (i.e., fossil remains) be identified at a particular site during project construction, the construction foreman shall cease construction within 100 feet of the find until a qualified professional can provide an evaluation.

3.04 PROTECTION OF HUMAN REMAINS

A. In the event of the discovery of human remains during construction, procedures outlined in Section 15064.5(e) of the CEQA Guidelines shall be strictly followed. Upon discovery all excavation at the site or any nearby area reasonably

suspected to overlie human remains shall cease immediately. Notify the Authority immediately. The Authority will notify County Coroner who will determine if remains are Native American. If the remains are determined to be Native American, the coroner will contact the Native American Heritage Commission (NAHC). The NAHC will identify the Most Likely Descendent (MLD). The MLD will make recommendations for the appropriate treatment and disposition of the remains and any associated artifacts in accordance with Public Resources Code (PRC), Section 5097.98. Do not commence construction in the area until notified to do so by the Authority.

3.05 PROTECTION FROM PREVIOUSLY EXISTING CONTAMINATION

A. In the event that previously unknown or unidentified soil and/or groundwater contamination that could present a threat to human health or the environment is encountered during construction of the proposed project, construction activities in the immediate vicinity of the contamination shall cease immediately. If contamination is encountered, a Risk Management Plan shall be prepared and implemented that (1) identifies the contaminants of concern and the potential risk each contaminant would pose to human health and the environment during construction and post development and (2) describes measures to be taken to protect workers, and the public from exposure to potential site hazards. Such measures could include a range of options, including, but not limited to, physical site controls during construction, remediation, long-term monitoring, post development maintenance or access limitations, or some combination thereof. Depending on the nature of contamination, if any, appropriate agencies shall be notified. If needed, a Site Health and Safety Plan that meets Occupational Safety and Health Administration requirements shall be prepared and in place prior to commencement of work in any contaminated area.

3.06 PREVENTION OF FUEL SPILLS AND HAZARDOUS MATERIAL SPILLS

- A. Store fuel, hazardous materials, and chemicals of all types in a contained staging area in full compliance with all applicable OSHA, EPA, NFPA and other governing regulations
- B. Conduct equipment refueling and maintenance in the contained staging area.
- C. Check vehicles daily for leaks.

3.07 PREVENTION OF STORED FUEL LEAKS

- A. Provide berms or other secondary containment at fuel/chemical storage areas in full compliance with all applicable OSHA, EPA, NFPA and other governing regulations.
- B. Test storage tanks, valves, etc., for leaks.

C. Submit a written commitment to provide labor, equipment, and materials to promptly clean up any leakage.

3.08 PROTECTION OF STORMWATER QUALITY AND CONTROL OF QUANTITY

- A. Comply with the stormwater quality plan prepared before issuance of construction permits. The plan will incorporate the state's industrial best management practices and other techniques if more effective. Refer to Section 01 14 25 Procedures in Construction for additional requirements.
- B. Runoff from impervious areas is to be detained, treated to industrial standards, and released under control.

3.09 PREVENTION OF TRAFFIC IMPACTS

- A. The Contractor shall prepare and submit a Traffic Management Plan in conjunction with local jurisdictions addressing the following:
 - 1. Detours.
 - 2. Coordination with any other construction projects.
 - 3. Length and timing of street closures.
 - 4. Coordination with police and fire departments regarding changes in emergency access routes.
 - 5. Temporary access routes and signage for any affected commercial property.
 - 6. Contact information for the Authority, contractors, and their personnel.
- B. Conform to all conditions required therein. The Authority in advance of any constructions activities that could potentially violate the requirements and conditions set forth in the plan.
- C. Construction parking shall be configured to minimize traffic interference during the construction period and, therefore, reduce idling of traffic.
- D. Temporary traffic controls are provided, such as a flag person, during all phases of construction to facilitate smooth traffic flow.
- E. Construction activities that affect traffic flow on the arterial system be scheduled to off-peak hours (10:00 A.M. to 4:00 P.M.).
- F. To ensure adequate access for emergency vehicles when construction activities would result in temporary lane or roadway closures, the contractor shall consult with the local agencies, Police and Fire Departments to disclose temporary lane or

roadway closures and alternative travel routes. The contractor shall be required to keep a minimum of one lane in each direction free from encumbrances at all times on perimeter streets accessing the project site. If construction activities require the complete closure of a roadway segment, the Contractor shall coordinate with the local agencies, Police and Fire Departments to designate proper detour routes and signage indicating alternative routes.

3.10 PREVENTION OF ROAD DAMAGE

- A. Before and after offsite road and utility construction, videotape the affected roadway and its access roads.
- B. Temporarily repair roadway damage caused during construction.
- C. Permanently restore damaged roadway to its original condition immediately after offsite improvements are completed.
- D. Establish construction truck routes with local jurisdictions before beginning offsite work. Refer to Section 01 14 27 Legal Relations and Responsibility for additional requirements.
- E. Consult with local jurisdictions to coordinate offsite work with other projects in the vicinity.

3.11 SCAQMD REQUIREMENTS

- A. Refer to Section 01 14 27 Legal Relations and Responsibility for these requirements.
- B. All diesel-powered equipment used will be retrofitted with after-treatment products (e.g., engine catalysts).
- C. All heavy-duty diesel-powered equipment operating and refueling at the project site use low-NOX diesel fuel to the extent that it is readily available and cost effective (up to 125 percent of the cost of California Air Resources Board diesel) in the South Coast Air Basin (this does not apply to diesel powered trucks traveling to and from the project site).
- D. Construction equipment engines be maintained in good condition and in proper tune per manufacturer's specification for the duration of construction.
- E. Construction operations rely on the electricity infrastructure surrounding the construction site rather than electrical generators powered by internal combustion engines.
- F. As required by South Coast Air Quality Management District Rule 403—Fugitive Dust, all construction activities that are capable of generating fugitive dust are required to implement dust control measures during each phase of project

development to reduce the amount of particulate matter entrained in the ambient air. These measures include the following:

- 1. Application of soil stabilizers to inactive construction areas.
- 2. Quick replacement of ground cover in disturbed areas.
- 3. Watering of exposed surfaces three times daily.
- 4. Watering of all unpaved haul roads three times daily.
- 5. Covering all stockpiles with tarp.
- 6. Reduction of vehicle speed on unpaved roads.
- 7. Post signs on-site limiting traffic to 15 miles per hour or less.
- 8. Sweep streets adjacent to the project site at the end of the day or hourly per Section 01 14 27, 1.10 J if visible soil material is carried over to adjacent roads.
- 9. Cover or have water applied to the exposed surface of all trucks hauling dirt, sand, soil, or other loose materials prior to leaving the site to prevent dust from impacting the surrounding areas.

3.12 PREVENTION OF NOISE IMPACTS

- A. Limit noise-producing activities to hours required by the local jurisdictions for construction activities.
- B. Construction-related equipment, including heavy-duty equipment, motor vehicles, and portable equipment, shall be turned off when not in use for more than 30 minutes. Diesel-fueled commercial motor vehicles with gross vehicular weight ratings of greater than 10,000 pounds shall be turned off when not in use for more than 5 minutes.
- C. Contractor shall require by contract specifications that the following construction best management practices (BMPs) be implemented by contractors to reduce construction noise levels:
 - 1. Ensure that construction equipment is properly muffled according to industry standards and be in good working condition.
 - 2. Schedule high noise-producing activities between the hours of 8:00 A.M. and 3:30 P.M. to minimize disruption on sensitive uses, Monday through Friday.
 - 3. Use electric air compressors and similar power tools rather than diesel equipment, where feasible.

- 4. Construction-related equipment, including heavy-duty equipment, motor vehicles, and portable equipment, shall be turned off when not in use for more than 10 minutes.
- 5. Construction hours, allowable workdays, and the phone number of the job superintendent shall be clearly posted at all construction entrances to allow for surrounding owners and residents to contact the job superintendent. If the City or the job superintendent receives a complaint, the superintendent shall investigate, take appropriate corrective action, and report the action taken to the reporting party.

3.13 DISPOSAL OF REFUSE

The Contractor shall establish a construction management plan with Disposal Company to have a waste diversion minimum of 65 percent for construction, demolition, and site clearing waste. Contractor shall record and provide all disposal receipts to the Authority. Reference https://ocrecycleguide.com/RecycleGuide/15 and CALGreen Sections 4.408 and 5.408

PART 4 - MEASUREMENT AND PAYMENT

No separate measurement or payment will be made for the work of this section.

END OF SECTION

SECTION 01 25 00

SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.02 SUMMARY

A. Section Includes:

1. Administrative and procedural requirements for requesting substitutions.

B. Definitions:

- 1. Substitutions: Requests by the Contractor to deviate from specified requirements for products, material, equipment, and methods, or to provide products other than those specified, shall be considered requests for substitutions, limited to the following conditions:
 - a. Substitutions requested during the bidding period and accepted prior to the execution of the Contract.
 - b. Substitutions requested after execution of the Contract.
- C. Substitution Provisions: Refer to substitution provisions of the Instructions to Bidders, in addition to the following specific requirements.
- D. Per Article 19. Assignments and Subcontracts: Contractor shall not have the right to make any substitutions of any subcontractor listed in Exhibit D, entitled "List of Subcontractors," except in accordance with the provisions of the Subletting and Subcontractors Fair Practices Act, Public Contract Code section 4100 et. seq. the Authority's consent shall not be deemed to relieve Contractor of its obligation to fully comply with the requirements of this Agreement.

E. Substitution Request Submittal Period:

1. Time Limit:

- a. Substitutions requested during Bidding Period: The Authority will consider requests for substitutions if received during bidding. Request permission for substitutions from the Authority per provisions of the Instructions to Bidders. If approved, the Authority will issue an addendum allowing all bidders to incorporate the request substitution.
- Substitutions requested after execution of Contract: Only within 14 calendar days of the Notice to Proceed will the Authority and the Engineer consider requests for substitutions, requests submitted after this will be denied.

2. Product Availability Waiver: Substitutions will be considered 21 calendar days of execution of the Agreement only when a product becomes unavailable due to no fault of the Contractor. Failure to place orders for specified products sufficiently in advance of required date for incorporation into the Work will not be considered as a valid reason for which Contractor may request a substitution or deviation from requirements of the Drawings and Specifications.

1.02 SUBMITTAL REQUIREMENTS

- A. Substitution Requests: The Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect and in accordance with a Change Order or Construction Change Directive. No Substitutions shall be allowed as part of a bid unless formally accepted and issued within a formal bid addendum.
 - Submit three copies of each request for consideration to the Authority. Identify product or fabrication or installation method proposed for substitution. Include specification section number and title and drawing numbers and titles.
 - 2. Substitution Request Form: Contractor shall formally submit any proposed substitutions for the Authority's approval outlined with Construction Specifications Institute (CSI) form "13.1a."
 - 3. Documentation: Substitutions will not be considered when they are indicated or implied on shop drawings, product data or sample submittals without a separate written request, or when acceptance will require substantial revision of the Contract Documents. Show compliance with requirements and the following, as applicable:
 - a. Statement indicating why specified material or product cannot be provided.
 - b. Coordination information, including a list of changes or modifications needed to other parts of the work and to construction performed by the Authority and separate contractors, which will be necessary to accommodate proposed substitution.
 - c. Detailed comparison of significant qualities of proposed substitution with those of the work specified. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated or specified.
 - d. Product data, including drawings and descriptions of products and fabrication and installation procedures.
 - e. Samples, where applicable or requested.

- f. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.
- g. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated or specified.
- h. Research/evaluation reports evidencing compliance with building code in effect for project, from a model code organization acceptable to Inspector and authorities having jurisdiction.
- i. Detailed comparison of Contractor's Construction Schedule using proposed substitution with products specified for the work, including effect on the overall contract time. If specified product or method of construction cannot be provided within the contract time, include letter from manufacturer, on manufacturer's letterhead, stating lack of availability or delays in delivery.
- j. Cost information, including a proposal of change, if any, in the contract sum.
- k. Contractor's certification that Contractor has investigated proposed substitution and that it complies with requirements in the contract documents and is appropriate for applications indicated. Contractor further certifies that Contractor will provide the same or better guarantee or warranty as for specified product or method of construction. Contractor shall also certify that Contractor will coordinate installation of accepted substitution into work, making any changes as may be required for work to be complete in all respects as specified.
- I. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
- m. Only one request for substitution will be considered for each product.
- n. If the proposed substitution is not accepted, provide the specified product.
- 4. The Authority's Action: If necessary, the Authority will request additional information or documentation for evaluation within 7 days of receipt of a request for substitution. The Authority will notify Contractor of acceptance or rejection of proposed substitution within 15 days of receipt of request, or 7 days of receipt of additional information or documentation, whichever is later.
 - a. Form of Acceptance: Change Order, if costs involved; otherwise, written approval.
 - b. Use product specified if the Authority is unable to accept the proposed substitution within time allocated.

1.03 COMPARABLE PRODUCTS

A. See Section 01 60 00, Product Requirements, for discussion of comparable products.

1.04 PRODUCT SUBSTITUTIONS

- A. The Authority will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, the Authority will return requests without action, except to record noncompliance with these requirements:
 - 1. Requested substitution is submitted within the time frame stated herein above.
 - Requested substitution offers OCTA a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities OCTA must assume. OCTA's additional responsibilities may include compensation to consultants for redesign and evaluation services, increased cost of other construction by OCTA, and similar considerations.
 - 3. Requested substitution does not require extensive redesign of the project or revisions to the contract documents.
 - 4. Requested substitution is consistent with the contract documents and will produce indicated results.
 - 5. Substitution request is fully documented and properly submitted.
 - 6. Requested substitution will not adversely affect Contractor's Construction Schedule.
 - 7. Requested substitution has received necessary approvals of authorities having jurisdiction.
 - 8. Requested substitution is compatible with other portions of the work.
 - 9. Requested substitution has been coordinated with other portions of the work.
 - 10. Requested substitution provides specified warranty.
 - 11. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
- B. Substitutions will not be considered if they are indicated or implied on shop drawings or project data submittals or Requests for Information without formal submittal request detailed in this section.

1.05 AVAILABILITY OF SPECIFIED ITEMS

- A. Prior to execution of Contract, Contractor shall verify that all specified items will be available as required by the schedule for orderly and timely progress of the work. Notify the Authority if specified items will not be available.
- B. Costs of delays because of non-availability of specified items, when such delays could have been avoided by the Contractor, will deducted from amounts due or to become due the contractor, and will not be borne by OCTA.
- C. Substitutions during construction for prior approved items will only be considered under the following circumstances:
 - 1. Substitution is required for compliance with subsequent interpretation of code.
 - 2. Specified item cannot be provided within the contract time or becomes unavailable through no fault of contractor.
 - 3. Subsequent information discloses that specified item or system will not perform properly or fit in designated space, or manufacturer or supplier refuses to certify or warrant performance as required.

PART 2 – PRODUCTS

Not Used.

PART 3 – EXECUTION

Not Used

PART 4 – MEASUREMENT AND PAYMENT

- A. No separate measurement will be made for the work of this section.
- B. No separate payment will be made for the work of this section.

END OF SECTION

SECTION 01 26 00

CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

Administrative and procedural requirements for handling and processing contract modifications.

B. Related Sections:

- 1. Reference Article 13. Changes as written within the Contract Agreement.
- 2. Exhibit A: SECTION V: GENERAL PROVISIONS
- 3. Section 01 60 00, Product Requirements, for procedures to approve comparable products.
- 4. Section 01 25 00, Substitution Procedures, for procedures to propose substitutions.
- 5. Section 01 26 13 Requests for Information, for procedures to clarify and interpret the contract documents.

1.02 MINOR CHANGES IN THE WORK / FIELD ORDERS

A. The Authority will issue supplemental instructions authorizing minor changes in the work, not involving adjustment to the Contract Price or the Contract Time, in written form.

1.03 DOCUMENTATION OF CHANGES IN AGREEMENT PRICE AND AGREEMENT TIME

- A. Documentation of Changes in Contract Sum and Contract Time: Contractor shall provide full information required for evaluation of proposed changes and to substantiate costs of changes in the Work.
 - Maintain detailed records of Work completed on time and material basis. Contractor shall use "Daily Extra Work Report" provided by the Authority. All extra work reports shall be signed by the Authority and the Contractor verifying all extra materials and labor incorporated into the project at the end of each workday.
 - 2. Document each quotation for a change in Contract Sum and Contract Time, with sufficient cost breakdown data for labor, materials, and equipment to allow evaluation of the quotation.

- 3. Provide details of cost of all material used for change in work. Provide detail of labor hours expended in change of work, and wage rate of worker. Provide total of hours equipment was used in the work, and hourly rate of the equipment.
- B. Additional Data: Upon request by the Engineer, provide additional data to support computations:
 - 1. Quantity of product, material, labor, and equipment.
 - 2. Overhead and profit (20% includes all superintendence, taxes, insurance, bonds, overhead and profit, etc.). 20 percent overhead and profit shall be divided between Contractor and sub-contractor(s).
 - 3. Justification for change in Contract Time, if claimed.
 - 4. Credit for deletions from Contract, similarly documented.

1.04 CHANGE PROCEDURES

- A. Change Procedure General: The following describe administrative procedures to be followed in complying with provisions of the Conditions of the Contract for changes in the Work.
- B. The Engineer's Supplemental Instructions: Minor changes in the Work, not involving an adjustment in either the Contract Sum or Contract Time, as authorized by the Conditions of the Contract. The Contractor shall take prompt action on such instructions.
- C. OCTA Initiated Proposal Requests: The Authority will issue a detailed description of proposed changes in the work that may require adjustment to the Contract Price or the Contract Time. If necessary, the description will include supplemental or revised drawings and specifications.
 - 1. Proposal Requests issued by the Authority are not instructions either to stop work in progress or to execute the proposed change.
 - 2. Proposal Request may include an estimate of additional or deductions in Contract Sum or Contract Time for executing the change and may include stipulations regarding overtime work and period of time the requested response from the Contractor shall be considered valid.
 - a. Within time specified in Proposal Request or five (5) calendar days, when not otherwise specified, after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Price and the Contract Time (cost proposal) necessary to execute the change. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases

and credits to be made. If requested, furnish survey data to substantiate quantities.

- b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
- c. Include costs of labor and supervision directly attributable to the change.
- d. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
- e. Submit name of individual authorized to receive construction change documents and who is responsible for informing others in Contractor's employ or subcontractors of changes in the Work.
- f. Quotation Form: Use forms acceptable to the Authority. Quotations shall include detailed unit-cost breakdowns and, if applicable, be in compliance with contractor's rate sheets.
- g. All cost proposal preparation, field visits, submittals for change orders shall be included in contractor's cost proposal.
- D. Upon the Authority's approval of a Proposal Request, the Authority will issue a Change Order for signatures of the Authority and Contractor. The Authority and Contractor will sign the Change Order indicating acceptance and approval of the change.

1.05 WORK CHANGE DIRECTIVE

- A. Work Change Directive: In accordance with provisions of the Conditions of the Contract, the Authority may issue a Work Change Directive. A Work Change Directive instructs Contractor to proceed with a change in the work, for subsequent inclusion in a Change Order.
- B. Work Change Directive contains a complete description of change in the work. It also designates method to be followed to determine change in the Contract Price or the Contract Time. Contractor shall promptly execute the change in the Work.
- C. Changes Based on Stipulated Sum or Time: Construction Change Directive shall be based on stipulated adjustment in Contract Sum and Contract Time as mutually acceptable to the Authority and Contractor and the change shall be performed immediately. A Change Order for this amount shall be executed at the earliest convenience of all parties. Contractor shall provide a cost estimate based on section 1.03 of this section.

- D. Changes Based on Unit Costs or Quantities: When scope of change cannot be accurately determined in advance, a Construction Change Directive shall be executed based on mutually acceptable quantities and pre-determined unit prices. Actual costs shall be determined after completion of the Work and a Change Order for this amount shall be executed.
- E. Changes Based on Time and Material Costs: If directed for changes for which amounts are not defined or are disputed, a Construction Change Directive will be issued by the Authority and Contractor shall execute the Work, keeping accurate records of time, both labor and calendar days, and cost of materials. See Section 1.03. A. 1.
- F. Cost and Time Resolution: If amounts for changes in Agreement price and Agreement time cannot be agreed upon by the Authority and Contractor, amounts shall be resolved in accordance with requirements of the Conditions of the Contract for resolution of disputes.
- G. Documentation: Maintain detailed records on a time and material basis of work required by the Work Change Directive. The total construction cost of the change shall not exceed the mutually agreed adjustment in Contract Sum and Contract time of the Change Order.
- H. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the contract.

1.06 CHANGE ORDER

- A. Change Orders, General:
 - 1. In accordance with provisions of the Conditions of the Contract, the Engineer and Authority will review Contractor's response to a Proposal Request or a Construction Change Directive and determine with the Contractor the acceptable amount, if any, of the change in Contract Sum and Contract Time.
 - 2. When agreement is reached on the change in Contract Time and Sum, the Engineer will prepare a Change Order, with supplementary documents (Contractor's cost estimate) as necessary to describe the change and the associated costs and schedule impacts, if any.
 - 3. The Authority and Contractor will sign the Change Order indicating acceptance and approval of the change.

1.07 RECONCILIATION OF CHANGE ORDER

A. Schedule of Values: Promptly revise the Schedule of Values and Application for Payment forms to record each authorized Change Order as a separate line item and adjustment to the Contract Sum.

- B. Schedules: Promptly revise progress schedules to reflect changes in Contract Time, revising sub-schedules to adjust time for other items of Work as may be affected by the change. Submit revised schedules at the next Application for Payment following approval and acceptance of the Change Order.
- C. Change in work due to request for information, or any other reason shall not be reason for claims of delays by the contractor. The Authority shall endeavor to respond to request for information within seven (7) days, and an additional fourteen (14) days to make necessary changes to resolve changes in work and change orders. The Authority shall issue an official change order within 30 calendar days following OCTA's approval.

PART 2 - PRODUCTS

Not Used.

PART 3 – EXECUTION

Not Used.

PART 4 - MEASUREMENT AND PAYMENT

Not Used.

END OF SECTION

SECTION 01 26 13

REQUESTS FOR INFORMATION

PART 1 - GENERAL

1.01 DESCRIPTION

A. Section Includes:

1. The general requirements for Contractor's requests for information and pertains to all portions of the contract documents.

1.02 **DEFINITION**

- A. A "Request for Information" is defined as a document submitted by the Contractor requesting clarification of a portion of the contract documents, hereinafter referred to as RFI.
- B. All questions and requests for clarification of the Contract Documents from the contractor and subcontractors shall be submitted in writing as a "Request for Information".

1.03 CONTRACTOR'S REQUESTS FOR INFORMATION (RFI)

- A. When the Contractor is unable to determine from the contract documents, the exact material, process or system to be installed, the Contractor shall request the Authority to make a clarification of the indeterminate item. Wherever possible, such clarification shall be requested at the next appropriate project meeting, with the response entered into the meeting minutes. When clarification at the meeting is not possible, either because of the urgency of the need or the complexity of the item, the Contractor shall prepare and submit an RFI to the Authority.
- B. RFI's shall be submitted on a form provided by the Authority. The Contractor will be given the form electronically upon Notice to Proceed.
- C. RFI forms shall be completely filled in, and if prepared by hand, shall be fully legible after photocopying. Each page of attachments to RFI's shall bear the contract number, project name, RFI number. Each RFI shall reference a drawing number and/or Specification Section. The Contractor shall include sketches, mark ups on the contract drawings, and/or photographs to clearly demonstrate its requests or questions in each RFI. Contractor shall indicate on the RFI the date by which response is required.
- D. RFI's from Subcontractors or Material suppliers shall be submitted through, reviewed by, and signed by the Contractor prior to submittal to the Authority.

- E. Prior to submitting an RFI, the Contractor shall carefully study the Contract Documents to assure that the requested information is not available therein. Contractor shall be responsible for insuring that RFI's are not frivolous or excessive.
- F. Frivolous RFIs: Frivolous RFIs include requests for information shown in the contract documents or resulting from Contractor's failure to study and compare contract documents or to coordinate its own work; and RFIs that are incomplete, contain errors, or include unrelated items. The cost in time and materials on the part of the Authority and related design professionals to review unnecessary or frivolous RFIs will be assessed and deducted from the Contractor's final payment.
- G. RFI's shall not be used for the following purposes:
 - 1. To request approval of submittals.
 - 2. To request approval of substitutions.
 - 3. To request changes which entail additional cost or credit or changes in the contract time.
 - 4. To request different methods of performing work than those shown or specified.
- H. In the event the Contractor believes that a clarification by the Authority results in additional cost, the Contractor shall not proceed with the Work indicated by the RFI until a Change Order is prepared and approved. Answered RFI's shall not be construed as approval to perform extra work.
- I. RFIs submitted to request clarification of issues related to means, methods, techniques, and sequencing of construction, or to establish scope of subcontractors' work will be returned without response.
- J. Unanswered RFI's will be returned with a stamp or notation indicating: "Not Reviewed."
- K. Assign each RFI a sequential number starting from 001. Contractor shall prepare and maintain a log of RFI's and, at any time requested by the Authority, Contractor shall furnish copies of the log showing all outstanding RFI's. Contractor shall also note all unanswered RFI's in the log.
- L. Contractor shall allow for 14 calendar days review and response time for RFI's.

1.04 RESPONSE TO RFI'S

A. The Authority's response to RFIs will be in writing. RFIs received after 12:00 noon will be considered as received on the following working day for purposes of establishing the start of the 14-day response time. The Authority's response may

include a request for additional information, in which case the Authority's time for response will date from time of receipt of additional information.

- B. No extension of time will be granted because of Contractor's failure to submit RFIs in a timely manner or to allow a sufficient amount of time for review.
- C. The Authority's response will confirm a stated interpretation or solution or otherwise interpret the design intent; this may include an alternative solution, consistent with the design intent of the Contract Documents. Where such a solution would result, in the contractor's opinion, in an extra cost or time extension to the project, contractor shall notify the Authority prior to implementing the response.
- D. Each RFI and the Authority's response shall become a part of the Contract Documents. To the extent that the Authority's response changes, modifies, or amends any portion of the Contract Documents, the response shall be deemed sufficient. No revised Contract Documents will be issued unless the RFI response is insufficient in providing direction to the Contractor. Whenever possible, revised contract documents will be issued in 8-1/2x11 inch or 11x17 inch size, suitable for inclusion with the RFI response. Re-issuance of full size drawings or sets of drawings will be kept to an absolute minimum.

1.05 VERBAL COMMUNICATIONS

A. Any verbal instructions given to the Contractor on the job site by any person other than the Authority's personnel is subject to nullification by the Authority. Contractor shall obtain written documentation of any and all verbal instructions (especially if instructions may reflect an addition to or deduction from the contract sum) from the Authority prior to commencement of the work resulting from the verbal instructions.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

Not Used.

PART 4 - MEASUREMENT AND PAYMENT

No separate measurement or payment shall be made under this Section.

END OF SECTION

SECTION 01 29 00

PAYMENT PROCEDURES

PART 1 – GENERAL

1.01 SUMMARY

A. Section Includes:

- 1. Administrative and procedural requirements necessary to prepare and process Applications for Payment.
- 2. Administrative and procedural requirements for preparing and submitting a Schedule of Values.

B. Related Sections:

- 1. Article 6. Payment of the Contract Agreement
- 2. IFB Exhibit A, SECTION V: GENERAL PROVISIONS
- 3. Section 01 26 00, Contract Modification Procedures, for administrative procedures for handling changes to the contract.
- 4. Section 01 32 00, Construction Progress Documentation, for administrative requirements governing the preparation and submittal of the Contractor's construction schedule.
- 5. Section 01 33 00, Submittal Procedures, for administrative requirements governing the preparation and submittal of the Schedule of Values.

1.02 **DEFINITIONS**

A. Schedule of Values (Cost Breakdown): A document furnished by Contractor allocating portions of the Contract Price to various portions of the work and used as the basis for reviewing Contractor's Applications for Payment. The Contract Scope of Work including any and all required deliverables are considered by the Authority to be part of the Schedule of Values upon which progress payments will be made to the Contractor, and if not clearly identified in the Contractor's Schedule of Values, 100% of progress payment will not be made until all required Scope of Work items are completed and received by the Authority.

1.03 SCHEDULE OF VALUES

A. Prepare and submit within 15 calendar days after the effective date in the Notice to Proceed, but in any event prior to the Contractor's first Application for Payment, for

approval by the Authority, a Schedule of Values. If the schedules are affected by Change Orders, prepare and submit updated copies of the schedules under this Section.

- B. Submit, under the provisions of Section 01 33 00, Submittals, and a Schedule of Values including the following information:
 - For purposes of calculating the progress payments, the Authority will use the cost breakdown submitted by the Contractor for each Bid Item at the start of this Agreement.
 - Additional clarification may be provided to identify items in the Schedule of Values with the title of Project and location, agreement number, name and address of the Contractor, date of submission, Specification Section/Subsection number, Specification Section/Sub-section title, and Bid item number as contained in the Schedule of Quantities and Prices submitted with the Contractor's bid.
 - 3. Contractor shall indicate subcontracted work items the Schedule of Values including the related subcontractor name(s) and subcontracted amount(s).
 - 4. Schedule shall list the installed value of the component parts of the Work in sufficient detail to serve as a basis for computing values as itemized in the Cost Breakdown for progress payments during construction. Percentage of completed items installed will be paid.
 - 5. Schedule of Values shall also provide line items breaking out each of the following clarifications:
 - a. Bonds:
 - b. Insurance premiums;
 - c. Field supervision;
 - d. Mobilization cost (not to exceed 10% of the total contract amount).
 - 6. Upon request by the Authority, support values given with data, which will substantiate the correctness of the values.
 - 7. In addition to the requirements stated in the General Conditions, the Schedule of Values shall be provided in Excel and PDF file formats. .
- C. Each item shall include a directly proportional amount of Contractor's overhead and profit, which will not be paid separately.
- D. Lump Sum bid payment based on Schedule of Values approved by the Authority based on percentage of work completed.

- E. The sum of all values listed in the schedule shall equal the total contract Sum.
- F. Cost loading of Schedule of Values is for fund management purposes only and will not be constructed to establish unit cost.
- G. The Authority's Review: The Authority will review the Schedule of Values to assure that they are reasonable and balanced. When approved, they will be used in reviewing and approving the monthly partial payment requests. If review by the Authority indicates that changes to the schedules are required, upon five (5) calendar days from receipt of notice from the Authority, the Contractor shall revise and resubmit schedules in the same manner as the original schedules were prepared and submitted.

1.04 APPLICATION FOR PAYMENT - GENERAL

- A. Progress Payment Application Draft "Pencil Draw:" The Contractor, no later than 21st day of each month, shall prepare a draft of the official progress payment application based on the estimated percentage of completion of work in the approved Schedule of Values and on the Contractor's actually incurred allowable expenses on such work. The Authority and the Contractor shall meet at the jobsite and review the proposed completion percentages against the physical work in place. Any discrepancies in the percentages of work complete or what will reasonably be completed within one week of the jobwalk shall be adjusted and submitted as noted in the official monthly Progress Payment Application.
- B. Progress Payment Application: The Contractor, no later than 25th day of each month, shall prepare an official progress payment application based on the estimated percentage of completion of work in the approved Schedule of Values and on the Contractor's actually incurred allowable expenses on such work. Each month's official Payment Application shall include all associated [Mechanics] Conditional Lien Releases by Contractor and Subcontractors, as well as associated Unconditional Lien Releases for payments received within the previous 30-days.
- C. Fabricated materials, materials on site but not installed in construction, and work items not completed shall not be included in progress payment applications and shall not be paid by OCTA unless specifically pre-approved on a case by case basis for formal Stored Materials billings, and accompanied with all associated approval documents (proof of ownership, insurance, bonding, acceptance) and the Authority's inspection report. Any approved stored material billing does not relieve the contractor of their full responsibility for the materials prior to project completion and final turnover to OCTA. Any associated materials and/or equipment that is compromised by damage, theft, or otherwise shall be replaced by Contractor at Contractor's sole expense and in a timely manner to not impact the project's schedule.
- D. OCTA will issue the progress payment, in the amount it deems appropriate, on approximately the same of the following month, net 30-days.

- E. Application for progress payments and partial progress payments shall be in accordance with Contract General Provision and the approved Schedule of Values.
- F. The Contractor shall submit the progress payment, signed by the Contractor's authorized representative, and furnish an invoice for further process based on a schedule to be established at the pre-construction meeting. Submit other documentation such as certified payroll, monthly labor utilization form, and waivers as required by contract.
- G. For the final payment, the Authority shall determine if all Work of the Contract has been performed by the Contractor according to the provisions of the Contract. The Authority shall make a final estimate and determine the amount remaining due the Contractor. This amount shall include any amounts withheld from previous estimates but exclude any and all deductions that have been or should be made at the time under other sections of these Specifications.

1.05 WORK AUTHORIZATION CHANGE NOTICE WORK

A. Measurement and payment of Work associated with a Work Authorization Change Notice (WACN) shall be as detailed in OCTA's Exhibit A.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

PART 4 - MEASUREMENT AND PAYMENT

Not Used.

END OF SECTION

SECTION 01 31 00

PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

- 1. Administrative provisions for coordinating construction operations on project including, but not limited to, the following:
 - a. General project coordination procedures.
 - b. Administrative and supervisory personnel.
 - c. Project meetings.
- B. Contractor is responsible for coordination with OCTA's selected material suppliers and contractors involved in the project.

C. Related Sections:

- 1. Section 01 32 00, Construction Progress Documentation, for preparing and submitting Contractor's construction schedule.
- 2. Section 01 43 01, Contractor Qualifications and Requirements, for required staff and qualifications.
- 3. Section 01 71 23, Field Engineering, for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.
- 4. Section 01 77 00, Closeout Procedures, for coordinating closeout of the contract.
- 5. Individual specification sections for normal startup, testing, and adjusting procedures required.

1.02 COORDINATION

A. Coordination: Coordinate construction operations with those of other OCTA selected material suppliers and contractors. Coordinate construction operations included in different sections of the specifications to ensure efficient and orderly installation of each part of the work. Coordinate construction operations, included in different

sections, which depend on each other for proper installation, connection, and operation. Contractor is responsible for progress and performance of the work, and shall provide direction to others as required to properly coordinate trades and processes.

- 1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the work depends on installation of other components, before or after its own installation.
- 2. Coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair.
- 3. Make adequate provisions to accommodate items scheduled for later installation.
- 4. Coordinate equipment installation requirements with equipment contractors to prevent delays and facilitate proper installation. Acknowledge, accommodate, and respect equipment contractors' needs for access to the work for the periods required to complete equipment installation. Incorporate these periods into the construction progress schedule and work plan before commencing work.
- B. Prepare memoranda for distribution to each party involved (including the Authority and separate contractors and suppliers) outlining special procedures required for coordination. Include such items as required notices, actions, reports, and list of attendees at meetings.
- C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the work. Such administrative activities include, but are not limited to, the following:
 - 1. Preparation of Contractor's construction schedule.
 - 2. Preparation of the schedule of values.
 - 3. Installation and removal of temporary facilities and controls.
 - 4. Delivery and processing of submittals.
 - 5. Progress meetings.
 - 6. Pre-installation conferences.
 - 7. Commissioning, Startup and adjustment of systems.
 - 8. Training activities.

- 9. Project closeout activities.
- D. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials. Coordinate use of temporary utilities to minimize waste.

1.03 KEY PERSONNEL

- A. Key Personnel Names: Within 5 days of date of Notice to Proceed, submit a list of key personnel assignments, including superintendent and other personnel in attendance at project site. Conform to requirement of Section 01 43 01 Contractor Qualifications and Requirements. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home, office, and cellular telephone numbers and email addresses. Provide names, addresses, and telephone numbers of individuals assigned as standbys in the absence of individuals assigned to project.
 - 1. Post copies of list in project meeting room and in temporary field office. Keep list current at all times.

1.04 INITIAL CONSTRUCTION MEETING

- A. The Authority will schedule the Initial Construction Meeting (Pre-construction meeting) after the Contractor has been provided the written Notice to Proceed.
- B. The Authority will distribute a notice of this meeting, along with an agenda of the subjects to be addressed at least one (1) workday prior to the meeting.
- C. Contractor's Construction Project Manager and key staff, as defined in Section 01 43 01, and as identified per the requirements of 1.03, shall attend the meeting.
- D. The following is a minimum agenda for the Initial Construction Meeting:
 - 1. The Authority will explain and discuss:
 - a. Insurance, laws, codes, maintenance of traffic, permits, quality assurance, quality control, inspection, and related items.
 - b. Preparation, submittal, and review of Site-Specific Work Plans (SSWP)
 - c. Procedures for processing RFI's and Submittals
 - d. Monthly estimate cutoff dates, and procedures for processing Applications for Payment.

- e. Distribution of the contract documents.
- f. Preparation of record documents.
- g. Use of the premises.
- h. Work restrictions and permitted working hours.
- i. Owner's occupancy requirements.
- j. Responsibility for temporary facilities and controls.
- k. Procedures for disruptions and shutdowns.
- I. Construction waste management and recycling.
- m. Parking availability.
- n. Areas available for Contractor's Office, work, and storage areas.
- o. First aid.
- p. Security.
- q. Progress cleaning.
- r. Level 3 Health, Safety and Environmental Specifications.
- 2. The Contractor shall introduce, explain, and discuss the following:
 - Contractor's representatives and personnel, briefly describing each person's responsibilities, and furnishing complete contact information for the Contractor's staff.
 - b. Arrangements for safety, first aid, emergency actions, and security.
 - c. A list of Subcontractors and suppliers.
 - d. Sequence of critical Work, the construction schedule, and the submittal schedule.
 - e. Plan for construction sequencing of entire Contract, general worksite layout, temporary facilities, erosion and sedimentation control plans, haul routes, noise, air and water pollution control and temporary closure plans.
 - f. Breakdown of lump sum items and Schedule of Values.

- g. Status of coordination and notification for utility Work.
- h. Locations and use of office, storage, parking and construction areas.
- i. Method of providing security to the Worksite.
- j. Construction methods and coordination of Work within the provisions of the Contract Documents.
- k. Coordination with the Work of Subcontractors and procedures for sharing access to the Worksite.
- I. Plan for deliveries of major construction equipment and deliveries of long lead-time materials and products needed in the construction of this Contract.

1.05 PROGRESS MEETINGS

- A. Progress meetings will be scheduled by the Authority on a weekly basis and more often as necessary. The Authority will make every effort to accommodate the Contractor's availability in establishing the meeting schedule.
- B. Attendees: In addition to the Authority and representatives of the Contractor, subcontractors, suppliers, and other entities concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meeting shall be familiar with project and authorized to conclude matters relating to the work.
- C. Meetings will focus on the competent and timely execution of the Work under the Contract. The Authority will chair these meetings. Weekly site meetings will start when Contract Work commences. At the weekly meetings the Contractor shall present a review of the following topics:
 - 1. Safety and incidents.
 - 2. Contractor's Schedule status.
 - 3. Progress according to the current approved schedule.
 - 4. Presentation of new 28-day schedule.
 - 5. Critical activities and any constraint issues on the 28-day schedule.
 - 6. The Authority's requirements and coordination.
 - 7. Specific late items of Work.

- 8. Overall Project schedule status.
- 9. Contract time.
- 10. Public impacts and contacts.
- 11. RFI, Submittal, Procurement, and Change Issue logs and statuses.
- 12. Contract Issues including:
 - a. Status of proposal requests.
 - b. Pending changes.
 - c. Status of Change Orders.
 - d. Pending claims and disputes.
 - e. Documentation of information for payment requests.

1.06 PRE-INSTALLATION CONFERENCES:

- A. Contractor shall conduct a pre-installation conference at Project site before each construction activity that requires coordination with other construction, as required in individual specification sections.
- B. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise the Authority of scheduled meeting dates.
- C. Suggested Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
 - 1. Contract Documents.
 - 2. Options.
 - 3. Related RFIs.
 - 4. Purchases.
 - 5. Deliveries.

- 6. Submittals.
- 7. Review of any required mockups.
- 8. Possible conflicts.
- 9. Compatibility problems.
- 10. Time schedules.
- 11. Weather limitations.
- 12. Manufacturer's written recommendations.
- 13. Warranty requirements.
- 14. Compatibility of materials.
- 15. Acceptability of substrates.
- 16. Installation procedures.
- 17. Coordination with other work.
- 18. Required performance results.
- 19. Protection of adjacent work.
- D. Contractor shall record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
- E. Reporting: Distribute minutes of the meeting to the Authority, each party present and to other parties requiring information.
- F. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the work and reconvene the conference at earliest feasible date.

1.07 PROJECT CLOSEOUT MEETING:

A. Reference the IFB, Section V: General Provisions, C. Final Inspection and Acceptance for further clarification of "Closeout" and "Substantial Completion."

- B. The Authority, in coordination with the Contractor, shall schedule and conduct a project closeout conference no later than 15 calendar days prior to the scheduled date of Substantial Completion. The conference will review requirements and responsibilities related to project closeout.
- C. Attendees: The Authority, Contractor's key personnel, major subcontractors and other concerned parties shall attend the meeting. Participants at the meeting shall be familiar with project and authorized to conclude matters relating to the work.
- D. Agenda: The Authority will introduce and discuss items of significance that could affect or delay Project closeout, including the following:
 - 1. Preparation of record documents.
 - 2. Procedures required prior to inspection for Substantial Completion and for final inspection for acceptance.
 - 3. Submittal of written warranties.
 - 4. Requirements for preparing operations and maintenance data.
 - 5. Requirements for demonstration and training.
 - 6. Preparation of Contractor's punch list.
 - 7. Procedures for processing Applications for Payment at Substantial Completion and for final payment.
 - 8. Final Submittal procedures.
 - 9. Coordination of separate contracts.
 - 10. The Authority r's partial occupancy requirements.
 - 11. Installation of the Authority's fixtures, and equipment. [TBD]
 - 12. Responsibility for removing temporary facilities and controls.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

3.01 REPORTING

A. Minutes: The Authority will record significant discussions and agreements achieved at all conference chaired by the Authority, including initial construction meeting, progress meetings and project closeout meeting. The Authority will distribute the meeting minutes to everyone concerned within five (5) working days of the meeting.

PART 4 - MEASUREMENT AND PAYMENT

No separate measurement or payment shall be made under this section.

END OF SECTION

SECTION 01 32 00

CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.01 DESCRIPTION

- A. This Section specifies the requirements for preparation of a preliminary schedule, a Contractor's Progress Schedule, related narratives, and progress reporting.
- B. The reports and schedules shall be designed to:
 - 1. Assure adequate planning and execution of the Work so that the Work is completed within the number of calendar days allowed in the Contract
 - 2. Assist the Contractor and the Authority in appraising:
 - a. The attainability of the proposed schedule.
 - b. Conformance to contract requirements.
 - c. The progress of Work.
- C. For all schedules and scheduling requirements/activities related to this Contract, the Contractor shall utilize Primavera Project Planner or Microsoft Project software as directed by the Authority

1.02 SUBMITTALS

- A. Submit the following information under the provisions of 01 33 00, Submittal Procedures. All electronic file submittals shall include the entire schedule, which is typically provided by utilizing the file backup routine in the software. Electronic submittals shall be provided in PDF format.
 - 1. Construction Schedule (with narrative) in electronic format and upon acceptance by the Authority provide two full-size plots.
 - 2. Contractor's Progress Schedule in electronic format.
 - 3. Weekly Progress Reports (28 day schedule) in electronic format.
- B. Milestones, as specified in the Contract Documents, shall be incorporated into all areas of the scheduling process.

1.03 CONTRACTOR'S CONSTRUCTION SCHEDULE (BASE SCHEDULE)

- A. Within five (5) calendar days of the Notice to Proceed, the Contractor shall prepare and submit to the Engineer for approval a detailed schedule of work. This schedule shall indicate the areas in which the Contractor anticipates working and the dates during which construction operations will be performed. All submittals by the Contractor shall be listed as separate activities in the schedule. The Contractor shall submit three (3) hard copies and a PDF file of the schedule to the Engineer for approval.
- B. The detailed schedules shall be of the bar chart or network diagram method, at the Contractor's option. The schedule shall be comprehensive, covering activities at the site of the work, procurement, and construction.
- C. The schedule shall identify work items or Milestones that affect or are affected by the Authority, other utilities, and other third parties including Subcontractors.
- D. The work activities making up the schedule shall be of sufficient detail to assure that adequate planning has been done for proper execution of the Work and such that, in the judgment of the Authority, it provides an appropriate basis for monitoring and evaluating the progress of the Work. A work activity is defined as any activity requiring time and resources (manpower, equipment and/or material) to accomplish. Activity durations will be in workdays. Typical construction activity durations should be between 3 and 14 workdays. Exceptions may be reviewed by the Authority where sub-schedules will be used to define critical portions of prime schedules, materials delivery, key submittals, etc. Activities shall include but not necessarily be limited to the following:
 - 1. Project mobilization.
 - 2. Submittal and review of plans and procedures.
 - 3. Procurement of Materials.
 - 4. Each item of Work.
 - 5. Special Inspections and Key Permit Inspections
 - 6. Equipment Start-Up and Commissioning
 - 7. Final cleanup.
 - 8. Fire Department Final Inspection
 - 9. Final Building Inspection.
 - 10. All activities by Contractor, the Authority, and others, which affect progress or required dates for completion, or both, for each part of the Work.

- 11. Release of areas to the Authority according to Milestone Dates.
- E. Other requirements that shall be incorporated into the Contractor's schedule include
 - 1. Division of Work into major work areas (i.e. Areas 1, 2, etc.).
 - 2. Manpower required to perform the Work in total man-hours by craft for each activity.
 - 3. All activities that require unusual shift work, such as two shifts, 6-day workweek, etc. shall be clearly identified in the schedule.
- F. Each activity shall be labeled with an alphanumeric work breakdown structure/sorting/selection code.
- G. The sequence, duration in workdays, and interdependence of activities required for the complete performance of all work shall be shown.
- H. The schedule shall begin with the date of the Notice to Proceed and conclude with the date of Final Completion shown in the Contract.
- I. The network diagram shall include the following:
 - 1. Time scaled network diagrams based on calendar days and shall be critical path method (CPM) precedence format showing the sequence/interdependence of activities required for complete accomplishment of all items of work.
 - 2. Each activity shall be plotted so that the start/finish dates can be determined graphically (by comparison) with the calendar scale.
 - 3. All network diagrams shall be drawn legibly and accurately on 22" x 34" size media, or other size acceptable to the Authority.
 - 4. Each activity shall be labeled with complete description, planned duration in workdays, and total float time.
 - 5. The schedules shall accurately indicate the sequence and interdependency of all work activities.

1.04 CONTRACTOR'S PROGRESS SCHEDULE

- A. The Contractor shall update the Progress Schedule monthly (the "Schedule Update") and submit to the Authority for review concurrent by the 5th of the month following month for which the progress reflected on schedule.
- B. Progress Payment to Contractor will not be made until a schedule conforming to the requirements stated herein is submitted each month to the Authority. A continued

failure to supply such schedule data shall be grounds for declaring Contractor in default of the Contract.

- C. Contractor's progress schedule shall:
 - 1. Become an integral part of the Contract and will establish interim completion dates for the various activities under the Contract and shall reflect and be consistent with the Milestone Dates established by the Contract.
 - 2. Be used to determine if any activity is not completed by the Milestone date.
 - 3. Be combined with the Schedule of Values for use in the Contractor's submittal/application for and the Authority's review and approval of monthly partial payments.

1.05 PROGRESS REPORTING

- A. Contractor shall provide regular progress reports monthly along with progress schedule submittal to include as described herein.
- B. A statement that the approved Contractor's Progress Schedule has not changed or has been revised. Only the revisions described in this statement shall be made to the progress schedule.
- C. A 28-day schedule covering the past week, current week and two weeks ahead at each scheduled weekly meeting. The schedule shall be a bar chart schedule, divided into 28 calendar days, listing all activities for the four-week period. Scheduled and actual start and finish dates shall be shown. Each activity shall be identified by its approved activity number and a brief description. The bar chart schedule shall have in the heading the Project Title, Contract Number, Contractor's Name, Date, Contract Day Number and Remaining Contract Days.

1.06 PROGRESS EVALUATION

- A. If at any time during the Project, the Contractor fails to complete any activity by its latest scheduled completion date and which late completion of such activity will impact the end date of the work past the Contract Completion Date, Contractor shall within five (5) working days, submit to the Authority a written statement as to how and when Contractor will reorganize his work force to return to the current Contractor's construction schedule. Whenever it becomes apparent from progress evaluation and updated construction schedule data that any Milestone Date(s) or the Contract Completion Date will not be met, Contractor, at his sole cost, shall take some or all of the following actions:
 - Increase construction manpower in such quantities and crafts as shall substantially eliminate the backlog of work and meet the current Contract Completion Date.

- Increase the number of working hours per shift, the number of shifts per day, the number of work days per week, the amount of construction equipment, or any combination of the foregoing sufficient to substantially eliminate the backlog of work.
- 3. Reschedule work items to achieve concurrent accomplishment of work activities.
- B. Under no circumstances will the addition of equipment or construction forces, increasing work hours, or any other method, manner, or procedure required to return to the contractually required completion date be considered justification for a change order or treated as an acceleration.
- C. The Contractor's Progress Schedule shall begin with the date of issuance of the Notice to Proceed (NTP) and conclude with the date of final completion of the project. Float or slack time within the Progress Schedule is not for the exclusive use or benefit of either OCTA or the Contractor but is a jointly owned expiring project resource available to both parties as needed to meet contract milestones and the Contract completion date.

1.07 SUBMITTAL OF SCHEDULES

- A. The Contractor shall submit to the Authority for review, two (2) copies of the construction schedule (base schedule) within time frame specified herein. The Authority shall have a minimum of 2 weeks to review the construction schedule. Contractor shall address the Authority's comments on schedule and resubmit within five (5) workdays from receipt of the Authority's comments.
- B. The Contractor shall submit to the Authority for review two (2) hard copies of the Contractor's Progress Schedule, one (1) copy of all schedule data, along with one electronic copy within the time frames specified herein. Updates of the Contractor's schedule shall be submitted monthly as part of the payment application submittal.
- C. THE AUTHORITY will have five (5) workdays after receipt of the Contractor's Progress Schedule to respond. Upon receipt of the Authority's comments, the Contractor shall confer with the Authority on the appraisal and evaluation of the proposed Contractor's Progress Schedule. The Contractor shall make necessary changes resulting from this review, and the Contractor's Progress Schedule shall be resubmitted for review within three (3) workdays after the receipt of comments.
- D. The Contractor's construction schedule (base schedule) when reviewed and recognized by the Authority shall stand until updated schedules are submitted to reflect actual completed work, reviewed changes, or recognized delays.
- E. All updated or revised schedules submitted after the base schedule shall be in the same detail as the base submittal unless modified in writing by the Authority.

1.08 REVISIONS TO REVIEWED SCHEDULE

- A. The Contractor shall accomplish the Work in accordance with Contractor's construction schedule recognized by the Authority. Changes made to Contractor's construction schedule for accomplishing the Work shall in all cases require prior approval by the Authority.
- B. The Contractor shall reflect processed Change Orders that affect the schedule, and issuance of emergency change authorizations in the next schedule submittal.
- C. If Contractor desires to make a major change to Contractor's construction schedule, the Contractor shall submit to the Authority a schedule change request in writing stating the reasons and justification for the change, for the Authority's review and acceptance. Major changes are defined as follows:
 - 1. Those that affect the time estimate for the accomplishment of an activity.
 - 2. Those that affect the sequence when varied from the original schedule to a degree that there is doubt that the agreed Contract Completion Date will be met.
 - Changes to activities having adequate float to absorb the change shall be considered as minor changes, except that an accumulation of minor changes may be considered a major change when the effect of such changes impact the Project Milestones or the Contract Completion date.

PART 2 – PRODUCTS

Not used.

PART 3 – EXECUTION

Not Used

PART 4 – MEASUREMENT AND PAYMENT

A. No separate measurement or payment shall be made under this section. Contractor's Progress Schedule will be reviewed each month. The monthly progress payment will not be made until the Contractor's Progress Schedule is found by the Authority to be in conformance with the requirements of this Section.

END OF SECTION

SECTION 01 33 00

SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.01 DESCRIPTION

A. This Section consists of requirements for Contractor submittals to the Authority, including plans, procedures, certificates, shop drawings, product data, samples, and miscellaneous Work-related submittals. Individual submittal requirements are specified in the applicable specification section for each unit of Work. No construction work shall be commenced prior to submittals and acceptance of all submittals and shop drawings required per contract documents.

1.02 **DEFINITIONS**

- A. Submittals are categorized for convenience as follows:
 - 1. Plans and Procedures: Include narrative descriptions, diagrams, equipment, procedures for excavation, demolition, site clearing, maintenance of traffic, etc.
 - Certificates: Include certified material test reports, certification of proper disposal of demolition materials, or tickets demonstrating compliance with materials, tests or specifications indicated.
 - 3. Equipment: Include equipment specifications, manufacturer information and demonstration of suitability of equipment for intended use.
 - 4. Product Data: Standard published information ("catalog cuts") and specially prepared data for the Work of the Contract, including standard illustrations, schedules, brochures, diagrams, performance charts, instructions and other information to illustrate a portion of the Work. Include standard printed information on materials, products and systems to be furnished by the Contractor for this Contract.
 - 5. Shop Drawings: Include detailed manufacturing and layout information, drawings, diagrams, schedules, and illustrations, demonstrating the contractor's understanding and approach to meeting the intent of the plans and specifications. Shop drawings shall be submitted to the Authority for review and comment on the conformance of the submitted information to the general intent of the design.
 - 6. Samples: Include physical examples of materials either for limited visual inspection or selection, or (where indicated) for confirmation, testing, and analysis by the Authority.

- 7. Miscellaneous Submittals: Such submittals shall be related directly to the Work, not administration related. Include but not be limited to asphalt concrete mix design, work schedule, phasing plans, warranties, guarantees, maintenance agreements, workmanship bonds, survey data and reports, physical work records, quality testing and certifying reports, copies of industry standards, record drawings, field measurement data, operating and maintenance materials, overrun stock (and similar information) and, devices and materials applicable to the Work but not processed as shop drawings, product data or samples. Beside the shop drawings required in the project plans or specifications, the Authority may require additional shop drawings demonstrating the contractor's approach to meeting the intent of the plans and specifications as a part of Quality Control/Quality Assurance.
- B. Product data, shop drawings, samples, and any other submittals are not contract documents.

1.03 SCHEDULE OF SUBMITTALS

- A. It is the Contractor's responsibility to identify the submittals that will be required in each section of specifications and on the contract drawings and determine the date on which each submittal will be made. The submittal schedule, the timeline for which Contractor plans to deliver required submittals to the Authority shall be submitted by the Contractor at time of initial construction meeting to the Authority for review and acceptance. The Authority shall have a minimum of 14 calendar days to review Schedule of Submittals. After review and return by the Authority, resubmit Schedule of Submittals within 7 calendar days.
- B. Throughout the duration of the Contract, Contractor shall, at the Authority's request, submit all product or procedure documentation for any activity in the Contract.

1.04 GENERAL SUBMITTAL REQUIREMENTS

- A. Administrative Requirements for Submittal: Submittals shall be made in accordance with requirements specified herein and in Product Sections of the Specifications.
- B. Transmission of Submittals: Transmit all submittals through the Authority unless otherwise directed. Include all information specified below for identification of submittals and for monitoring of review process.
- C. Make submittal at time required per the contract documents and per the Submittal Schedule accepted by the Authority. Allow three (3) weeks for the Authority's Consultant to review and accept submittals.
- D. The Authority and Contractor shall discuss at the initial construction meeting, the exact procedure to be adopted for the processing of submittals. Generally, submittals shall be made at the time indicated in Contractor's approved submittal schedule. The Authority will endeavor to process submittals within 21 calendar days after receipt of

each of submittals and within 14 calendar days after receipt of each of resubmittals from Contractor. After review and return by the Authority, resubmit the submittals within 7 calendar days.

- E. Contractor shall be responsible for on time delivery and processing of submittals so as not to impede the progress of the Work. Contractor shall submit an electronic copy of each submittal in PDF format, plus up to three (3) hard copies of each submittal if requested by the Authority.
- F. Contractor shall, before making submittals, ensure that products will be available in the quantities and in the time required by the Contract.
- G. Contractor shall coordinate and sequence different categories of submittals for same work, and interface units of work, so that one will not be delayed for coordination with another.
- H. Contractor shall maintain a file of all approved submittal documents on work site.
- I. Where required by California law, or as specified in the Contract Documents, submittals shall be signed and sealed by a Professional Engineer licensed in the State of California, or Land Surveyor licensed in the State of California as applicable.
- J. Submittals shall be consecutively and uniquely numbered using a document identifier including Contract number and the appropriate suffix, which will include specification section number and submittal number. Submittals under each specification section shall be in a separate package.
- K. Submittals Identification: Identify each submittal by Specification Section and subsection number's in order of submittal submitted to the Authority starting from 001 as the first submittal. Re-submittals shall use same number as original submittal, followed by a point number indicating sequential re-submittal. For example:

001	First submittal of the project
002	Second submittal of the project
002.1	First re-submittal of second submittal of the project
002.2	Second re-submittal of second submittal of the project

1. Title each submittal with Project name, the Contract number (C-3-2208), Submittal number, Contractor's Project number and submission date.

- Identify each element on submittal by reference to Drawing sheet number, detail, schedule, number, assembly or equipment number, Specifications article and paragraph, and other pertinent information to clearly correlate submittal with Contract Drawings. Identify field dimensions clearly and relationships to adjacent or critical features of Work, any deviations from the contract documents and applicable standards, ASTM, ACI, OSHA, etc.
- L. Contractor's review of submittals: Prior to submission to the Authority for review, Contractor shall review each submittal for completeness and conformance to specified requirements. Contractor shall stamp each submittal with a review action stamp and sign each copy certifying that:
 - 1. Field measurements have been determined and verified.
 - 2. Field construction criteria have been verified.
 - 3. Catalog numbers and similar data are correct.
 - 4. Conformance with requirements of Contract Drawings and Specifications is confirmed.
 - 5. All deviations from requirements of Drawings and Specifications have been identified and noted, and product is available.
- M. Submittals which are received from sources other than through Contractor's office or which have not undergone Contractor's review, will be returned marked "Without Action".
- N. Contractor shall be responsible for timely delivery of submittals in the proper specified format for each submittal category.
- O. Except as otherwise indicated in individual work sections, the Contractor shall comply with requirements specified herein for each indicated category of submittal.
- P. The Contractor shall include an up-to-date log of submittals in each submittal package.
- Q. Grouping of Submittals: Unless otherwise specifically permitted by the Authority, make all submittals in groups containing all associated items. The Authority may reject partial submittals as incomplete or hold them until related submittals are made. Submittals under a specification section shall be in one submittal package.
- R. Unsolicited Submittals: Unsolicited submittals will be returned un-reviewed.
- S. Record Submittals: When record submittals are specified, submit three hard copies or sets only. Record submittals will not be reviewed but will be retained for historical and maintenance purposes.

1.05 CITY PLAN CHECK DRAWINGS AND SHOP DRAWINGS

- A. Contractor shall submit to the Authority a full-size hard copy and an electronic copy in PDF format of all approved plan check permit drawings issued by the local City, immediately after obtaining the plan check permits drawings from the City.
- B. Shop drawings shall be prepared using AutoCAD. Unless otherwise approved by the Authority or indicated in specific sections of the project specific specifications, shop drawings shall be scaled sufficiently large to accurately show all pertinent aspects of the item and its relationship to the work. Acceptable shop drawings hard copy sizes are 22" x 34", 11" x 17" and 8½" x 11" and are scalable. The Contractor shall additionally submit the shop drawing on electronic media in PDF format and in AutoCAD format compatible with AutoCAD version 2012.
- C. Shop drawings shall be original drawings prepared for submittal review, fabrication and execution of Work. Direct copies and modified reproductions of Contract Drawings will not be accepted for review. Provide space for review action stamps. Contractor shall field verify all existing conditions and all measurements on site before preparing and submitting shop drawings.
- D. Shop drawings shall show, at a minimum, the following:
 - 1. General project information:
 - a. The original date of issue;
 - b. The dates of all applicable revisions:
 - c. The project title, project number, and address;
 - d. The names of contractor, subcontractors, suppliers, manufacturers, separate detailers, etc...
 - 2. Detailed manufacturing and layout information.
 - 3. Drawings, diagrams, schedule and illustrations.
 - 4. Bill of materials including material types, dimensions and weights, quantities, origin of the materials, material certifications.
 - 5. Welding procedure specifications.
 - 6. Erection or installation plans.
 - 7. Any other important items related to specific work of the Project and as requested by the Authority.
- E. Detailed work drawings shall be submitted by Contractor for temporary structures and for such other temporary work as may be required for construction, but which

does not become an integral part of the completed project. Submittals shall include back-up calculations or any information needed to explain the structure or system or its intended use.

- F. Where a submittal involves engineering computations or original design work is depicted, the submittal shall show the name, the State of California registration number, seal, and signature of the Professional Engineer certifying that such computations or design work are correct and in conformance with standards, codes, and acceptable engineering practice.
- G. Contractor shall submit 5 hard copies and a PDF file of each shop drawing submittal. Distribution of submitted shop and working drawings by Contractor for the Authority's use will be performed by the Authority. Review comments of the Authority, and other parties as may be required will be shown on the reproducible set when it is returned to Contractor. Contractor shall make and distribute all copies required for his purposes.

1.06 PRODUCT DATA

- A. Contractor shall collect required data into one submittal for each unit of work or system and mark each copy to show which choices and options are applicable to the Project.
- B. Contractor shall include the manufacturer's standard printed recommendations for application and use, certification of compliance with standards, notation of field measurements, which have been checked, and special coordination requirements. A Material Safety Data Sheet (MSDS) shall be submitted for each product.

1.07 CERTIFICATES OF COMPLIANCE

- A. Certificates of Compliance shall be submitted by Contractor to the Authority for those materials and products for which no samples and test results are specified. The certificates shall:
 - 1. State that the product complies with the respective contract specification and contract drawing requirements.
 - 2. Be accompanied by a certified copy of test results pertaining to the product. All test equipment used shall be verified to be in calibration at the time of each test and test reports shall so indicate. No test shall be made without such verification. When required by the Contract Documents or by law, certified test results shall be sealed by a Professional Engineer licensed to practice in the State of California.
 - 3. Show product represented and its location in the Contract, producer's name, product trade name and catalog number as applicable, place of product origin,

test date, testing organization's name and address, quantity of the product to be furnished, and the related Contract Drawing and specification section numbers.

1.08 SAMPLES

- A. Provide samples of each color, texture and pattern identical with final condition of proposed materials or products for the work. Include range of samples (not less than three units) where unavoidable variations may be expected. Submit one item only of actual assembly or product. Full-size and complete samples may be returned or may be incorporated into field mock-up and the Work.
- B. Submit actual samples. Photographic or printed reproductions will not be accepted. For manufacturer's products, the Contractor shall submit samples from manufacturer, with manufacturer's finish.
- C. Include information with each sample showing generic description, source or product name, manufacturer and compliance with standards and specifications.
- D. Samples are submitted to the Authority for review and confirmation. The Authority will review and select material for Project only after all samples are received, so that materials may be probably coordinated. The Authority will not test samples (except as otherwise indicated) for compliance with specifications. Contractor shall have the exclusive responsibility of demonstrating material compliance.

1.09 SURVEY DATA

A. As required per contract documents and/or by the Authority, Contractor shall submit survey data, signed and sealed by a Land Surveyor licensed to practice in the State of California. Refer to Section 01 71 23, Field Engineering for requirements.

1.10 GENERAL DISTRIBUTION

- A. Contractor shall provide distribution of the Authority's reviewed submittals (not included in foregoing copy submittal requirements) to subcontractors, suppliers, fabricators and installers, governing authorities, and others as necessary for proper performance of the Work.
- B. Contractor shall include such additional copies of transmittal to the Authority, where required, to receive status marking before final distribution.

1.11 REVIEW OF SUBMITTALS

A. Submittals shall be a communication aid between Contractor and the Authority by which interpretation of Contract Documents requirements may be confirmed in advance of construction. The Authority will review submittals for general conformance with the design concept only. Such review by the Authority shall not

relieve Contractor or any subcontractor of responsibility for full compliance with contract requirements, for proper design of details, for proper fabrication and construction techniques, for proper coordination with other trades, or for providing all devices required for safe and satisfactory construction and operation.

B. Changes shall only be authorized by separate written Change Order or Construction Change Authorization, in accordance with the Conditions of the Contract and Section 01 26 00 - Contract Modification Procedures.

1.12 SUBMITTAL STATUS

- A. Submittals reviewed by the Authority and returned to Contractor will be marked with one of the following designations:
 - 1. Conforms
 - 2. Revise as Noted and Resubmit
 - 3. Rejected. Resubmit
 - 4. No Action Taken
- B. Contractor shall not proceed with procurement, manufacture or fabrication of items submitted for review, until such submittals have been designated by the Authority as "Conforms". Until submittal items receive a conforming designation by the Authority, any costs associated with procurement for these items shall be at the Contractor's risk.

1.13 SUBMITTALS DESIGNATED AS "CONFORMS"

- A. Each copy of the submittal so designated by the Authority will be identified accordingly by being so stamped and dated.
- B. One reproducible copy will be returned to Contractor.
- C. When a submittal has been designated as "Conforms" by the Authority, Contractor shall carry out construction in accordance therewith and no further changes shall be made therein except upon written approval and instructions from the Authority.
- D. Contractor shall take responsibility for and bear all cost of damages, which may result from the ordering of any material or from proceeding with any part of the Work prior to submittal being marked "Conforms" by the Authority.
- E. Submittals stamped "Conforms" do not relieve the contractor from the responsibility of performance of Work as intended in the plans and specifications. Refer to 1.11 of this Section.

1.14 SUBMITTALS DESIGNATED AS "REVISE AND RESUBMIT," OR "REJECTED. RESUBMIT"

- A. Each copy of the submittal so designated by the Authority will be identified accordingly by being so stamped and dated.
- B. One copy will be returned to Contractor.
- C. If corrections to the submittals are required, copies returned to Contractor will be marked "Rejected. Resubmit", or "Revise and Resubmit", and the required corrections shall be made on the re-submittal copies.
- D. Re-submittals will be handled in the same manner as first submittals. Direct specific attention in writing on re-submittals to revisions other than the corrections requested by the Authority on previous submittals. A resubmittal shall contain all information required specifically for the submittal per contract documents including corrections requested and approved information in the previous submittals. A resubmittal will supersede the previous version of a submittal and/or resubmittal as applicable. Incomplete or missing information submittals/resubmittals will be returned without review.
- E. Contractor shall notify the Authority prior to execution of any correction, which constitutes a change of the contract requirements indicated on the submittals.

1.15 SUBMITTALS DESIGNATED AS "NO ACTION TAKEN"

- A. Each copy of the submittal so designated by the Authority will be identified accordingly by being so stamped and dated.
- B. One reproducible copy will be returned to Contractor.
- C. Submittals made by the Contractor that are not required by the contract documents or were not otherwise requested shall be designated "No Action Taken"

PART 2 - PRODUCTS

Not Used.

PART 3 – EXECUTION

Not Used.

PART 4 - MEASUREMENT AND PAYMENT

No separate measurement or payment shall be made under this Section.

END OF SECTION

SECTION 01 35 13

SPECIAL PROJECT PROCEDURES

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Products and installation for patching and extending Work.
- B. Transitions and adjustments.
- C. Repair of damaged surfaces, finishes, and cleaning.

1.02 RELATED SECTIONS

- A. Section 01 35 13 Coordination with the Authority and Local Agencies: Authority occupancy and maintenance of utility services.
- B. Section 01 73 29 Cutting and Patching: General requirements for cutting and patching requirements.
- C. Section 01 50 00 Temporary Facilities and Controls: Temporary enclosures, protection installed Work, and cleaning during construction.

PART 2 - PRODUCTS

2.01 PRODUCTS FOR PATCHING AND EXTENDING WORK

- A. New Materials: As specified in PART 2 PRODUCTS of applicable product Specification Sections, provide suitable products and construction procedures for patching and extending Work.
- B. Type and Quality of Existing Products: Determine by inspection and testing of Products where necessary, referring to existing construction as a standard.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify that demolition is complete, and areas are ready for execution of Work.
- B. Beginning of alteration Work will be interpreted to mean that Contractor has examined existing conditions and determined that they are acceptable.

3.02 PREPARATION

A. Coverings:

- Provide weather- and dust-protection coverings as necessary to contain dust and debris. Protect OCTA's Property, equipment, utilities, landscaping, and accessories from dust. Provide appropriate covers and protect by spraying water over work area to control dust.
- 2. Close area of work with barricades to protect existing construction and new Work from traffic, weather, and extremes of temperature and humidity. At end of workday, provide enclosure around work area with flashing lights so that traffic is aware of construction excavations and new work.
- 3. See Section 01 50 00 Temporary Facilities and Control for additional requirements.
- B. Access for Work: Demolish, Cut, move or remove items as necessary for access for alterations, renovation and extension Work. Replace and restore at completion.
- C. Disposal of Materials: Immediately remove unsuitable material not marked for salvage, such as decayed wood, insulation, asphalt concrete, corroded rebar, accessories and other materials as required to complete the work. Replace materials as specified for finished Work.
 - 1. Do not allow debris to accumulate in work areas. Dispose debris daily off-site in a legal manner. Dispose all existing asphalt concrete and accessories that are to be removed, and legally dispose off-site.
 - 2. Remove debris and abandoned items from work area and from parking spaces.
- D. Surface Preparation: Remove surface finishes and prepare surfaces to provide for proper installation of new materials and finishes.
- E. Protection: Protect vehicles, property, and equipment adjacent to construction area from damage.

3.03 INSTALLATION

- A. Coordinate Work for alterations and renovations to expedite completion and to accommodate the Authority's concurrent occupancy and use of the facility.
- B. Coordinate Work for alterations and renovations in a timely manner to expedite completion and minimize disruption to the Authority's continued use occupied areas and spaces. Park all construction equipment and materials inside areas of construction and barricade construction area on all sides at end of workday. Provide flashing lights around work area from dusk to dawn.

- C. Remove, cut, and patch Work in a manner to minimize damage and to provide a means of restoring products and finishes to original or specified new condition. Refer to Section 01 73 29 - Cutting and Patching.
- D. Refinish visible existing surfaces to condition before start of construction. Match adjacent finish surface in color and material. Finish to specified condition for each material, with a near transition to adjacent finishes.
- E. In addition to specified work, in case of breakdown of under or above ground utilities, plumbing, electrical power, signal systems, and lighting, restore to fully operational condition immediately as before construction commenced. All power, and other systems should be operational at end of workday. The plans are diagrammatic and do not show all utilities, ducting, equipment, and accessories on the site. Contractor will be required to repair immediately utilities, ducting, plumbing lines, power lines, signal and communication system, data lines, equipment, and accessories in case of breakdown or disruption due to construction work and as required to complete the work. Review record drawings of construction area before excavation.
- F. Install products as specified in applicable product specification Sections.

3.04 TRANSITIONS

- A. Where Work abuts or aligns with existing construction, perform a smooth and even transition. Patches shall match existing adjacent construction in texture and appearance.
- B. When finished surfaces are cut so that a smooth transition is not possible, terminate existing surface along a straight line at a natural line of division. Refer to Section 01 73 29 Cutting and Patching.

3.05 ADJUSTMENTS

- A. Where removal of materials results in adjacent spaces becoming one, rework to a smooth plane without breaks, steps or bulkheads.
- B. Where a change of plane of 1/4-inch or more occurs, submit recommendation for providing a smooth transition for the Engineer's review.
- C. Fit Work at penetrations of surfaces as specified in Section 01 73 29 Cutting and Patching.

3.06 REPAIR OF DAMAGED SURFACES

- A. Replace portions of adjacent existing surfaces which are damaged, lifted, discolored, or showing other imperfections or require replacement or repairs during replacement work. Extent of replacement will be required to nearest construction joint, expansion joint, break line, natural break, or in a straight line. Provide a smooth transition between existing and new surface.
- B. Repair substrate prior to patching finish.
- C. Unless noted otherwise or directed by the Authority, all pavement striping, markings, and markers affected by the construction activities shall be reinstalled to match the existing conditions.

3.07 FINISHES

- A. Finish surfaces as specified in applicable Sections.
- B. Finish patches with material and paint to produce uniform finish and texture over entire area. When finish cannot be matched, refinish entire surface to nearest intersections or joints.

3.08 CLEANING

A. In addition to cleaning specified in Section 01 74 23 - Cleaning, clean the Authority-occupied areas affected by construction activities. Clean areas around the site where asphalt concrete material has fallen during workday. Clean site of work daily before leaving site at end of each workday. Haul debris off-site daily. Secure the entire jobsite and notify the Authority before leaving the jobsite each workday.

PART 4 – MEASUREMENT AND PAYMENT

No separate measurement or payment shall be made under this section.

END OF SECTION

SECTION 01 35 23

OWNER SAFETY REQUIREMENTS

PART 1 - GENERAL

1.01 DESCRIPTION

- A. The Contractor shall comply with OCTA Level 3 Health, Safety and Environmental Specifications in the contract documents.
- B. Work specified in this section consists of furnishing, operating, maintaining, and utilizing safety equipment; providing safety aids on construction equipment; and assuring safe operation. Compliance with requirements of this section shall not relieve Contractor from other obligations imposed elsewhere in contract, by law and by regulation.

1.02 OTHER SECTIONS WITH SAFETY REQUIREMENTS

- A. OCTA Level 3 Health, Safety and Environmental Specifications
- B. Section 01 14 22, Rules and Hours of Operation
- C. Section 01 14 23, Coordination with OCTA and Local Agencies
- D. Section 01 14 25. Procedures in Construction
- E. Section 01 43 01, Contractor Qualifications and Requirements

1.03 REFERENCE STANDARDS

- A. Comply with the provisions of all local, State and Federal codes, specifications, standards and recommended practices, and OCTA Policy, in particular:
 - 1. Cal/OSHA: California State Occupational Safety and Health Administration
 - 2. OSHA: Federal Occupational Safety and Health Administration

1.04 QUALITY CONTROL AND QUALITY ASSURANCE

- A. Contractor's selection and operation of construction equipment and tools shall meet requirements of California State and Federal Occupational Safety and Health Administration (Cal/OSHA, OSHA).
- B. If there is a conflict between the above, the most stringent requirement will apply.

1.05 SUBMITTALS

- A. Contractor shall submit, under provisions of Section 01 33 00, Submittals, the following information:
 - 1. Information required by OCTA Level 3 Health, Safety and Environmental Specifications.
 - 2. Safety Data Sheet, per Section 01 14 25, Procedures in Construction.
 - 3. Notification to OCTA as soon as reasonably possible of any injury to Contractor's employee, subcontractor of any tier, supplier or other entity engaged in any portion of the work while on OCTA property. Contractor shall submit an injury report to the Authority within 24 hours of said injury.
 - 4. Other records as required by agencies listed in Part 1.03.
- B. Meetings between Contractor and its Site Safety Representative with the Authority will be required for safety submittals. Submittal preparation shall not be paid in as extra cost or part of progress payments.

1.06 SAFETY AND HEALTH PERSONNEL

A. Provide a Site Safety Representative, as described in Sections 01 43 01 Contractor Qualifications and Requirements, OCTA Level 3 Health, Safety and Environmental Specifications, and the General Provisions, who shall coordinate and supervise onsite safety and health, including training and testing Contractor's personnel.

1.07 CONSTRUCTION AND SAFETY EQUIPMENT

A. Contractor shall conform to requirements of OCTA, Cal/OSHA, and to applicable codes and regulations of Federal, State, and local authorities having jurisdiction over jobsite safety.

1.08 TESTING EQUIPMENT

A. Testing equipment as applicable to work site safety shall conform to requirements of California Code of Regulations, Title 8, Division of Industrial Safety, unless indicated otherwise.

1.09 IDENTIFICATION OF CONTRACTOR/SUBCONTRACTOR PERSONNEL

- A. While performing work at worksite, Contractor personnel of any tier shall be identified with employee's company name or logo affixed to employee's hardhat and safety vest, and an identification badge or other visible identification unique to each individual worker (number or name) acceptable to the Authority.
- B. Contractor personnel shall wear Cal/OSHA compliant Personal Protective Equipment (PPE) including but not limited to hard hats, orange safety vests or orange T-shirts with reflective strips, safety glasses, and safety shoes at all times while on the project.

PART 2 - PRODUCTS

Not Used.

PART 3 – EXECUTION

Not Used.

PART 4 – MEASUREMENT AND PAYMENT

No separate measurement or payment shall be made under this Section.

END OF SECTION

SECTION 01 41 00

REGULATORY REQUIREMENTS

PART 1 - GENERAL

<u>1.01 SUMMARY</u>

A. Section Includes:

1. Requirements associated with regulations, standards, and requirements of authorities having jurisdiction.

B. Related Sections:

- 1. Section 01 14 25, Procedures in Construction.
- 2. Section 01 14 27, Legal Relations and Responsibility.

1.02 SUBMITTALS

- A. Submit in accordance with Section 01 33 00, Submittal Procedures.
- B. Before starting the work, submit to the Authority copies of permit applications, permits, licenses, receipts for fee payments, judgments, and other similar documents, correspondence, and records obtained for performance of the work.
- C. At Substantial Completion, submit certifications, releases, jurisdictional settlements, notices and other similar documents under Section 01 77 00, Closeout Procedures.

1.03 APPLICABILITY OF INDUSTRY STANDARDS

- A. Construction Industry Standards referenced in the contract documents have the same force and effect as if published herein and are made a part of the contract documents. Refer to Section 01 42 00 References.
- B. Reference standards (referenced in the contract documents or by governing regulations) have precedence over non-referenced standards that are recognized in the industry for applicability to the work.
 - Building Codes: Performance of the Work shall meet or exceed the minimum requirements of California Code of Regulations (CCR), Title 24, including the following:
 - 2.
- a. CCR Title 24, Part 2: Uniform Building Code (UBC), latest edition, with State of California amendments; referenced as California Building Code (CBC).

- b. CCR Title 24, Part 3: National Fire Protection Association (NFPA) 13 National Electrical Code (NEC), latest edition, with State of California Amendments, referenced as California Electrical Code (CEC).
- c. CCR Title 24, Part 9: Uniform Fire Code (UFC), latest edition, with State of California Amendments, referenced as California Fire Code (CFC).
- d. CCR Title 24, Part 12: Uniform Building Code Standards (UBC Standards), latest edition, with State of California Amendments; referenced as California Building Standards Code (CBSC).
- 3. Performance of the Work shall also comply with applicable requirements of California Code of Regulations (CCR), as follows:
 - a. Title 19 Public Safety.
 - b. Title 22 Social Security.
 - c. Title 24 Building Standards, Parts 2 through 7, and Title 25 as applicable.
- 4. References on the Drawings or in the Specifications to "code", "Code" or "building code" similar terms, not otherwise identified, shall mean the codes specified above, together with all additions, amendments, changes, and interpretations adopted by code authorities of the jurisdiction having authority over the Project.
- 5. The applicable edition of all codes shall be that adopted at the time of issuance of permits by the jurisdiction having authority and shall include all modifications and additions adopted by that jurisdiction(s).
- C. Recognized industry standards shall be used where no specific standard is referenced in the contract documents. Obtain the Authority's approval before using any non-referenced standards.

1.04 GOVERNING REGULATIONS AND AUTHORITIES

- A. Contact authorities having jurisdiction directly for necessary information and decisions having a bearing on performance of the work.
- B. Utility location and protection shall conform to Section 5, Utilities, of the Standard Specifications for Public Works Construction (SSPWC). The contractor shall utilize an independent underground utility locating service, which uses standard locating techniques other than excavating, to identify the location of underground utilities in the areas of the work prior to excavating. The contractor shall determine the exact location of utilities identified in the work area by potholing using hand tools before using any power operated excavating equipment. Utilities now shown on the plans which are in direct conflict with the work will be dealt with by change orders.

C. Comply with requirements under the National Pollutant Discharge Elimination System (NPDES).

1.05 OTHER APPLICABLE LAWS, ORDINANCES AND REGULATIONS

- A. Work shall be accomplished in conformance with all applicable laws, ordinances, rules and regulations of Federal, State and local governmental agencies and jurisdictions, County of Orange, AQMD, CAL-OSHA, and all other agencies having authority over the Project.
- B. Work shall be accomplished in conformance with all rules and regulations of public utilities, utility districts, and public agencies providing utility services.
- C. Where such laws, ordinances, rules, and regulations require more care or greater time to accomplish Work, or require better quality, higher standards or greater size of products, Work shall be accomplished in conformance to such requirements with no change to the Contract Sum and Contract Time, except where changes in laws, ordinances, rules and regulations occur subsequent to the execution date of the Agreement.
- D. Contractor shall pay for and obtain all permits required by all agencies having jurisdiction over the work. Contractor shall be required to pay for all temporary utility connections and use to the respective utility company during construction.

1.06 PERMITS

- A. Obtain required permits from regulating agencies. Do not start work in areas requiring permits before issuance of permits from authorities having jurisdiction.
 - 1. Coordinate with regulating agencies to obtain required permits.
 - 2. Submit copies of permit applications and permits to the Authority.
 - 3. Comply with permit requirements and assume responsibility for any violations.
- B. Prepare permit applications and obtain permits as necessary for performance of the work, including but not limited to:
 - 1. Maintenance and protection of vehicle traffic and traffic control, if necessary.
 - 2. Disposal of debris and soils.
 - 3. All other activities with potential to adversely affect the environment.
 - 4. Utility connections.

PART 2 - PRODUCTS

Not Used.

PART 3 – EXECUTION

Not Used.

PART 4 - MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

No separate measurement will be made for work of this section.

4.02 PAYMENT

Work of this section is considered incidental to work under other payment item(s) listed in the Schedule of Quantities and Prices and no separate payment will be made.

END OF SECTION

SECTION 01 42 00

REFERENCES

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

- 1. Use of references in Drawings and Specifications, including requirements for copies of reference standards at Project site.
- 2. Abbreviations and acronyms.
- 3. General provisions regarding references.

1.02 USE OF REFERENCES

- A. References: The Drawings and Specifications contain references to various standards, standard specifications, codes, practices and requirements for products, execution, tests and inspections. These reference standards are published and issued by the agencies, associations, organizations and societies listed in this Section or identified in individual product specification Sections.
- B. Relationship to Drawings and Specifications: Such references are incorporated into and made a part of the Drawings and Specifications to the extent applicable.
- C. Referenced Grades Classes and Types: Where an alternative or optional grade, class or type of product or execution is included in a reference but is not identified on the Drawings or in the Specifications, provide the highest, best, and greatest of the alternatives or options for the intended use and prevailing conditions.
- D. Copies of Reference Standards:
 - 1. Reference standards are not furnished with the Drawings and Specifications because it is presumed that the Contractor, subcontractors, manufacturers, suppliers, trades and crafts are familiar with these generally-recognized standards of the construction industry.
 - 2. Copies of reference standards may be obtained from publishing sources.

E. Jobsite Copies:

 Contractor shall obtain and maintain at the Project site copies of reference standards identified on the Drawings and/or in the Specifications in order to properly execute the Work.

- 2. At a minimum, the following shall be readily available at the site:
 - a. Local and State Building Codes: As referenced in Section 01060 Regulatory Requirements.
 - b. Safety Codes: State of California, California Code of Regulations (CCR), Title 8 Industrial Relations, Chapter 4, Subchapter 7, General Industry Safety Orders.
 - c. General Standards: UBC Standards, other model Code standards, UL Building Products Listing, FM Approval Guide and ASTM Standards in Building Codes.
 - d. Fire and Life Safety Standards: All referenced standards pertaining to fire rated construction and exiting.
 - e. Common Materials Standards: American Concrete Institute (ACI), American Institute of Steel Construction (AISC), American Welding Society (AWS), Gypsum Association (GA), National Fire Protection Association (NFPA), Tile Council of America (TCA) and Woodwork Institute of California (WIC) standards to the extent referenced within the Contract Specifications.
 - f. Research Reports: ICBO Evaluation Service (ICBO ES) Research Reports and CABO National Evaluation Service Reports (NER), for products not in conformance to prescribed requirements stated in Building Code.
 - g. Product Listings: Approval documentation, indicating approval of authorities having jurisdiction for use of product with local City.

F. Edition Date of References:

- When an edition or effective date of a reference is not given, it shall be understood to be the current edition or latest revision published as of the date indicated on the Drawings and Specifications.
- 2. All amendments, changes, errata and supplements as of the effective date shall be included.
- G. ASTM and ANSI References: Specifications and Standards of the American Society for Testing and Materials (ASTM) and the American National Standards Institute (ANSI) are identified in the Drawings and Specifications by abbreviation and number only and may not be further identified by title, date, revision or amendment. It is presumed that the Contractor is familiar with and has access to these nationally- and industry-recognized specifications and standards.

1.03 ABBREVIATIONS, ACRONYMS, NAMES AND TERMS, GENERAL

- A. Abbreviations, Acronyms, Names and Terms: Where acronyms, abbreviations names and terms are used in the Drawings, Specifications or other Contract Documents, they shall mean the recognized name of the trade association, standards generating organization, authority having jurisdiction or other entity applicable.
- B. Abbreviations: The following are commonly-used abbreviations which may be found on the Drawings or in the Specifications:

AC or ac Alternating current or air conditioning

(depending upon context)

AMP or amp Ampere C Celsius

CFM or cfm Cubic feet per minute

CM or cm Centimeter CY or cv Cubic yard DC or dc Direct current DEG or deg Degrees F Fahrenheit FPM or fpm Feet per minute FPS or fps Feet per second FT or ft Foot or feet Gal or gal Gallons

GPM or gpm
IN or in
Kip or kip
Gallons per minute
Inch or inches
Thousand pounds

KSI or ksi Thousand pounds per square inch KSF or ksf Thousand pounds per square foot

KV or kv Kilovolt

KVA or kva Kilovolt amperes

KW or kw Kilowatt
KWH or kwh Kilowatt hour
LBF or lbf Pounds force
LF or lf Lineal foot
M or m Meter

MPH or mph Miles per hour MM or mm Millimeter

PCF or pcf Pounds per cubic foot PSF or psf Pounds per square foot PSI or psi Pounds per square inch

PSY or psy
SF or sf
SY or sy
Per square yard
Square foot
Square yard

V or v Volts

- C. Undefined Abbreviations, Acronyms, Names and Terms: Words and terms not otherwise specifically defined in this Section, in the Instructions to Bidders, in the Conditions of the Contract, on the Drawings or elsewhere in the Specifications, shall be as customarily defined by trade or industry practice, by reference standard and by specialty dictionaries such as the following:
 - 1. The American Institute of Architects (AIA) Document M101, "Glossary of Construction Industry Terms".
 - 2. The Construction Specifications Institute (CSI) Technical Document TD 2-4, "Abbreviations".
 - 3. <u>Dictionary of Architecture and Construction</u>, (Cyril M. Harris, McGraw-Hill Book Company, 1975).
 - 4. <u>Encyclopedia of Associations</u>, published by Gale Research Co., available in most libraries.

1.04 ABBREVIATIONS FOR AGENCIES, ASSOCIATIONS, CODES AND STANDARDS

A. Abbreviations for Agencies, Associations, Codes and Standards: The following abbreviations and acronyms may be used in the Drawings and Specifications. When used, the abbreviation or acronym shall mean the full name of the applicable agency, association, organization, society or standard.

AAMA	American Architectural Manufacturers Association
AAR	Association of American Railroads
AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
ADA	Americans with Disabilities Act
ADAAG	Americans with Disabilities Act Accessibility Guidelines
AGA	American Galvanizers Association
AGA	American Gas Association
AHRI	Air-Conditioning, Heating, and Refrigeration Institute
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
ALSC	American Lumber Standard Committee
AMCA	Air Movement and Control Association International, Inc.
ANSI	American National Standards Institute
APA	APA - The Engineered Wood Association (formerly American Plywood
	Association)
AREMA	American Railway Engineering and Maintenance-of-Way Association
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating, and Air-Conditioning Engineers
ASME	ASME International (formerly American Society of Mechanical Engineers)
ASSE	American Society of Safety Engineers

4005	
ASSE	American Society of Sanitary Engineering
ASTM	ASTM International (formerly American Society for Testing and Materials)
AWI	Architectural Woodwork Institute
AWPA	American Wood Protection Association (formerly American Wood-Preservers'
	Association)
AWS	American Welding Society
BHMA	Building Hardware Manufacturers Association
Cal/EPA	California Environmental Protection Agency
Cal/OSHA	California Department of Industrial Relations, Division of Occupational Safety and Health
Caltrans	California Department of Transportation, Standard Plans & Specifications 2010 Edition
CBC	California Building Code
CEC	California Electrical Code
CFR	Code of Federal Regulations
CMC	California Mechanical Code
СРА	Composite Panel Association
CPC	California Plumbing Code
CPUC	California Public Utilities Authority
CRI	Carpet and Rug Institute
CRSI	Concrete Reinforcing Steel Institute
DHI	Door and Hardware Institute
DOC	U.S. Department of Commerce
DOT	U.S. Department of Transportation
EPA	U.S. Environmental Protection Agency
FM	FM Approvals
FM	FM Global (formerly Factory Mutual)
FRA	Federal Railroad Administration
FS	Federal Specification
FSC	Forest Stewardship Council
FTA	Federal Transit Administration
GA	Gypsum Association
GANA	Glass Association of North America
HI	Hydraulics Institute
HMMA	Hollow Metal Manufacturers Association
ICC	International Code Council
IEEE	Institute of Electrical and Electronics Engineers
IGCC	Insulating Glass Certification Council
IGMA	Insulating Glass Manufacturers Alliance
ISO	International Organization for Standardization
LBTC	Laguna Beach Transportation Center
LEED	Leadership in Energy and Environmental Design
MPI	Master Painters Institute
MSS	Manufacturers Standardization Society of the Valve and Fittings Industry
NAAMM	National Association of Architectural Metal Manufacturers
NACE	NACE International (formerly National Association of Corrosion Engineers)
NEMA	National Electrical Manufacturers Association
INFINI	riational Electrical Manufacturers Association

NETA	International Electrical Testing Association
NFPA	National Fire Protection Association
NFPA	National Forest Products Association
NFRC	National Fenestration Rating Council
NHLA	National Hardwood Lumber Association
NSF	NSF International (formerly National Sanitation Foundation)
OSHA	Occupational Safety and Health Administration
PCI	Precast/Prestressed Concrete Institute
PDI	Plumbing and Drainage Institute
PS	Product Standard (US Department of Commerce)
RCSC	Research Council on Structural Connections
RIS	Redwood Inspection Service
RTA	Railway Tie Association
SDI	Steel Deck Institute
SDI	Steel Door Institute
SCRRA	Southern California Regional Rail Authority
SCAQMD	South Coast Air Quality Management District
SMACNA	Sheet Metal and Air Conditioning Contractors' National Association
SPPWC	Standard Plans for Public Works Construction, 2015 Edition
SSPC	Society for Protective Coatings (formerly Steel Structures Painting Council)
SSPWC	Standard Specifications for Public Works Construction, 2015 Edition
TCNA	Tile Council of North America
UL	Underwriters Laboratories Inc.
USDOJ	U.S. Department of Justice
USDOT	U.S. Department of Transportation
USGBC	U.S. Green Building Council
WCLIB	West Coast Lumber Inspection Bureau (stamped WCLB)
WI	Woodwork Institute
WWPA	Western Wood Products Association

1.05 REFERENCE STANDARDS

A. General

- Specifications, standards, and guidelines referenced in the text are incorporated by reference as if fully set forth. Where a referenced standard includes both administrative and technical provisions, and the administrative provisions conflict with the contract documents, only the technical provisions shall apply. If a referenced standard appears to conflict with the drawings and specifications, consult OCTA Project Manager for resolution.
- 2. The governing versions of reference standards and codes are those current at the time of contract execution, including errata, amendments, updates, etc., unless noted otherwise.

- Contractor shall maintain the latest copy of applicable standards at jobsite during submittals, planning and progress of the work. Make standards available for use by OCTA Project Manager upon request.
- 4. Caltrans: Standard Plans and Specifications 2022 Edition.
- 5. Standard Plans for Public Works Construction (SPPWC) 2021 Edition, Standard Specifications for Public Works Construction (SSPWC) 2021 Edition.

B. ADA Standards

- 1. References to ADAAG or the ADA Accessibility Guidelines refer to the ADA [Americans with Disabilities Act] Accessibility Guidelines for Buildings and Facilities, current amendments, available at https://www.access-board.gov/ada/.
- 2. References to USDOT ADA Standards refer to the U.S. Department of Transportation ADA Standards for Transportation Facilities, current standards are available at www.access-board.gov.
- 3. References to USDOJ ADA Standards are to the U.S. Department of Justice ADA Standards for Accessible Design, https://www.access-board.gov/ada/, or to new standards (currently pending) if in effect at the time of execution of the contract documents.

PART 2 - PRODUCTS

Not Used.

PART 3 – EXECUTION

Not Used.

PART 4 - MEASUREMENT AND PAYMENT

Not Used.

END OF SECTION

SECTION 01 42 16

DEFINITIONS

PART 1 - GENERAL

1.01 GENERAL

This Section provides definition of terms cited in the Contract Documents.

1.02 DEFINITION OF TERMS

- A. Wherever in the specifications and other Contract Documents, the following terms and abbreviations or pronouns in place of them, are used, the intent and meaning shall be interpreted as provided in this section unless the context otherwise requires.
 - 1. The Authority: Orange County Transportation Authority's (OCTA's) project representative. For the sake of the 16585 MAGNOLIA ST project, "the Authority" is the single point of contact to the Contractor. "The Authority" is OCTA's jobsite representative who will manage, coordinate, and otherwise facilitate jobsite requirements between the Contractor, OCTA's staff, and their consultants.
 - Quality Assurance (QA): The process by which the Authority elects to monitor and assure that it receives proper construction related documentation from the Contractor. QA procedures measure the setting of schedules for the receipt and review of documentation and the quality of the information contained within the documentation.
 - 3. Quality Control (QC): The process by which the Authority receives documentation from the Contractor that proves that the Contractor is providing the contractually mandated services, such as training, testing and inspection. Contractor must show evidence of internal procedures demonstrating how he will perform these mandated functions and submit documentation that QC verifications have been completed. QC is the responsibility of the Contractor.
 - 4. Salvage: To save any removed item. The salvaged item shall be reused in the contract or delivered and stockpiled for OCTA as specified in the Contract Documents.
 - 5. Site Specific Work Plan (SSWP): A program, plan, and schedule prepared and submitted by the Contractor and approved by the Authority that accurately describes and illustrates the manner in which work within the operating envelope will be accomplished, the impacts on any elements of the Operating System and the manner in which work will be accomplished with the allotted work windows.
 - 6. Project Applicant: all references made by City, local agencies, or other agencies to Project Applicant means the Contractor and not the Authority.

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- 7. Provide: To furnish/supply and install equipment/materials by Contractor per Contract documents as a complete system, fully operational and useful as designed.
- 8. Substantial Completion: In the opinion of the Authority, the Work or portion thereof that is sufficiently complete and in accordance with the Contract, that it can be utilized by the Authority for the purpose for which it was intended. A determination of Substantial Completion does not waive but may not require the prior completion of minor items, which do not impair the Authority's ability to safely occupy and utilize the Work for its intended purpose.

PART 2 - PRODUCTS

Not Used.

PART 3 – EXECUTION

Not Used.

PART 4 - MEASUREMENT AND PAYMENT

No separate measurement or payment shall be made under this Section.

END OF SECTION

Definitions 01 42 16 - 2

SECTION 01 43 00

QUALITY ASSURANCE

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes: Administrative and procedural requirements for quality assurance.
 - Specific quality assurance requirements for individual construction activities are specified in the sections that specify those activities. Requirements in those sections may also cover production of standard products.
 - 2. Requirements for Contractor to provide quality assurance services required by the Authority, or authorities having jurisdiction are not limited by provisions of this section.

B. Related Sections:

- 1. Section 01 43 01, Contractor Qualifications and Requirements.
- 2. Section 01 45 00, Quality Control.

1.02 DEFINITIONS

- A. Quality Assurance Services: Activities, actions, and procedures performed before and during execution of the work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- B. Quality Control Services: Tests, inspections, procedures, and related actions during and after execution of the work to evaluate that actual products incorporated into the work and completed construction comply with requirements. Refer to Section 01 45 00, Quality Control.
- C. Mockups: Full-size, physical assemblies that are constructed on-site. Mockups are used to verify selections made under sample submittals, to demonstrate aesthetic effects and, where indicated, qualities of materials and execution, and to review construction, coordination, testing, or operation; they are not samples. Approved mockups establish the standard by which the work will be judged.
- D. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, subcontractor, or sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.
 - 1. Using a term such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a

corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to trades people of the corresponding generic name.

E. Experienced: When used with an entity, "experienced" means having successfully completed a minimum of five previous projects similar in size and scope to this project; having a minimum of five years' experience in work similar to that required for this project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

1.03 CONFLICTING REQUIREMENTS

- A. General: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to the Authority for a decision before proceeding.
- B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to the Authority for a decision before proceeding.

1.04 QUALITY ASSURANCE

- A. General: Qualifications paragraphs in this article establish the minimum qualification levels required; individual specification sections specify additional requirements.
- B. Installer Qualifications: A firm or individual experienced (as defined above) in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this project, whose work has resulted in construction with a record of successful in-service performance.
- C. Manufacturer Qualifications: A firm experienced (as defined above) in manufacturing products or systems similar to those indicated for this project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- D. Fabricator Qualifications: A firm experienced (as defined above) in producing products similar to those indicated for this project and with a record of successful inservice performance, as well as sufficient production capacity to produce required units.
- E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where project is located and who is experienced (as defined

- above) in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product which are similar to those indicated for this project in material, design, and extent.
- F. Specialists: Certain sections of the specifications require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.
 - 1. Requirement for specialists shall not supersede building codes and regulations governing the work.
- G. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented and certified; and with additional qualifications specified in individual sections; and where required by authorities having jurisdiction, that is acceptable to authorities.
 - 1. NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.
 - 2. NVLAP: A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program.
- H. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this project.
- I. Preconstruction Testing: Where testing agency is indicated to perform preconstruction testing for compliance with specified requirements for performance and test methods, comply with the following:
 - 1. Contractor responsibilities include the following:
 - a. Provide test specimens representative of proposed products and construction.
 - b. All mockups shall be provided as submittals and follow the same tracking, recording, and approval processes.
 - c. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the work.
 - d. Provide sizes and configurations of test assemblies, mockups, and laboratory mockups to adequately demonstrate capability of products to comply with performance requirements.
 - e. Build site-assembled test assemblies and mockups, where indicated, using installers who will perform same tasks for Project.

- Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to the Authority, with copy to Contractor. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the contract documents.
- J. Mockups: Before installing portions of the work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed work:
 - 1. Build mockups in location and of size indicated or, if not indicated, as directed by the Authority.
 - 2. Notify the Authority seven days in advance of dates and times when mockups will be constructed.
 - 3. Demonstrate the proposed range of aesthetic effects and workmanship.
 - 4. Obtain the Authority's approval of mockups before starting work, fabrication, or construction.
 - 5. Allow seven days for initial review and each re-review of each mockup.
 - 6. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed work.
 - 7. Demolish and remove mockups when directed, unless otherwise indicated.
- K. OCTA Quality Assurance Inspection and Testing:
 - 1. The Authority will select and pay for an independent testing and inspection laboratory or agency, to conduct test and inspection for quality assurance purposes. Contractor is fully responsible for all quality control testing and inspection as required on contract drawings and/or specifications, required by AHJ, and as standard industry practice.
 - 2. Contractor shall coordinate and notify the Authority when work is ready for quality assurance testing and inspection.
 - 3. Contractor shall provide the Authority, independent testing and inspection personnel, and the Authority's Consultants with full access to the work and reasonable time for inspection for ascertaining whether or not the work is performed in accordance with the requirements and intent of the contract. No work shall be covered and no materials shall be installed without making the work and materials available for inspection by the Authority. If the Authority so requests, Contractor shall, at any time before acceptance of the work, remove and uncover such portions of the finished work as may be directed for quality assurance testing and inspection.

- 4. After quality assurance testing and inspection, Contractor shall restore the work to the standard required by the contract document.
- 5. Costs for additional tests, inspection and related services, due to the following, shall be reimbursed to the Authority by the Contractor and no change in Contract Time shall result.
 - a. Failure to properly schedule or notify the Authority for testing and inspection.
 - b. Changes in sources, lots or suppliers of products after original quality assurance tests or inspections.
 - c. Changes in means, methods, techniques, sequences and procedures of constructions which necessitate additional testing, inspections, and additional services.
 - d. Changes in materials after review and acceptance of submittals.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

Not Used

PART 4 - MEASUREMENT AND PAYMENT

No separate measurement will be made for the work of this section.

END OF SECTION

SECTION 01 43 01

CONTRACTOR QUALIFICATIONS AND REQUIREMENTS

PART 1 – GENERAL

1.01 CONTRACTOR DUTIES

- A. Except as specifically noted otherwise, provide:
 - A Construction Project Manager, who shall serve as the Contractor's Representative for the Contract, at or beyond the requirements described in this section.
 - 2. Other labor, supervision, and materials required for the work.
 - 3. Other tools, equipment, and machinery required for the work.
 - 4. Water, heat, and utilities required for the work.
 - 5. Support facilities and services, including fully furnished field office facilities, necessary for the proper execution and completion of the work.
- B. Pay legally required sales, consumer, and use taxes.
- C. Secure and pay for fees, surcharges, taxes, permits, and licenses necessary for the proper execution of the work.

1.02 REFERENCE STANDARDS

A. OSHA: Occupational Safety and Health Administration regulations.

1.03 CONSTRUCTION PROJECT MANAGER

- A. Provide and remain for the duration of the Project a Construction Project Manager who will manage and coordinate the overall aspects of the work.
- B. The Construction Project Manager's qualifications and experience shall include:
 - 1. A minimum of five years of progressing work responsible experience on public works construction projects that include coordination, and scopes, types, and characters of work directly related to the scope of work of this contract.
 - 2. Demonstrated ability to work safely and supervise individuals in safe work.

- 3. Previous positions and experience supervising and planning work activities of construction superintendents, project engineers, and support personnel foreman and crews.
- 4. Ability to read and understand survey, grading, paving, striping, utility, and structural plans.
- 5. Ability to develop and work from construction schedules.

C. The Construction Project Manager shall:

- 1. Visit the site daily during the work to verify the work is proceeding per contract documents.
- 2. Be on the job during the work week to manage and coordinate all aspects of work for the full duration of the project.
- 3. Be able to respond immediately to emergency or problem calls, 24 hours a day, 7 days a week.
- D. The Construction Project Manager shall have the necessary authority to provide instructions and orders to his authorized representatives. The Construction Project Manager is a project key personnel and shall not be replaced without advance approval by the Authority; the Authority will have sole approval of the replacement. Construction Project Manager shall be prime contractor's employee and shall be on prime contractor's payrolls.
- E. The Contractor may propose supervisory personnel such as superintendent to serve as Construction Project Manager, given she/he meets all Construction Project Manager's qualifications and requirements.

1.04 ON-SITE SUPERINTENDENCY

- A. Provide and remain for the duration of the Project an on-site superintendent.
- B. On-site competent superintendent shall meet qualifications and experience herein below:
 - A minimum of three years of progressing work responsible experience on public works construction project that includes coordination, and scopes, types, and characters of work directly related to the scope of work of this contract.
 - 2. Ability to work safety and supervise individuals in safe work.
 - 3. Contractor's Construction Project Manager can serve as an on-site superintendent. On the workdays the on-site superintendent cannot be present at the job site during construction, the Contractor's Construction Project Manager shall be present at the job site during construction and serve as an on-site superintendent.

- C. The on-site superintendent shall:
 - 1. Attend pre-construction meeting.
 - 2. Be present at the job site at all times during the work to verify the work is proceeding per contract documents. If there are multiple job sites in project scope and work is performed concurrently at multiple job sites, one on-site superintendent is required to be present at each job site during construction activities.
 - 3. Communicate and coordinate effectively with Contractor's Construction Project and the Authority in any project related matters.
 - 4. Prepare and sign contractor's daily reports.
- D. The on-site superintendent is a project key personnel and shall not be replaced without advance approval by the Authority; the Authority will have sole approval of the replacement. On-site superintendent shall be prime contractor's employee and shall be on prime contractor's payrolls.

1.04 SITE SAFETY REPRESENTATIVE

- A. Provide and maintain for the duration of Project an on-site Health, Safety and Environmental (HSE) representative who is key personnel of the Project.
- B. On-site HSE representative qualifications and experience must include:
 - 1. Qualifications set forth in the General Provision and OCTA Level 3 Health, Safety and Environmental Requirements.
- C. The on-site HSE representative must be headquartered for the duration of the project at Contractor's construction field office. If there are multiple job sites in project scope and work is performed concurrently at multiple job sites, one on-site HSE representative is required to be present at each job site during construction activities.
- D. The on-site HSE representative will be required to train and test Contractor's employees as described in Section 01 35 23, Owner Safety Requirements.

1.05 SUBMITTALS

A. Contractor shall submit for the Authority's approval the name and professional history (resumes) of each of the key personnel positions identified in this specification section.

PART 2 – PRODUCTS

Not Used

PART 3 – EXECUTION

3.01 PERSONNEL QUALIFICATION

- A. Within five calendar days after Notice to Proceed, submit to the Authority resumes of personnel listed above in Part 1 above. Each resume shall provide sufficient detail to demonstrate compliance with requirements. Submit a schedule showing, for each employee classification, number of personnel to be assigned to the work and duration of their assignments.
- B. The Authority will review resumes to determine acceptability of qualifications and experience. the Authority's decision is final. Do not resubmit resumes of personnel deemed unacceptable by the Authority.
- C. Substitutions: To replace any personnel identified in Part 1, follow this section's procedures for obtaining approval of the original personnel. This qualification process shall be completed before the vacancy occurs. Provision for substitutions does not relieve Contractor of the responsibility to provide personnel as provided in Part 1.

PART 4 – MEASUREMENT AND PAYMENT

No separate measurement or payment will be made for work of this section.

END OF SECTION

SECTION 01 45 00

QUALITY CONTROL

PART 1 – GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Authority of "the Authority".
 - 2. Responsibilities of the Contractor.
 - 3. Inspection and testing by the Authority's Deputy Inspector.
- B. Related Sections:
 - 1. Section 01 14 23, Coordination with OCTA and Local Agencies.
 - 2. Section 01 33 00, Submittal Procedures.
 - 3. Section 01 41 00, Regulatory Requirements.
 - 4. Section 01 43 00, Quality Assurance.
 - 5. Section 01 60 00, Product Requirements.

1.02 AUTHORITY OF "THE AUTHORITY"

- A. The Authority will determine whether the work is completed in accordance with the contract documents. The Authority will decide all questions that may arise as to the quality or acceptability of materials furnished and work performed, and interpretations of the contract documents.
- B. The Authority may require the Contractor to finish a section on which work is in progress before work is started on any additional section. Refer to Section 01 14 22, Rules and Hours of Operation for requirements.
- C. The Authority may require the Contractor to submit additional shop drawings or documents to demonstrate the Contractor's understanding the intents of contract plans and specifications as part of quality control.

1.03 REFERENCES

A. ASTM D3740 - Practice for Evaluation of Agencies Engaged in Testing and/or Inspection Used in Engineering Design and Construction.

1.04 REGULATORY REQUIREMENTS FOR TESTING AND INSPECTION

- A. Regulatory Requirements for Testing and Inspection: Inspections, testing and approvals as required by authorities having jurisdiction. Refer to Section 01060 Regulatory Requirements.
 - 1. California Code of Regulations (CCR) Title 24, State Building Code (Uniform Building Code with State of California Amendments), latest edition, as adopted and interpreted by authorities having jurisdiction.
 - 2. California Code of Regulations (CCR) Title 22, Sections 94065, 94067 and 94069.

1.05 RESPONSIBILITIES OF THE CONTRACTOR

- A. Cooperate with the Authority and with other contractors as detailed in Section 01 14 24, Coordination with the Authority and Local Agencies.
- B. Ensure that products, services, workmanship and site conditions comply with requirements of the Drawings and Specifications by coordinating, supervising, testing and inspecting the Work and by utilizing only suitably qualified personnel.
- C. Perform the work to achieve the level of quality prescribed in the contract documents, including by reference, all Codes, laws, rules, regulations and standards. The no quality basic is prescribed, the quality shall be in accordance with the best accepted practices of the construction industry for the locale of the Project, for projects of this type.
- D. Perform the work in the proper sequence in relation to the requirements of the the Authority and other contractors, all as may be directed by the Authority.
- E. Employ and assign knowledgeable and skilled personnel as necessary to perform quality control functions to ensure that the Work is provided as required.
- F. Be responsible for any damage done by it or its agents to the work performed by the OCTA, CalTrans, or another contractor.

1.06 SUPERVISION AND CONSTRUCTION PROCEDURES

- A. Give the work the constant attention necessary to facilitate the progress of the work.
- B. Be solely responsible for all construction means, methods, techniques, and procedures and for coordinating all portions of the work under the contract. Permission given by the Authority to use any particular methods, equipment, or appliances shall not be construed to relieve the Contractor from furnishing other equipment or other appliances or adopting other methods when those in use prove unsatisfactory, or as to bind the Authority to accept work which does not comply with the contract.

- C. Immediately remove from the work, when so ordered by the Authority, and do not reemploy on any of the work, without written permission from the Authority, any contractor or subcontractor employee doing unsafe, improper, or defective work; who, in the Authority's judgment, refuses or neglects the direction of the Authority given to the Contractor; who is deemed incompetent or disorderly; or who commits trespassing on public or private property in the vicinity of the work.
- D. Be responsible for securing all work areas by barricade in accordance with local and State requirements as applicable at the end of each day.

1.07 QUALITY OF THE WORK

- A. Quality of Products: Unless otherwise indicated or specified, all products shall be new, free of defects and fit for the intended use.
- B. Quality of Installation: All Work shall be produced plumb, level, square and true, or true to indicated angle, and with proper alignment and relationship between the various elements. New material shall be installed so that drainage merges with existing flow patterns on the site towards the drains.
- C. Protection of Existing and Completed Work: Take all measures necessary to preserve and protect existing and completed Work free from damage, deterioration, soiling and staining, until Acceptance by the Authority.
- D. Standards and Code Compliance and Manufacturer's Instructions and Recommendations: Unless more stringent requirements are indicated or specified, comply with manufacturer's instructions and recommendations, reference standards and building code research report requirements in preparing, fabricating, erecting, installing, applying, connecting and finishing Work.
- E. Deviations from Standards and Code Compliance and Manufacturer's Instructions and Recommendations: Document and explain all deviations from reference standards and building code research report requirements and manufacturer's product installation instructions and recommendations, including acknowledgement by the manufacturer that such deviations are acceptable and appropriate for the Project.
- F. Verification of Quality: Work shall be subject to verification of quality by the Authority in accordance with provisions of the Conditions of the Contract.
 - 1. Contractor shall cooperate by making Work available for inspection by the Authority.
 - 2. Such verification may include mill, plant, shop, or field inspection as required. the Authority's designated Inspector/s shall access to material inspection.
 - 3. Provide access to all parts of the Work, including plants where materials or equipment are manufactured or fabricated.
 - 4. Provide all information and assistance as required, including that by and from subcontractors, fabricators, materials suppliers and manufacturers, for verification of quality by the Authority.
 - 5. Contract modifications, if any, resulting from such verification activities shall be governed by applicable provisions in the Conditions of the Contract.

- G. Observations by the Engineer and Engineer's Consultants: Periodic and occasional observations of Work in progress may be made by the Engineer and Engineer's consultants as deemed necessary to review progress of Work and general conformance with design intent.
- H. Limitations on Inspection, Test and Observations: Neither employment of an Inspector of Record, independent testing and inspection agency, or observations by the Engineer and Engineer's consultants shall in no way relieve Contractor of obligation to perform Work in full conformance to all requirements of Contract Documents and applicable Building Code and other regulatory requirements.
- The Engineer's Acceptance and Rejection of Work: The Engineer reserves the right to reject all Work not in conformance to the requirements of the Drawings and Specifications.
- J. Correction of Non-Conforming Work: Non-conforming Work shall be modified, replaced, repaired or redone by the Contractor at no change in Contract Sum or Contract Time.
- K. Acceptance of Non-Conforming Work: Acceptance of non-conforming Work, without specific written acknowledgement and approval of the Authority, shall not relieve the Contractor of the obligation to correct such Work.
- L. Contract Adjustment for Non-conforming Work: Should the the Authority determine that it is not feasible or in the Authority 's interest to require non-conforming Work to be repaired or replaced, an equitable reduction in Contract Sum shall be made by agreement between the Authority and Contractor. If equitable amount cannot be agreed upon, a Construction Change Directive will be issued and the amount in dispute resolved in accordance with the Conditions of the Contract.
- M. Non-Responsibility for Non-Conforming Work: The Engineer and the Engineer's consultants disclaim any and all responsibility for Work produced not in conformance with the Drawings and Specifications.

1.08 INSPECTION AND TESTING

- A. The work is to be completed in accordance with the specifications, the drawings, and such instructions or directions as the Authority may give to supplement drawings and specifications. Wherever the words "directed," "permitted," "approved," "acceptable," "satisfactory to," or similar words or phrases occur in the contract documents, they shall be understood to be functions of the Authority to be exercised at his discretion.
- B. The Authority shall not be responsible for and shall not have control or charge over the acts or omissions of the Contractor, subcontractors, or any of their agents or employees, or any other persons performing any of the work.
- C. Inspections and Tests by Authorities Having Jurisdiction: Contractor shall cause all tests and inspections required by authorities having jurisdiction to be made for Work under this Contract, Public Works Department, Fire Department, Health Department,

AQMD, SoCal Edison, and similar agencies. Except as specifically noted, scheduling, conducting and paying for such inspections shall be solely the Contractor's responsibility.

- D. Inspections and Tests by Serving Utilities: Contractor shall cause all tests and inspections required by serving utilities to be made for Work under this Contract. Scheduling, conducting and paying for such inspections shall be solely the Contractor's responsibility.
- E. Inspections and Tests by Manufacturer's Representatives: Contractor shall cause all tests and inspections specified to be conducted by materials or systems manufacturers to be made. Additionally, all tests and inspections required by materials or systems manufacturers as conditions of warranty or certification of Work shall be made, the cost of which shall be included in the Contract Sum.
 - 1. Test and Inspection Reports: After each inspection and test, one copy of report shall be promptly submitted to the Engineer, Engineer's consultant (as applicable), the Authority, Contractor, City Inspector, and to agency having jurisdiction (if required by Code).
 - a. Reports shall clearly identify the following:

Date issued.

Project name and number.

Identification of product and Specifications Section in which Work is specified. Name of inspector.

Date and time of sampling or inspection.

Location in Project where sampling or inspection was conducted.

Type of inspection or test.

Date of test.

Results of tests.

Comments of conformance with Contract Documents and other requirements.

- b. Test reports shall indicate specified or required values and shall include statement whether test results indicate satisfactory performance of products.
- c. Samples taken, but not tested, shall be reported.
- d. Test reports shall confirm that methods used for sampling and testing conform to specified test procedures.
- F. Contractor shall provide the Authority, independent testing and inspection agency personnel, inspector of record and the Authority's consultant with full access to the work and reasonable time for inspection for ascertaining whether or not the work is performed in accordance with the requirements and intent of the contract.
- G. No work shall be covered or materials used without making the work or materials available for inspection by the Authority. If the Authority so requests, the Contractor shall, at any time before acceptance of the work, remove or uncover such portions of the finished work as may be directed.

- H. After examination, Contractor shall restore the work to the standard required by the contract documents. Inspection will not relieve the Contractor from the responsibility for the quality of this work and to perform the work in accordance with the requirements of the contract documents.
- I. All materials and every process of manufacture and construction shall be subject to inspection at all times. The Authority and their designated representatives shall have free access to all operations. Contractor shall provide necessary materials and the Authority shall have the right to select suitable samples of materials for testing or examination which the contractor shall supply without charge. In case such samples must be shipped to some other point for inspection or testing, Contractor shall box or crate samples as necessary and shall deliver them at points designated for shipment without charge.
- J. Omission of inspection shall not relieve the Contractor of its obligations to produce the work required by the contract documents. Materials not in compliance with contract requirements shall be removed promptly from the vicinity of the work, and the Contractor, at its expense, shall promptly remove, reconstruct, replace, and make good any defective work as directed in writing by the Authority. Oversight or error in judgment of inspectors, or previous acceptance of the work, shall not relieve Contractor from the obligation to correct defects whenever discovered.
- K. If the Contractor does not correct nonconforming work or remove rejected materials within a reasonable time fixed by written notice, the Authority may direct that removals and corrections be performed by other contractors. Charges for such removals and corrections shall be deducted from the Contractor's payment due under this contract or may be paid for by the Contractor's bonds held for this contract.
- L. All inspection by the Authority is for the protection of the Authority and its interest and shall not relieve the Contractor of responsibility for providing work in accordance with the contract documents. After completion of the work, a final inspection will be made and any previous inspection or acceptance will not preclude rejection at the final inspection of any item that is not satisfactory to the Authority or is not in accordance with the contract documents.
- M. If, within the period of time prescribed by law or by the terms of any applicable special warranty required by the contract documents, whichever is longer, any of the work is found to be defective or not in accordance with the contract documents, the Contractor shall correct it promptly after receipt of a written notice from the Authority. This obligation shall survive acceptance of the work or termination of the contract. In the event the Authority prefers to accept or not require correction of defective or nonconforming work, the Authority may do so instead of requiring its removal and correction, in which case the Authority shall determine an appropriate sum to be deducted from the contract price or otherwise charged against the Contractor, which determination shall be final and binding upon the parties. Such adjustment shall be affected whether or not final payment has been made.
- N. All defective work which has been rejected shall be remedied or removed and replaced by the Contractor at its own expense, in a manner acceptable to the Authority.

- O. Whenever all of the work provided for in the contract or authorized as force account work has been completed and the final cleaning-up performed, the Authority will make the final inspection, and, if the work is found to be satisfactory, Contractor will be notified in writing of the acceptance. All portions of the work shall be maintained by the Contractor at the standards required by the contract documents until final acceptance.
- P. At the Authority's discretion, portions of the work that are determined to be substantially complete may be accepted before all the project work is completed. After acceptance of substantially completed work, Contractor shall not use the finished product for any purpose without permission of the Authority.

PART 2 - PRODUCTS

Not Used

PART 3 – EXECUTION

3.01 FIELD QUALITY CONTROL/QUALITY ASSURANCE

- A. Give minimum of 48-hour advance notice of each test and inspection to the Authority when ready for testing, observation and inspection.
- B. Should any compaction density/strength test or inspection fail to meet specification requirements, necessary corrective work shall be performed by the Contractor. Additional testing shall be required to determine that corrective work provides compaction in the failed area meeting requirements of these Specifications.
- C. Contractor shall provide a record of testing results including corrective actions taken if necessary, on the approved form to the Authority.
- D. Contractor's corrective work to meet requirements and retesting resulting from failing tests shall be at no additional cost to OCTA.
- E. Obtain all inspections required by the local regulatory agencies and provide the Authority with the final sign-off cards for the project from the local regulatory agencies.

PART 4 – MEASUREMENT AND PAYMENT

No separate measurement or payment shall be made under this section.

END OF SECTION

SECTION 01 50 00

TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Temporary facilities and controls used during construction.
- B. Related Sections:
 - 1. Section 01 14 25, Procedures in Construction.
 - 2. Section 01 14 27, Legal Relations and Responsibility.
 - 3. Section 01 14 43, Environmental Resource Protection.
 - 4. Section 01 71 13, Mobilization and Demobilization
 - 5. Section 01 74 19, Construction Waste Management and Disposal.

1.02 SUBMITTALS

- A. Submit in accordance with Section 01 33 00, Submittal Procedures.
- B. Site Plans: Show temporary facilities, utility hookups, staging areas, and parking areas for construction personnel.
- C. Moisture Protection Plan: Describe procedures and controls for: protecting materials and construction from water absorption and damage, including delivery, handling, and storage; discarding water-damage materials; protocols for mitigation of water into completed work; and replacing water-damaged work.

1.03 QUALITY ASSURANCE

A. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.

PART 2 - PRODUCTS

2.01 TEMPORARY FACILITIES, PRODUCTS, AND CONTROL

- A. Common-Use Field Office: not required.
- B. Storage and Fabrication Sheds: No equipment or tools are allowed to be stored at the jobsite without the Authority's written permission. If on-site storage is permitted, provide access and orderly provision for maintenance and for inspection of products.
- C. Telephone Service: Provide mobile telephone service for project superintendent.

D. Temporary Electricity:

- Connect to existing power service at location as directed. Power consumption shall not disrupt Owner's need for continuous service. Exercise measures to conserve energy.
- 2. Provide power outlets for construction operations, with branch wiring and distribution boxes. Provide flexible power cords as required.
- 3. Provide main service disconnect and over current protection at convenient location.
- 4. Comply with NECA, NEMA, and UL standards and regulations for temporary electric service.
- 5. Permanent convenience receptacles may be utilized during construction.

E. Temporary Fire Protection:

- 1. Maintain temporary fire protection facilities of the types needed until permanent facilities are installed. Fire Extinguishers shall be portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.
- 2. Comply with NFPA 10 "Standard for Portable Fire Extinguishers" and NFPA 241 "Standard for Safeguarding Construction, Alterations, and Demolition Operations".
- 3. Fire safety during construction shall comply with CFC California Fire Code (CCR) California Code of Regulations, Title 24, Part 9, Article 87.
- 4. Store combustible materials in containers in fire-safe locations.
- 5. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire-protection facilities, stairways, and other access routes.
- 6. Provide supervision of welding operations, combustion-type temporary heating units, and similar sources of fire ignition.
- F. Barriers, enclosures, and fencing:

- Provide traffic cones to prevent unauthorized entry to construction areas and to protect existing facilities and adjacent properties from damage from construction operations.
- 2. Provide protection for plant life and trees designated to remain and for soft and hardscape areas adjacent to work, replace damaged materials in kind.
- 3. Protect non-owned vehicular traffic, stored materials (if allowed) site and structures from damage.
- G. Noise Control: Provide methods, means, and facilities to minimize noise produced by construction operations.

H. Pollution Control:

- 1. Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations.
- 2. Conform to Best Management Practices for waste management and material controls as defined in Section 4 of the Construction Activity Handbook published by the Storm Water Quality Association.
- 3. Coordinate construction activities with control procedures established in the Storm Water Pollution Prevention Plan (SWPPP).

I. Security:

1. Provide security and facilities to protect Work, from unauthorized entry, vandalism, or theft.

J. Traffic Control:

- 1. Comply with requirements of authorities having jurisdiction.
- 2. Obtain all required permits, provide all materials and maintain controls as required of authorities having jurisdiction.
- 3. Maintain access for fire-fighting equipment and access to hydrants.

K. Progress Cleaning:

- 1. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.
- 2. Broom and vacuum clean interior areas prior to start of surface finishing and continue cleaning to eliminate dust.
- 3. Provide walk-off mats at each building entry affected by construction activities.

- L. Waste Disposal:
 - 1. Waste Management: In compliance with City regulations.
 - 2. Maintain work areas free of waste materials, debris, and rubbish.
 - 3. Remove waste materials, debris, and rubbish from site periodically during a workday and legally dispose of off-site at the end of each workday by 3:30 pm.
 - 4. Maintain site area in a clean and orderly condition.

PART 3 - EXECUTION

3.01 INSTALLATION, GENERAL

- A. Locate facilities where they will serve project adequately and result in minimum interference with performance of the work. Relocate and modify facilities as required by progress of the work.
 - 1. Locate facilities to avoid protected areas as specified in Section 01 14 43, Environmental Resource Protection.

3.02 TEMPORARY UTILITIES

A. Provide and pay for temporary utility services and facilities such as sanitary facilities, telephone service and internet service adequate for construction and related activities.

3.03 TEMPORARY ROADS, PAVING, PARKING, AND SIMILAR IMPROVEMENTS, AND USE OF SITE

- A. See Section 01 14 25, Procedures in Construction.
- B. See Section 01 14 27, Legal Relations and Responsibility

3.04 PROTECTION OF AIR AND WATER RESOURCES AND OTHER ENVIRONMENTAL RESOURCES

- A. See Section 01 14 25, Procedures in Construction.
- B. See Section 01 14 27, Legal Relations and Responsibility.
- C. See Section 01 14 43, Environmental Resource Protection.

3.05 CONSTRUCTION WASTE

A. See Section 01 74 19, Construction Waste Management and Disposal.

3.06 SECURITY AND FIRE PROTECTION

A. See Section 01 14 27, Legal Relations and Responsibility.

PART 4 - MEASUREMENT AND PAYMENT

Work of this section is incidental to other work and no separate measurement or payment will be made.

END OF SECTION

SECTION 01 57 13

TEMPORARY EROSION AND SEDIMENTATION CONTROL

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Temporary erosion and sedimentation control.
 - 2. Accessories required for a complete installation.
- B. Related Sections:
 - 1. Section 01 14 25, Procedures in Construction.
 - 2. Section 01 50 00, Temporary Facilities and Controls.
 - 3. Section 01 14 43, Environmental Resource Protection

1.02 REFERENCE STANDARDS

- A. Caltrans: State of California Department of Transportation, Standard Specifications.
- B. Standard Specifications for Public Works Construction (SSPWC).
- C. California Stormwater Quality Association (CASQA)

1.03 SUBMITTALS

- A. Submit in accordance with Section 01 33 00, Submittal Procedures.
- B. Working drawings and data on proposed straw bales and fiber rolls, including physical properties of various products.

1.04 DELIVERY, STORAGE, AND HANDLING

A. Deliver, handle, and store materials in accordance with recommendations of manufacturer.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Miscellaneous Materials:

- 1. Plastic sheeting: Clear polyethylene plastic sheeting at least 10 mils thick, secured with anchor restrainers (gravel filled bags) per the Construction Best Management Practices (BMP) handbook prepared by the California Stormwater Quality Association (CASQA), www.cabmphandbooks.com.
- 2. Temporary Fiber Rolls and Straw Bales: Provide fiber rolls and straw bales with staking per the Construction BMP handbook prepared by the CASQA, www.cabmphandbooks.com. If staking is not feasible, contractor shall develop other suitable methods of anchoring that will be acceptable to OCFCD.
- 3. Temporary concrete washout facility, per the Construction BMP handbook prepared by the CASQA, www.cabmphandbooks.com.
- 4. Gravel bags per the Construction BMP handbook prepared by the CASQA, www.cabmphandbooks.com

PART 3 - EXECUTION

3.01 GENERAL

- A. Conform to all applicable local, state and Federal Regulations and laws pertaining to water pollution control and as specified in SSPWC section 7-8.6.
- B. Accomplish erosion and sediment control through use of berms, dikes, swales, dams, fiber mats, plastic sheeting, netting, gravel, storm drain inlet protection, slope drains, sediment fences, and other sediment barriers; gravel construction entrances; and other erosion control devices or methods. Cover material stockpiles with plastic sheeting.
- C. Coordinate temporary pollution control provisions with permanent erosion control features specified elsewhere in the contract documents to the extent practicable to assure economical, effective, and continuous erosion control throughout the construction and post-construction period.
- D. WQMP may limit surface area of erodible earth material exposed by clearing, grubbing, excavation, borrow, embankment, and fill operations.
 - 1. Provide immediate, permanent, or temporary pollution control measures to prevent contamination of adjacent streams or other watercourses, lakes, ponds, or other areas of water impoundment.
 - 2. Work may involve construction of temporary berms, dikes, dams, sediment basins, and slope drains; use of temporary mats; or other control devices or methods as necessary to control erosion.

E. Construct facilities required for clearing, grading, and land alteration activities, to ensure that sediment-laden water does not enter drainage systems or violate applicable water standards. Conform to requirements of Section 01 14 43, Environmental Resource Protection.

F. Permanent Features:

- Incorporate permanent erosion control features at earliest practicable time. Use temporary pollution control measures to correct unforeseen conditions that develop during construction, to provide measures that are needed prior to installation of permanent pollution control features, or to temporarily control erosion that develops during normal construction.
- 2. Where erosion interferes with clearing and grubbing operations, schedule and perform work so that grading operations and permanent erosion control features can follow immediately; otherwise, provide temporary erosion control measures between successive construction stages.

G. Areas of Work:

- 1. Limit the area of clearing, grubbing, excavation, borrow, and embankment operations in progress commensurate with progress. Should seasonal limitations result in unrealistic coordination of operations, take temporary erosion control measures immediately.
- 2. Flag boundaries of clearing limits prior to construction.
 - a. Do not disturb or permit disturbance of ground beyond flagged boundary. Reference Section 01 14 43, Environmental Resource Protection
 - b. Maintain flagging for duration of work.
- 3. Temporary soil erosion and sediment control may include construction work outside right of way where work is necessary as a result of project construction such as borrow pit operations, haul roads, and equipment storage sites.

H. Maintenance:

- 1. Maintain erosion control features installed, including replacement, and upgrading of facilities when needed, until work is completed and notice of Final Acceptance issued.
- 2. Maintain catch basins (inlets with sumps or inverted siphons) so that not more than one foot depth of sediment is allowed to accumulate within a trap (or sump).
 - a. Clean catch basins and storm drains prior to paving and Substantial Completion.
 - b. Remove sediment. Do not flush sediment-laden water into downstream system.

- 3. Keep paved areas clean for the duration of the project.
- 4. Measures in addition to those indicated may be required.
- 5. Do not permit more than a one-foot depth of sediment to accumulate behind a silt fence.
 - a. Remove sediment or regrade it into slopes, and repair and reestablish silt fences as needed.
- 6. Remove silt fences in entirety when no longer required. Fences are required until uphill area has been permanently stabilized.
- 7. Remove pipes, end sections, drainage curbs, silt fences, and other materials from temporary erosion control devices; those not incorporated into permanent work become property of Contractor.

3.02 STORM DRAIN INLET PROTECTION

- A. Storm drain inlet protection must prevent sediment from entering storm drain systems prior to permanent stabilization of disturbed areas.
- B. Use storm drain inlet protection per the Construction BMP handbook prepared by the CASQA, www.cabmphandbooks.com:
 - 1. Where storm drain inlets are operational before permanent stabilization of disturbed drainage area.
 - 2. Adjacent to and immediately downhill of utility type construction in existing paved areas with catch basin drainage.
 - 3. When cleaning streets.
- C. Use berms when required to direct drainage to flow through filters and prevent bypassing of inlets.
- D. Do not permit more than one-foot depth of sediment to accumulate against storm drain inlet protection.
 - 1. Remove sediment and restore inlet protection as needed to maintain sediment trapping and filtering capability.

PART 4 - MEASUREMENT AND PAYMENT

No separate measurement or payment will be made for the work of this section.

END OF SECTION

SECTION 01 60 00

PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.01 SUMMARY

A. This section includes administrative and procedural requirements for selection of products for use in the project; product delivery, storage, and handling.

1.02 SOURCE OF SUPPLY AND QUALITY OF MATERIALS

- A. The Authority shall approve the source of supply of each of the materials supplied by the Contractor before the purchase or delivery of materials to the work site. Promptly after receiving the Contract award, the Contractor shall notify the Authority of all proposed material sources. If it is found after trial that sources of supply previously approved do not produce uniform and satisfactory products, or if the product from any source proves unacceptable at any time, the Contractor shall furnish materials from other sources as approved by the Authority.
- B. Only materials conforming to Specifications and approved in advance by the Authority shall be used in the work. All material being used shall be subject to inspection or test at any time during their preparation or use. No material that after approval has in any way become unfit for use shall be used in the Work.
- C. It is Contractor's responsibility to verify material and product availability and compliance prior to submitting material and product submittals to the Authority for review and acceptance.

1.03 UNLOADING, HAULING AND STORING MATERIALS

- A. The Contractor shall, at its expense, deliver, unload, store, handle, and be responsible for all materials whether furnished by the Authority or by the Contractor.
- B. Store and protect products in accordance with manufacturer's instructions, with seals and labels intact and legible.
 - 1. Periodically inspect to ensure products are undamaged, and are maintained under required conditions.
 - 2. Products damaged by improper storage or protection shall be removed and replaced with new products at no change in Contract Sum or Contract Time.
- C. Store products to facilitate inspection and measurement of quantities and units.
- D. The unloading, storing and hauling of all the Authority's or Contractor's material shall be considered as incidental to contract pricing.

Product Requirements 01 60 00 - 1

- E. When permission to do so is given in writing by the Authority, the Contractor may store materials and erect temporary buildings on OCTA's property provided such property is not required for OCTA's use or is not under lease to other parties.
- F. Store moisture-sensitive products in a weathertight enclosure or covered with an impervious sheet covering. Provide adequate ventilation to avoid condensation. Maintain product storage within temperature and humidity ranges required by manufacturer's instructions.
 - 1. For exterior storage of fabricated products, place on sloped supports above ground.
 - 2. Store loose granular materials on solid surfaces in a well-drained area. Prevent mixing with foreign matter. Prevent material from flowing or blowing away to other areas of the site. Provide covers for sand, aggregate base, and debris so that wind does not cause it to blow away.
 - 3. Arrange storage to provide access for inspection. Periodically inspect to assure products are undamaged, and are maintained under required conditions.
- G. All electrical and mechanical equipment shall be stored so as to be protected from rain, sun, wind, sand, dust, moisture, etc. The equipment shall be stored on supports off the ground or on concrete slabs with all factory provided dust and moisture protection left in place until equipment is installed.
- H. Electrical and mechanical equipment shall be maintained in accordance with the manufacturer's operation and maintenance instructions until the Contractor is relieved of the responsibility by the Authority.
- I. Store heavy materials away from the structure in a manner that will not endanger supporting construction.
- J. Building materials shall be stored in a protected environment safe from sun, rain and excessive dust. Store cementitious products and materials on elevated platforms. Damaged or excessively dirty materials will not be permitted to be installed.

K. Protection:

- 1. Provide barriers, flashing lights, substantial coverings and notices to protect installed Work from traffic and subsequent construction operations.
- 2. Remove protective measures when no longer required and prior to Acceptance of the Work.

L. Delivery Requirements:

1. Schedule delivery to minimize long-term storage at project site and to prevent overcrowding of construction spaces.

- 2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
- Comply with manufacturer's instructions and recommendations for transportation, delivery and handling. Provide equipment and personnel to handle products by methods to prevent soiling, marring or other damage.
- 4. Deliver products to project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with manufacturer's labels and instructions for handling, storing, unpacking, protecting, and installing.
- Contractor is responsible and shall be present at work side for receiving his
 material delivery at the work site. Promptly inspect products on delivery to ensure
 compliance with the contract documents and to ensure that products are
 undamaged and properly protected.
- 6. Contractor shall provide the Authority with 48 hours' notice prior to delivery of any products and materials.

1.04 PRODUCT SELECTION PROCEDURES

- A. Products: Items purchased for incorporation in the Work, whether purchased for the Project or taken from previously purchase stock, and include material, equipment, assemblies, fabrications and systems.
- B. General Product Requirements: Provide products that comply with the contract documents, that are undamaged and, unless otherwise indicated, that are new at time of installation.
 - 1. It is OCTA's policy that all manufactured products and supplies be provided by United States manufacturing industries in agreement with related Union organizations. Therefore in the performance of the contract, Contractor shall give United States made products preference.
 - 2. Named Product: Items identified by manufacturer's product name, including make or model designations indicated in the manufacturer's published product data.
 - 3. Specific Product Requirements: Refer to requirements of Section 01 45 00 Quality Control and individual product Specifications Sections in the project specifications for specific requirements for products.
 - 4. Materials: Products that are shaped, cut, worked, mixed, finished, refined or otherwise fabricated, processed or installed to form a part of the Work.
 - 5. Product Completeness: Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.

- 6. Minimum Requirements: Specified requirements for products are minimum requirements.
- 7. Standard Products: Where specific products are not specified, provide standard products of types that are suitable for the intended use in similar conditions and that have been produced and used successfully in similar situations on similar projects. Products shall be selected by the Contractor and subject to review and acceptance by the Engineer.
- 8. Code Compliance: All products, other than commodity products prescribed by Code, shall have a current ICBO Evaluation Service (ICBO ES) Research Report or CABO National Evaluation Report (NER).
- 9. Interchangeability: To the fullest extent possible, provide products of the same kind from a single source. Products required to be supplied in quantity shall be the same product and interchangeable throughout the Work. When options are specified for the selection of any of two or more products, the product selected shall be compatible with products previously selected.

10. Nameplates:

- a. Except for require labels and operating and safety instructions, do not attach manufacturer's identifying nameplates or trademarks on surfaces exposed to view in occupied spaces or to the exterior.
- b. Provide a permanent nameplate on each item of service-connected or power-operated equipment. Nameplates shall contain identifying information and essential operating data such as the following example:

Name of manufacturer Name of product Model and serial number Capacity Power Characteristics Speed

- 11. the Authority reserves the right to limit selection to products with warranties not in conflict with requirements of the contract documents.
- 12. Where products are accompanied by the term "as selected" or similar, the Authority's Engineer will make selection.
- 13. Where products are accompanied by the term "match sample" or similar, sample to be matched is the Authority's.
- 14. Descriptive, performance, and reference standard requirements in the specifications establish salient characteristics of products.
- C. General Product Selection Requirements:

- Where products or manufacturers are identified in the specifications, the intent is not to limit competition or to restrict the work to only those products or manufacturers named. Rather, the intent is to establish the level of quality required and the product characteristics important to the success of the work. Subject to compliance with requirements, products of any manufacturer may be incorporated into the work, if shown to be equal to those listed to the satisfaction of the Authority.
- 2. "Or Equal" Provision: Where "or equal" is included after named manufacturer(s) and product(s), equivalent products of unnamed manufacturers will be considered in accordance with requirements specified in Section 01 25 00 Substitution Procedures.
 - a. Prior to submitting "Or Equal" product(s) for consideration, Contractor shall review and determine that product(s) meet or exceed the minimum quality and warranty provisions of the specified product.
 - Cost and time considerations will be waived for products and manufacturers submitted under the "Or Equal" provision, except no increase in Contract Sum or Contract Time shall result.
 - c. Contractor's attention is called to the substitution provisions of the Conditions of the Contract.
- Products Specified by Description: Where Specifications describe a product, listing characteristics required, with or without use of a brand name, provide a product that provides the characteristics and otherwise complies with the specified requirements.
- 4. Products Specified by Performance Requirements: Where Specifications require compliance with performance requirements, provide product(s) that comply with performance requirements and are recommended by the manufacturer for the intended application. Verification of manufacturer's recommendations may be by product literature or by certification of performance from manufacturer.
- 5. Products Specified by Reference to Standards Only: Where Specifications require compliance with a standard, provided product shall fully comply with the standard specified.
- Products Specified by Combination of Methods: Where products are specified by a combination of described characteristics, performance characteristics, reference standards and manufacturer identification, provide products conforming to all such characteristics.
- 7. Use of products or manufacturers, whether listed or not, is subject to demonstrated compliance with requirements of the contract documents.

D. Product Selection Procedures:

- Basis of Design: Where products or manufacturers are identified as "basis of design" or where sizes, profiles, and dimensional requirements on drawings are based on a specific product or system, comply with provisions for comparable products to obtain approval for listed alternate products or manufacturers.
 Comply with provisions for substitutions to obtain approval for use of an equal unnamed product or manufacturer.
- 2. Specified Products: Where the specifications indicate that a product or manufacturer is to be selected from those listed, comply with the provisions for substitutions to obtain approval for use of an equal unnamed product.
- Other Named Products: Where products or manufacturers are indicated without qualification, or with the words "or approved equal" or similar terms, comply with provisions for comparable products to obtain approval for use of an equal unnamed product.
- 4. Visual Matching Specification: Where specifications require matching an established sample, select a product that complies with requirements and matches Engineer's sample. the Authority's decision will be final on whether a proposed product matches.
- 5. Visual Selection Specification: Where specifications include the phrase "as selected from manufacturer's colors, patterns, textures" or a similar phrase, Contractor shall select a product that complies with other specified requirements.
- 6. Full Range: Where specifications include the phrase "to match existing colors, patterns, textures" or similar phrase, the Authority will select color, pattern, density, or texture from manufacturer's product line submitted by the Contractor, that includes both standard and premium items.

PART 2 - PRODUCTS

Not used.

PART 3 – EXECUTION

Not Used.

PART 4 - MEASURMENT AND PAYMENT

No separate measurement or payment will be made for the work of this section.

END OF SECTION

Product Requirements 01 60 00 - 6

SECTION 01 71 13

MOBILIZATION AND DEMOBILIZATION

PART 1 - GENERAL

1.01 DESCRIPTION

A. This section consists of the Contractor furnishing all transportation, labor, materials, and equipment necessary and incidental to mobilization and demobilization to perform the work of this contract. Work for mobilization and demobilization as specified in this section consists of preparatory work and operations at the start of the Contract Work and removal of those items at Contract completion. Mobilization includes installation of construction site perimeter fencing and regulatory signage. Jobsite shall be completely secured prior to delivery of any construction equipment and materials. Contractor shall coordinate with the Authority and Westminster's Police and Fire Department to ensure communication of intent to mobilize and that emergency responder's 24-hour access to the jobsite shall be maintained throughout the duration of the project. Knox locks will likely be required.

1.02 **DEFINITIONS**

- A. Mobilization is operations necessary for the movement and arrival at the worksite of personnel, equipment, supplies, and appurtenances, all in ready and satisfactory working and operational order, which the Contractor intends to use for the work; for the establishment of all temporary offices and Contractor-owned structures and other temporary facilities necessary to perform the work; proper safety training of project personnel; and for incidental work and operations which must be performed prior to beginning work on the various contract items.
- B. Demobilization is operations necessary for the removal of all personnel, equipment, supplies, appurtenances, Contractor-owned structures, temporary facilities, materials, and debris from the worksite and restoration of site and surrounding properties, affected by the Contractor's activities, to pre-construction conditions, as approved by the Authority.

1.03 SUBMITTALS

- A. Shop Drawing showing the installation of any pollution control/BMP features required for the Project to be established on the site prior to initiating construction, maintained for the duration of construction, and removed upon completion of construction.
- B. Copies of all required permits obtained prior to starting Work covered by the permit.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

3.01 GENERAL

- A. The Contractor shall provide personnel, equipment, temporary facilities, construction materials, tools, and supplies at the worksite at the time they are scheduled to be required.
- B. The Contractor shall locate plant or equipment appropriately close to the portion of the work for which it will be used.
- C. The Contractor shall obtain all necessary permits required by the local jurisdictions to perform the work of this Contract. The Contractor shall provide the Authority copies of all permits obtained prior to starting work covered by the permit.
- D. The Contractor shall install pollution control features required by permits for the construction. These features shall be maintained throughout the duration of construction and removed at the completion of construction.
- E. Upon completion of the work, the Contractor shall remove all equipment, temporary facilities, construction tools, apparatus, equipment, unused materials and supplies, plant, and personnel from the worksite and shall leave the worksite in a clean and satisfactory condition as approved by the Authority.

PART 4 – MEASUREMENT AND PAYMENT

Work is considered incidental to work under other payment items and no separate payment will be made.

END OF SECTION

SECTION 01 71 23

FIELD ENGINEERING

PART 1 – GENERAL

1.01 DESCRIPTION

A. Work Includes:

- 1. Employ land surveyors and professional engineers, licensed in the State of California, to perform surveying and field engineering.
- 2. Establish and maintain baselines and field control points as required for construction layout survey.
- 3. Perform survey and measurement to establish design lines and grades.
- 4. Layout of the Work.
- 5. Other engineering services, as necessary, to accomplish the Work.

1.02 GENERAL

- A. Contractor shall locate and protect all adjacent areas, utilities, equipment, and appurtenances.
- B. Control area of work. Provide barricade and traffic signs around work area, excavations, and contractor's equipment.
- C. Promptly report and repair to the Engineer's satisfaction disruption in utilities caused by construction work. Repair disruption of utilities immediately.
- D. Make no changes without prior written notice to the Engineer.

1.03 SUBMITTALS

- A. Submit for the Authority's approval the name and professional history of the land surveying firm designated by the Contractor as its project surveyor.
 - 1. At a minimum the project surveyor must have five to ten years of verifiable experience performing field survey.
- B. On request, submit to the Authority documentation that verifies accuracy of field engineering work and surveying work. Submit data certifying all dimensions, elevations, and locations of improvement are in conformance, or non-conformance, with Contract Documents at end of Project.

- C. Prior to completion of project and when requested by the Authority, submit a copy of site drawing prepared by California registered engineer and signed by land surveyor verifying that the elevations and locations of the work are in conformance with contract documents.
- Contractor shall submit a complete copy of the baseline survey field notes and final layout.
- E. Contractor shall provide As-built redline drawings to the Authority at the completion of the Project.

1.04 REQUIREMENTS

- A. Field Engineering: Provide field engineering services, as necessary. Utilize recognized engineering practices.
- B. Verification: Verify all existing dimensions before starting work. Record all existing pavement striping and markings and submit this record to the Authority before commencing any demolition work.
- C. Layout and Control of the Work: Establish elevations, lines, and grade for all Work under this Contract. Locate and lay out by instrumentation and similar appropriate means. Contractor is responsible for all construction field survey and setting of grades and slopes. New asphalt or concrete paving flow patterns should merge with existing flow patterns on the site so that flow of water is directed towards existing gutters, swales, and storm drains on site. Protect in place existing storm drain system, swales, gutters, concrete walk, storm drain inlets, channel wall, fencing, on-site storage, equipment, and property during construction.

1.05 QUALITY CONTROL

- A. Contractor shall maintain a complete and accurate log of control and survey work as it progresses.
- B. The Authority reserves the option to check Contractor's survey measurements and calculations. Whether the Authority' exercises this option or not, the requirement for accuracy will not be waived.
- C. On completion of construction and major site improvements, Contractor shall prepare a final certified survey illustrating dimensions, locations, angles, and elevations of construction and work site.

PART 2 - PRODUCTS

Not Used

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Verify locations of survey control points prior to starting any work on the project site. Contractor shall field verify all existing dimensions, conditions, layout, grading that will affect the project before commencing any work.
- B. Review OCTA record drawings for underground utilities and field verify all utilities that may affect construction activities before demolition work and excavation. Contractor shall utilize an independent utility locator company to survey and map any and all utilities that may affect construction activities and determine if there are any utility lines in conflict with construction of this project.
- C. Contractor shall conduct survey (line and grade) of existing improvements such as top of curb, finished surface, flow lines etc. before any demolition or removal is undertaken. Areas where pavement has failed or settled shall be documented.
- D. Immediately notify the Authority of any discrepancies discovered.
- E. Finished grade shall match existing grade and ensure positive drainage is provided.

3.02 SURVEYS AND RECORDS

- A. Working from lines and grades established by baseline survey as shown in relation to work, establish and maintain benchmarks and other dependable markers to set lines and levels for work on site as needed to locate each element of the project.
- B. Contractor shall inform tradesmen performing the work of marked lines and grades provided for their use in layout work.
- C. Contractor shall provide a complete copy of baseline survey field notes and final layout to the Authority prior to starting construction.
- D. Certify all lines and grades and submit them to the Authority for project record.

3.03 SURVEY REFERENCE POINTS

- A. Contractor shall locate and protect survey control and reference points. Preserve permanent reference points during construction.
- B. Contractor shall establish appropriate control datum for construction survey.
- C. Contractor shall report to the Authority the loss or destruction of any reference points or relocation required because of changes in grades or other reasons.

D. Contractor shall replace dislocated survey control points based on original survey control and shall make no changes without prior written notice to and approval by the Authority.

PART 4 - MEASUREMENT AND PAYMENT

No separate measurement or payment will be made under this section.

END OF SECTION

SECTION 01 73 29

CUTTING AND PATCHING

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Requirements and limitations for cutting and patching of Work.

1.02 RELATED SECTIONS

- A. Section 01 11 00 Summary of Work.
- B. Individual Product Specification Sections:
 - 1. Cutting and patching incidental to Work specified in the Section.
 - 2. Coordination with Work specified in other Sections for openings required to accommodate Work specified in those other Sections.

C. Include:

- 1. Identification of Project.
- 2. Location and description of affected Work.
- 3. Explanation of necessity for irregular cutting and patching procedures.
- 4. Description of proposed special work and alternate products to be used.
- 5. Alternatives to cutting and patching.
- 6. Effect on existing construction and, if applicable, work being performed for the Authority under separate contracts.
- 7. Date and time Work will be executed.
- 8. Written permission of affected separate contractor.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Primary Products: As required for original installation and to match surrounding construction.

B. Product Substitution: For each proposed change in materials, submit request for substitution under provisions of Section 01 60 00 - Product Requirements.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examination, General: Inspect existing conditions prior to commencing Work, including elements subject to damage or movement during cutting and patching.
- B. After uncovering existing Work, inspect conditions affecting proper accomplishment of Work.
- C. Beginning of cutting or patching shall be interpreted to mean that existing conditions were found by Contractor to be acceptable.

3.02 PREPARATION

A. Temporary Supports: Provide devices and methods to protect other portions of Project from damage by providing temporary supports.

3.03 CUTTING AND PATCHING

- A. Cutting and Patching:
 - 1. Execute cutting, fitting, patching, excavation, and fill, to complete Work.
 - 2. Coordinate installation or application of products for integrated Work.
- B. Remedial Work: Remove and replace defective or non-conforming Work.

3.04 PERFORMANCE

- A. Cutting and Patching:
 - Execute demolition, cutting and patching by methods to avoid damage to adjoining Work, and which will provide appropriate surfaces to receive final finishing.
 - 2. Saw cut asphalt concrete or Portland cement concrete paving for smooth edges. Do not overcut corners.
 - Contractor is required to take all precautions during construction to prevent damage to OCTA property. All precautions are to be taken per CAL-OSHA code to prevent accidents and injuries.

B. Restoration:

- 1. Restore Work with new products as specified in individual Sections.
- 2. Where affected or uncovered by construction work, finish adjacent surfaces and background to condition before construction. Match material, paint, and finish to nearest joint. Re-paint all curbs, traffic striping, legends, parking stalls, numbers, and paving as existed before construction. Damage to adjacent or OCTA property shall be repaired, at the Contractor's expense, to a condition as existed before construction and to the Authority's satisfaction.
- C. Finishing: Refinish (material and paint) surfaces to match adjacent and similar finishes as used for the Project (materials, textures, colors, sheens and finishes). For continuous surfaces, refinish with material and paint to nearest intersection or natural break or joint. Replace equipment or appurtenances damaged due to demolition, cutting or patching work during construction. Provide material quality to level equal to or better than that which existed before construction started.

PART 4 - MEASUREMENT AND PAYMENT

No separate measurement or payment will be made under this section.

END OF SECTION

SECTION 01 74 19

CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work Includes: Procedures for ensuring optimal diversion of construction and demolition waste generated by the Project, and documentation procedures for tracking waste generation and diversion.

1.02 **DEFINITIONS**

- A. Certified Mixed Debris Processing Facility: A solid waste processing facility that accepts loads of mixed debris for the purpose of recovering re-usable and recyclable materials and disposing of the non-recyclable residual material.
- B. Class III Landfill: A landfill that accepts non-hazardous solid waste such as household, commercial, and industrial solid waste. A Class III landfill shall have a California Integrated Waste Management Board (CIWMB) solid waste facilities permit and is regulated by the Local Enforcement Agency.
- C. Construction and Demolition (C&D) Debris: Solid waste and recyclable materials that result directly from construction and demolition of buildings and other structures, do not contain hazardous waste (as defined in CCR Title 22, Section 66621.3, et seq.), and contain no more than 1 percent putrescible wastes by volume, calculated on a monthly basis. C&D debris includes, but is not limited to: asphalt, concrete, portland cement, brick, lumber, wallboard, roofing material, ceramic tile, pipe, glass and associated packaging.
- D. Disposal: Acceptance of solid waste at a legally operating facility for the purpose of landfilling.
- E. Diversion: Activities that result in reducing the amount of waste disposed at a landfill. This can include source reduction activities, composting, recycling, and reuse.
- F. Inert Backfill Site: A location, other than inert fill or other disposal facility, to which inert waste is taken for the purpose of filling an excavation, shoring, or another soils engineering operation.
- G. Inert Fill: A facility that can legally accept inert waste such as asphalt and concrete exclusively for the purpose of disposal.
- H. Inert Debris/Inert Waste: Solid waste and recyclable materials that are source separated or separated for reuse, do not contain hazardous waste (as defined in

CCR, Title 22, section 66261.3 et. seq.) or soluble pollutants at concentrations in excess of applicable water quality objectives, and do not contain significant quantities of decomposable waste. Inert debris may not contain more than 1 percent putrescible wastes by volume calculated on a monthly basis. Gravel, rock, soil, sand and similar materials, whether processed or not, that have never been used in connection with any structure, development, or other human purpose are not inert debris.

- Mixed Debris: Material that includes commingled recyclable and non-recyclable construction and demolition debris.
- J. Mixed Debris Processing Facility: A solid waste processing facility that accepts loads of mixed debris for the purpose of recovering re-usable and recyclable materials and disposing of the non-recyclable residual materials. Refer also to Certified Mixed Debris Processing Facility.
- K. Permitted Waste Hauler: A company that possesses a valid and current permit from the County of Riverside to collect and transport solid waste from individuals or businesses in the County of Riverside.
- L. Recycling: The process of sorting, cleaning, treating, and reconstituting materials for the purpose of using the altered form in the manufacture of a new product. Recycling does not include burning, incinerating, or thermally destroying solid waste.
 - 1. On-site recycling materials that are sorted and processed for use in an altered form in the Project, (e.g. concrete is crushed for use as base for a parking lot on the site).
 - 2. Off-site recycling source-separated materials hauled to another location and used in an altered form in the manufacture of a new product.
- M. Recycling Facility: An operation that can legally accept materials for the purpose of processing the materials into an altered form for the manufacture of a new product. Depending on the types of materials accepted and operating procedures, a recycling facility may or may not be required to have a Solid Waste Facilities permit from the CIWMB or be regulated by the Local Enforcement Agency.
- N. Reuse: Materials that are recovered for use in the same form. This includes materials that are reused on-site or off-site.
- O. Salvage: Materials recovered for reuse or sale or donation to a third party.
- P. Source Reduction: Any action causing a net reduction in the generation of solid waste. Source reduction includes, but is not limited to, reducing the use of non-recyclable materials, replacing disposable materials and products with reusable materials and products, reducing packaging, and reducing the amount of yard waste generated.
- Q. Source-Separated Materials (Construction and Demolition Debris): Material that is

sorted at the site of generation by individual material type for the purpose of reuse or recycling, i.e., loads of concrete that are source-separated for delivery to a base course recycling facility to be crushed into road base material.

- R. Solid Waste: Shall mean waste that the CIWMB has deemed acceptable for disposal at a Class III landfill and shall not include source-separated material.
- S. Transfer Station: A facility that can legally accept solid waste for the purpose of temporarily storing the materials for re-loading onto other trucks and transporting materials to a landfill for disposal or recovering some materials for reuse or recycling. Transfer stations must be permitted by the CIWMB and regulated by the Local Enforcement Agency.

1.03 SUBMITTALS

- A. Waste Management Plan (WMP): Conduct a site assessment and estimate the types and quantities of materials, under the Project, that are anticipated for on-site or off-site processing, recycling, reuse, or disposal.
 - 1. Not more than 10 working days after Notice to Proceed, submit a written WMP to the Authority. The plan shall show the percentage of recycling for inert debris expected from the Project and the percentage recycling for the remaining C&D debris expected from the Project. While no minimum amounts of recycling have been established for this project, Contractor shall make every reasonable effort to achieve a minimum of 50% by weight of material that is recycled, re-used, salvaged or otherwise diverted from landfill.
 - 2. The Authority's approval of the Contractor's WMP will not otherwise relieve the Contractor of responsibility for adequate and continuing control of pollutants and other environmental protection measures.
 - 3. Dirt and excavation spoils, whether reused as fill or not, will not be counted in the calculation of diverted and disposed materials.
- B. Solid Waste Diversion and Disposal Report (SWDD Report): One week prior to the first of every month, and prior to Contractor's monthly progress estimate for payment, Contractor shall prepare and submit a written SWDD report to the Authority quantifying all material generated in the Project which was either disposed or diverted from disposal through reuse or recycling during the time period covered by the SWDD report and progress payment. Include in the Report a cumulative history of the diversion and disposal for the Project. Attach supporting documentation including manifests, weigh tickets, receipts, reports, invoices, and other supporting documents specifically identifying the project, the recyclables and solid waste generated by the Project, and where the material was sent. The final SWDD report shall cover the complete time period of the Project and shall contain a list of the total waste disposed and/or diverted for each reporting period. The final SWDD report and supporting documentation shall be submitted within 30 Calendar Days of Project completion.

1.04 WASTE MANAGEMENT PLAN SUBMITTAL MEETING

A. On or about 5 working days after Notice to Proceed, to the Authority will schedule and attend a meeting with the Contractor to discuss the proposed WMP submittal. This meeting shall be held to allow to the Authority and the Contractor an opportunity to develop a mutual understanding regarding the recycling and reuse requirements and programs.

1.05 REUSE, SALVAGE, AND RECYCLING OPTIONS

- A. Contractor shall make use of as many reuse and salvage options as is feasible. One option is the California Materials Exchange (CalMAX), a free program sponsored by the CIWMB.
- B. Recycling shall include both on-site and off-site recycling of source-separated materials, as well as mixed debris recycling efforts.
- C. On-site recycling program shall produce a quality product to meet the specifications identified in the Contract Documents, subject to approval. Estimate the amount of material to be used in the Project and include a program for off-site recycling of any excess material that cannot be used in the Project.
- D. Develop and implement a program to include source separation of solid waste, to the greatest extent feasible, of the following types:
 - 1. Asphalt
 - 2. Concrete and concrete block
 - 3. Rock
 - 4. Wood (lumber)
 - 5. Green material (i.e. tree trimmings)
 - 6. Metals
- E. Mixed Debris Recycling: Develop and implement a program to transport loads of commingled construction and demolition materials that cannot be feasibly source separated to a mixed debris recycling facility.

1.06 HAULING AND DISPOSAL OPERATIONS

A. Hauling: Arrange the collection and hauling of C&D debris by a waste hauler that is permitted by the County of Orange Waste Management Department and Agencies as applicable.

- B. Recycling And Processing Facilities: Transport C&D debris to recycling or processing facilities. Contractor shall be familiar with the requirements for acceptance of C&D materials at the recycling and processing facilities before the material is delivered. Always call facilities in advance to verify requirements.
- C. Disposal Facilities: Transport C&D debris that cannot be delivered to a recycling or processing facility, to a transfer station or disposal facility that can legally accept the materials for the purpose of disposal.
- D. Site Disposal: Do not burn, bury, or otherwise dispose of solid waste on the Project job-site. All trash, debris, and removed materials shall be hauled away and legally disposed off-site on the same day they are removed.

PART 2 - PRODUCTS

Not Used

PART 3 – EXECUTION

Not Used

PART 4 - MEASUREMENT AND PAYMENT

No separate measurement or payment will be made under this section.

END OF SECTION

SECTION 01 74 23

CLEANING

PART 1 - GENERAL

1.01 DESCRIPTION.

- A. Work Included:
 - 1. Execute cleaning, during progress of the work, and at completion of the work.
- B. Related Work Specified Elsewhere:
 - 1. Cleaning for specific products or work; the respective specification section for that work.
 - 2. Refer to Section 01 14 25, Procedures in Construction for requirements for restoration of project site(s), including but not limited to photographic documentation.
 - 3. Refer to Section 01 71 13, Mobilization and Demobilization for requirements for removal of all of Contractor's facilities, equipment and tools.

1.02 DISPOSAL REQUIREMENTS.

- A. Conduct cleaning and disposal operations to comply with all applicable codes, local codes, ordinances, regulations and laws, rules and practices.
- B. Conform to requirements of 01 74 19, Construction Waste Management and Disposal.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Use only those cleaning materials which will not create hazards to health or property and which will not damage surfaces.
- B. Use only those cleaning materials and methods recommended by manufacturer of the surface material to be cleaned.
- C. Use cleaning materials only on surfaces recommended by cleaning material manufacturer.

D. All cleaning materials to be submitted to the Authority with MSD sheets for review. Cleaning materials to be low VOC and as required levels under applicable codes. Approved MSD sheets and recommended safety items and PPE (e.g., eye wash, disposable gloves, respirators, eye protection, signage, etc.) associated with materials being utilized to be present at the location of the work being performed.

PART 3 - EXECUTION

3.01 CLEANING DURING CONSTRUCTION

- A. Provide all labor and equipment required to remove trash and broom clean project sites as required, including surrounding areas affected by construction activities.
- B. Provide all labor and equipment required to load, haul, and legally dispose of all construction trash and debris at the end of each workday throughout the duration of the project.
- C. Pay all dump fees required to legally dispose of materials.
- D. Clean streets adjacent to the project site as required to meet the requirements of all local, City, County and State authorities.
- E. Clean and wash parking lots and driveways.
- F. Provide labor to clean the office trailer once a week.
- G. Clean up all excess concrete from site concrete work.
- H. Wet down dry materials and rubbish to prevent blowing dust.
- At reasonable intervals during progress of work and at the end of each workday, remove waste materials, debris and rubbish from site and dispose of legally away from site.
- J. Handle waste materials and debris in a controlled manner with as few handlings as possible; do not drop or throw materials from heights.
- K. Schedule cleaning operations so that dust and other contaminants resulting from cleaning process will not fall on wet or newly painted surfaces.
- L. Do not place in fills or backfills or bury at site any waste material, rubbish or debris. Remove such material from project to a lawful disposal area by the end of each workday; pay all associated hauling and dumping charges.
- M. Perform any additional cleaning or cleaning at shorter intervals when instructed to do so by the Authority.

3.02 FINAL CLEANING

- A. SUBSTANTIAL COMPLETION REVIEW CLEANING, GENERAL
 - 1. Substantial Completion Review Cleaning, General: Execute a thorough cleaning prior to Substantial Completion review by the Authority.
 - a. Clean surrounding areas affected by construction. Clean and repair all surrounding areas and appurtenances such as curbs, gutters, swales, storm drain, platforms, equipment, vents, buses, fences, Apex boxes, light concrete pedestal, landscaping, and driveways. Repair equipment, curbs, surrounding driveways, landscaping, and site affected by the construction work by thorough brooming and washdown. Remove all oil, concrete, debris, and paint from the surfaces mentioned.
 - b. Remove waste and surplus materials, rubbish and temporary construction facilities, utilities and controls from site.
 - 2. Employ experienced workmen, or professional cleaners, for final cleaning.
 - 3. In preparation for occupancy, conduct final inspection of sight-exposed surfaces, and of concealed spaces.
 - 4. Remove grease, dust, dirt, stains, labels, fingerprints, and other foreign materials, from sight-exposed finished surfaces; polish surfaces so designated to shine finish.
 - 5. Wash and shine glazing and mirrors.
 - 6. Repair, patch and touch up marred surfaces to specified finish, to match adjacent surfaces.
 - 7. Water-jet clean paved surfaces; rake clean other surfaces of grounds. Comply with SWPPP BMP measures.
 - 8. Contaminated Earth: Final clean-up operations shall include removal and lawful disposal of earth that is contaminated or unsuitable for support of plant life in planting areas, as well as filling of resulting excavations with suitable soil. Contaminated areas include those used for disposal of waste concrete, mortar, plaster, masonry and similar materials; areas in which washing out of concrete and plaster mixes or washing of tools and other similar cleaning operations have been performed; and areas that have been oiled, paved or chemically treated. Do not dispose of waste oil, solvents, paints, solvents and similar material of a penetrating nature by depositing or burying on OCTA's property.
 - 9. Maintain cleaning until project is occupied.
 - 10. Final cleaning shall be done to the satisfaction of the Authority.

B. FINAL COMPLETION INTERIOR CLEANING

- 1. Final Completion Cleaning, General: Complete final cleaning before submitting final Application for Payment.
 - a. Remove asphalt, oil, grease, mastic, adhesives, dust, dirt, stains, fingerprints, labels, concrete material, and other foreign materials from all visible exterior surfaces.
 - b. Remove dust from all horizontal surfaces not exposed to view, including equipment, light standards, ledges, utilities, buses, apex boxes, and plumbing fixtures on site affected by construction.
 - c. Repair all disrupted or broken appurtenances which were damaged during construction to a new condition to the Authority 's satisfaction.
- 2. Clean all adjacent walls, equipment, and other appurtenances mentioned in article 3.1.A.1 above affected by construction work including areas adjacent to construction and on site.
- 3. Clean construction area in which phase has been completed and re-stripe before commencing the next phase of work.

C. FINAL COMPLETION SITE CLEANING

- 1. Site Cleaning: Broom clean exterior paved surfaces. Rake clean other surfaces of the grounds affected by construction material.
 - a. Wash down and scrub where necessary all paving soiled as a result of construction activities. Thoroughly remove material droppings, asphalt splatters, stains, oil, and adhered soil.
 - b. Remove from the site all construction waste, unused materials, excess soil and other debris resulting from the Work.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

Not Used

PART 4 – MEASUREMENT AND PAYMENT

No separate measurement or payment will be made under this section.

END OF SECTION

SECTION 01 77 00

CLOSEOUT PROCEDURES

PART 1 – GENERAL 1.01 SUMMARY

A. Section Includes:

- 1. Administrative and procedural requirements for contract closeout, including, but not limited to, the following:
 - a. Substantial Completion procedures.
 - b. Final Acceptance procedures.

B. Related Sections:

- 1. INVITATION FOR BIDS (IFB) Exhibit A, SECTION V: GENERAL PROVISIONS, C. FINAL INSPECTION AND ACCEPTANCE
- 2. Section 01 74 23, Cleaning, for final cleaning of project site(s).
- 3. Section 01 78 00, Closeout Submittals, for operation and maintenance manual requirements.
- 4. Section 01 78 00, Closeout Submittals, for submitting record drawings, record specifications, and record product data.
- 5. Section 01 78 36, Warranties and Guarantees and Bonds, for submitting Warranties.
- 6. Divisions 02 through 48 sections for any specific closeout requirements for the work in those sections.

1.02 SUBSTANTIAL COMPLETION

A. Preliminary punch list review: At Contractor's request, the Authority will attend a preliminary Contract closeout review, not earlier than 14 days prior to anticipated Substantial Completion review day. The Authority and Contractor shall conduct a walk-though of Project to review scope, adequacy, and completeness of the Work. Upon receipt of Contractor's proposed preliminary punch list, the Authority will prepare a list of items to be completed and corrected (preliminary punch list).

- B. Before requesting review/inspection for determining date of Substantial Completion, the Contractor shall complete the following:
 - Execute cleaning and clear site of temporary facilities and controls, as specified in Section 01 50 00 Temporary Facilities and Controls and in Section 01 74 23 Cleaning.
 - 2. Prior to Substantial Completion review, complete all testing, inspection, balancing, sterilization, and cleaning of the Work. Obtain final City Inspection and City sign-off required for the Project. Provide original of final sign-off cards to the Authority.
 - 3. Advise the Authority of pending insurance changeover requirements.
 - Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents. Refer to Section 01 78 00, Closeout Submittals for requirements.
 - Obtain and submit releases permitting the Authority unrestricted use of the work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 - 6. Prepare and submit project record documents, operation and maintenance manuals, final completion construction photographic documentation, damage or settlement surveys, property surveys, and similar final record information. Refer to Section 01 78 00, Closeout Submittals for requirements.
 - Deliver tools, spare parts, extra materials, and similar items to location designated by the Authority. Label with manufacturer's name and model number where applicable.
 - 8. Make final changeover of permanent locks and deliver keys to the Authority. Advise the Authority of changeover in any security provisions.
 - 9. Notify the Authority one week in advance of startup testing of systems and provide documentation of successful completion of start-up.
 - 10. Protect HVAC systems from contaminates with filters in place and construction filters over the HVAC air return/intake vents. Filters to be replace regularly as required for proper function until facility is in a Dust Free condition.

- 11. Submit test/adjust/balance records.
- 12. Terminate and remove temporary facilities from project site, along with mockups, construction tools, and similar elements. Refer to Section 01 71 13, Mobilization and Demobilization for requirements.
- 13. Advise the Authority of changeover in utilities.
- 14. Submit changeover information related to OCTA's occupancy, use, operation, and maintenance.
- 15. Complete final cleaning requirements, including touchup painting. Refer to Section 01 74 23, Cleaning for requirements.
- 16. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- C. Contractor's Certification: The Contractor shall submit to the Authority written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents and ready for Substantial Completion review by the Authority. Provide in writing to the Authority, with one week's notice, that Work is substantially complete.
- D. Punch List Review: The Authority, and their responsible design consultants, will attend a Contract closeout review and conduct a walk-thorough of Project to review the updated list of items to be completed and corrected (Punch List).
 - 1. Contractor shall prepare a list and record additions, deletions, and revisions as noted by the Authority for completion or correction.
 - 2. The Contractor shall complete all items on the punch list and notify the Authority that the items are completed and ready for inspection. The Authority will update and distribute the revised Punch List after their next walk-through.
 - 3. Costs of additional visits caused by incomplete scope of work or punch list items after the second site visit by the Authority and the design consultants, to review completion and correction of Work, shall be charged to the Contractor.
- E. Inspection: Submit a written request for inspection for Substantial Completion. On receipt of request, the Authority will either proceed with inspection or notify Contractor of unfulfilled requirements. The Authority will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on

Contractor's list or additional items identified by the Authority, that must be completed or corrected before certificate will be issued.

- 1. Re-inspection: Request re-inspection when the work identified in previous inspections as incomplete is completed or corrected.
- 2. Results of completed inspection will form the basis of requirements for final completion.

1.03 FINAL ACCEPTANCE

- A. Preliminary Procedures: Before requesting final inspection for determining final acceptance, complete the following:
 - 1. A final Application for Payment according to Section 01 29 00, Payment Procedures and the General Provisions of the Contract.
 - Submit certified copy of the Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by the Authority. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
 - 3. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
 - 4. Train the Authority's personnel in operation, adjustment, and maintenance of products, equipment, and systems. Approved final Operation and Maintenance Manuals shall be provided prior to training.
- B. Inspection: Submit a written request for final inspection for final acceptance. On receipt of request, the Authority will either proceed with inspection or notify Contractor of unfulfilled requirements.
 - 1. Re-inspection: Request re-inspection when the work identified in previous inspections as incomplete is completed or corrected.
- C. Engineer's Certification: The Authority's responsible engineers determine that the list of items to be completed and corrected (Punch List) is sufficiently complete for the Authority to occupy the Project area for the use to which it is intended.
- D. Notice of Completion: The Authority will record an official Notice of Completion with the County Recorder's Office.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

Not Used

PART 4 - MEASUREMENT AND PAYMENT

No separate measurement or payment shall be made under this section.

END OF SECTION

SECTION 01 78 00

CLOSEOUT SUBMITTALS

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

- 1. Maintain at the site one record copy of Project record documents, including but not limited to the following items.
 - a. Record drawings.
 - b. Record specifications.
 - c. Addenda.
 - d. Change Orders and other Modifications to the Contract.
 - e. OCTA's field orders and written instructions.
 - f. Reviewed and Accepted Shop Drawings, Product Data and Samples.
 - g. Field Test Reports.
 - h. Referenced Documents.

B. Related Sections:

- 1. INVITATION FOR BIDS(IFB) Section V: General Provisions, C. Final Inspection and Acceptance
- 2. Section 01 77 00, Closeout Procedures.
- 3. Section 01 78 36, Warranties and Guarantees and Bonds.
- 4. Section 01 33 00, Submittal Procedures.
- 5. Sections in Division 02-49 for specific requirements related to work of those sections.
- 6. General Conditions for all financial and payment requirements.

1.02 SUBMITTALS

A. At Contract close-out, deliver Record Documents to the Authority.

Closeout Submittals 01 78 00 - 1

- B. Accompany submittal with transmittal letter in duplicate, containing:
 - 1. Date:
 - 2. Project title and contract number;
 - 3. Contractor's name and address;
 - 4. Title and number of each Record Document; and
 - 5. Signature of Contractor or his authorized representative.
- C. Submit in accordance with Section 01 33 00, Submittal Procedures.
- D. Record Drawings: Submit one set of full size marked-up record prints. Submit also as pdf electronic file on electronic media acceptable to the Authority.
- E. Record Specifications: Submit one set of contract specifications, including addenda and contract modifications. Submit also as pdf electronic file on electronic media acceptable to the Authority.
- F. Record Product Data: Submit one marked-up copy of each product data submittal. Submit also as pdf electronic file on electronic media acceptable to the Authority.
 - 1. Product data need not be submitted separately if included in operation and maintenance manuals.
- G. Shop Drawings: Submit one hard copy of reviewed and accepted shop drawings. Also submit as PDF files and AutoCAD files on a thumb-drive and into the shared electronic filing system (example: Box.com).
- H. Operations and Maintenance Manual:
 - Manual content is specified in individual specification sections to be reviewed at the time of section submittals. Submit review manual content formatted and organized as required by the section. Where applicable, clarify and update reviewed manual content to correspond to modifications and field conditions.
 - Submit three paper copies of each Operations and Maintenance Manual. Include a complete operation and maintenance directory. Enclose tile pages and directories in clear plastic sleeves.
 - 3. Submit PDF electronic file on digital media acceptable to the Authority. Assemble each manual into a composite electronically-indexed file.
 - 4. Initial Manual Submittal: Submit draft copy of each manual at least 30 calendar days before commencing demonstration and training. The Authority will comment on whether general scope and content of manual are acceptable.

Closeout Submittals 01 78 00 - 2

- Correct or modify each manual to comply with the Authority's comments.
 Submit copies of corrected manual within 15 calendar days of receipt of comments and prior to commencing demonstration and training.
- 5. Final Manual Submittal: Submit each manual in final form before requesting inspection for Substantial Completion and at least 15 calendar days before commencing demonstration and training.
- I. Other Documents: Unless otherwise specified, submit one (1) hard copy and a PDF electronic file of each document required herein.

1.03 FINAL COMPLETION SUBMITTALS:

- A. Final Submittals: Submit to the Authority all documents and products required by Specifications to be submitted, including the following which apply:
 - 1. Project record drawings and specifications.
 - 2. Operations and Maintenance data.
 - 3. Guarantees, warranties and bonds.
 - 4. Test reports and certificates of compliance.
 - 5. Local Regulatory Jurisdiction(s) final Sign-off, including any and all documents required by governing authorities, utilities and other agencies, building permit cards, inspection cards signed-off as final by the inspectors, and certifications of inspections and tests.
- B. Certificates of Compliance and Test Report Submittals: Submit to the Authority certificates and reports as specified, as required by manufacturers for warranty and guarantee purposes, and as required by authorities having jurisdiction.
- C. Subcontractor List: Submit to the Authority copies of updated Subcontractor and Materials Supplier Lists within the Operation and Maintenance Manuals and PDF separate file copy.
- D. Warranty Documents: Prepare and submit to the Authority warranties and bonds as specified in Section 01 78 36 Warranties and Guarantees and Bonds and PDF copies.
- E. Final Payment: Contractor shall provide a final Application for Payment. The Authority will process the final payment per the General Provisions of the Contract.

1.04 PROJECT RECORD DOCUMENTS - GENERAL

- A. Maintain on site, one set of the following record documents and record actual construction and all revisions to the Work:
 - 1. Contract Drawings.
 - 2. Project Manual, with Specifications, Addenda, Change Orders and other instruments modifying the Contract.
 - 3. Reviewed shop drawings, product data and samples.
 - 4. Store Record Documents separate from documents used for construction.

1.05 RECORD DRAWINGS:

- A. Record Prints: Maintain one set of black-line white prints of the contract drawings and shop drawings for the sole purpose of recording all as-built changes to the work.
- B. Preparation: Record information continuously as Work progresses. Do not conceal Work permanently until all required information is recorded. Require individual or entity who obtained record data, where individual or entity is installer, subcontractor, or similar entity, to prepare the marked-up record prints. Legibly and to scale, mark a reproducible set of Contract Drawings to record actual construction where installation varies from that shown on contract drawings, including:
 - Measured dimensions and cross section of work.
 - 2. Measured horizontal and vertical locations of underground utilities, ducts, and vents from specific wall locations, including all new utilities installed and utilities found, abandoned or left in place, referenced to permanent surface improvements and to visible and accessible features of the structure.
 - 3. Field changes of dimensions and details.
 - 4. Details not on original Contract Drawings and any other changes to the original Contract Drawings (Changes of location of utilities, equipment, and other accessories).
 - 5. As-Built information shall be shown along with RFIs, Submittals, Change Orders, or other indicating source of changes. References to written changes such as RFI's of Field Directives should be clouded on the drawings with a copy of the written direction attached to the set of drawings.
 - 6. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
 - 7. Accurately record information in an understandable drawing technique.

- 8. Record data as soon as possible after obtaining it. Record and check the markup before enclosing concealed installations.
- C. Mark record sets in red ink. Use other colors as required to distinguish between changes for different categories of the work at same location.
 - 1. Mark important additional information that was either shown schematically, such as conduit runs, or omitted from original drawings.
 - 2. Note work change RFI numbers, directive numbers, alternate numbers, change order numbers, and similar identification, where applicable.

1.06 RECORD SPECIFICATIONS

- A. Preparation: In PART 2 PRODUCTS in each specification section, legibly mark in red ink and record actual products installed or used
 - 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 - 2. Mark copy with the proprietary name and model number or catalog number of products, materials, and equipment furnished, including substitutions or alternates utilized and product options selected.
 - 3. Record the name of manufacturer, supplier, installer, and other information necessary to provide a record of selections made.
 - 4. For each principal product, indicate whether record product data has been submitted in operation and maintenance manuals instead of submitted as record product data.
 - 5. Note related addenda, change orders, record product data, and record drawings, and other instruments modifying the Contract, where applicable.

1.07 SHOP DRAWINGS

- A. Maintain as record documents.
 - 1. Legibly annotate drawings to record changes made after review.
 - 2. Record Shop Drawings:
 - a. Revise the shop drawings CAD files to reflect annotations made on record copy.
 - b. Submit hard copies, PDF files and CAD files compatible with AutoCAD 2018 and in accordance with paragraph 1.02.

1.08 OPERATIONS AND MAINTENANCE DOCUMENT DIRECTORY

- A. Organization: Include a section in the directory for each of the following:
 - 1. List of documents.
 - 2. List of systems.
 - 3. List of equipment.
 - 4. Tables of contents.
- B. List of systems and subsystems: List systems alphabetically. Include references to operation and maintenance manuals that contain information about each system.
- C. List of Equipment: List equipment for each system, organized alphabetically by system. For parts of equipment not part of system, list alphabetically in separate list.
- D. Tables of Contents: Include a table of contents for each emergency, operation, and maintenance manual.
- E. Identification: In the document directory and in each operation and maintenance manual, identify each system, subsystem, and piece of equipment with same designation used in the contract documents. If no designation exists, assign a designation according to ASHRAE Guideline 4, Preparation of Operating and Maintenance Documentation for Building Systems.

1.09 REQUIREMENTS FOR OPERATION AND MAINTENANCE MANUALS

- A. Organization: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain the following materials, in the order listed:
 - Title page.
 - 2. Table of contents.
 - 3. Manual contents.
- B. Title Page: Include the following information:
 - 1. Subject matter included in manual.
 - 2. Name and address of project.
 - 3. Name and address of OCTA.
 - 4. Date of submittal.

- 5. Name and contact information for Contractor.
- 6. Name and contact information for OCTA.
- 7. Names and contact information for major consultants to OCTA that designed the systems contained in the manuals.
- 8. Cross-reference to related systems described elsewhere in the operation and maintenance manuals.
- C. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to specification section number in project manual.
 - 1. If operation or maintenance documentation requires more than one volume to accommodate data, include comprehensive table of contents for all volumes in each volume of the set.
- D. Manual Contents: Provide manuals for each piece of equipment including individual components and subsystems of complete assembly. Arrange contents alphabetically by system, subsystem, and equipment. Assemble instructions for subsystems, equipment, and components of one system into a single binder. Cross out non-applicable text and illustration. The section of the manual on operation shall describe the functions and limitations of each component and its relationship to the system of which it is a part. Where several models, options, or styles are described, the manual shall identify only the items provided.
- E. Manuals, Electronic Files: Submit manuals in the form of a multiple file composite electronic PDF file for each manual.
 - Electronic Files: Use electronic files prepared by manufacturer where available. Where scanning of paper documents is required, configure scanned file for minimum readable file size.
 - 2. File Names and Bookmarks: Enable bookmarking of individual documents based upon file names. Name document files to correspond to system, subsystem, and equipment names used in manual directory table of contents. Group documents for each system and subsystem into individual composite bookmarked files, then create composite manual, so that resulting bookmarks reflect the system, subsystem, and equipment names in a readily navigated file tree. Configure electronic manual to display bookmark panel upon opening file.
- F. Manuals, Paper Copy: Submit manuals in the form of hard copy, bound and labeled volumes and tabbed PDF copies.
 - 1. Binders: Heavy-duty, three-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, sized to hold 8-1/2 by 11-inch paper; with clear plastic sleeve on cover to hold label and cover sheet describing contents and with pockets inside covers to hold folded oversize sheets.

- a. If two or more binders are necessary to accommodate data of a system, organize data in each binder into groupings by subsystem and related components. Cross-reference other binders if necessary to provide essential information for proper operation or maintenance of equipment or system.
- b. Identify each binder on front and spine, with printed title "Operation and Maintenance Manual," project name, subject matter of contents, and specification section number (on bottom of spine). Indicate volume number for multiple-volume sets.
- 2. Dividers: Heavy paper dividers with plastic covered tabs for each section of manual. Mark each tab to indicate contents. Include typed list of products and major components of equipment included in the section on each divider, cross-referenced to specification section number and title of project manual.
- 3. Protective Plastic Sleeves: Transparent plastic sleeves designed to enclose diagnostic software storage media for computerized electronic equipment.
- 4. Supplementary Text: Prepared on 8-1/2 by 11-inch white bond paper.
- 5. Drawings: Attach reinforced, punched binder tabs on drawings and bind with text.
 - a. If oversize drawings are necessary, fold drawings to same size as text pages and use as foldouts.
 - b. If drawings are too large to be used as foldouts, fold and place drawings in labeled enveloped and bind envelopes in rear of manual. At appropriate locations in manual, insert typewritten pages indicating drawing titles, descriptions of contents, and drawing locations.
- G. Manuals shall contain the following minimum information for each product or system:
 - 1. List of equipment furnished for project with name, address, and telephone number of each vendor.
 - 2. Name, address and telephone number for nearest manufacturer's service representative.
 - 3. Catalog, model and serial number for the installed equipment.
 - 4. Description of the normal and emergency operations of the equipment.
 - 5. Statement of warranty and date warranty begins and ends.
 - 6. Standard starting, stopping and operating instructions.
 - 7. Emergency and special operating instructions and a list of service organizations (including addresses and telephone numbers) capable of rendering emergency service to the various parts of the system.

- 8. Copy of each wiring and control diagram.
- 9. Routine maintenance procedures.
- 10. Servicing and lubrication schedule.
- 11. Manufacturer's printed operating and maintenance instructions and part lists. Operating and maintenance instructions for each and every item of equipment, setting forth in detail and step-by-step the procedure of starting, stopping, operating, and maintaining the entire system as installed. Include a schedule of recommended maintenance intervals.
- 12. Manufacturer's recommended special maintenance tools.
- 13. List of spare parts to include recommended stock quantities for one year of routine maintenance.
- 14. Tabulation of motor nameplate horsepower, nameplate current, field-measured current, overlay relay setting, and catalog number for polyphase motors.
- 15. List of fuses, lamps, seals, and other expendable equipment and devices. Specify size, type, and ordering description. List name, address, email address, fax number, and telephone number of vendor.
- 16. A copy of shop drawings for mechanical, electrical, and instrument equipment in final form.
- 17. Certified equipment drawings or reviewed shop drawing data clearly marked for equipment furnished.
- H. Brochures shall be loose leaf with durable plastic or fiberboard covers. Each sheet shall be reinforced to prevent tearing from continued use, and each brochure shall have the following information clearly printed on its cover:
 - 1. Project name, name of Owner, and address.
 - 2. Name and address of Owner's Representative.
 - 3. Contact names, departments, and addresses of contractors and subcontractors.
 - 4. Telephone number of contractors, including night and emergency numbers.
 - 5. Major equipment vendors' names and telephone numbers.
- I. Equipment Data Sheet: Provide three sets of equipment data sheets, bound in threering binders, summarizing the equipment manufacturer's maintenance instructions and recommendations. A blank data sheet and a sample data sheet are attached at the end of this specification section.

1.10 PHOTOGRAPHS

- A. Prior to performing any work on the site, the Contractor shall thoroughly and professionally photo document the entire property and building, inside and outside. Each major area of work shall be the subject of at least three photographs from opposite angles for perspective.
- B. After construction operations have been started at the site, the Contractor shall periodically take color photographs to show general site condition and progress of work. A minimum of twenty (20) photos shall be taken throughout each month and submitted to the Authority by the 5th of the following month. Each major area of work shall be the subject of at least one photograph.

The photo submittals shall be uploaded to a shared cloud based filing system (example: Box.com) containing high-resolution electronic files of the color photographs. Each photograph will be captioned with date taken, location, and general description.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

3.01 RECORDING AND MAINTENANCE OF PROJECT RECORD DOCUMENTS

- A. Recording: Post changes and modifications to project record documents as they occur; do not wait until the end of project.
- B. Maintenance of Record Documents: Store record documents in the field office apart from the contract documents used for construction. Do not use project record documents for construction purposes. Maintain one copy of each submittal during the construction period for project record document purposes. Maintain record documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to project record documents for OCTA's reference during normal working hours.
- C. Label each document "PROJECT RECORD" in two-inch high printed letters, or a height appropriate to document size.

PART 4 - MEASUREMENT AND PAYMENT

No separate measurement or payment will be made for the work of this section.

SAMPLE

Preventive Maintenance and Operating Requirement Sheets

Preventive Maintenance Program	Equipment Record Numb	er
EQUIPMENT DESCRIPTION	ELECTRICAL OR MECH	IANICAL DATA
Name:	Size:	
Serial No.:	Model:	
Vendor:		
Vendor Address:	Type:	
	Mfr.:	
Vendor Rep:	Voltage:	Amps:
Phone:	Phase:	rpm:
Maintenance Work to be Done		Frequency*
OPERATING REQUIREMEN	ITS AND REFERENCE	

^{*}D - Daily; W - Weekly; B - Biweekly; M - Monthly; Q - Quarterly; S - Semiannually; A - Annually.

SAMPLE Preventive Maintenance and Operating Requirement Sheets

Decreasing Maintenance Decreases	E-min-man D-man No	
Preventive Maintenance Program	Equipment Record Nu	imber
EQUIPMENT DESCRIPTION	ELECTRICAL OR ME	CHANICAL DATA
Name: Pump No. 1 Tag No.: P01-1	Size: 15 hp	
Serial No.: 123456ABC	Model: 140T Frame	
Vendor: ABC Pump Co.	Serial No. 98765 Class F Insulatio W/Space Heater	n
Vendor Address:	Type:	
1111 Pump Circle Newport Beach, CA 92663	Mfr.: DEF Motors, Inc	·.
/endor Rep: XYZ Equipment, Inc. Voltage: 460		Amps: 20
Phone: 714/752-0505 Phase: 3		RPM: 1,800
Maintenance Work to be Done		Frequency*
 Operate all valves and check such things as a temperature, b) changes in running sound, c discharge gauge readings, d) pump discharge condition of the drive equipment. Check packing. 	suction and	D
Checking pumping unit for any dust, dirt, or de	5	
	D	
(Continued on attached sheet)		W
OPERATING REQUIREMEN	NTS AND REFERENCE	
For manufacturer's instructions regarding installation shooting of this equipment, see Volume, Sec		nce, and trouble

^{*}D - Daily; W - Weekly; B - Biweekly; M - Monthly; Q - Quarterly; S - Semiannually; A - Annually.

SAMPLE

Preventive Maintenance and Operating Requirement Sheets

Preventive Maintenance Program	Equipment Record Number	er
EQUIPMENT DESCRIPTION	ELECTRICAL OR MECHA	ANICAL DATA
Name:	Size:	
Serial No.:	Model:	
Vendor:		
Vendor Address:	Type:	
	Mfr.:	
Vendor Rep:	Voltage:	Amps:
Phone:	Phase:	RPM:
Maintenance Work to be Done		Frequency*
4. Lubricate bearing frame and motor bearings (consult manufacturer's instructions for type of grease or oil).		Q
5. Disassemble and change or repair the following a) impeller, b) shafts, c) shaft sleeve,d) rotary seals, and e) sleeve bearings.	А	
OPERATING REQUIREMEN	ITS AND REFERENCE	

*D - Daily; W - Weekly; B - Biweekly; M - Monthly; Q - Quarterly; S - Semiannually; A - Annually.

C-3-2208 EXHIBIT B

END OF SECTION

SECTION 01 78 36

WARRANTIES, GUARANTEES, AND BONDS

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work Included:

- General administrative and procedural requirements for preparation and submission of warranties and bonds required by the Contract Documents, including manufacturer's standard warranties on products and special Project warranties. This section specifies the general requirements for written warranties and guarantees required by the Contract Documents.
 - a. Refer to the Conditions of the Contract for terms of Contractor's special warranty of workmanship and materials.
 - b. Certifications and other commitments and agreements for continuing services to the Authority are specified elsewhere in the Contract Documents.

1.02 RELATED DOCUMENTS AND SECTIONS

- A. Section 01 33 00 Submittal Procedures: General administrative requirements for submittals, applicable to warranties and bonds.
- B. Section 01 77 00 Closeout Procedures: General requirements for closeout of the Contract.
- C. Section 01 78 00 Closeout Submittals: Operating and Maintenance data binders to include copies of warranties and bonds documents.
- D. Individual Product Specifications Sections: Special Project warranty requirements for specific products or elements of the Work; commitments and agreements for continuing services to Authority.

1.03 WARRANTIES AND GUARANTEES

- A. General: Provide all warranties and manufacturer's guarantees with the Orange County Transportation Authority named as the beneficiary. For equipment, products, or components bearing a manufacturer's warranty of guarantee that extends for a period of time beyond the Contractor's warranty and guarantee, so state in the warranty or guarantee.
- B. Warranty: Assurance to the Authority by the Contractor, installer, supplier, manufacturer, or other party responsible as warrantor, for the quantity, quality,

performance and other representations of a product, system service of the Work, in whole or in part, for the duration of the specified period of time. Warranty shall be an agreement to repair to repair or replace, without cost and undue hardship to the Authority, work performed under the Contract which is found to be defective during the warranty or guaranty period (correction period).

- C. Guaranty: Assurance to the Authority by the Contractor or product manufacturer or other specified party, as guarantor, that the specified warranty will be fulfilled by the guarantor in the event of default by the warrantor.
- D. Standard Product Warranty: Preprinted, written warranty published by product manufacturer for particular products and specifically endorsed by the manufacturer to the Authority.
- E. Special Project Warranty: Written warranty required by or incorporated into Contract Documents, to extend time limits provided by standard warranty or to provide greater rights for the Authority. For provisions for special warranties, refer to the Conditions of the Contract for terms of the Contractor's special warranty of the workmanship and materials.
- F. Specific Warranty and Guarantee Requirements: Refer to Divisions 02 and higher.
- G. Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties shall not relieve the Contractor of warranty on the work that incorporates the products, nor shall they relieve suppliers, manufacturers and installers required to countersign special warranties with Contractor.
- H. Related Damages and Losses: When correcting warranted work that has been found defective, remove and replace other work that has been damaged as a result of such defect or that must be removed and replaced to provide access for correction of warranted work
- Correction Period: The Correction Period shall be synonymous with warranty period and guaranty period used in the Contract Specifications. All defective work shall be initiated with 12 hours for critical system operations, as determined solely by the Authority, and within 3 calendar days for all other warranty work.
- J. Reinstatement of Warranty: When work covered by a warranty has been found defective and has been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.
- K. Replacement Cost: Upon determination that work covered by a warranty has been found to be defective, replace or reconstruct the work to a condition acceptable to OCTA, complying with applicable requirements of the Contract Documents. Contractor shall be responsible for all costs for replacing or reconstructing defective work regardless of whether OCTA has benefited from use of the work through a portion of its anticipated useful service life.

- L. OCTA's Recourse: Written warranties made to OCTA are in addition to implied warranties and shall not limit the duties, obligations, rights, and remedies otherwise available under law nor shall warranty periods be interpreted as limitations on time in which the Authority can enforce such other duties, obligation, rights, or remedies.
- M. Rejection of Warranties: The Authority reserves the right to reject warranties and disallow the use of products with warranties in conflict with contract document requirements.
- N. Warranty as Condition of Acceptance: The Authority reserves the right to refuse to accept work for the project where a special warranty, certification or similar commitment is required until evidence is presented that those required to countersign such commitments are willing to do so.

1.04 PREPARATION OF WARRANTY AND GUARANTEE SUBMITTALS

- A. Number of Copies: Two, unless otherwise specified or directed.
- B. Special Project Warranty and Manufacturer's Guarantee Forms: Forms for Special Project Warranties and for Manufacturer's Guarantees are included in the Conditions of the Contract at the end of this Section. Prepare a written document utilizing the appropriate form, ready for execution by the Contractor or the Contractor and subcontractor, supplier, or manufacturer. Submit a draft to the Authority for approval prior to final execution.
 - 1. Refer to Division 02 and higher for specific content requirements and particular requirements for submittal of special project warranties.
 - 2. Prepare standard product warranties and product guarantees, excepting manufacturer's standard printed warranties and guarantees, on Contractor's, subcontractor's, material supplier, or manufacturer's own letterhead, addressed to the Authority.
 - 3. Warranty and guarantee letters shall be signed by all responsible parties and by Contractor in every case, with modifications only as approved by the Authority to suit the conditions pertaining to the warranty or guarantee.
- C. Manufacturer's Guarantee Forms: Manufacturer's guarantee forms may be used in lieu of special project forms included at the end of the Section. Manufacturer's guarantee forms shall contain appropriate terms and identification, ready for execution by the required parties.
 - 1. If proposed terms and conditions restrict guarantee coverage or require actions by OCTA beyond those specified, submit draft of guarantee to the Authority for review and acceptance before performance of the work.
 - 2. In other cases, submit draft of guarantee to the Authority for approval prior to final execution of guarantee.

- D. Signatures: By persons authorized to sign warranties, guarantees, and bonds on behalf of entity provided the warranty, guarantee, and bonds. All signatures shall be notarized.
- E. Co-Signature: the Contractor shall cosign all installer's warranties and bonds Manufacturer's printed guarantees will not require co signatures.

1.05 FORM OF WARRANTY SUBMITTALS

- A. Form of warranty and bond submittals: At final completion, compile 2 copies of each required warranty and guaranty and bond, properly executed by the Contractor, or by the Contractor and subcontractor, supplier, or manufacturer. Collect and assemble all written warranties and guarantees into binders and deliver binders to the Authority for final review and acceptance.
- B. Prior to submission, verify that documents are in proper form, contain all required information and are properly signed.
- C. Organize the warranty documents into an orderly sequence based on the table of contents of the Specifications.
- D. Include a table of contents for the binder, neatly typed, following order, section names, and numbers of the Specifications.
- E. Bind warranties and guarantees in heavy-duty, commercial quality, 3-ring vinyl covered loose-leaf binders, thickness as necessary to accommodate contents, with clear front and spine to receive inserts, and sized for 8 ½" by 11" paper.
- F. Provide heavy paper dividers with celluloid or plastic covered tabs for each separate warranty. Mark tabs to identify products or installation, and the name, address, telephone number and responsible person for applicable installer, supplier and manufacturer.
- G. Include on a separate typed sheet, if information is not contained in warranty or guarantee form, a description of the product or installation, and the name, address, telephone number, and responsible person for applicable installer, supplier, and manufacturer.
- H. Identify each binder on front and spine with typed or printed inserts with title, "WARRANTIES, GUARANTEES, AND BONDS", the project title, and the name of the Contractor. If more than one volume of warranties and guarantees is produced, identify volume number of binder.
- When operating and maintenance data manuals are required for warranted construction, include additional copies of each required warranty in each required manual. Coordinate with requirements specified in Section 01 78 00 Closeout Submittals.

1.06 TIME OF WARRANTY AND GUARANTEE SUBMITTALS

- A. Preliminary Submittal: Unless otherwise specified, obtain preliminary copies of warranties and guarantees within ten (10) calendar days of completion of applicable item or work. Prepare and submit preliminary copies for review as specified herein.
- B. Final Submittal: Submit fully executed copies of warranties and guarantees within ten (10) days of date of substantial completion but not later than three (3) days prior to date of application for final payment.
- C. Date of Warranties and Guarantees: Unless otherwise directed, the commencement date for warranty and guarantee periods shall be the date of established in Certificate of Completion.
- D. For warranties for work such as designated systems, equipment, component part or other portion of the Work is completed, accepted, and occupied or put to beneficial use by the Authority, by a separate agreement with Contractor, prior to Final Completion, submit properly executed warranties to the Authority within ten (10) calendar days of completion of that designated portion of the Work. List date of commencement of warranty, guaranty, or bond period as date of Acceptance.
- E. For warranties for Work not accepted as of the date of substantial completion, submit documents within ten (10) calendar days after acceptance. List the commencement date as the date of acceptance of such Work and as beginning of warranty, guaranty, and bond period.
- F. Duration of Warranties and Guarantees: Unless otherwise specified or prescribed by law, warranty, and guaranty periods (Correction Period) for all work shall not be less than one year from the filing date of notice of completion. See product specifications Sections in contract specifications for extended warranty and guaranty beyond the minimum duration.

PARTS 2 - PRODUCTS

Not used.

PART 3 – EXECUTION

Not used.

PART 4 – MEASUREMENT AND PAYMENT

No separate measurement or payment shall be made under this Section.

END OF SECTION

WARRANTY/GUARANTEE

FOR WORK

We, the undersigned, do hereby warranty and guarantee that the parts of the Work described above which we have furnished and/or installed for the Orange County Transportation Authority (OCTA) is in accordance with the Contract Documents and that all said Work as installed will fulfill or exceed all of the Warranty and Guarantee requirements. We agree to repair or replace Work installed by us, together with any adjacent Work, which is displaced or damaged by doing so, that proves to be defective in Workmanship, material, or operation within a period of one (1) year from the date of final acceptance by OCTA or from the date of Certificate of Substantial Completion, whichever is the earlier. Ordinary wear and tear and unusual neglect or abuse is accepted.

In the event of our failure to comply with the above-mentioned conditions within a reasonable time period determined by OCTA, after notification in writing, we, the undersigned, all collectively and separately, hereby authorize OCTA to have said defective Work repaired and/or replaced and made good, and agree to pay to OCTA upon demand all moneys that the OCTA may expend in making good said defective Work, including all collection cost and reasonable attorney fees.

(Subcontractor, Sub subcontractor, N	Manufacturer, or Supplier)
Ву	
Title	
State License No	
(Contractor)	
Ву	
State License No	Date
Local Representative. For maintenar	nce, repair, or replacement service, contact:
Name:	
Address:	
Phone Number:	

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SECTION 01 79 00 DEMONSTRATION AND TRAINING

GENERAL

1.01 SUMMARY

A. Section Includes:

- 1. Administrative and procedural requirements for instructing OCTA's personnel, including the following:
 - a. Demonstration of operation of systems, subsystems, and equipment.
 - b. Training in operation and maintenance of systems, subsystems, and equipment.
 - c. Demonstration and training video recordings.

B. Related Sections:

1. Divisions 02 through 49 sections for specific requirements for demonstration and training for products in those sections.

1.02 INFORMATIONAL SUBMITTALS

- A. Instruction Program: Submit outline of instructional program for demonstration and training, including a list of training modules and a schedule of proposed dates, times, length of instruction time, and instructors' names for each training module. Include learning objective and outline for each training module.
 - 1. Indicate proposed training modules utilizing manufacturer-produced demonstration and training video recordings for systems, equipment, and products in lieu of video recording of live instructional module.
- B. Qualification Data: For instructor.
- C. Attendance Record: For each training module, submit list of participants and length of instruction time.
- D. Evaluations: For each participant and for each training module, submit results and documentation of performance-based test.

1.03 CLOSEOUT SUBMITTALS

A. Demonstration and Training Video Recordings: Submit five (5) copies of training videos in High-Definition quality recordings on USB drives within seven days of each training module.

- 1. Identification: On each copy, provide an applied label with the following information:
 - a. Name of Project.
 - b. Name and address of videographer.
 - c. Name of associated OCTA contact/s.
 - d. Name of Contractor.
 - e. Date of video recording.
- 2. Transcript: Prepared on 8-1/2-by-11-inch paper, punched and bound in heavy-duty, three-ring, vinyl-covered binders. Mark appropriate identification on front and spine of each binder. Include a cover sheet with same label information as the corresponding video recording. Include name of project and date of video recording on each page.
- 3. At completion of training, submit complete training manual(s) and tabbed PDF copies for OCTA's use.

1.04 QUALITY ASSURANCE

- A. Instructor Qualifications: A factory-authorized service representative, complying with requirements in Section 01 43 00, Quality Assurance, experienced in operation and maintenance procedures and training.
- B. Videographer Qualifications: A professional videographer who is experienced photographing demonstration and training events similar to those required.
- C. Pre-instruction Conference: Conduct conference at project site to comply with requirements in Section 01 31 00, Project Management and Coordination. Review methods and procedures related to demonstration and training including, but not limited to, the following:
 - 1. Inspect and discuss locations and other facilities required for instruction.
 - 2. Review and finalize instruction schedule and verify availability of educational materials, instructors' personnel, audiovisual equipment, and facilities needed to avoid delays.
 - 3. Review required content of instruction.
 - 4. For instruction that must occur outside, review weather and forecasted weather conditions and procedures to follow if conditions are unfavorable.

1.05 COORDINATION

- A. Coordinate instruction schedule with the Authority.
- B. Coordinate instructors, including providing notification of dates, times, length of instruction time, and course content.
- C. Coordinate content of training modules with content of approved emergency, operation, and maintenance manuals. Do not submit instruction program until Operation and Maintenance Manuals have been reviewed, approved by the Authority, and copies submitted for closeout record (reference Specification 01-78-00, Closeout Submittals).

PART 2 - PRODUCTS

2.01 INSTRUCTION PROGRAM

- A. Program Structure: Develop an instruction program that includes individual training modules for each system and for equipment not part of a system, as required by individual specification sections.
- B. Training Modules: Develop a learning objective and teaching outline for each module. Include a description of specific skills and knowledge that participant is expected to master. For each module, include instruction for the following as applicable to the system, equipment, or component:
 - 1. Basis of System Design, Operational Requirements, and Criteria: Include the following:
 - a. System, subsystem, and equipment descriptions.
 - b. Performance and design criteria if Contractor is delegated design responsibility.
 - c. Operating standards.
 - d. Regulatory requirements.
 - e. Equipment function.
 - f. Operating characteristics.
 - g. Limiting conditions.
 - h. Performance curves.
 - 2. Documentation: Review the following items in detail:
 - a. Emergency manuals.
 - b. Operations manuals.
 - c. Maintenance manuals.
 - d. Project record documents.
 - e. Identification systems.
 - f. Warranties and bonds.
 - g. Maintenance service agreements and similar continuing commitments.

- 3. Emergencies: Include the following, as applicable:
 - a. Instructions on warnings, trouble indications, and error messages.
 - b. Instructions on stopping.
 - c. Shutdown instructions for each type of emergency.
 - d. Operating instructions for conditions outside of normal operating limits.
 - e. Sequences for electric or electronic systems.
 - f. Special operating instructions and procedures.
- 4. Operations: Include the following, as applicable:
 - a. Startup procedures.
 - b. Equipment or system break-in procedures.
 - c. Routine and normal operating instructions.
 - d. Regulation and control procedures.
 - e. Control sequences.
 - f. Safety procedures.
 - g. Instructions on stopping.
 - h. Normal shutdown instructions.
 - i. Operating procedures for emergencies.
 - j. Operating procedures for system, subsystem, or equipment failure.
 - k. Seasonal and weekend operating instructions.
 - I. Required sequences for electric or electronic systems.
 - m. Special operating instructions and procedures.
- 5. Adjustments: Include the following:
 - a. Alignments.
 - b. Checking adjustments.
 - c. Noise and vibration adjustments.
 - d. Economy and efficiency adjustments.
- 6. Troubleshooting: Include the following:
 - a. Diagnostic instructions.
 - b. Test and inspection procedures.
- 7. Maintenance: Include the following:
 - a. Inspection procedures.
 - b. Types of cleaning agents to be used and methods of cleaning.
 - c. List of cleaning agents and methods of cleaning detrimental to product.
 - d. Procedures for routine cleaning
 - e. Procedures for preventive maintenance.
 - f. Procedures for routine maintenance.
 - g. Instruction on use of special tools.
- 8. Repairs: Include the following:
 - a. Diagnosis instructions.
 - b. Repair instructions.
 - c. Disassembly; component removal, repair, and replacement; and reassembly instructions.
 - d. Instructions for identifying parts and components.
 - e. Review of spare parts needed for operation and maintenance.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Assemble educational materials necessary for instruction, including documentation and training module. Assemble training modules into a training manual organized in coordination with requirements in Section 01 78 00, Closeout Submittals.
- B. Set up instructional equipment at instruction location.

3.02 INSTRUCTIONS

- A. Engage qualified instructors to instruct OCTA's personnel to adjust, operate, and maintain systems, subsystems, and equipment not part of a system.
- B. The Authority will furnish Contractor with names and positions of participants.
- C. Scheduling: Provide instruction at mutually agreed on times. For equipment that requires seasonal operation, provide similar instruction at start of each season.
 - 1. Schedule training with OCTA personnel, through the Authority, with at least two week's advance notice.
- D. Evaluation: At conclusion of each training module, assess and document each participant's mastery of module by use of a demonstration/performance-based review.
- E. Cleanup: Collect used and leftover educational materials and remove from project site. Remove instructional equipment. Restore systems and equipment to condition existing before initial training use.

3.03 DEMONSTRATION AND TRAINING VIDEO RECORDINGS

- A. General: Engage a qualified commercial videographer to record demonstration and training video recordings. Record each training module separately. Include classroom instructions and demonstrations, board diagrams, and other visual aids, but not student practice.
 - 1. At beginning of each training module, record each chart containing learning objective and lesson outline.
- B. Video Recording Format: Provide high-quality video recordings with menu navigation in format acceptable to the Authority.

- C. Recording: Mount camera on tripod before starting recording, unless otherwise necessary to show area of demonstration and training. Display continuous running time.
- D. Narration: Describe scenes on video recording by audio narration while video recording is recorded. Include description of items being viewed.
- E. Transcript: Provide a transcript of the narration. Display images and running time captured from videotape opposite the corresponding narration segment.
- F. Pre-Produced Video Recordings: Provide video recordings used as a component of training modules in same format as recordings of live training.

PART 4 - MEASUREMENT AND PAYMENT

No separate measurement or payment will be made for this section.

END OF SECTION

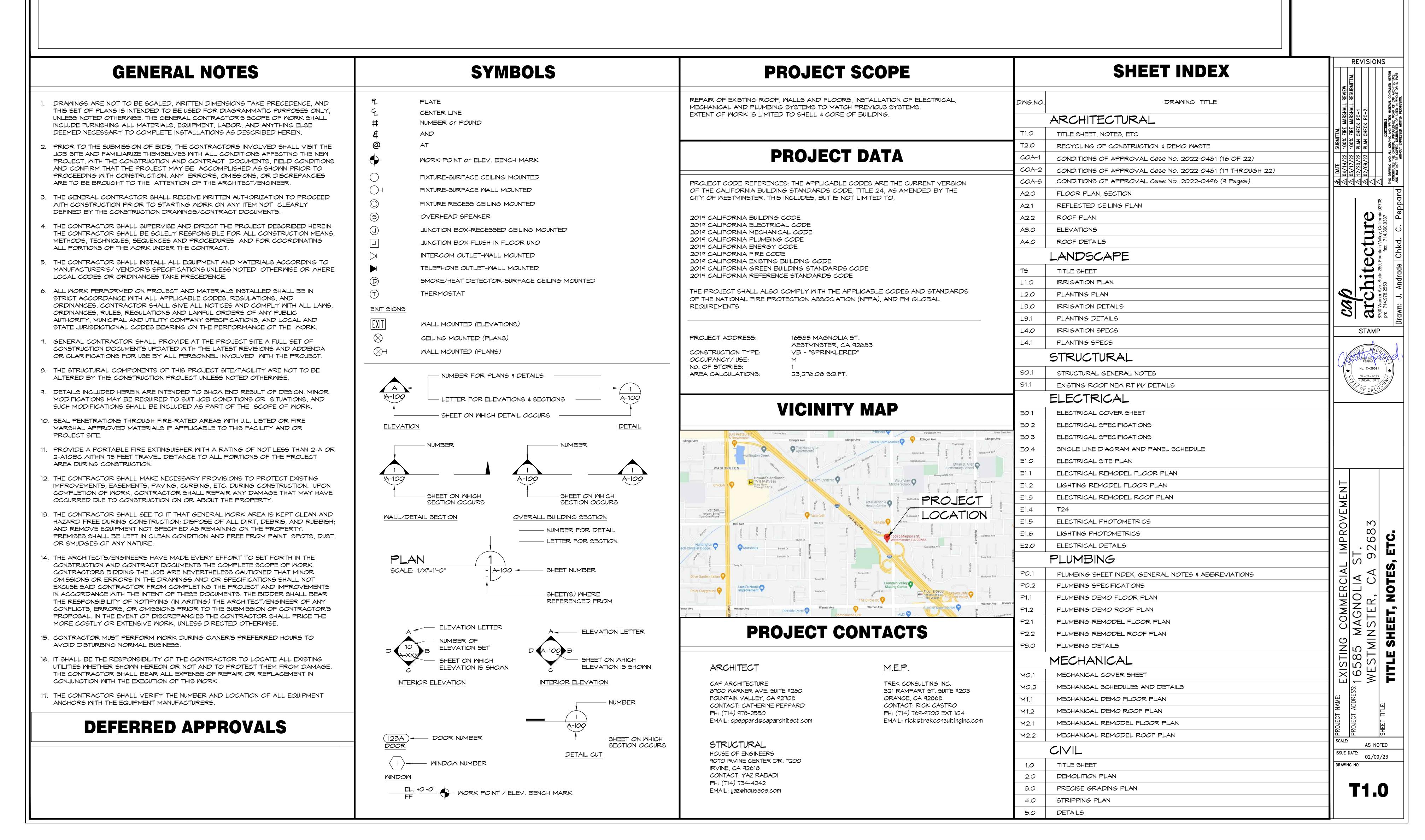
SECTION VII: LIST OF DRAWINGS - EXHIBIT C

LIST OF DRAWINGS

By this reference, the following drawings are incorporated in this Invitation For Bids.

Sheet Identification	<u>Number of</u>
	<u>Sheets</u>
T1.0 – Title Sheet, Notes, Etc.	1
T2.0 – Recycling of Construction & Demo Waste	1
COA.1 - COA.3 – Conditions of Approval	3
A2.0 – Existing Floor Plan	1
A2.1 – Reflected Ceiling Plan	1
A2.2 – Roof Plan	1
A3.0 – Elevations	1
A4.0 – Roof Details	1
L1 - L4.1 – On-Site Landscape Improvement Plans	7
S0.1 – E2.0 – Electrical Plans	14
P0.1 – P3.0 – Plumbing Plans	7
M0.1 – M2.2 – Mechanical Plans	6
1.0 – 5.0 – Existing Commercial Improvement Plan	5

EXISTING COMMERCIAL IMPROVEMENT PLAN 16585 MAGNOLIA ST. WESTMINSTER, CA 92683



Part II.	CONSTRUC				
	Disposed in	Taken to	Other	Reduced,	How
<u>Material</u>	Landfills	Inert Fills	(describe)	Recycled	Diverted?
<u>Type</u>				or Salvaged	(e.g., reused as aggregate, etc.)
Concrete					
Asphalt					
Dirt					
Wood					
Metals					
Mixed Waste					
Other					
(describe)					
Total Tons	A=	B=	C=	D=	
or Cubic Yards	A-	D-	C=	D=	

Disposal Facilities

Additional Notes / Comments: _

Please name the facilities (e.g., landfill or inert facility name) materials are taken to:

Facility Name Total Tons or Cubic Yards

Recycling Facilities

Westminster.

Please name the recycling facilities or recycler (materials given or sold to):

Total Tons or Cubic Yards Recycler / Recycling Facility Name To the best of my knowledge, the above are an accurate representation of the disposition

of the construction and demolition materials generated on-site.

Print Name

CITY OF WESTMINSTER APPROVED HAULER

Demolition hauler permitted to conduct business in the City of

city to ensure our compliance with mandatory State recycling regulations.

5 OF 6

CR&R Environmental Services is the only city-approved Construction and

By utilizing the services of only one franchised hauler, Through Midway City Sanitary District, the City of Westminster pro-actively manages the waste generated in the

environmental services

CR&R Environmental Services offers a variety of services for construction and demolition solid waste disposal. For rates, account application, and to make arrangements for your recycling and waste hauling needs please contact:

For information about the city's Comprehensive Waste Management Program, Westminster Municipal Code Chapter 8.16, or other refuse-related matters please

Westminster Public Works Service Representative at (714) 548-3463.

For information on the California Green Building Standards Code (CALGreen) and

additional recycling requirements during construction please contact:

Westminster Building Division (714) 548-3254

CR&R Environmental Customer Service (714) 890-6300

CRER

Construction and Demolition Waste Material Disposition Summary

Owner Name: ______ Date: _____

Owner Telephone:

Contractor Name:

Contractor Contact: _____ Contractor Telephone: _____

Description of Project:

Approximate Dollar Value of Construction / Demolition:

Approximate Square Footage of Project:

Demolition Schedule:

Construction Schedule:

Name of Hauler(s): _____ Telephone: _____

___ Reduced Packaging

1.18 tons/cu yd

0.97 tons/cu yd

1.21 tons/cu yd

1.33 tons/cu yd

0.20 tons/cu yd

0.25 tons/cu yd

0.025 tons/cu yd

___ Other (describe) _____

0.84 cu yds/ton

1.03 cu yds/ton

0.82 cu yds/ton

0.75 cu yds/ton

5.00 cu yds/ton

4.00 cu yds/ton

40.0 cu yds/ton

Please check waste reduction activities that are practiced at this project site:

2370 lbs/cu yd

1940 lbs/cu yd

2430 lbs/cu yd

2660 lbs/cu yd

400 lbs/cu yd

500 lbs/cu yd

50 lbs/cu yd

3 OF 6

____ Use of Prefabricated Components

Conversion Factors for Selected Loose Materials

___ Reuse of Materials Onsite ____ Accurate Material Estimates

Concrete

Asphalt

Wood

Cardboard

Gypsum wallboard

City Of Westminster Guideline for the Reduction and Recycling of Construction and Demolition Waste

I. General/Background

Construction and demolition (C&D) waste diversion is a significant portion of the California mandatory recycling requirement, AB 341 and California Green Building Standards Code (CALGreen). Effective January 1, 2017, new residential and nonresidential building construction, demolition and certain additions and alteration projects are required to recycle and/or salvage for reuse a minimum 65% of the nonhazardous C&D debris generated during the project (CALGreen sections 301.1.1, 301.3, 4.408, and

II. Covered Projects

- a. Covered Projects: Newly constructed buildings and additions to non-residential buildings or structures shall divert from landfills at least 65 percent of nonhazardous C&D materials. Additions and alterations to residential buildings that increase the structure's conditioned area, volume or size are also required to meet the 65% minimum diversion requirement.
- b. City-Sponsored Projects: All City-sponsored construction, demolition, and renovation Projects, regardless of cost shall be considered "Covered Projects" and shall submit a Construction and Demolition Waste Reduction and Recycling Plan to the WMP Compliance Official prior to beginning any construction or demolition activities and shall be subject to all applicable provisions of Article.
- c. Compliance with the provisions of this Guideline is a condition of approval on any building or demolition permit issued for a Covered Project.

III. Construction Waste Management Plan and Report

Applicant must fill out the "Construction and Demolition Waste Reduction and Recycling Plan" for a covered project and submit to the Building Division. Applicant/Contractor will be expected to follow the plan and document results during construction. At completion of activities, Applicant/Contractor must submit the "Construction and Demolition Waste Reduction and Recycling Report" form to the Building Inspector for review and file.

The following Forms are required to be filled out by the Applicant/Contractor:

- "Construction and Demolition Waste Reduction and Recycling Plan"
- "Construction and Demolition Waste Reduction and Recycling Report"

CONSTRUCTION & DEMOLITION WASTE REDUCTION AND RECYCLING PLAN

1 OF 6

Property Address:	
Owner Name:	Owner Telephone:
Contractor Name:	Contractor Telephone:
Description of Project:	
	(T)
Approximate Dollar Value of Construction	on / Demolition:
A ' C F (D)'	
Approximate Square Footage of Project:	
Domalition Dates:	Construction Dates:
Demontion Dates.	Construction Dates:

Places fill out the following form for submittely

Explanation if Petitioning for Waiver Due to Infeasibility:

MATERIALS		IMATE ISPOSAL	ESTIMATE OF DIVERSION		HOW MATERIALS IS DIVERTED
	Tons	Cubic Yards	Tons	Cubic Yards	
Concrete					
Asphalt					
Dirt					
Wood					
Metals					
Soil					
Other (describe)					
Other (describe)					
Total	X=		Y=		

FOR CITY USE ONLY

Approval Status: ____ Approved. ____ Denied. ___ Information Needed. ___ Exempt.

CONSTRUCTION & DEMOLITION WASTE REDUCTION AND RECYCLING REPORT

2 OF 6

REVISIONS

P. STAMP



IMPROVEMEN

T2.0

	Disposed in	Taken to	Other	Reduced,	How
Material Type	Class III Landfill	Inert Fills	Disposal (describe)	Recycled or Salvaged	Diverted? (e.g., reused as aggregate, etc.)
Concrete					
Asphalt					
Dirt					
Wood					
Metals					
Mixed Waste					
Other					
(describe)					
Total Tons Diversion Ra	A= te: D / (A+B+Cotes / Commen	,	C=	D=	
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6 OF 6

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November 7, 2022

Dennis Mak Orange County Transportation Authority 550 S. Main Street Orange, CA 98686

SUBJECT: Zoning Clearance Application (Case No. 2022-0481) for the property at 16575-16595 Magnolia Street, Westminster, CA 92683 (Assessor's Parcel Number 107-232-05)

Dear Dennis Mak:

Thank you for submitting an application on September 1, 2022, requesting a Zoning Clearance to regrade a portion of the asphalt parking lot, reconfigure the parking areas and reduce the number of parking spaces, restore code compliant pedestrian access to the existing building, restore existing landscaping, add 3,747 square feet of new landscaping, repair existing roof, walls and floors and install electrical, mechanical and plumbing systems at 16575-16595 Magnolia Street, Westminster, CA 92683 (APN 107-232-05). After reviewing the submitted plans received on September 1, 2022, and accompanying documents, the Zoning Clearance is hereby <u>approved</u> by the Community Development Director in accordance with the following findings and conditions of

Zoning Clearance Findings

The request complies with all of the applicable standards and provisions for the category of use in the zoning district of the subject parcel, in full compliance with Title 17, other applicable sections of the Westminster Municipal Code (WMC), and the National Pollution Discharge Elimination Systems (NPDES) program, and the City's Design Guidelines.

1. The project site is located within the C1 (Local Business) zoning district and has a General Plan land use classification of "Neighborhood Commercial." Because the project involves improvements to the parking lot and interior alterations of the building, (no changes to land uses) the proposed project will not adversely affect the General Plan, as conditioned, and is consistent with the General Plan land use classification.

Tri Ta Carlos Manzo Tai Do Chi Charlie Nguyen Kimberly Ho Christine Cordon

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2 OF 22

- 2. With the conditions of approval, the proposed project advances General Plan Community Design Goal CD-3, which requires "a visually attractive appearance of the City from... enhanced corridors and intersections." The proposed new 3,747 square feet of landscaping will substantially increase the area of existing landscaping and significantly enhance the aesthetic quality of the site and improve the visual appearance of the parking lot. Total lot size is 23,276 square feet and 6,408 square feet of landscaping is proposed which is equal to 27.5 percent of the lot. The Zoning Code requires at least 15 percent of the lot be landscaped. The proposed landscaping meets and exceeds the minimum standard.
- 3. The project is unique because the proposed improvements are a direct result of the Orange County Transportation Authority (OCTA) I-405 Improvement Project. OCTA in cooperation with the California Department of Transportation (Caltrans) is widening the San Diego Freeway (I-405) between State Route 73 (SR-73) and Interstate 605 (I-605).
- 4. The modified parking lot will reduce the number of parking stalls from 100 parking stalls to 95 parking stalls. The existing building is 23,675 square feet. The Zoning Code requires one parking stall per 250 square feet of gross floor area. Therefore, the project will conform to the parking standards.

Conditions of Approval

- 1. The applicant and the property owner agree to indemnify and hold the City harmless from and against any claim, action, damages, costs (including, without limitation, attorney's fees), injuries, or liability, arising from the City's approval of Case No. 2022-0481. Should the City be named in any suit, or should any claim be brought against it by suit or otherwise, whether the same be groundless or not, arising out of the City's approval of this project designated as Case No. 2022-0481, the applicant agrees to defend the City (at the City's request and with counsel satisfactory to the City) and will indemnify the City for any judgment rendered against it or any sums paid out in settlement or otherwise. For purposes of this section, "the City" includes the City of Westminster's elected officials, appointed officials, officers, and employees.
- 2. The subject property shall be developed for the use and in the manner requested and shall be in substantial conformance with the plans reviewed by the approving body unless revised or modified by the approving body.
- 3. The subject Zoning Clearance (Case No. 2022-0481) may be modified or revoked by the City should it be determined that the proposed use or conditions under which it was permitted are detrimental to the public health, welfare, or materially injurious to property or improvements in the vicinity or if the use is maintained as to constitute a public nuisance.
- By using this approval to develop the subject site, the applicant and the property owner acknowledge and accept all of the conditions imposed and with full awareness of the

Tri Ta Carlos Manzo Tai Do Chi Charlie Nguyen Kimberly Ho Christine Cordon

Mayor Vice Mayor Council Member Convol Member Convol Member City Manager

At Large District 3

3 OF 22

- provisions of the Westminster Municipal Code. These conditions are binding upon all future property owners, occupants, and business owners of the subject property.
- The landscape and irrigation plans shall be submitted to the Planning Division as the project is subject to the Water Efficiency Landscape Measures.
- 6. The project shall comply with all project specific conditions from the Orange County Fire Authority and Engineering Division (attached).7. The project shall be reviewed and approved by the Orange County Fire Authority prior
- 8. Prior to construction, construction plans shall be submitted to the Community Development Department (CDD) (Planning and Building Divisions) for plan check review, and a building permit must be obtained. When submitting for plan check review, please submit three (3) sets of plans, two (2) sets of specifications, structural and energy calculations, and a soil report. Plans shall be prepared by California licensed architect and engineers and include electrical, mechanical, plumbing, Title 24, and green building plans.
- 9. Before submitting construction plans to the Community Development Department (Planning and Building Divisions) for building plan check review, plans shall be revised
- to include the following:

 a. Conditions of approval, including all attachments, shall be printed verbatim on all
- plan sets before the CDD may issue the building permit;b. Revise the plans to include a note that existing landscaped areas will be restored and will conform to Code standards.
- c. Revise the plans to note the existing retaining wall with information regarding current height and that the retaining wall will not be modified.
- d. Identify all trash enclosures on the site.

At-Large

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to issuance of Building Permit.

e. Show required bicycle parking (five spaces required) in accordance with Westminster Municipal Code Section 17.320.035 (Bicycle Parking).

Pursuant to Westminster Municipal Code Chapter 17.640 (*Appeals*), any person may appeal this action to the Planning Commission within 15 days of the approval date. An appeal must be filed in compliance with all conditions of Chapter 17.640, and submitted to the City of Westminster Planning Division with the applicable filing fee prior to the expiration of the 15-day period, or until 5:30 p.m. on November 22, 2022.

Zoning Clearance provides only an initial review of development plans. It is not intended to comprehensively list all City requirements. In addition to the conditions contained in

Tri Ta Carlos Manzo Tai Do Chi Charlie Nguyen Kimberly Ho Christine Cordon
Mayor Vice Mayor, Council Member Council Member City Manages

At-Large

District 3

CITY OF WESTMINSTER DEPARTMENT OF PUBLIC WORKS DEVELOPMENT ENGINEERING REQUIREMENTS The following are the Department of Public Works Development Engineering

Requirements for issuance of a Grading Permit and/or for a Land Subdivision. In addition, a Subdivision must fulfill all requirements of the California Subdivision Map Act, and the City of Westminster Municipal Code.

Project Parking and Landscape mod
Address 16585 Magnolia

Developer
Flood Zone A
Project ID Case 2022-0481
Date 10/11/2022

Prepared by: Harry Tran

RIGHT-OF-WAY EASEMENT DEDICATION

Owner shall dedicate the following as public right-of-way easement and submit current title report:

None

PLAN CHECK / INSPECTION

Prior to issuance of Building Permit, applicant shall submit a Grading Plan or On-Site Improvement Plan and supporting documents for review and approval of the City Engineer. Plan shall use City of Westminster Title Block and shall be prepared by developer's Registered Civil Engineer. When plan check is complete Applicant shall submit three sets of final Plan for approval and signature of the City Engineer.

PUBLIC IMPROVEMENTS

Applicant shall construct the following Public Works Improvements (per approved plans & City

Standards) and indicate these improvements on the grading plans/improvement plans. Additional improvements may be required during grading plan check, see City of Westminster Grading Plans / Utility Plans Submittal requirement.

Magnolia St.

Remove existing driveway approach, construct driveway approaches per City Std 209.
 Paving per City Std 609 for all utility connections.

Applicant shall construct the following On-Site Improvements (per approved plans & City Standards)

On-site parking shall be per City Std. 509.

 ENCROACHMENT PERMIT & INSPECTION

Prior to the commencement of any work in the Public Right-Of-Way, applicant shall obtain an Encroachment Permit and shall make arrangements for inspection by the City of Westminster.

STORM WATER POLLUTION PREVENTION – ADDITIONAL REQUIREMENTS

WQMP is not required.

OTHER DEVELOPMENT ISSUES

and indicate these improvements on the plan:

- On-site Improvement plan is required.
 Flood zone A, submit "Flood Valuation Worksheet for Substantial Improvements"
- At the time of issuance of the Permit the Applicant shall make a payment to the City of Westminster for the Development Fees shown on the City of Westminster Development Fee Worksheet.

5 OF 22

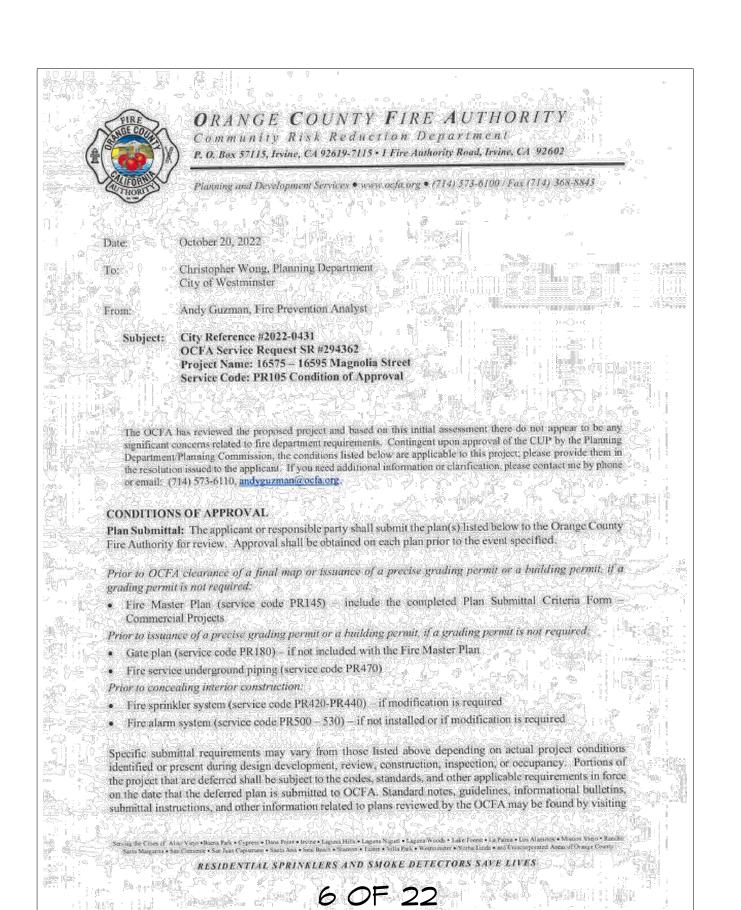
this letter, you are required (unless exempted by Code) to comply with all adopted codes, plans, and policies of the City of Westminster that are in effect prior to the issuance of your building permit.

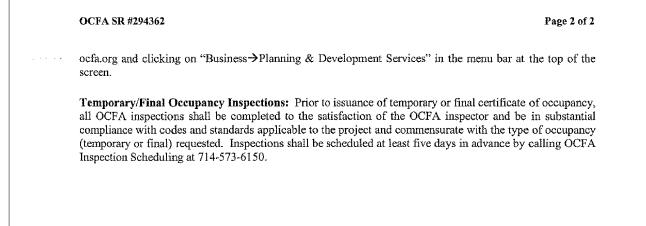
Additionally, the approved permit or entitlement shall expire one year from the date of approval if the use has not been exercised, unless otherwise specified in the permit or entitlement pursuant to Westminster Municipal Code Section 17.510.030 (*Time Limits and Extensions*). The zoning approval shall not be deemed exercised until the permittee has submitted plans to the Building Division for plan check. A time extension may be granted if a written request is submitted by the applicant and received by the Division prior to the expiration of the approval and if the Director determines that a good faith effort was made to establish the permit.

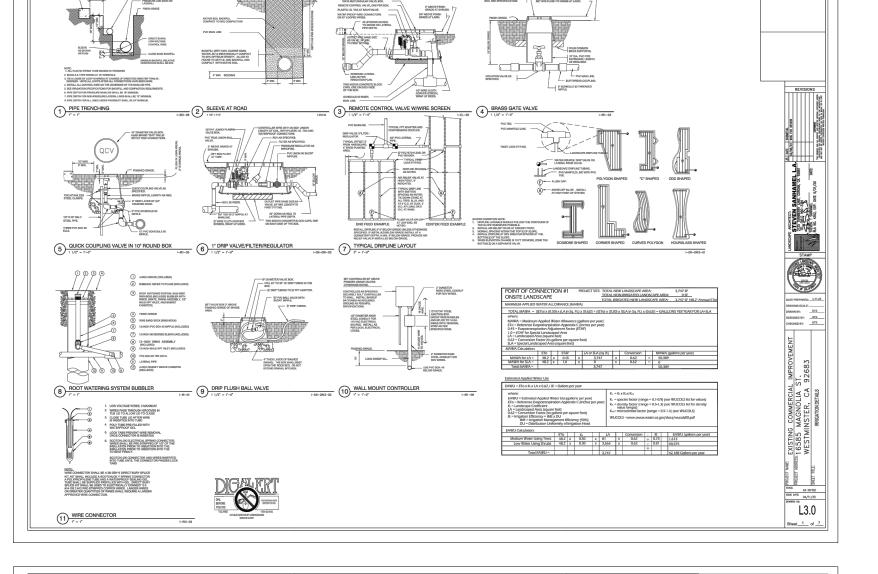
If you have any questions about the above information, please contact Christopher Wong, Senior Planner, at (714) 548-3495 or at cwong@westminster-ca.gov.

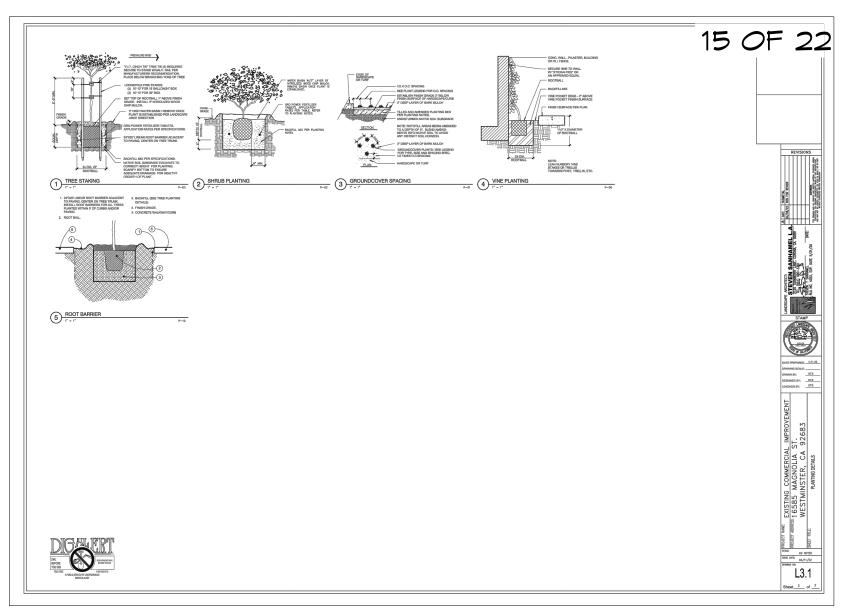


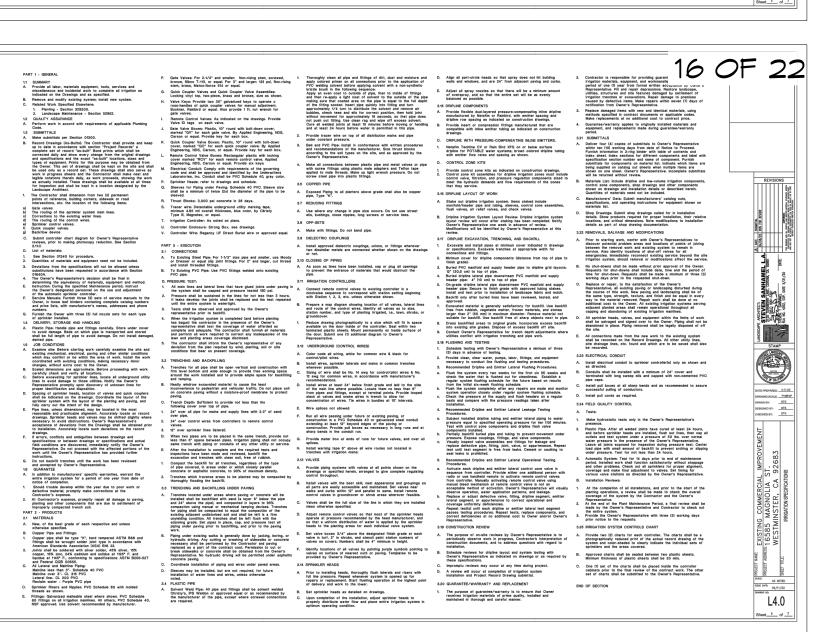
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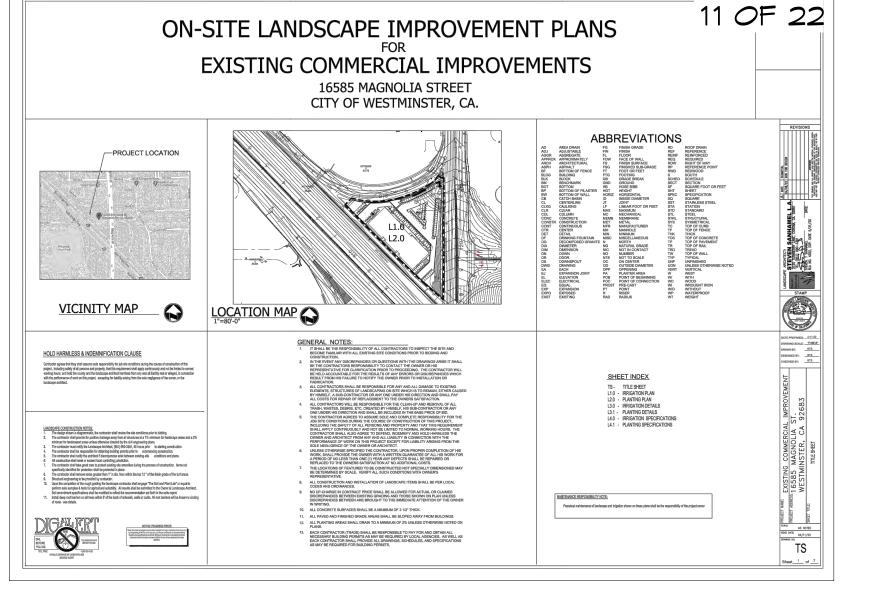


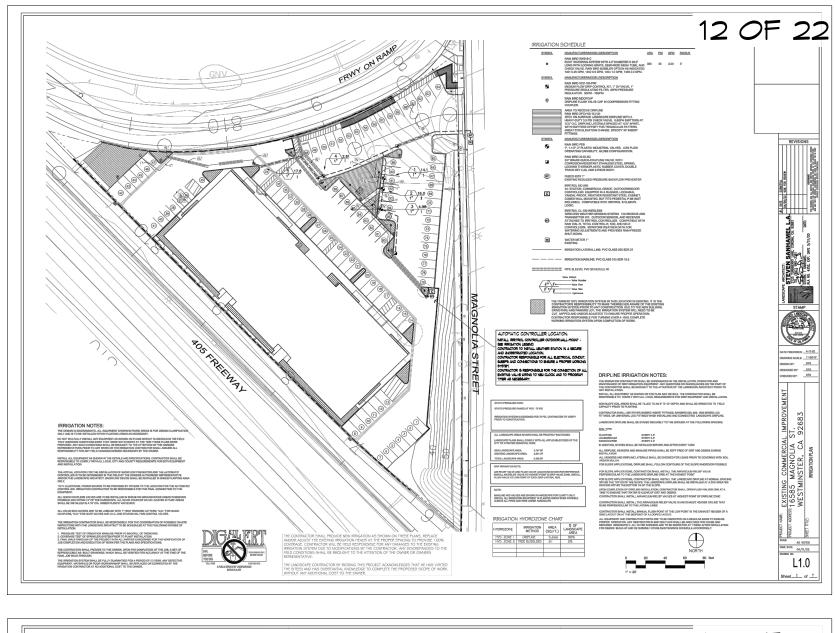


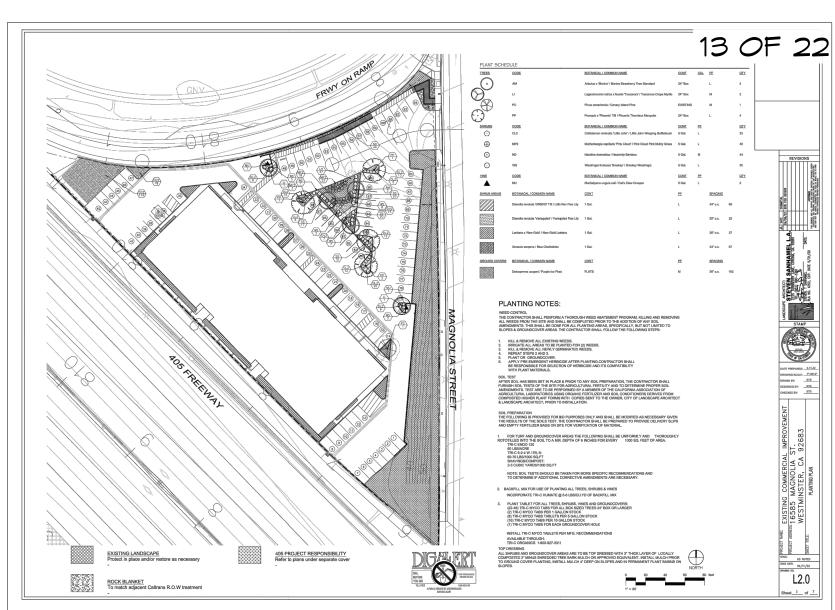


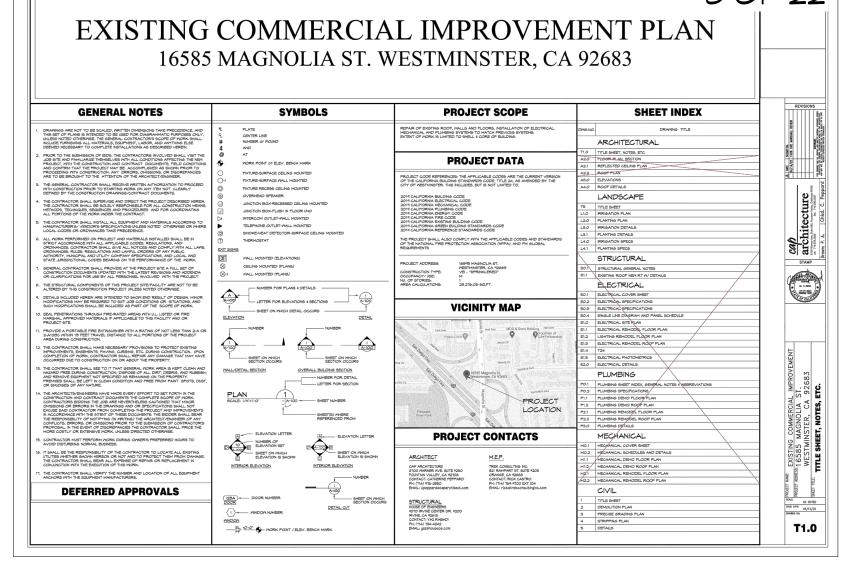


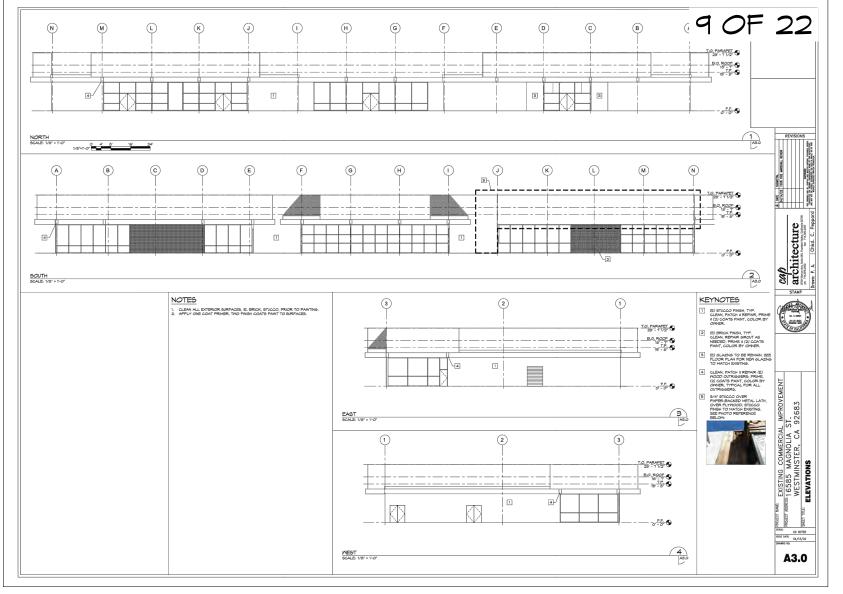


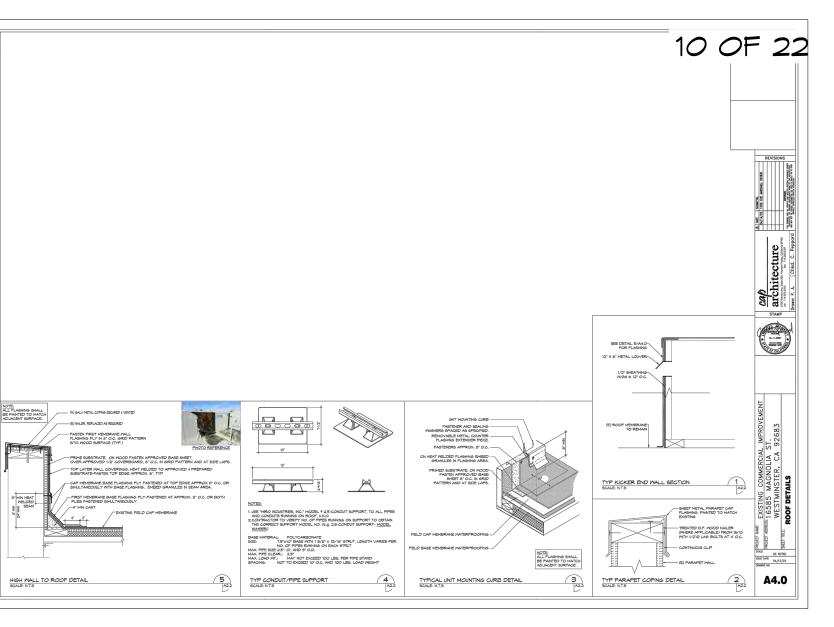














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ADDRESS: 16585 MAGNOLIA ST.
WESTMINSTER, CA 92683

REVISIONS

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PROJECT ADDRESS: A
SHEET TITLE:

SCALE:

AS NOTED

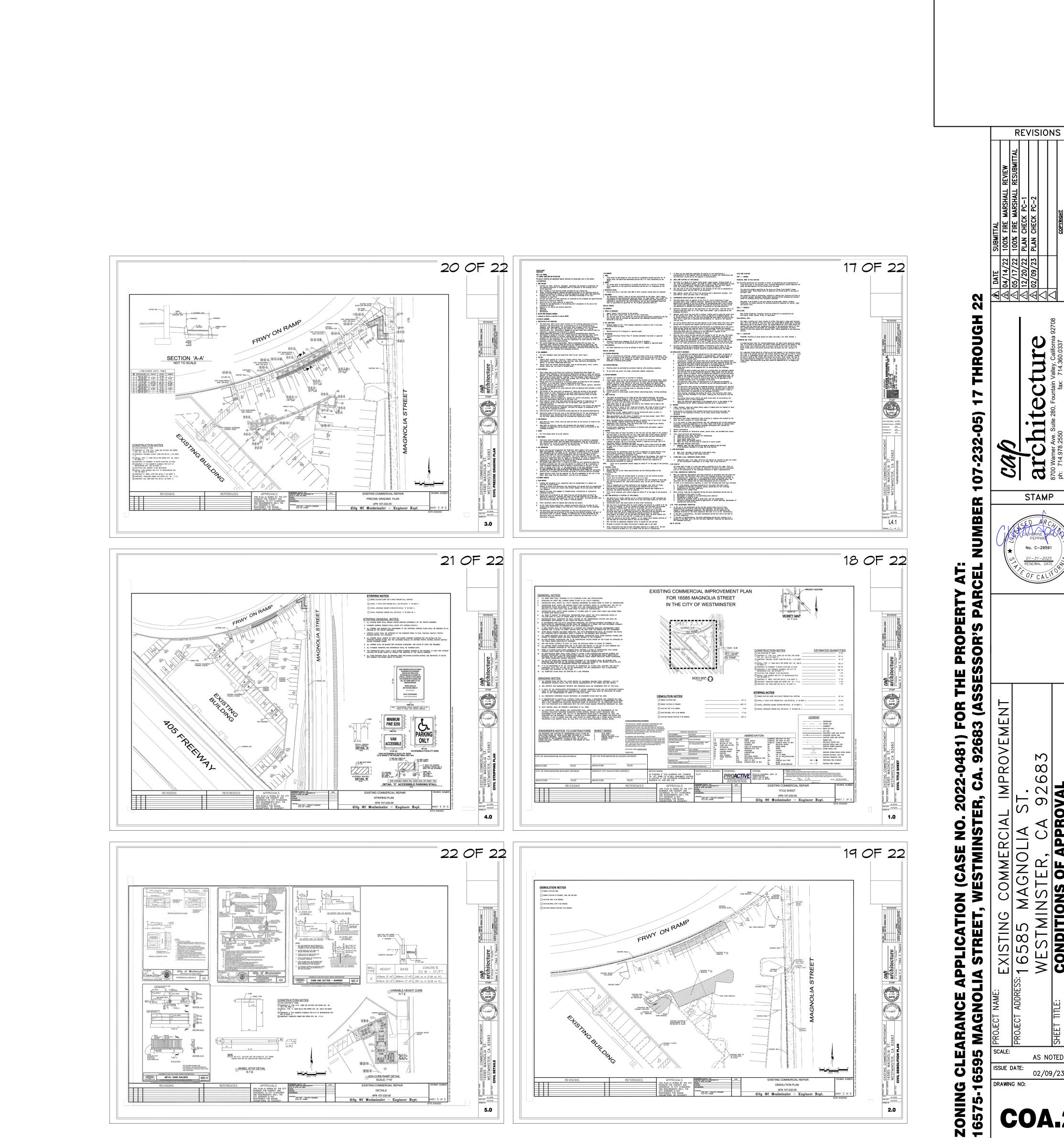
ISSUE DATE:

02/09/23

DRAWING NO:

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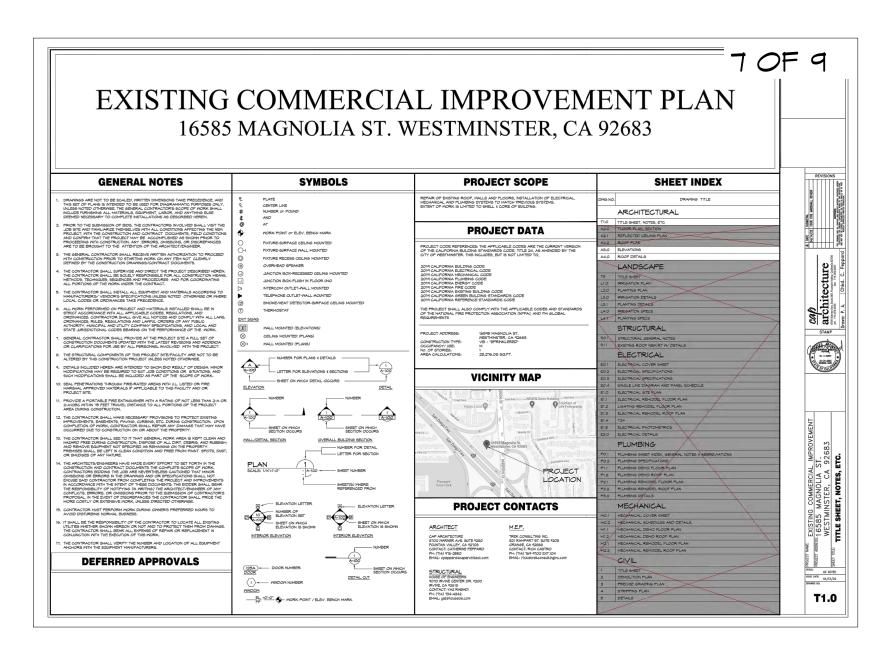
7 OF 22

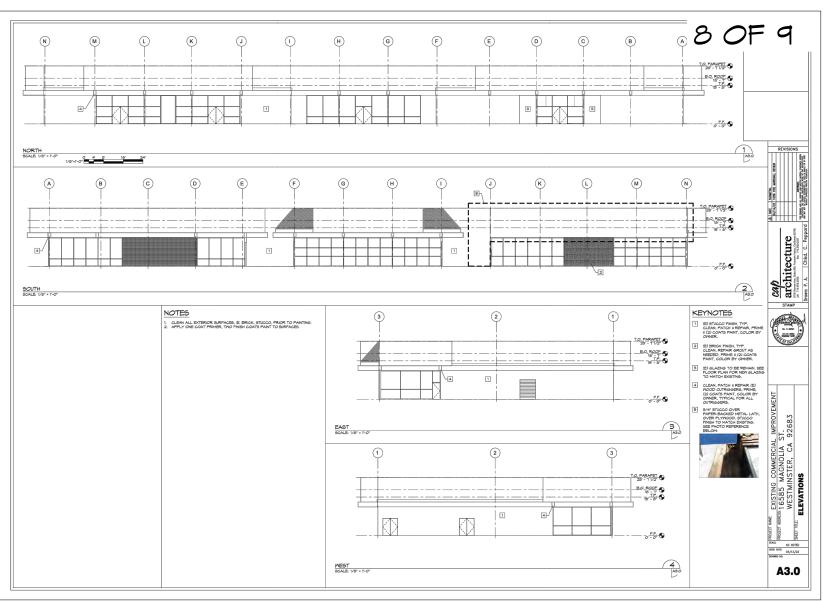


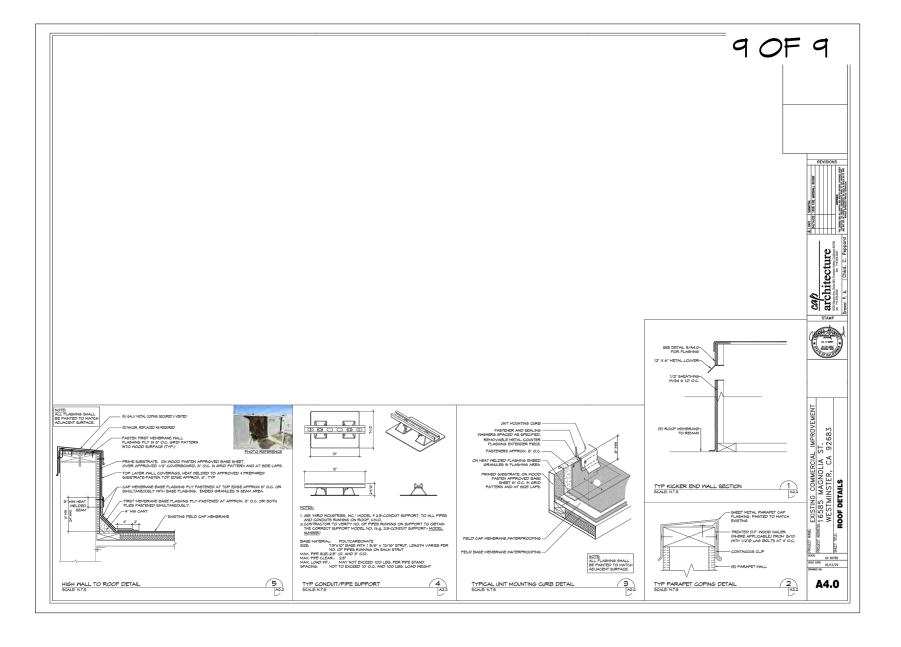
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AS NOTED

COA.2









WESTMINSTER-CAGOV

8200 WESTMINSTER BOULEVARD, WESTMINSTER, CA 92683 (714) 898-3311

November 15, 2022

Dennis Mak Orange County Transportation Authority 550 S. Main Street Orange, CA 98686

SUBJECT: Zoning Clearance Application (Case No. 2022-0496) for the property at 16585-16595 Magnolia Street, Westminster, CA 92683 (Assessor's Parcel Number 107-232-05)

Dear Dennis Mak:

Thank you for submitting an application on October 5, 2022, requesting a Zoning Clearance to restore and rehabilitate a portion of a building façade that was removed to accommodate the Orange County Transportation Authority I-405 Improvement Project along the southeastern section of the building located at 16585-16595 Magnolia Street, Westminster, CA 92683 (APN 107-232-05). After reviewing the application, plan, accompany documents, and photo simulation received via e-mail on October 24, 2022 (attached); the Zoning Clearance is hereby *approved* by the Community Development Director in accordance with the following findings and conditions of approval.

Zoning Clearance Findings

The request complies with all of the applicable standards and provisions for the category of use in the zoning district of the subject parcel, in full compliance with Title 17, other applicable sections of the Westminster Municipal Code (WMC), and the National Pollution Discharge Elimination Systems (NPDES) program, and the City's Design Guidelines.

1. The project site is located within the C1 (Local Business) zoning district and has a General Plan land use classification of "Neighborhood Commercial." Because the project involves improvements to the building façade (no changes to land uses), the proposed project will not adversely affect the General Plan, as conditioned, and is consistent with the General Plan land use classification.

Tri Ta	Carlos Manzo	_ Tai Do	Chi Charlie Nguyen	Kimberly Ho	Christine Cordon
Mayor	Vice Mayor,	Council Member,	Council Member,	Council Member District 3	City Manager

3 OF 9

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review, and a building permit must be obtained. When submitting for plan check review, please submit three (3) sets of plans, two (2) sets of specifications, structural and energy calculations, and a soil report. Plans shall be prepared by California licensed architect and engineers and include electrical, mechanical, plumbing, Title 24, and green building plans.

- 7. Before submitting construction plans to the Community Development Department (Planning and Building Divisions) for building plan check review, plans shall be revised to include the following:
- a. Conditions of approval, including all attachments, shall be printed verbatim on all plan sets before the CDD may issue the building permit.
- A decorative roof cornice element shall be incorporated on all sides of the building design subject to review and approval from the Community Development Department.
- c. An awning shall be incorporated along the rear of the building façade adjacent to the I-405 Freeway as shown in the photo simulations submitted on October 24, 2022.

Pursuant to Westminster Municipal Code Chapter 17.640 (*Appeals*), any person may appeal this action to the Planning Commission within 15 days of the approval date. An appeal must be filed in compliance with all conditions of Chapter 17.640, and submitted to the City of Westminster Planning Division with applicable filing fee prior to the expiration of the 15-day period, or until 5:30 p.m. on November 30, 2022.

Zoning Clearance provides only an initial review of development plans. It is not intended to comprehensively list all City requirements. In addition to the conditions contained in this letter, you are required (unless exempted by Code) to comply with all adopted codes, plans, and policies of the City of Westminster that are in effect prior to the issuance of your building permit.

Additionally, the approved permit or entitlement shall expire one year from the date of approval if the use has not been exercised, unless otherwise specified in the permit or entitlement pursuant to Westminster Municipal Code Section 17.510.030 (*Time Limits and Extensions*). This zoning approval shall not be deemed exercised until the permittee has submitted plans to the Building Division for plan check. A time extension may be granted if a written request is submitted by the applicant and received by the Division prior to the expiration of the approval and if the Director determines that a good faith effort was made to establish the permit.

If you have any questions about the above information, please contact Christopher Wong, Senior Planner, at (714) 548-3495 or at cwong@westminster-ca.gov.

Tri Ta	Carlos Manzo	Tai Do	Chi Charlie Nguyen	Kimberly Ho	Christine Cordo
Mayor	Vice Mayor,	Council Member,	Council Member	Council Member	City Manage

2 OF 09

- 2. With the conditions of approval, the proposed project advances General Plan Community Design Goal CD-3, which requires "a visually attractive appearance of the City from... enhanced corridors and intersections." The restored and rehabilitated building façade, with the condition of approval requiring the installation of a roof cornice and awning, will enhance the aesthetic quality of the site and improve the visual appearance of the building.
- 3. The project is unique because the proposed improvements are a direct result of the Orange County Transportation Authority (OCTA) I-405 Improvement Project. OCTA in cooperation with the California Department of Transportation (Caltrans) is widening the San Diego Freeway (I-405) between State Route 73 (SR-73) and Interstate 605

Conditions of Approval

- 1. The applicant and the property owner agree to indemnify and hold the City harmless from and against any claim, action, damages, costs (including, without limitation, attorney's fees), injuries, or liability, arising from the City's approval of Case No. 2022-0496. Should the City be named in any suit, or should any claim be brought against it by suit or otherwise, whether the same be groundless or not, arising out of the City's approval of this project designated as Case No. 2022-0496, the applicant agrees to defend the City (at the City's request and with counsel satisfactory to the City) and will indemnify the City for any judgment rendered against it or any sums paid out in settlement or otherwise. For purposes of this section, "the City" includes the City of Westminster's elected officials, appointed officials, officers, and employees.
- 2. The subject property shall be developed for the use and in the manner requested and shall be in substantial conformance with the plans reviewed by the approving body unless revised or modified by the approving body.
- 3. The subject Zoning Clearance (Case No. 2022-0496) may be modified or revoked by the City should it be determined that the proposed use or conditions under which it was permitted are detrimental to the public health, welfare, or materially injurious to property or improvements in the vicinity or if the use is maintained as to constitute a public nuisance.
- 4. By using this approval to develop the subject site, the applicant and the property owner acknowledge and accept all of the conditions imposed and with full awareness of the provisions of the Westminster Municipal Code. These conditions are binding upon all future property owners, occupants, and business owners of the subject property.

5. The project shall be reviewed by the Orange County Fire Authority prior to issuance

of Building Permit.

6. Prior to construction construction plans shall be submitted to the Community

0. F	noi lo constituction,	construction plans	Silali De Subi	ilitied to the	Community
	evelopment Departm	ent (CDD) (Plannin	a and Building	Divisions) for	nlan check
	evelopment beparti	icht (ODD) (Flammi	g and banding	Divisions) for	plan oncok

Tri Ta	Carlos Manzo	Tai Do	Chi Charlie Nguyen	Kimberly Ho	Christine Cord
Mayor	Vice Mayor,	Council Member,	Council Member,	Council Member	City Manager
	District 2	At-Large	At-Large	District 3	



Sincerely,

for Art Bashmakian Contract Planner

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No. C-29591

No. C-29591

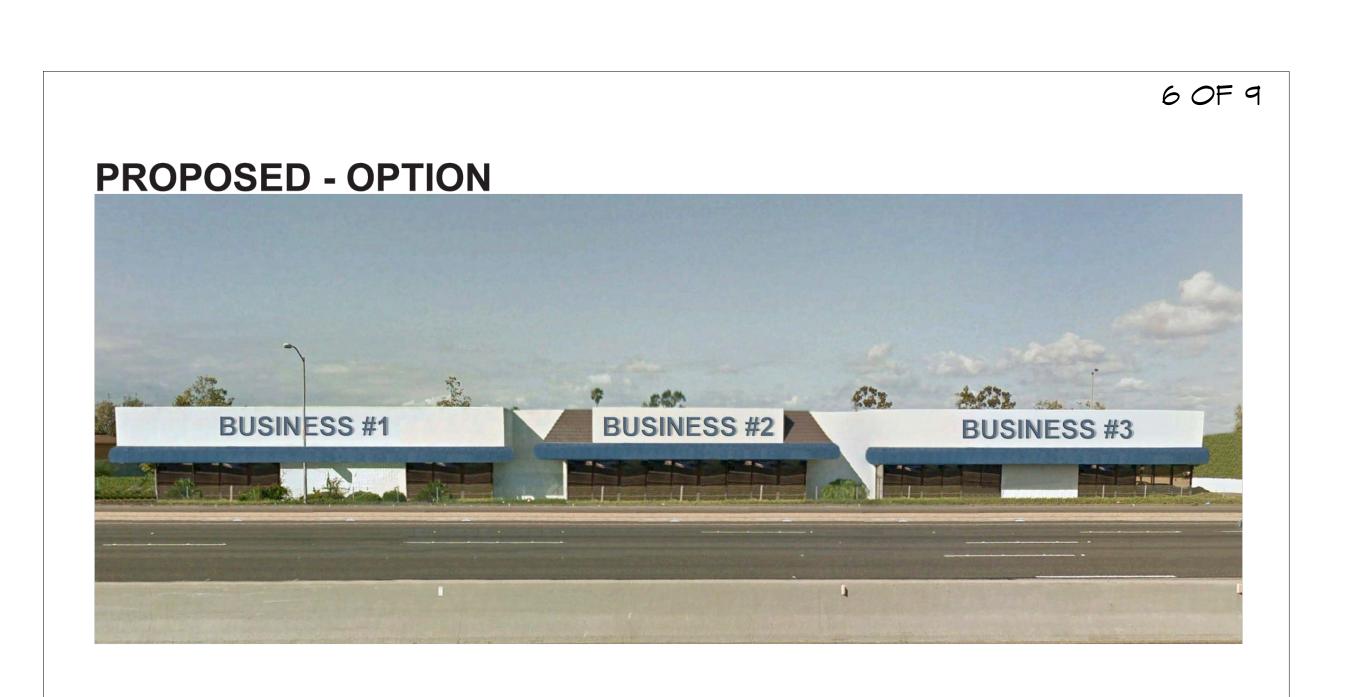
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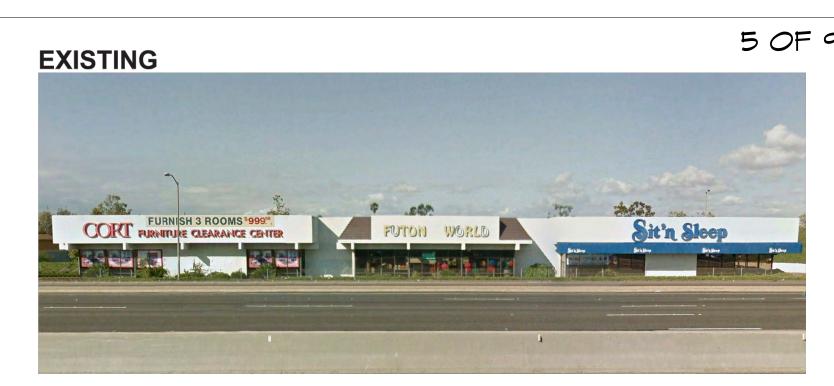
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REVISIONS

Tai Do Chi Charlie Nguyen Kimberly Ho Christine Cordon

Vice Mayor,
District 2 At-Large Council Member,
At-Large District 3







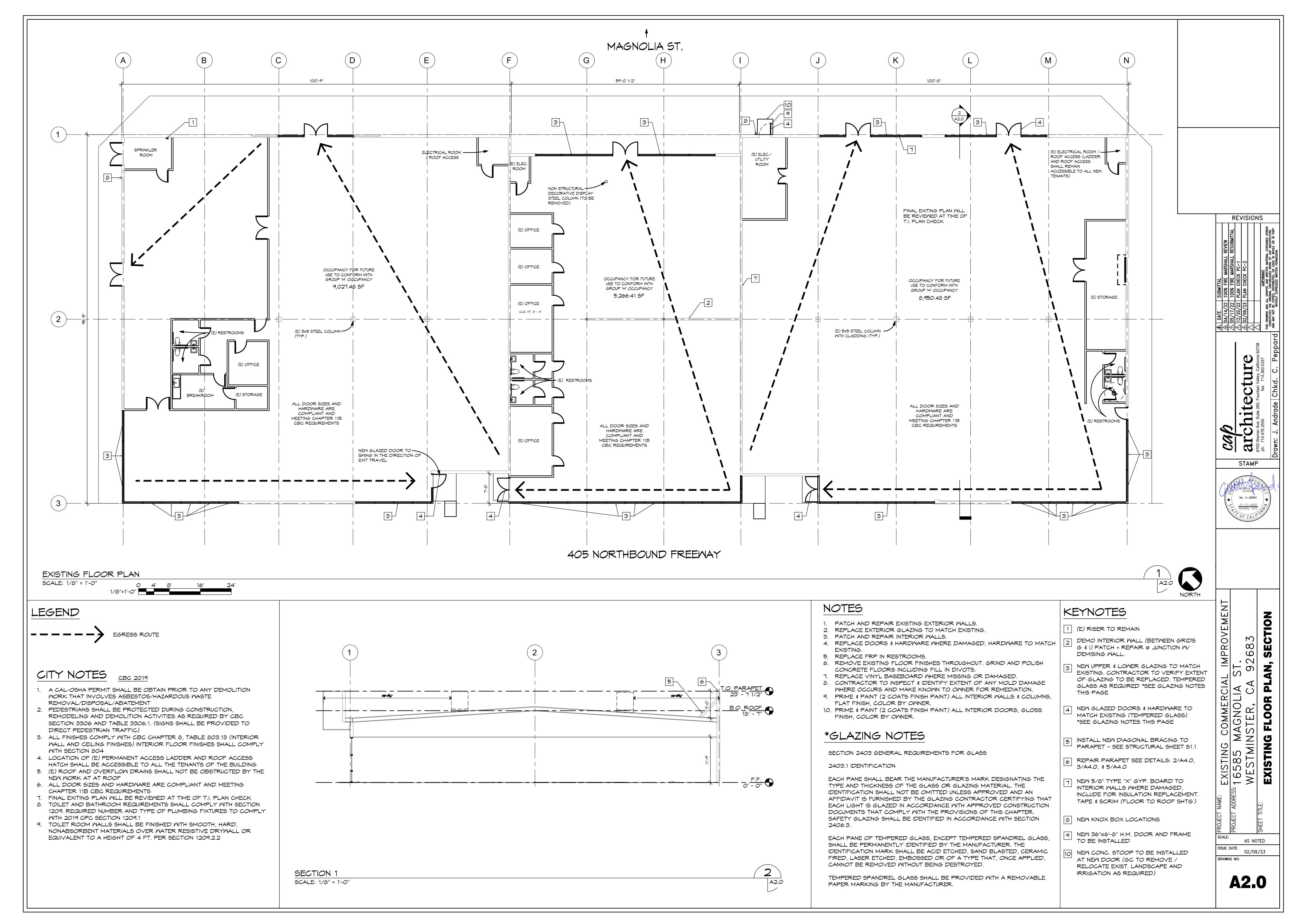
ONING CLEARANCE APPLICATION (CASE NO. 2022-0496) FOR THE PROPERTY AT: 6585-16595 MAGNOLIA STREET, WESTMINSTER, CA 92683 (ASSESSOR'S PARCEL NUMBER

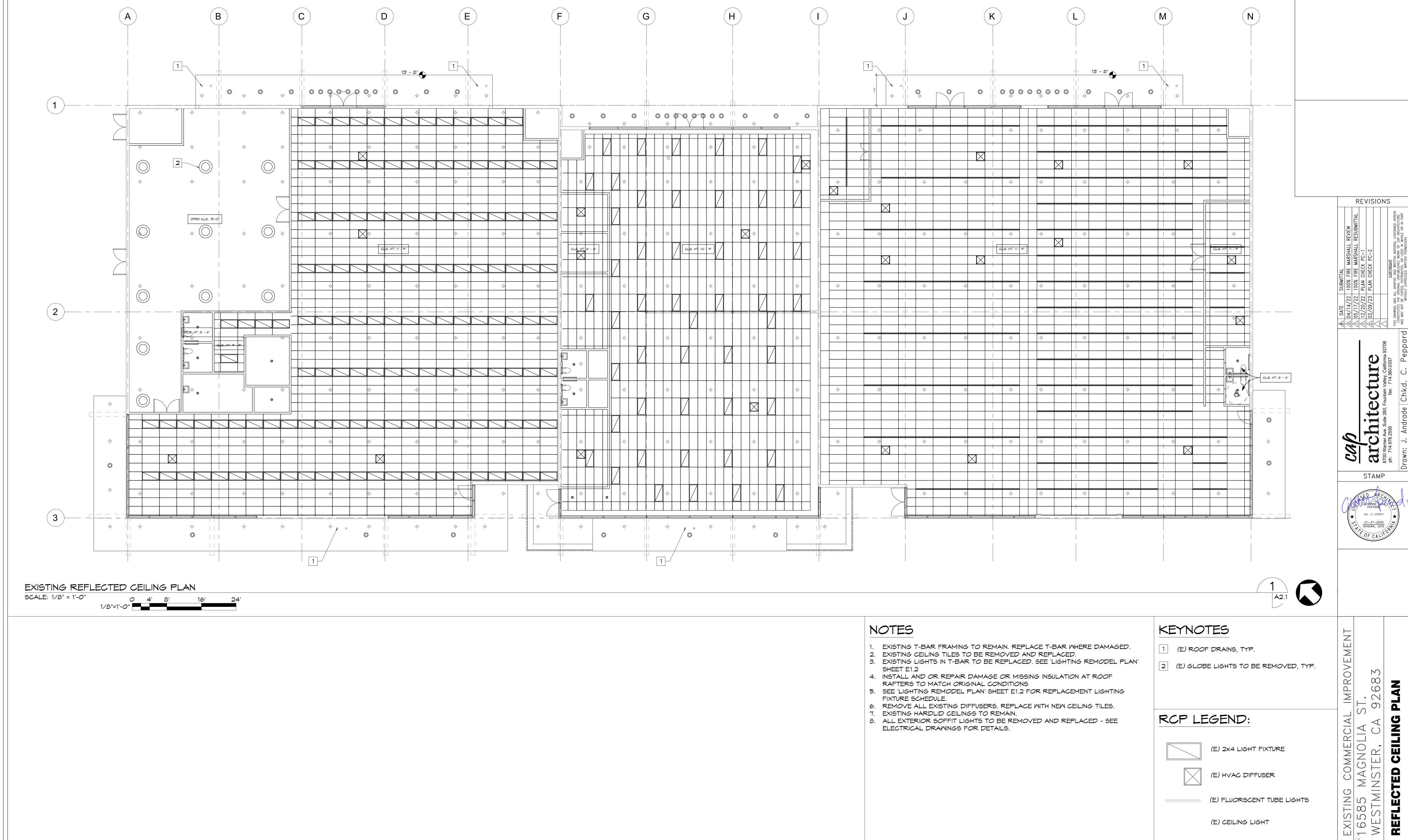
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ECT ADDRESS: 16585 MAGNO
WESTMINSTER,
TITLE: CONDITIONS OF A
Case No. 2022-04

E: AS NOTED

E DATE: 02/09/23

COA.3







(E) HYAC DIFFUSER



(E) FLUORSCENT TUBE LIGHTS

(E) CEILING LIGHT



(E) GLOBE LIGHTS

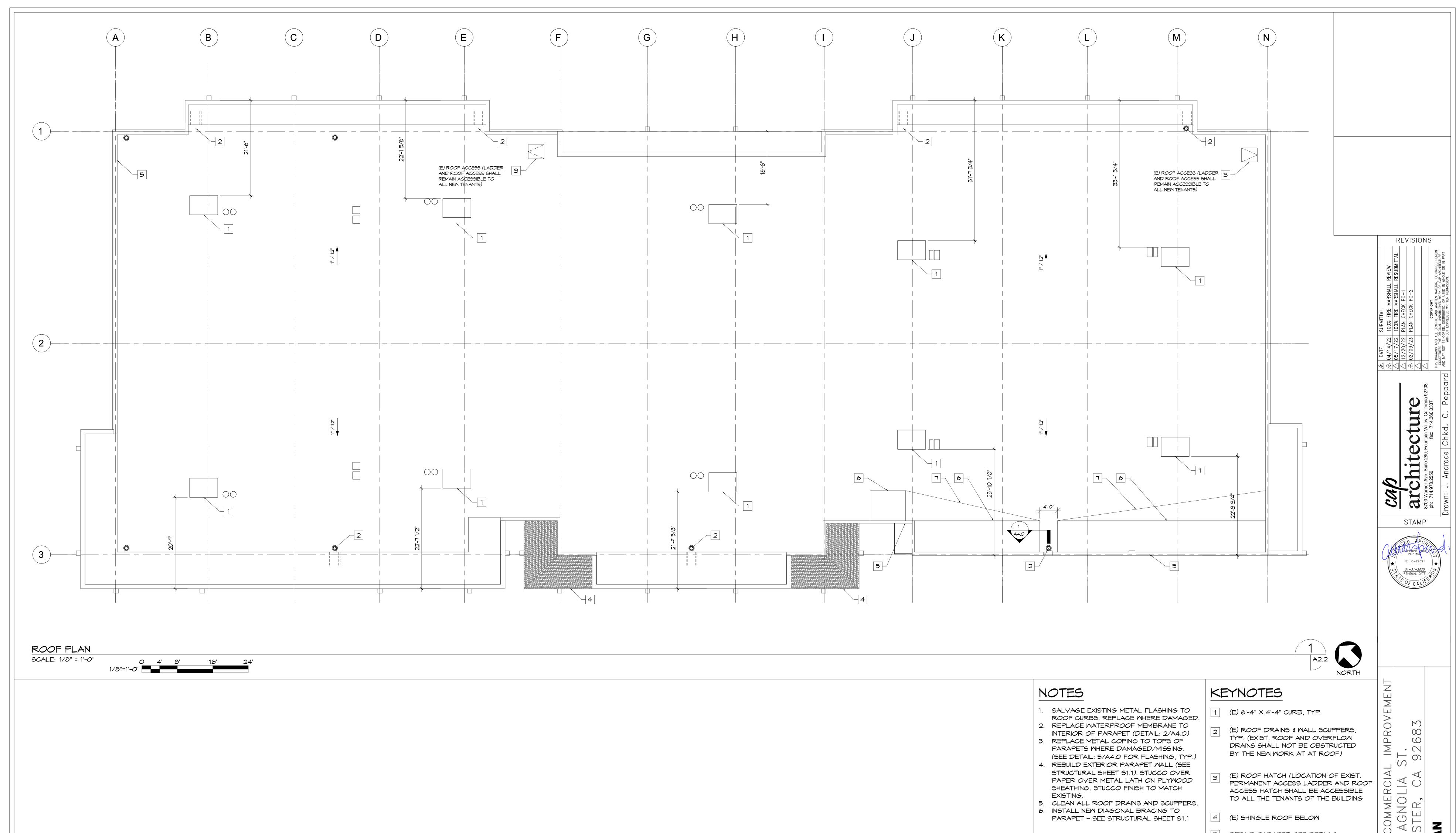
(E) FIRE SPRINKLERS TO REMAIN. ADJUST FOR (N) CEILING HEIGHT.

GENERAL NOTES:

CONTRACTOR TO VERIFY IN FIELD DIMENSIONS. ANY DISCREPANCIES SHALL BE REPORTED TO THE PROJECT MANAGER AND ARCHITECT PRIOR TO COMMENCEMENT OF WORK.

AS NOTED ISSUE DATE: 02/09/23 DRAWING NO:

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5 REPAIR PARAPET, SEE DETAILS 2\$5/A4.0

SIMILIAR.

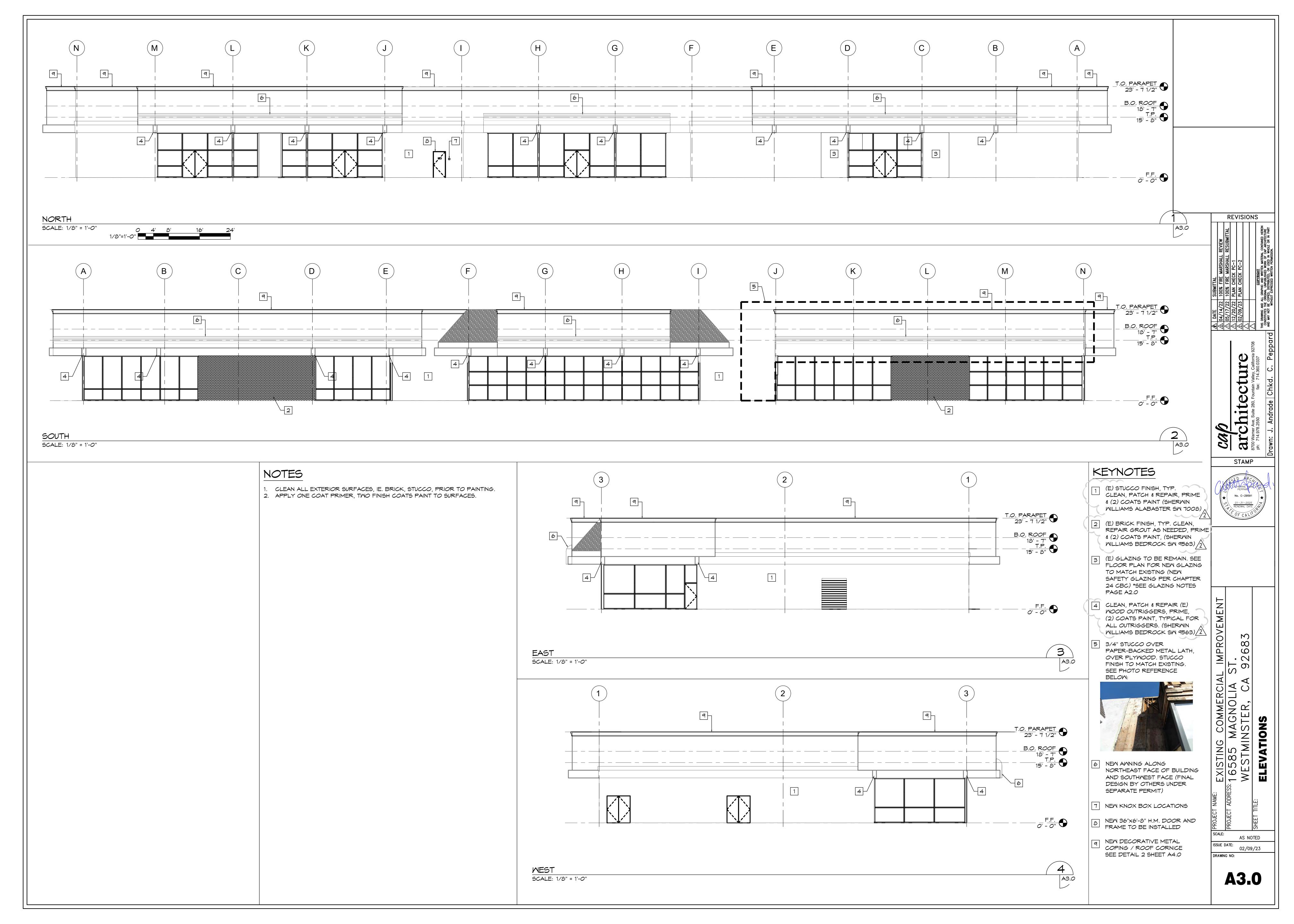
- 6 INSTALL NEW DIAGONAL BRACING TO PARAPET SEE STRUCTURAL SHEET S1.1
- 7 NEW CRICKET REMOVE EXISTING TOP PLY & ADD TAPERED POLYISO THERMAL INSULATION, W/ ADHESIVE. INSTALL NEW ROOF PLY (GRANULATED MODIFIED BITUMEN) TO MATCH EXISTING, PER MANUFACTURERS INSTALLATION

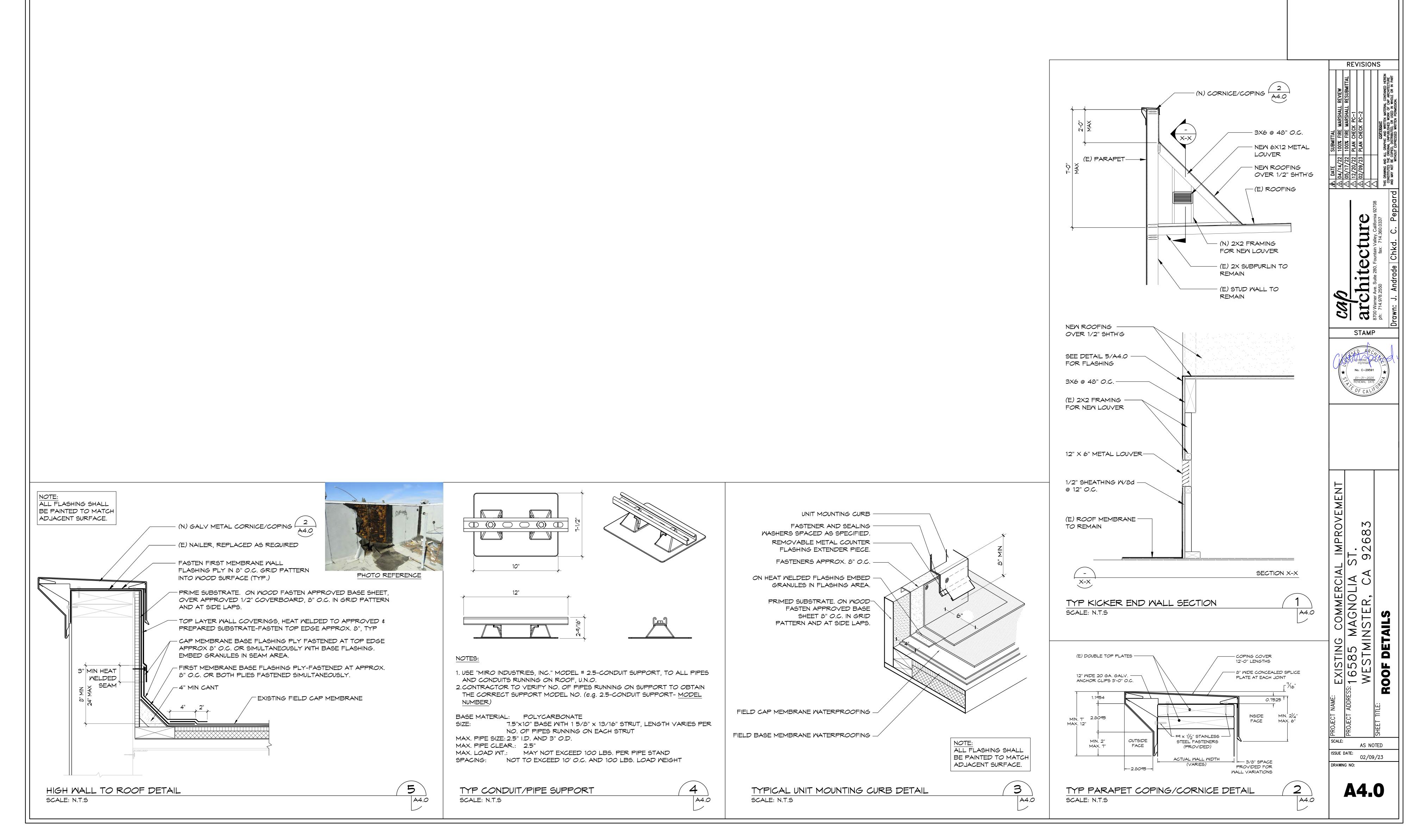
RECOMMENDATIONS, DETAIL 2/A4.0

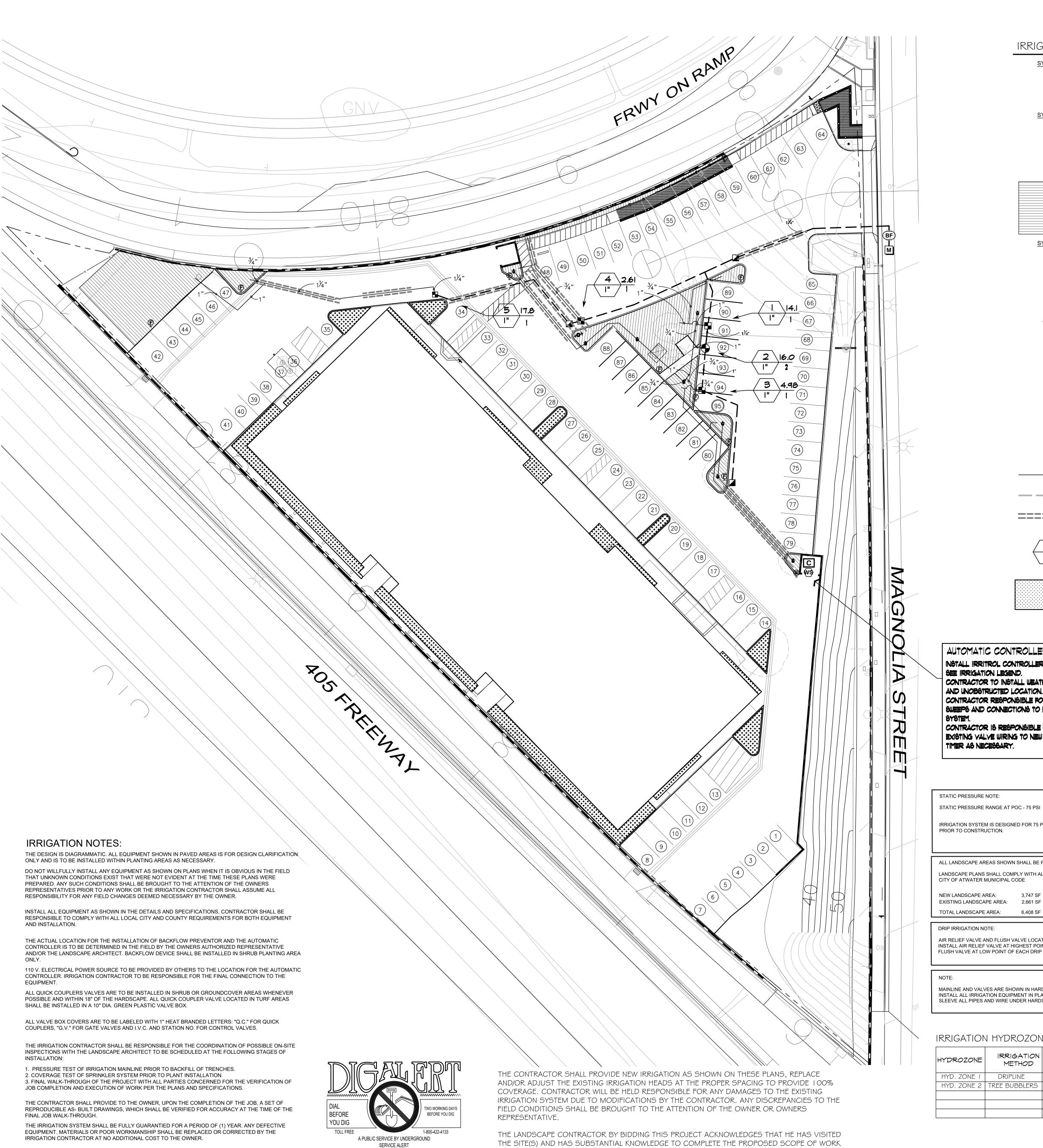
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AS NOTED ISSUE DATE: 02/09/23 DRAWING NO:

A2.2







WITHOUT ANY ADDITIONAL COST TO THE OWNER.

IRRIGATION SCHEDULE

MANUFACTURER/MODEL/DESCRIPTION ARC PSI GPM RADIUS RAIN BIRD RWS-B-C ROOT WATERING SYSTEM WITH 4.0" DIAMETER X 36.0" LONG WITH LOCKING GRATE, SEMI-RIGID MESH TUBE, AND 360 30 2.00 3' CHECK VALVE. RAIN BIRD BUBBLER OPTION AS INDICATED: 1401 0.25 GPM, 1402 0.5 GPM, 1404 1.0 GPM, 1408 2.0 GPM. MANUFACTURER/MODEL/DESCRIPTION RAIN BIRD XCZ-100-PRF MEDIUM FLOW DRIP CONTROL KIT, 1" DV VALVE, 1" PRESSURE REGULATING FILTER, 40PSI PRESSURE REGULATOR. 3GPM - 15GPM. RAIN BIRD MDCFCAP DRIPLINE FLUSH VALVE CAP IN COMPRESSION FITTING COUPLER. AREA TO RECEIVE DRIPLINE RAIN BIRD XFCV-06-12 (12) XFCV ON-SURFACE LANDSCAPE DRIPLINE WITH A HEAVY-DUTY 3.5 PSI CHECK VALVE. 0.6GPH EMITTERS AT 12.0" O.C. DRIPLINE LATERALS SPACED AT 12.0" APART, WITH EMITTERS OFFSET FOR TRIANGULAR PATTERN. GREAT FOR ELEVATION CHANGE. SPECIFY XF INSERT MANUFACTURER/MODEL/DESCRIPTION 1", 1-1/2", 2" PLASTIC INDUSTRIAL VALVES. LOW FLOW OPERATING CAPABILITY, GLOBE CONFIGURATION. RAIN BIRD 33-DLRC 3/4" BRASS QUICK-COUPLING VALVE, WITH CORROSION-RESISTANT STAINLESS STEEL SPRING, LOCKING THERMOPLASTIC RUBBER COVER, DOUBLE TRACK KEY LUG, AND 2-PIECE BODY. FEBCO 825Y 1" EXISTING REDUCED PRESSURE BACKFLOW PREVENTER **IRRITROL MC-24E** 24- STATION, COMMERCIAL-GRADE, OUTDOOR/INDOOR CONTROLLER. EQUIPPED IN A RUGGED, LOCKABLE, VANDAL-PROOF, WEATHER RESISTANT STEEL CABINET. COMES WALL MOUNTED, BUT FITS PEDESTAL P-6B (NOT INCLUDED). COMPATIBLE WITH IRRITROL'S CLIMATE IRRITROL CL-100-WIRELESS WIRELESS WEATHER SENSING SYSTEM. 100-RECEIVE AND TRANSMITTER KIT. OUTDOOR SENSOR, AND RECEIVER ATTACHES TO IRRITROL CONTROLLER. COMPATIBLE WITH RAIN DIAL-R, TOTAL CONTROL-R, KD2, AND MC-E CONTROLLERS. MONITORS WEATHER DATA FOR WATERING ADJUSTMENTS AND PROVIDES RAIN-FREEZE SHUT-DOWN. **EXISTING** IRRIGATION LATERAL LINE: PVC CLASS 200 SDR 21 IRRIGATION MAINLINE: PVC CLASS 315 SDR 13.5 PIPE SLEEVE: PVC SCHEDULE 40

THE CURRENT SITE IRRIGATION SYSTEM IN THIS LOCATION IS EXISTING. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAKE THEMSELVES AWARE OF THE EXISTING IRRIGATION SYSTEM PRIOR TO ANY CONSTRUCTION. DUE TO THE NEW BUILDING, DRIVE-THRU AND PARKING LOT, THE IRRIGATION SYSTEM WILL NEED TO BE CUT, CAPPED AND AND/OR ADJUSTED TO ENSURE PROPER OPERATION. CONTRACTOR RESPONSIBLE FOR TURNING OVER A 100% COMPLETE WORKING IRRIGATION SYSTEM UPON COMPLETION OF WORK.

AUTOMATIC CONTROLLER LOCATION: INSTALL IRRITROL CONTROLLER OUTDOOR WALL-MOUNT -SEE IRRIGATION LEGEND. CONTRACTOR TO INSTALL WEATHER STATION IN A SECURE AND UNOBSTRUCTED LOCATION. CONTRACTOR RESPONSIBLE FOR ALL ELECTRICAL CONDUIT, SWEEPS AND CONNECTIONS TO ENSURE A PROPER WORKING CONTRACTOR IS RESPONSIBLE FOR THE CONNECTION OF ALL EXISTING YALVE WIRING TO NEW CLOCK AND TO PROGRAM

STATIC PRESSURE NOTE:

STATIC PRESSURE RANGE AT POC - 75 PSI

IRRIGATION SYSTEM IS DESIGNED FOR 75 PSI. CONTRACTOR TO VERIFY PRIOR TO CONSTRUCTION.

ALL LANDSCAPE AREAS SHOWN SHALL BE PRIVATELY MAINTAINED. LANDSCAPE PLANS SHALL COMPLY WITH ALL APPLICABLE CODES OF THE

NEW LANDSCAPE AREA: EXISTING LANDSCAPE AREA: 2,661 SF

DRIP IRRIGATION NOTE:

AIR RELIEF VALVE AND FLUSH VALVE LOCATIONS SHOWN FOR REFERENCE. INSTALL AIR RELIEF VALVE AT HIGHEST POINT IN DRIP VALVE ZONE. INSTALL FLUSH VALVE AT LOW POINT OF EACH DRIP LATERAL RUN.

MAINLINE AND VALVES ARE SHOWN IN HARDSCAPE FOR CLARITY ONLY. INSTALL ALL IRRIGATION EQUIPMENT IN PLANTER AREAS WHEN POSSIBLE. SLEEVE ALL PIPES AND WIRE UNDER HARDSCAPE

IRRIGATION HYDROZONE CHART

HYDROZONE	IRRIGATION METHOD	AREA (SQ.FT.)	% OF LANDSCAP! AREA
HYD. ZONE I	DRIPLINE	3,666	98%
HYD. ZONE 2	TREE BUBBLERS	81	2%

DRIPLINE IRRIGATION NOTES:

THE IRRIGATION CONTRACTOR SHALL BE EXPERIENCED IN THE INSTALLATION, OPERATION AND MAINTENANCE OF DRIP IRRIGATION EQUIPMENT. ANY QUESTIONS OR INADEQUACIES ON THE PART OF THE CONTRACTOR SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT PRIOR TO

INSTALL ALL EQUIPMENT AS SHOWN ON THE PLAN AND DETAILS. THE CONTRACTOR SHALL BE RESPONSIBLE TO COMPLY WITH ALL LOCAL REQUIREMENTS FOR DRIP EQUIPMENT AND INSTALLATION. NON-SLOPE SOIL AREAS SHALL BE TILLED TO AN 8" TO 12" DEPTH AND SHALL BE IRRIGATED TO FIELD

CONTRACTOR SHALL USE EITHER BARBED INSERT FITTINGS, RAINBIRD 600, 800, 1000 SERIES LOC FITTINGS, OR UNIVERSAL LOC FITTINGS WHEN INSTALLING AND CONNECTING LANDSCAPE DRIPLINE. LANDSCAPE DRIPLINE SHALL BE STAKED SECURELY TO THE GROUND AT THE FOLLOWING SPACING:

SOIL TYPE CLAY/FINE EVERY 3-5'

CAPACITY PRIOR TO PLANTING

EVERY 2-3' IN ADDITION, STAKES SHALL BE INSTALLED BEFORE AND AFTER EVERY TURN

ALL DRIPLINE, HEADERS AND MAINLINE PIPING SHALL BE KEPT FREE OF DIRT AND DEBRIS DURING ALL HEADERS AND DRIPLINE LATERALS SHALL BE CHECKED FOR LEAKS PRIOR TO COVERING WITH SOIL

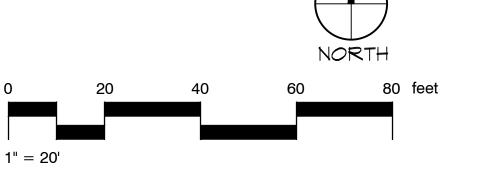
FOR SLOPE APPLICATIONS, DRIPLINE SHALL FOLLOW CONTOURS OF THE SLOPE WHEREVER POSSIBLE FOR SLOPE APPLICATIONS, CONTRACTOR SHALL INSTALL THE AIR/VACUUM RELIEF VALVE PERPENDICULAR TO THE LANDSCAPE DRIPLINE GRID AT THE HIGHEST POINT

FOR SLOPE APPLICATIONS, CONTRACTOR SHALL INSTALL THE LANDSCAPE DRIPLINE AT NORMAL SPACING WITHIN THE TOP 2/3 OF THE SLOPE. THE LANDSCAPE DRIPLINE SHALL BE INSTALLED AT A 25% GREATER

SPACING WITHIN THE BOTTOM 1/3 OF THE SLOPE. UPON COMPLETION OF DRIPLINE INSTALLATION, CONTRACTOR SHALL OPEN FLUSH VALVES ONE AT A TIME TO ENSURE THAT WATER IS CLEAR OF DIRT AND DEBRIS.

CONTRACTOR SHALL INSTALL THE AIR/VACUUM RELIEF VALVE IN AN EXHAUST HEADER OR LINE THAT RUNS PERPENDICULAR TO THE LATERAL LINES CONTRACTOR SHALL INSTALL MANUAL FLUSH POINT AT THE LOW POINT IN THE EXHAUST HEADER OF A GRID LAYOUT OR AT THE MIDPOINT OF A LOOPED LAYOUT.

ALL EQUIPMENT AND DISTRIBUTION PORTS ARE TO BE INSPECTED ON A REGULAR BASIS TO ENSURE PROPER OPERATION. ANY RESTRICTION IN EMITTER FLOW SHALL BE ANALYZED FOR CAUSE AND REPAIRED IMMEDIATELY. ALL FILTER SCREENS ARE TO BE INSPECTED AT 1 WEEK AFTER INSTALLATION FOR DEBRIS BUILD-UP AND DETERMINE FUTURE MAINTENANCE SCHEDULE ACCORDINGLY.



REVISIONS

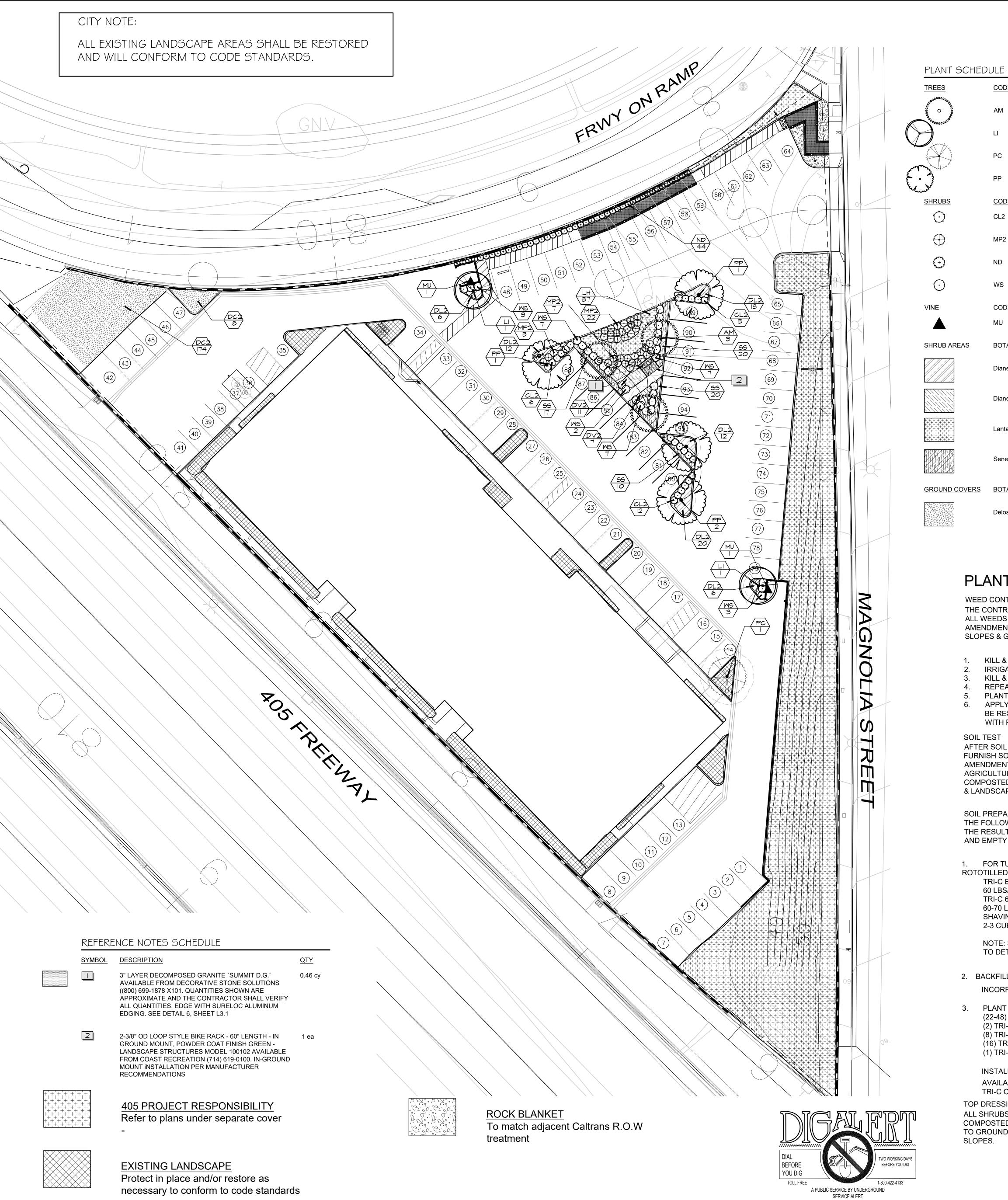
DATE PREPARED: 4-11-22 DRAWING SCALE: ___1"=20'-0 DESIGNED BY:

CHECKED BY:

AS NOTED ISSUE DATE: 04/11/22

DRAWING NO:

Sheet $\frac{2}{}$ of $\frac{7}{}$





PLANTING NOTES:

THE CONTRACTOR SHALL PERFORM A THOROUGH WEED ABATEMENT PROGRAM, KILLING AND REMOVING ALL WEEDS FROM THE SITE AND SHALL BE COMPLETED PRIOR TO THE ADDITION OF ANY SOIL AMENDMENTS. THIS SHALL BE DONE FOR ALL PLANTING AREAS, SPECIFICALLY, BUT NOT LIMITED TO SLOPES & GROUNDCOVER AREAS. THE CONTRACTOR SHALL FOLLOW THE FOLLOWING STEPS:

- 1. KILL & REMOVE ALL EXISTING WEEDS.
- IRRIGATE ALL AREAS TO BE PLANTED FOR (2) WEEKS. KILL & REMOVE ALL NEWLY GERMINATED WEEDS.
- REPEAT STEPS 2 AND 3.
- PLANT OR GROUNDCOVER.
- APPLY PRE-EMERGENT HERBICIDE AFTER PLANTING.CONTRACTOR SHALL BE RESPONSIBLE FOR SELECTION OF HERBICIDE AND ITS COMPATIBILITY WITH PLANT MATERIALS.

AFTER SOIL HAS BEEN SET IN PLACE & PRIOR TO ANY SOIL PREPARATION, THE CONTRACTOR SHALL FURNISH SOIL TESTS OF THE SITE FOR AGRICULTURAL FERTILITY AND TO DETERMINE PROPER SOIL AMENDMENTS. TEST ARE TO BE PERFORMED BY A MEMBER OF THE CALIFORNIA ASSOCIATION OF AGRICULTURAL LABORATORIES USING ORGANIC FERTILIZER AND SOIL CONDITIONERS DERIVED FROM COMPOSTED HIGHER PLANT FORMS WITH COPIES SENT TO THE OWNER, CITY OF LANDSCAPE ARCHITECT & LANDSCAPE ARCHITECT, PRIOR TO INSTALLATION.

SOIL PREPARATION

THE FOLLOWING IS PROVIDED FOR BID PURPOSES ONLY AND SHALL BE MODIFIED AS NECESSARY GIVEN THE RESULTS OF THE SOILS TEST. THE CONTRACTOR SHALL BE PREPARED TO PROVIDE DELIVERY SLIPS AND EMPTY FERTILIZER BAGS ON SITE FOR VERIFICATION OF MATERIAL

FOR TURF AND GROUNDCOVER AREAS THE FOLLOWING SHALL BE UNIFORMLY AND THOROUGHLY ROTOTILLED INTO THE SOIL TO A MIN. DEPTH OF 6 INCHES FOR EVERY 1000 SQ. FEET OF AREA.

TRI-C ENDO 120 60 LBS/ACRE TRI-C 6-2-4 W / 5% S: 60-70 LBS/1000 SQ.FT SHAVINGS/COMPOST:

2-3 CUBIC YARDS/1000 SQ.FT

NOTE: SOIL TESTS SHOULD BE TAKEN FOR MORE SPECIFIC RECOMMENDATIONS AND TO DETERMINE IF ADDITIONAL CORRECTIVE AMENDMENTS ARE NECESSARY.

2. BACKFILL MIX FOR USE OF PLANTING ALL TREES, SHRUBS & VINES INCORPORATE TRI-C HUMATE @ 5-6 LBS/CU.YD OF BACKFILL MIX

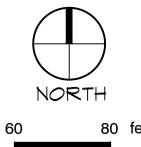
PLANT TABLET FOR ALL TREES, SHRUBS, VINES AND GROUNDCOVERS: (22-48) TRI-C MYCO TABS FOR ALL BOX SIZED TREES 24" BOX OR LARGER (2) TRI-C MYCO TABS PER 1 GALLON STOCK (8) TRI-C MYCO TABS TABLETS PER 5 GALLON STOCK (16) TRI-C MYCO TABS PER 15 GALLON STOCK (1) TRI-C MYCO TABS FOR EACH GROUNDCOVER HOLE

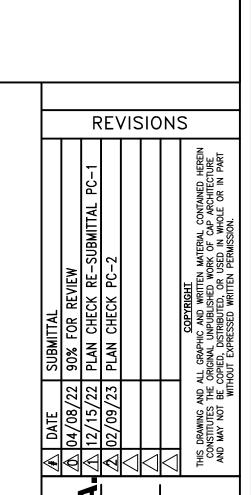
INSTALL TRI-C MYCO TABLETS PER MFG. RECOMMENDATIONS AVAILABLE THROUGH: TRI-C ORGANICS 1-800-927-3311

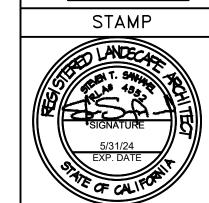
TOP DRESSING

ALL SHRUBS AND GROUNDCOVER AREAS ARE TO BE TOP DRESSED WITH 3" THICK LAYER OF LOCALLY COMPOSTED 2" MINUS SHREDDED TREE BARK MULCH OR APPROVED EQUIVALENT. INSTALL MULCH PRIOR TO GROUND COVER PLANTING, INSTALL MULCH 4" DEEP ON SLOPES AND IN PERMANENT PLANT BASINS ON SLOPES.

1" = 20'







DATE PREPARED: 4-11-22 DRAWING SCALE: 1"=20'-0' DRAWN BY:

DESIGNED BY: CHECKED BY:

EXIS 165 WE

SCALE: AS NOTED 04/11/22 DRAWING NO:

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ON-SITE LANDSCAPE IMPROVEMENT PLANS EXISTING COMMERCIAL IMPROVEMENTS

16585 MAGNOLIA STREET CITY OF WESTMINSTER, CA.





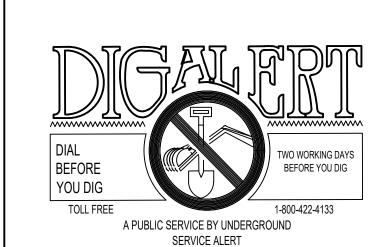


HOLD HARMLESS & INDEMNIFICATION CLAUSE

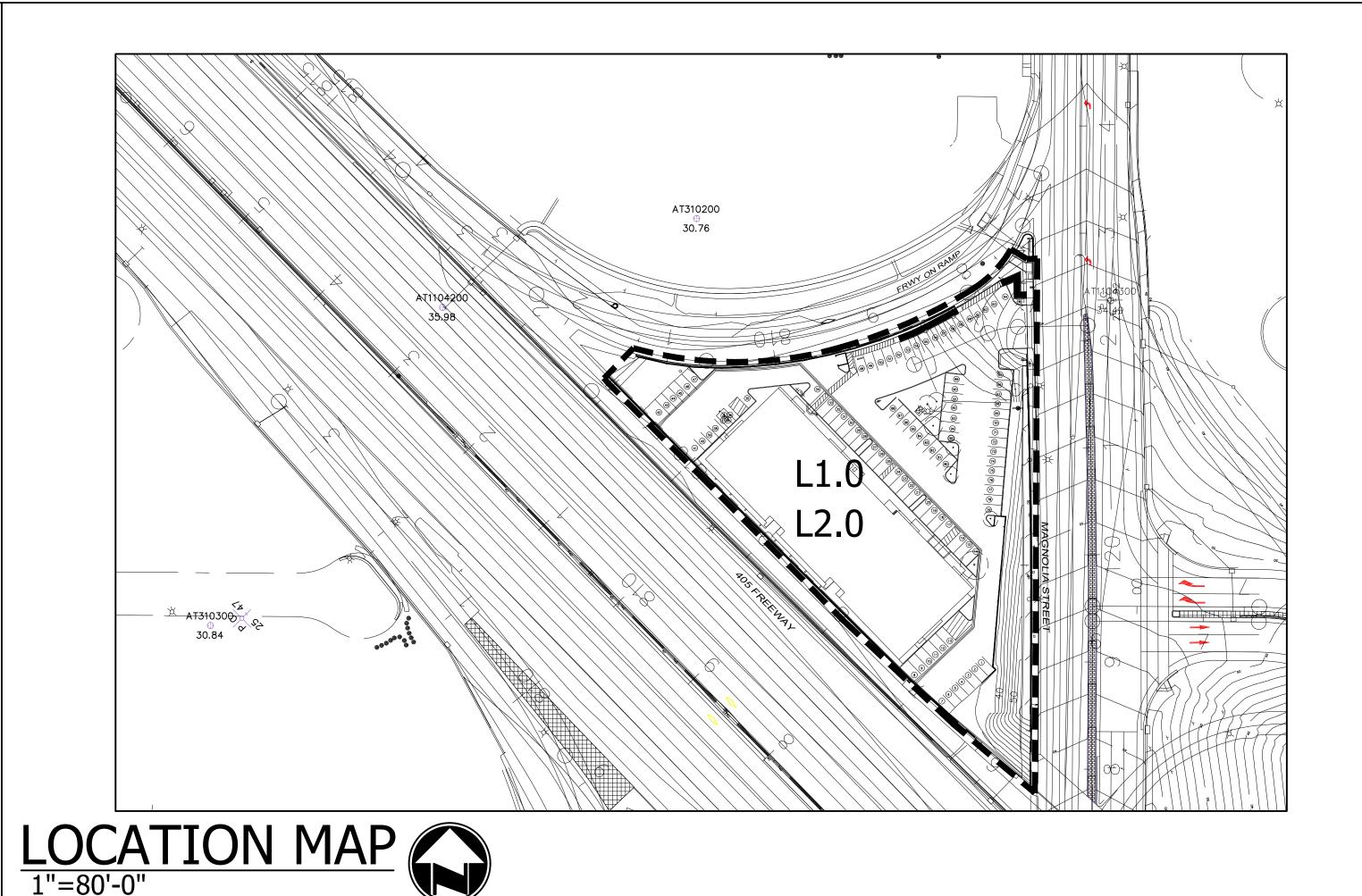
Contractor agrees that they shall assume sole responsibility for job site conditions during the course of construction of this project, including safety of all persons and property, that this requirement shall apply continuously and not be limited to normal working hours, and hold the county and the landscape architect harmless from any and all liability real or alleged, in connection with the performance of work on this project, excepting for liability arising from the sole negligence of the owner, or the landscape architect.

LANDSCAPE CONSTRUCTION NOTES

- The design shown is diagrammatic, the contractor shall review the site conditions prior to bidding. The contractor shall provide for positive drainage away from all structures at a 1% minimum for hardscape areas and a 2%
- minimum for landscaped areas unless otherwise directed by the civil engineering plans.
- The contractor must notify the Landscape Architect, (951) 990-3381, 48 hours prior to starting construction.
- The contractor shall be responsible for obtaining building permits prior to commencing construction.
- The contractor shall notify the architect if discrepancies exist between existing site conditions and plans. All construction shall meet or exceed local controlling jurisdiction.
- The contractor shall take great care to protect existing site amenities during the process of construction. Items not
- specifically identified for protection shall be protected in place. The contractor shall remove rocks greater than 1" in dia. from within the top 12 " of the finish grade of the turf areas.
- Structural engineering to be provided by contractor. 10. Upon the completion of the rough grading the landscape contractor shall engage "The Soil and Plant Lab" or equal to
- perform soils samples & tests for agricultural suitability. All results shall be submitted to the Owner & Landscape Architect. Soil amendment specifications shall be modified to reflect the recommendation set forth in the soils report.
- Install deep root barriers on all trees within 6' of the back of sidewalk, walls or curbs. All root barriers will be linear-no circling of roots - see details.



NOTICE: PROGRESS PRINTS These documents are progress copies and are subject to change, due to plan check commen therefore, the use of these documents for bidding or construction is not authorized and the Landscape Architect accepts no responsibility for the use of these documents for those

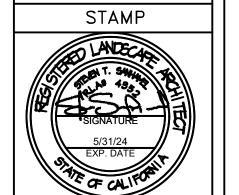


GENERAL NOTES:

- IT SHALL BE THE RESPONSIBILITY OF ALL CONTRACTORS TO INSPECT THE SITE AND BECOME FAMILIAR WITH ALL EXISTING SITE CONDITIONS PRIOR TO BIDDING AND CONSTRUCTION.
- IN THE EVENT ANY DISCREPANCIES OR QUESTIONS WITH THE DRAWINGS ARISE IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO CONTACT THE OWNER OR HIS REPRESENTATIVE FOR CLARIFICATION PRIOR TO PROCEEDING. THE CONTRACTOR WILL BE HELD ACCOUNTABLE FOR THE RESULTS OF ANY ERRORS OR DISCREPANCIES WHICH RESULT FROM HIS FAILURE TO NOTIFY THE OWNER PRIOR TO INSTALLATION OR
- ALL CONTRACTORS SHALL BE RESPONSIBLE FOR ANY AND ALL DAMAGE TO EXISTING ELEMENTS, STRUCTURES OF LANDSCAPING ON SITE WHICH IS TO REMAIN, EITHER CAUSED BY HIMSELF, A SUB-CONTRACTOR OR ANY ONE UNDER HIS DIRECTION AND SHALL PAY ALL COSTS FOR REPAIR OF REPLACEMENT TO THE OWNERS SATISFACTION.
- ALL CONTRACTORS WILL BE RESPONSIBLE FOR THE CLEAN-UP AND REMOVAL OF ALL TRASH, WASTES, DEBRIS, ETC. CREATED BY HIMSELF, HIS SUB-CONTRACTOR OR ANY ONE UNDER HIS DIRECTION AND SHALL BE INCLUDED IN THE BASE PRICE OF BID.
- THE CONTRACTOR AGREES TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR THE JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY AND THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL ALSO AGREE TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE OWNER AND ARCHITECT FROM ANY AND ALL LIABILITY IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPT FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR ARCHITECT
- UNLESS OTHERWISE SPECIFIED THE CONTRACTOR, UPON PROPER COMPLETION OF HIS WORK, SHALL PROVIDE THE OWNER WITH A WRITTEN GUARANTEE OF ALL HIS WORK FOR A PERIOD OF NO LESS THAN ONE (1) YEAR ANY DEFECTS SHALL BE REPAIRED OR REPLACED TO THE OWNERS SATISFACTION AT NO ADDITIONAL COSTS.
- THE LOCATIONS OF FEATURED TO BE CONSTRUCTED NOT SPECIALLY DIMENSIONED MAY BE DETERMINED BY SCALE. VERIFY ALL SUCH CONDITIONS WITH OWNER'S
- 8. ALL CONSTRUCTION AND INSTALLATION OF LANDSCAPE ITEMS SHALL BE PER LOCAL CODES AND ORDINANCES.
- NO UP-CHARGE IN CONTRACT PRICE SHALL BE ALLOWED FOR ACTUAL OR CLAIMED DISCREPANCIES BETWEEN EXISTING GRADING AND THOSE SHOWN ON PLAN UNLESS DISCREPANCIES BETWEEN ARE BROUGHT TO THE IMMEDIATE ATTENTION OF THE OWNER IN WRITING.
- 10. ALL CONCRETE SURFACES SHALL BE A MINIMUM OF 3 1/2" THICK.
- 11. ALL PAVED AND FINISHED GRADE AREAS SHALL BE SLOPED AWAY FROM BUILDINGS.
- 12. ALL PLANTING AREAS SHALL DRAIN TO A MINIMUM OF 2% UNLESS OTHERWISE NOTED ON
- 13. EACH CONTRACTOR (TRADE) SHALL BE RESPONSIBLE TO PAY FOR AND OBTAIN ALL NECESSARY BUILDING PERMITS AS MAY BE REQUIRED BY LOCAL AGENCIES. AS WELL AS EACH CONTRACTOR SHALL PROVIDE ALL DRAWINGS. SCHEDULES. AND SPECIFICATIONS AS MAY BE REQUIRED FOR BUILDING PERMITS.

ABBREVIATIONS

		וטכ			
AD ADJ AGGR APPROX ARCH ASPH BLDG BLK BM BOT BW CL CONSTR CONT CTR DET DG DIM DN DS DWG EJ ELEC EXPO EXST	ARCHITECTURAL ASPHALT BOTTOM OF FENCE BUILDING BLOCK BENCHMARK BOTTOM BOTTOM OF PILASTER BOTTOM OF WALL CATCH BASIN CENTERLINE CAULKING CLEAR COLUMN CONCRETE	FG FIN FOW FS FT FG GN HORIZ H	FINISH GRADE FINISH FLOOR FACE OF WALL FINISH SURFACE FINISHED SUB-GRADE FOOT OR FEET FOOTING GRADE BREAK GROUND HOSE BIBB HEIGHT HORIZONTAL INSIDE DIAMETER JOINT LINEAR FOOT OR FEET MAXIMUM MECHANICAL MEMBRANE METAL MANUFACTURER MANHOLE MINIMUM MISCELLANEOUS NORTH NATURAL GRADE NOT IN CONTACT NUMBER NOT TO SCALE ON CENTER OUTSIDE DIAMETER OPPENING PLANTER AREA POINT OF BEGINNING POINT OF CONNECTION PRE-CAST POINT RISER RADIUS	RD REINF REOW RP S SCECT STAD STAD STREED STAD STAD STAD STAD STAD STAD STAD STA	ROOF DRAIN REFERENCE REINFORCED REQUIRED RIGHT OF WAY REFERENCE POINT REDWOOD SOUTH SCHEDULE SECTION SQUARE FOOT OR FEET SPECIFICATION SQUARE STAINLESS STEEL STATION STANDARD STEEL STRUCTURAL SYMMETRICAL TOP OF CURB TOP OF FENCE THICK TOP OF CONCRETE TOP OF PAVEMENT TOP OF RAIL TREAD TOP OF WALL TYPICAL UNFINISHED UNLESS OTHERWISE NOTED VERTICAL WEST WITH WOOD WROUGHT IRON WITHOUT WATERPROOF WEIGHT



DATE PREPARED: 4-11-22 DRAWING SCALE: ____1"=20'-0 DESIGNED BY:

CHECKED BY:

IMPROVEMEN ST. 92697

EXIS 165 WE

AS NOTED DRAWING NO:

Sheet___1__ of __7__

MAINTENANCE RESPONSIBILITY NOTE:

Perpetual maintenance of landscape and irrigation shown on these plans shall be the responsibility of the project owner

SHEET INDEX

TS - TITLE SHEET

L1.0 - IRRIGATION PLAN

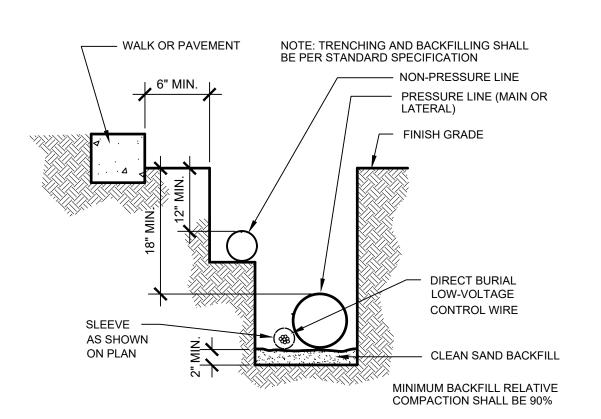
L2.0 - PLANTING PLAN

L3.0 - IRRIGATION DETAILS

L3.1 - PLANTING DETAILS

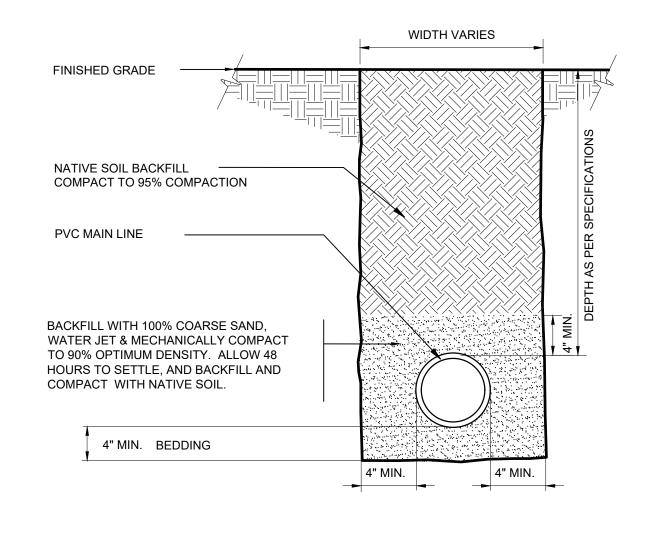
L4.0 - IRRIGATION SPECIFICATIONS

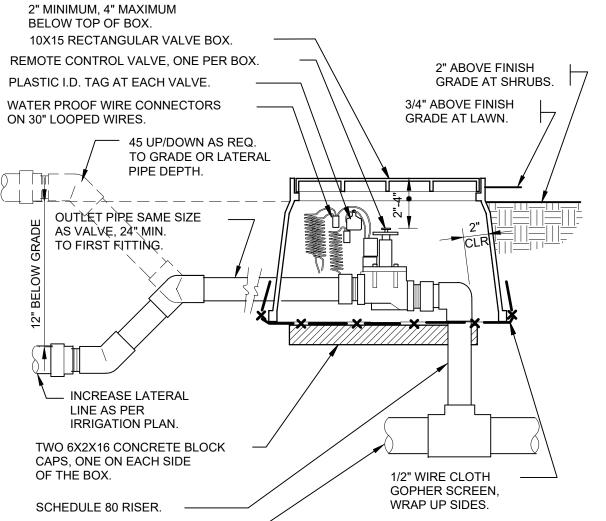
L4.1 - PLANTING SPECIFICATIONS

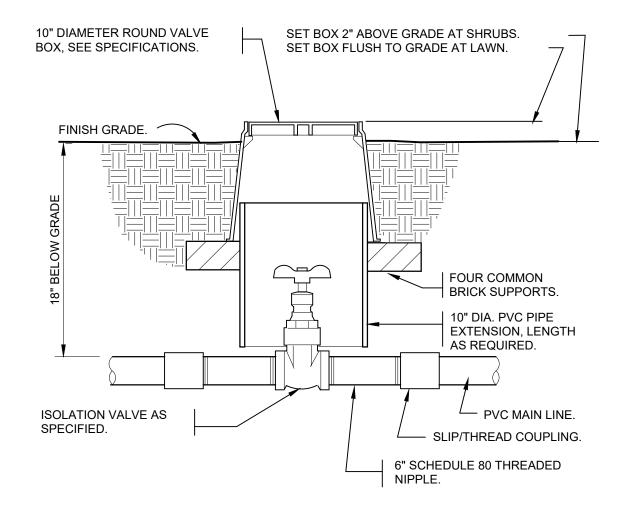


1. ALL PLASTIC PIPING TO BE SNAKED IN TRENCHES

- 2. BUNDLE & TAPE WIRING AT 10' INTERVALS 3. TIE A LOOSE 20" LOOP IN WIRING AT CHANGE OF DIRECTION GREATER THAN 30. DEGREES. UNTIE ALL LOOPS AFTER ALL CONNECTIONS HAVE BEEN MADE.
- 4. INSTALL ALL CONTROL WIRE ON THE UNDERSIDE OF THE MAINLINE PIPE. 5. SEE IRRIGATION SPECIFICATIONS FOR BACKFILL AND COMPACTION REQUIRMENTS.
- 6. PIPE DEPTH FOR PRESSURE MAINLINE SHALL BE 18" MINIMUM.
- 7. PIPE DEPTH FOR NON-PRESSURE LATERAL LINES SHALL BE 12" MINIMUM. 8. PIPE DEPTH FOR ALL LINES UNDER PAVEMENT SHALL BE 24" MINIMUM







PIPE TRENCHING

6" MIN.

TWO STAINLESS

STEEL CLAMPS.

1/2" X 36" GALV

THREE PVC SCH 80

STEEL PIPE.

10" DIAMETER VALVE BOX.

HEAD BRAND "QVC" ON LID

FINISHED GRADE.

— 6" DEEP LAYER OF 3/4"

- 3" PVC SCHEDULE 80

CRUSHED ROCK.

SPECIFIED.

- QUICK COUPLING VALVE AS

- BRASS NIPPLE, LENGTH AS REQ.

— 12" PVC SCHEDULE 80

WITH 2" HIGH CHARACTERS.

SLEEVE AT ROAD —CONTROLLER WIRE WITH 30 INCH LINEAR 20"X14" JUMBO PLASTIC LENGTH OF COIL, WITH PLASTIC I.D. TAG AND

VALVE BOX. WATERPROOF CONNECTORS. PVC TRUE UNION BALL RCV AS SPECIFIED. ____ FILTER AS SPECIFIED. 2" ABOVE GRADE AT —— PRESSURE REGULATOR AS SPECIFIED. PVC UNION W/ SHORT SET BOX FLUSH NIPPLES. AT TURF. OUTLET PIPE SAME SIZE AS — SCH. 80 RISER. VALVE, 24" MIN. LENGTH TO FIRST FITTING.

45° DOWN AS REQ. TO ———

TWO 6X2X16 CONCRETE BLOCK CAPS, ONE

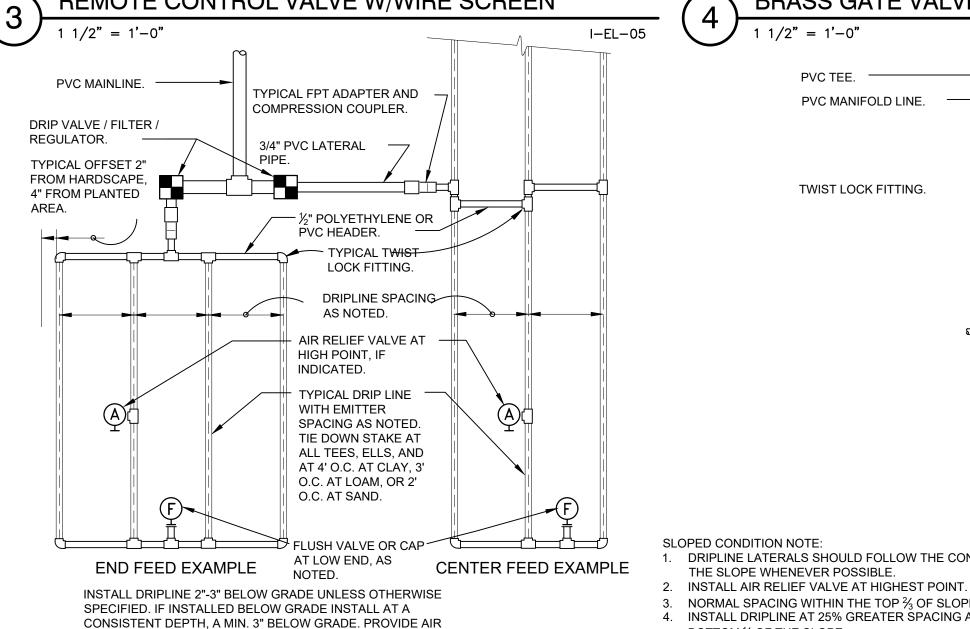
LATERAL PIPE DEPTH.

ON EACH SIDE OF THE BOX.

10" DIAMETER VALVE BOX.

— COIL 24" TO 30" OF DRIP TUBING IN THE

REMOTE CONTROL VALVE W/WIRE SCREEN



BRASS GATE VALVE I-IR1-03 PVC MANIFOLD LINE. TWIST LOCK FITTING. — LANDSCAPE DRIPLINE TUBÌ∭ WATER SOURCE: DRIP VALVE OR LATERAL FROM VALVE. LANDSCAPE DRIPLINE TUBING. PVC MANIFOLD LINE WITH PVC POLYGON SHAPED "C" SHAPED ODD SHAPED FLUSH CAP: AIR RELIEF VALVE: , INSTALL AT HIGH POINT OF SYSTEM. SLOPED CONDITION NOTE: 1. DRIPLINE LATERALS SHOULD FOLLOW THE CONTOURS OF THE SLOPE WHENEVER POSSIBLE.

QUICK COUPLING VALVE IN 10" ROUND BOX

1" DRIP VALVE/FILTER/REGULATOR

—— SxT TEE W/ 2" NIPPLE AT

½" WIRE CLOTH GOPHER

SCREEN, WRAP UP SIDES.

MAINLINE.

SET CONTROLLER 60" ABOVE

CONTROLLER AS SPECIFIED.

FINISHED GRADE UNLESS

OTHERWISE NOTED.

TYPICAL DRIPLINE LAYOUT

RELIEF VALVE IF INSTALLED BELOW GRADE.

I-DR-DRI2-01

HOURGLASS SHAPED

42,188 Gallons per year

(1) (2) (3) (4)

4-INCH GRATE (INCLUDED) 2) BUBBLER: REFER TO PLANS (INCLUDED)

(3) ROOT WATERING SYSTEM: RAIN BIRD RWS-BG02 (INCLUDES BUBBLER WITH RISER, GRATE, SWING ASSEMBLY, 1/2" MALE NPT INLET, AND BASKET

CANISTER)

- (4) FINISH GRADE 5 RWS SAND SOCK (RWS-SOCK)
- 6 1/2-INCH PVC SCH 80 NIPPLE (INCLUDED)
- (7) 1/2-INCH 90-DEGREE ELBOW (INCLUDED) 8 12-INCH SMING ASSEMBLY (INCLUDED)
- (9) 1/2-INCH MALE NPT INLET (INCLUDED)
- (O) PVC SCH 40 TEE OR EL (II) LATERAL PIPE
- 4-INCH BASKET WEAVE CANISTER (INCLUDED)

BOX. \sim $\frac{1}{2}$ " DRIP TUBING TO $\frac{3}{4}$ " FPT ADAPTER. /— ¾" PVC BALL VALVE WITH SHORT NIPPLE. SET VALVE BOX 2" ABOVE — ½" DRIP TUBING. FINISHED GRADE OF SHRUB — 4" THICK LAYER OF WASHED GRAVEL. THE BOX SHALL REST UPON THE ROCK BED. DO NOT EXTEND GRAVEL INTO BOX.

FOR RCV WIRES. SECURELY BOLT CONTROLLER TO WALL. INSTALL BACKUP BATTERIES AS REQUIRED. GROUND AS PER MFG. SPECIFICATIONS. 12"X12"X4" STEEL JUNCTION BOX. 1/2" DIAMETER RIGID **GROUP WIRE BUNDLES** STEEL CONDUIT FOR AND SPLICE TO 18 GA. 110 VAC ELECTRICAL WIRES WITH TERMINAL SOURCE. INSTALL AS STRIP AS PER PER LOCAL ELECTRICAL SPECIFICATIONS CODES. FINISHED GRADE. 2" DIAMETER RIGID STEEL CONDUIT FOR LONG SWEEP ELL. RCV WIRES. USE PVC SCH. 40

2" DIAMETER

BELOW GRADE.

RIGID STEEL CONDUIT

ROOT WATERING SYSTEM BUBBLER

- 1. LOW VOLTAGE WIRES, 3 MAXIMUM
- WIRES PASS THROUGH GROOVES IN TUB LID TO ALLOW LID TO CLOSE
- 3. CLOSE TUBE LID AFTER WIRE IS INSERTED INTO TUBE
- 4. POLY TUBE PRE-FILLED WITH WATERPROOF GEL
- 5. LOCK TABS PREVENT WIRE REMOVAL ONCE CONNECTOR IS INSERTED
- WIRES SHALL BE PRE-STRIPPED OF 1/2" OF THE INSULATION PRIOR TO INSERTION INTO THE INSULATION PRIOR TO INSERTION INTO THE TO SEAT FIRMLY. SCOTCHLOK CONNECTOR AND WIRES INSERTED INTO TUBE UNTIL THE CONNECTOR PASSES LOCK

SCOTCHLOK ELECTRICAL SPRING CONNECTOR.

WIRE CONNECTOR SHALL BE A 3M DBY-6 DIRECT BURY SPLICE KIT. KIT SHALL INCLUDE A SCOTCHLOK Y SPRING CONNECTOR A POLYPROPYLENE TUBE AND A WATERPROOF SEALING GEL. TUBE SHALL BE SUPPLIED PREFILLED WITH GEL. DIRECT BURY SPLICE KIT SHALL BE USED TO ELECTRICALLY CONNECT 2-3 #14 OR 2 #12 PRE-STRIPPED COPPER WIRES. LARGER WIRES OR GREATER QUANTITIES OF WIRES SHALL REQUIRE A LARGER

BEFORE 1-800-422-4133 A PUBLIC SERVICE BY UNDERGROUND

SERVICE ALERT

DRIP FLUSH BALL VALVE

WALL MOUNT CONTROLLER

POINT OF COI	NNEC.	TIO	N #1	PR	OJECT SITE: TOTAL	NEV	W LANDSCAPE AI	REA:	3,747 SF
ONSITE LAND	SCAPE	-			<u>TOTAL</u>	<u>NOI</u>	N-IRRIGATED LAN	<u>NDSC</u>	CAPE AREA: 0 SF
	3C/ \i L	_			TOTAL	IRRIC	GATED NEW LAN	IDSC.	APE AREA: 3,747 SF (48.2" Annual ETc
MAXIMUM APPLIED \	WATER A	LLOV	WANCE (MA	AWA _.					
TOTAL MAWA = [(ETo) x (C	.50)	x (LA in Sq.	Ft.) x	(0.62)] + [(ETo) x (0.	.50) >	(SLA in Sq. Ft.) x	(0.62	2)] = GALLLONS PER YEAR FOR LA+SLA
where:							<u>.</u>		
MAWA = Maximum	Applied	Wate	er Allowanc	e laa	llons per vear)				
ETo = Reference Eva									
0.45 = Evapotransp									
1.0 = ETAF for Spec		_		,	,				
LA = Landscaped A	rea (squa	re fe	et)						
0.62 = Conversion F	actor (to	gallo	ns per squa	are fo	oot)				
SLA = Special Lands	caped Ar	ea (s	quare feet)						
MAWA Calculation:									
	ЕТо		ETAF		LA or SLA (sq. ft.)		Conversion		MAWA (gallons per year)
MAWA for LA =	48.2	Х	0.45	Х	3,747	Х	0.62	=	50,389
MAWA for SLA =	48.2	Х	1.0	Х	0	Х	0.62	=	0
Total MA\X/A =					3 747				50 389

CORNER SHAPED

CURVED POLYGON

Estimated Applied Water Use

Total EAWU =

3. NORMAL SPACING WITHIN THE TOP 3/4 OF SLOPE,

BOTTOM 1/3 OF THE SLOPE.

BOTTOM 1/3 ON A SEPARATE VALVE.

4. INSTALL DRIPLINE AT 25% GREATER SPACING AT THE

5. WHEN ELEVATION CHANGE IS 10 FT OR MORE, ZONE THE

where: EAWU = Estimated Applied Wa ETo = Reference Evapotranpira KL = Landscape Coefficient LA = Landscaped Area (square 0.62 = Conversion Factor (to ga IE = Irrigation Efficiency = IME a IME = Irrigation Manag DU = Distribution Unifo	tion App feet) allons pe a DU ement E	endix r squa fficier	C (inches are foot)		ar) Ks Ka Km	= spe = der valu c= mic	nsity factor (rar ue ranges) roclimate facto	nge = or (ra	0.5-1.3 nge = 0) (see WUCOLS list for values)) (see WUCOLS list for density .5-1.4) (see WUCOLS) ov/docs/wucols00.pdf
EAWU Calculation:	FT.					_	C	Τ.		FAN(11/ 11
	ETo		Kι		LA		Conversion	:	IE	EAWU (gallons per year)
Medium Water Using Trees	48.2	X	0.50	Х	81	Х	0.62	+	0.75	1,613
			0.30		3,666		0.62		0.81	

3.747

WIRE CONNECTOR

APPROVED WIRE CONNECTION.

I-IR3-02

, Sheet<u></u> .. <u>·</u> ,

AS NOTED

04/11/22

SCALE:

ISSUE DATE:

DRAWING NO:

REVISIONS

STAMP

DATE PREPARED: 4-11-22

DRAWING SCALE:

DRAWN BY:

DESIGNED BY:

CHECKED BY:

IPROVEMEI

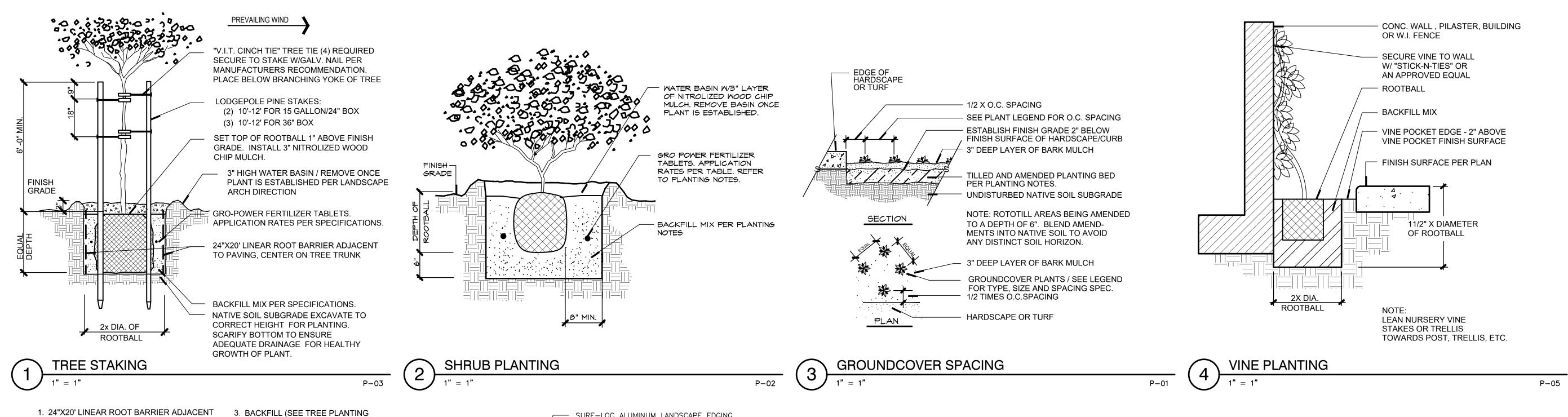
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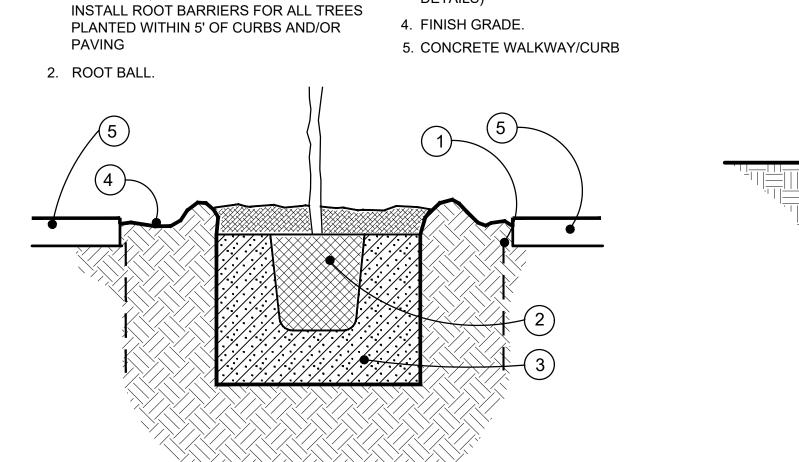
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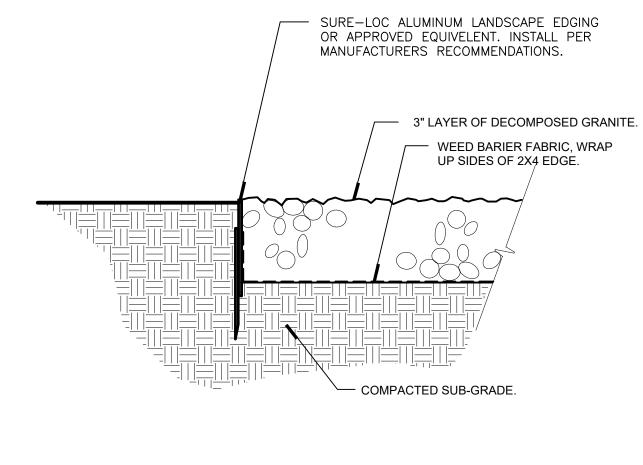
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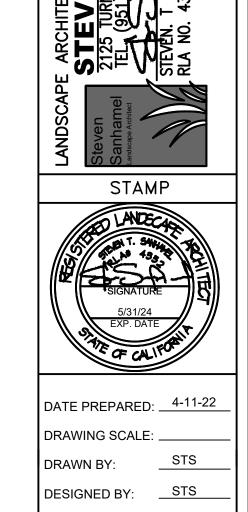
DETAILS)



TO PAVING, CENTER ON TREE TRUNK.

ALUMINUM EDGE AT DECOMPOSED GRANITE

P2-P0-16



REVISIONS

DRAWING SCALE:

DRAWN BY:

STS

DESIGNED BY:

CHECKED BY:

STS

PROJECT NAME: EXISTING COMMERCIAL IMPROVEMENT
PROJECT ADDRESS: 16585 MAGNOLIA ST.

WESTMINSTER, CA 92683
SHEET TITLE:
PROJECT NAME: EXISTING COMMERCIAL IMPROVEMENT
PROJECT TITLE: PLANTING DETAILS



- 1.1 SUMMARY
- A. Provide all labor, materials equipment, tools, services and miscellaneous and incidental work to complete all irrigation as indicated on the Drawings and as specified.
- Remove and modify existing system; install new system. C. Related Work Specified Elsewhere:
- Planting Section 329300. Landscape Maintenance - Section 02952.
- 1.2 QUALITY ASSURANCE
- Perform work in accord with requirements of applicable Plumbing
- 1.3 SUBMITTALS A. Make submittals per Section 01300.
- Record Drawings (As-Builts): The Contractor shall provide and keep up to date in accordance with section "Project Records" a complete set of record "as-built" Bond prints which shall be corrected daily and show every change from the original drawings and specifications and the exact "as-built" locations, sizes and types of equipment. Prints for this purpose may be obtained from the Owner. This set of drawings shall be kept on the site and shall be used only as a record set. These drawings shall also serve as work in progress sheets and the Contractor shall make neat and legible notations therein daily, as work proceeds, showing the work as actually installed. These drawings shall be available at all times for inspection and shall be kept in a location designated by the Landscape Architect.
- The Contractor shall dimension from two (2) permanent points of reference, building corners, sidewalk or road intersections, etc. the location of the following items:
- Gate valves
- The routing of the sprinkler system main lines.
- Corrections to the existing water lines.
- The routing of the control wires.
- Sprinkler control valves. Quick coupler valves.
- Backflow device
- Submit controller chart diagram for Owner's Representative reviews, prior to making photocopy reduction. See Section
- D. List of materials:

3.11.C

- See Section 01340 for procedure.
- Quantities of materials and equipment need not be included.
- Deviations from the specifications will not be allowed unless substitutions have been requested in accordance with Section
- 4. The Owner's Representative's decision shall be final in
- determining the equivalency of materials, equipment and method. E. Instruction: During the specified Maintenance period, instruct the Owner's designated personnel on the use and adjustment of the automatic sprinkler controller.
- F. Service Manuals: Furnish three (3) sets of service manuals to the Owner in loose leaf binders containing complete catalog numbers and price lists, with manufacturer's names, addresses and phone
- G. Furnish the Owner with three (3) full nozzle sets for each type of sprinkler installed.
- 1.4 DELIVERY, STORAGE AND HANDLING
- Plastic Pipe: Handle pipe and fittings carefully. Store under cover to avoid damage. Beds on which pipe is transported and stored shall be full length of pipe to avoid damage. Do not install damaged, dented pipe.
- 1.5 JOB CONDITIONS
- Examine site: Before starting work carefully examine the site and existing mechanical, electrical, paving and other similar conditions which may conflict or be within the area of work. Install the work coordinated with existing conditions, making necessary minor changes, without extra cost to the Owner.
- Scaled dimensions are approximate. Before proceeding with work
- carefully check and verify all locations. C. Before excavating for sprinkler lines, locate all underground utility lines to avoid damage to those utilities. Notify the Owner's Representative promptly upon discovery of unknown lines for proper identification and disposition.
- D. Spacing of sprinkler heads, location of valves and quick couplers shall be indicated on the drawings. Coordinate the layout of the sprinkler system with the layout of the planting and paving, and fully carry out the intent of the design.
- E. Pipe lines, unless dimensioned, may be located in the most reasonable and practicable alignment. Accurately locate on record drawings. Sprinkler heads and valves may be shifted slightly where necessary to avoid obstructions. Owner's Representative's acceptance of deviations from the Drawings shall be obtained prior to installation. Accurately locate such deviations on the record
- F. If errors, conflicts and ambiguities between drawings and specifications or between drawings or specifications and actual field conditions are discovered, immediately notify the Owner's Representative. Do not proceed with the affected portions of the work until the Owner's Representative has provided further instructions.
- Do not backfill trenches until the work has been reviewed and accepted by Owner's Representative.
- 1.6 GUARANTEE
- A. In addition to manufacturers' specific warranties, warrant the entire irrigation system for a period of one year from date of notice of completion.
- Should trouble develop within the year due to poor work or defective material, promptly make corrections at the Contractor's expense.
- 2. At Contractor's expense, promptly repair all damage to paving, planting and other components that are due to settlement of improperly compacted trench soil.
- PART 2 PRODUCTS
- 2.1 MATERIALS
- A. New, of the best grade of each respective and unless otherwise specified.
- B. Copper Pipe and Fittings:
- 1. Copper pipe shall be type "K", hard tempered ASTM B88 and fittings shall be wrought solder joint type in accordance with
- American Standards Association (ASA) B16 22. 2. Joints shall be soldered with silver solder, 45% silver, 15% copper, 16% zinc, 24% cadmium and solidus at 1125° F, and liquidus at 1145° F., conforming to specifications ASTM B206-52T
- and Federal QQB 00655. C. All Lateral and Mainline Piping: Mainline less than 3"- Schedule 40 PVC Mainline over 3"- CL 315 PVC
- Lateral line- CL 200 PVC Reclaim water - Purple PVC pipe D. Sprinkler Risers and Nipples: PVC Schedule 80 with molded
- threads as shown. E. Fittings: Galvanized malleable steel where shown. PVC Schedule 80 fittings on all irrigation mainlines. All others, PVC Schedule 40. NSF approved. Use solvent recommended by manufacturer.

- F. Gate Valves: For 2-1/2" and smaller: Non-rising stem, screwed. bronze, Nibco T-113, or equal. For 3" and larger: 125 psi, Non-rising stem, brass, Matco-Norca 514 or equal.
- Quick Coupler Valves and Quick Coupler Valve Assemblies: Locking vinyl top, two-piece, brass and bronze, size as shown.
- H. Valve Keys: Provide two 30" galvanized keys to operate c ross-handles of quick coupler valves for manual adjustment. Buckner, Rainbird or equal. Also provide 1 ft. nut wrench for
- Remote Control Valves: As indicated on the drawings. Provide Valve ID tags on each valve.
- Gate Valve Boxes: Plastic, 10" round with bolt-down cover, marked "GV" for each gate valve. By Applied Engineering, NDS, Carson or equal. Provide key for each box.
- Quick Coupler Valve Boxes: Plastic, 10" round with bolt-down cover, marked "QC" for each quick coupler valve. By Applied Engineering, NDS, Carson, or equal. Provide key for each box.
- Remote Control Valve Boxes: Rectangular plastic with locking cover marked "RCV" for each remote control valve. Applied Engineering, NDS, Carson or equal. Provide six keys.
- Electrical Conduit: Comply with requirements of the governing code and shall be approved and identified by the Underwriters Laboratories, Inc. Conduit shall be PVC Schedule 40, gray color.
- Sprinkler Heads: refer to drawings and schedule.
- Sleeves for Piping under Paving: Schedule 40 PVC. Sleeve size shall be a minimum of twice (2x) the diameter of the pipe to be sleeved.
- R. Thrust Blocks: 3,000 psi concrete in 28 days.
- S. Tracer wire: Detectable underground utility marking tape, minimum 4.85 mil overall thickness, blue color, by Christy Type III, Magnatec, or equal.
- Irrigation Controller: As noted on plans.
- U. Controller Enclosure: Strong Box, see drawings.
- V. Controller Wire: Regency UF Direct Burial wire or approved equal.

PART 3 - EXECUTION

gate valves.

- 3.1 CONNECTIONS
- A. To Existing Steel Pipe: For 1-1/2" size pipe and smaller, use Moody or Dresser or equal slip joint fittings. For 2" and larger, cut thread and install threaded fittings.
- B. To Existing PVC Pipe: Use PVC fittings welded onto existing PVC pipe.
- D. PRESSURE TEST:
- 1. All main lines and lateral lines that have glued joints under paving in the system shall be capped and pressure tested 150 psi
- Pressure shall be sustained in the lines for not less than 3 hours. If leaks develop the joints shall be replaced and the test repeated until the entire system is watertight.
- 3. Tests shall be observed and approved by the Owner's representative prior to backfill.
- When the irrigation system is completed (and before planting has begun) the contractor in the presence of the Owner's representative shall test the coverage of water afforded as complete and adequate. The contractor shall furnish all materials and perform all work required to correct any inadequacies of the lawn and planting areas coverage disclosed.
- The contractor shall inform the Owner's representative of any deviation from the plan required by wind, planting, soil or site conditions that bear on present coverage.
- 3.2 TRENCHING AND BACKFILLING
- A. Trenches for all pipe shall be open vertical and construction with firm level bottom and wide enough to provide free working space around the work installed and to provide ample space for backfilling
- Neatly windrow excavated material to cause the least inconvenience to pedestrian and vehicular traffic. Do not place soil on concrete paving without a moisture-proof membrane to protect paving.
- Trench Depth: Sufficient to provide not less than the following cover over top of pipe.
- 24" over all pipe for mains and supply lines with 2-3" of sand over pipe.
- 2. 24" over control wires from controllers to remote control
- 12" over sprinkler lines (lateral).
- D. When two pipes are to be placed in the same trench, provide not less than 6" space between pipes. Irrigation piping shall not occupy same trench with piping or conduits of any other utility or service.
- After the installation is complete and the required tests and inspections have been made and reviewed, backfill the excavation and trenches with clean soil, free of rubbish.
- Compact the backfill for all trenches, regardless of the type of pipe covered, in areas under or which closely parallel concrete or asphaltic concrete, to 90% of maximum density.
- 2. Trenches which traverse areas to be planted may be compacted by thoroughly flooding the backfill.
- 3.3 TRENCHING AND BACKFILLING UNDER PAVING
- A. Trenches located under areas where paving or concrete will be installed shall be backfilled with sand (a layer 6" below the pipe and 24" above the pipe), and compacted in layers to 95% compaction using manual or mechanical tamping devices. Trenches for piping shall be compacted to equal the compaction of the existing adjacent undisturbed soil and shall be left in a firm unyielding condition. All trenches shall be left flush with the adjoining grade. Set pipes in place, cap, and pressure test all piping under paving prior to backfilling, and prior to the paving
- Piping under existing walks is generally done by jacking, boring, or hydraulic driving. Any cutting or breaking of sidewalks or concrete necessary shall be performed by the Contractor and paving replaced as a part of the contract cost. Permission to cut or break sidewalks or concrete shall be obtained from the Owner's Representative. No hydraulic driving will be permitted under asphaltic concrete paving.
- C. Coordinate installation of piping and wires under paved areas.
- Sleeves may be installed, but are not required, for future installation of water lines and wires, unless otherwise
- 3.4 PLASTIC PIPE
- A. Solvent Weld Pipe: All pipe and fittings shall be solvent welded Christy's, IPS Weldon or approved equal or as recommended by the manufacturer of the pipe, except where screwed connections are required.

- Thoroughly clean all pipe and fittings of dirt, dust and moisture and apply colored primer on all connections prior to the application of PVC welding solvent before applying solvent with a non-synthetic
- bristle brush in the following sequence: Apply an even coat to outside of pipe, then to inside of fittings and then re-apply a light coat of solvent to the outside of the pipe making sure that coated area on the pipe is equal to the full depth of the fitting socket. Insert pipe quickly into fitting and turn approximately 1/4 turn to distribute the solvent and remove air bubbles, check tees and ells for correct position, then hold joint without movement for approximately 15 seconds, so that pipe does not push out fitting. Use clean rag and wipe off excess solvent. Cure all welded joints at least 15 minutes before moving or handling and at least 24 hours before water is permitted in this pipe.
- 2. Provide tracer wire on top of all distribution mains and pipe under constant pressure.
- 3. Bell and PVC Pipe: Install in conformance with written procedures and recommendations of the manufacturer. Size thrust blocks according to the soil types on the site, and as approved by the Owner's Representative.
- 4. Make all connections between plastic pipe and metal valves or pipe with screw fittings using plastic male adapters and Teflon tape applied to male threads. Make up light wrench pressure. Do not screw steel pipe into plastic fittings.
- 3.5 COPPER PIPE
- Exposed Piping to all planters above grade shall also be copper pipe, Type "K".
- 3.7 REDUCING FITTINGS
- A. Use where any change in pipe size occurs. Do not use street ells, bushings, close nipples, long screws or service tees.
- 3.8 OFF-SETS
- A. Make with fittings. Do not bend pipe.
- 3.9 DIELECTRIC COUPLINGS
- A. Install approved dielectric couplings, unions, or fittings wherever two dissimilar metals are connected whether shown on the drawings or not.
- 3.10 CLOSING OF PIPING
- A. As soon as lines have been installed, cap or plug all openings to prevent the entrance of materials that would obstruct the
- 3.11 IRRIGATION CONTROLLERS
- Connect remote control valves to existing controller in a clockwise sequence to correspond with station setting beginning with Station 1, 2, 3, etc. unless otherwise shown.
- B. Prepare a map diagram showing location of all valves, lateral lines and route of the control wires. Identify all valves as to size, station number, and type of planting irrigated, i.e., lawn, shrubs, or
- Reduce drawing photographically to a size which will fit in space available on the door inside of the controller. Seal within two laminated plastic sheets. Mount permanently on inside surface of the door. Submit one (1) additional diagram to Owner's Representative.
- 3.12 UNDERGROUND (CONTROL WIRES)
- A. Color code all wiring, white for common wire & black for control/pilot wires.
- B. Install wires, sprinkler laterals and mains in common trenches wherever possible. Sizing of wire shall be No. 14 awg for control/pilot wires & No.
- 12 awg for common wires, in accordance with manufacturer's D. Install wires at least 24" below finish grade and laid to the side of the main line where possible. Locate them no less than 6" from pipes and fittings, except at terminal points. Provide looped slack at valves and snake wires in trench to allow for
- concentration of wires. Tie wires in bundles at 10' intervals. Wire splices not allowed.
- F. Run all wire passing under future or existing paving, or construction in a PVC Schedule 40 or galvanized steel conduit extending at least 12" beyond edges of the paving or construction. Provide pull boxes as necessary in long runs and at sharp bends in the conduit run.
- Provide meter box at ends of runs for future valves, and over all
- H. Install warning tape 6" above all wire routes not located in trenches with irrigation mains.

3.13 VALVES

- A. Provide piping systems with valves at all points shown on the drawings or specified herein, arranged to give complete regulating control throughout.
- B. Install valves with the best skill, neat appearance and groupings so all parts are easily accessible and maintained. Set valves near walks and curbs within 12" and parallel to same. Install remote control valves in groundcover or shrub areas wherever feasible.
- C. Valves shall be the full size of the line in which they are installed nless otherwise specified.
- D. Adjust remote control valves so that most of the sprinkler heads operate at pressure recommended by the head manufacturer, and so that a uniform distribution of water is applied by the sprinkler heads to the planting areas for each individual valve system.
- E. Set valve boxes 3/4" above the designated finish grade at each valve in turf, 2" in shrubs, and stencil paint station numbers of valves on covers. Numbers shall be 4" minimum in height.
- Identify locations of all valves by painting purple symbols pointing to valves on surface of nearest curb or paving. Templates to be provided by Owner's Representative.
- 3.14 SPRINKLER HEADS
- A. Prior to installing heads, thoroughly flush laterals and risers with full line pressure. Repeat whenever system is opened up for repairs or replacement. Start flushing operation at the highest point of delivery and work to the lower.
- B. Set sprinkler heads as detailed on drawings.
- Upon completion of the installation, adjust sprinkler heads to properly distribute water flow and place entire irrigation system in optimum operating condition.

- Align all part-circle heads so that spray does not hit building walls and windows, and are 24" from adjacent paving and curbs.
- E. Adjust all spray nozzles so that there will be a minimum amount of overspray, and so that the entire set will be as evenly balanced as possible.
- 3.15 DRIPLINE COMPONENTS
- A. Provide flexible dual-layered pressure-compensating inline dripline manufactured by Netafim or Rainbird, with emitter spacing and dripline row spacing as indicated on construction drawings.
- Provide insert or compression fittings manufactured that are compatible with inline emitter tubing as indicated on construction drawings.
- C. DRIPLINE WITH PRESSURE-COMPENSATING INLINE EMITTERS.

Netafim Techline CV or Rain Bird XFS on or below surface

- dripline for POTABLE water systems; brown colored dripline tubing with emitter flow rates and spacing as shown.
- D. CONTROL ZONE KITS
- Provide control zone kits as indicated on construction drawings. Control zone kit assemblies for dripline irrigation zones must include control valve, filtration, and pressure regulation components sized to meet the hydraulic demands and flow requirements of the zones that they service.
- 3.16 DRIPLINE LAYOUT OF WORK

3.18 FLUSHING AND TESTING

- A. Stake out dripline irrigation system. Items staked include manifold/header pipe and tubing, sleeves, control zone assemblies, flush valves, air relief valves, and check valves.
- B. Dripline Irrigation System Layout Review: Dripline irrigation system layout review will occur after staking has been completed. Notify Owner's Representative one week in advance of review. Modifications will be identified by Owner's Representative at this review.
- 3.17 DRIPLINE EXCAVATION, TRENCHING, AND BACKFILL
- Excavate and install pipes at minimum cover indicated in drawings or specifications. Excavate trenches at appropriate width for connections and fittings.
- 2. Minimum cover for dripline components (distance from top of pipe to finish grade):
- Buried PVC manifold and supply header pipe to dripline grid layouts: 12" (30.5 cm) to top of pipe.
- 4. Buried dripline lateral pipe downstream PVC manifold and supply header pipe: 4" (10 cm) to top of pipe On-grade dripline lateral pipe downstream PVC manifold and supply
- Install and test prior to installation of landscape fabric and mulch 6. Backfill only after buried lines have been reviewed, tested, and

header pipe: Secure to finish grade with approved tubing stakes.

- Excavated material is generally satisfactory for backfill. Use backfill free from rubbish, vegetable matter, frozen materials, and stones larger than 2" (50 mm) in maximum diameter. Remove material not
- suitable for backfill. Use backfill free of sharp objects next to pipe. 8. Dress backfilled areas to original grade. Incorporate excess backfill into existing site grades. Dispose of excess backfill off site.
- 9. Contact Owner's Representative for trench depth adjustments where utilities conflict with irrigation trenching and pipe work.
- 1. Schedule testing with Owner's Representative a minimum of three (3) days in advance of testing.
- 2. Provide clean, clear water, pumps, labor, fittings, and equipment necessary to conduct line flushing and testing procedures.
- 3. Recommended Dripline and Emitter Lateral Flushing Procedures. a. Flush the system every two weeks for the first six (6) weeks and check the water that is flushed out for cleanliness. Establish a regular system flushing schedule for the future based on results
- from the initial six-week flushing schedule. b. Flush the system completely after any repairs are made and monitor system operation closely under regular system flushing schedule.

c. Check the pressure at the supply and flush headers on a regular

- basis and compare with the pressure readings taken after installation.
- 4. Recommended Dripline and Emitter Lateral Leakage Testing Procedures. a. Subject installed dripline tubing and emitter lateral piping to water pressure equal to specified operating pressure for ten (10) minutes.
- Test with control zone components and dripline flush valve components installed. b. Partially backfill buried pipe and tubing to prevent movement under
- pressure. Expose couplings, fittings, and valve components. c. Visually inspect valve assemblies and fittings for leakage and replace defective pipe, fitting, joint, valve, or appurtenance. Repeat test until test segment is free from leaks. Cement or caulking to
- seal leaks is prohibited. Recommended Dripline and Emitter Lateral Operational Testing
- a. Activate each dripline and emitter lateral control zone valve in sequence from controller. Provide either one additional person with radio or use handheld remote to activate remote control valves from controller. Manually activating remote control valve using manual bleed mechanism at remote control valve is not an acceptable method of activation. Owner's Representative will visually
- b. Replace or adjust defective valve, fitting, dripline segment, emitter lateral segment, or appurtenance to correct operational and coverage uniformity deficiencies. c. Repeat test(s) until each dripline or emitter lateral test segment passes testing procedures. Repeat tests, replace components, and

correct deficiencies at no additional cost to Owner and/or Owner's

observe operation, water application patterns, and leakage.

- A. The purpose of on-site reviews by Owner's Representative is to periodically observe work in progress, Contractor's interpretation of construction documents, and to address questions with regard to
- B. Schedule reviews for dripline layout and system testing with Owner's Representative as indicated on drawings or as required by these specifications.
- installation and Project Record Drawing submittal. 3.20 GUARANTEE/WARRANTY AND REPLACEMENT

Representative.

installation.

3.19 CONSTRUCTION REVIEW

1. The purpose of guarantee/warranty is to ensure that Owner receives irrigation materials of prime quality, installed and maintained in thorough and careful manner.

C. Impromptu reviews may occur at any time during project.

D. A review will occur at completion of irrigation system

- Contractor is responsible for providing guarantee/warranty of irrigation materials, equipment, and workmanship against defects for period of one (1) year from formal written acceptance by Owner's Representative. Fill and repair depressions. Restore landscape, utilities, structures and site features damaged by settlement of irrigation trenches or excavations. Repair damage to premises caused by defective items. Make repairs within seven (7) days of notification from Owner's Representative.
- Replace damaged items with new and identical materials, using methods specified in contract documents or applicable codes. Make replacements at no additional cost to contract price.
- 4. Guarantee/warranty applies to originally installed materials and equipment, and replacements made during guarantee/warranty period.
- 3.21 SUBMITTALS
- A. Deliver four (4) copies of submittals to Owner's Representative within ten (10) working days from date of Notice to Proceed. Furnish information in 3-ring binder with table of contents and index sheet. Index sections for different components and label with specification section number and name of component. Furnish submittals for components on material list. Indicate which items are being supplied on catalog cut sheets when multiple items are shown on one sheet. Owner's Representative. Incomplete submittals will be returned without review.
- Materials List: Include dripline and low-volume irrigation components, control zone components, shop drawings and other components shown on drawings and installation details or described herein. Quantities of materials need not be included.
- Manufacturers' Data: Submit manufacturers' catalog cuts, specifications, and operating instructions for equipment shown on materials list.
- Shop Drawings: Submit shop drawings called for in installation details. Show products required for proper installation, their relative locations, and critical dimensions. Note modifications to installation details as part of shop drawing documentation.
- 3.22 REMOVALS. SALVAGE AND MODIFICATIONS
- A. Prior to starting work, confer with Owner's Representatives to discover potential problem areas and locations of points of joining between the removal work and existing system to remain in service. Also identify locations of shut-off valves for all emergencies. Immediately reconnect existing service beyond the site irrigation system, should removal or modifications affect the service.
- No shut-downs shall be made without prior approval of the Owner. Requests for shut-downs shall include date, time and the period of time for shut-down. Requests shall be made a minimum of three (3) working days prior to the requested shut-down.
- Replace or repair, to the satisfaction of the Owner's Representative, all existing paving or landscaping disturbed during the course of this work. New paving and landscaping shall be of the same type, strength, texture, and finish and be equal in every way to the material removed. Repair work shall be done at no additional cost to the Owner. All existing irrigation systems serving adjacent planted areas shall remain operational throughout all capping and abandoning of existing irrigation mainlines.
- All sprinkler heads, valves, and equipment within the limits of work shall be salvaged and signed over to the Owner. Piping shall not be abandoned in place. Piping removed shall be legally disposed of off

All connections made from the new work to the existing system

shall be recorded on the Record Drawings. All other utility lines,

site drainage lines, etc. found and which are to be saved shall also

be recorded.

successful pulling of conductors.

- 3.23 ELECTRICAL CONDUIT A. Install electrical conduit to sprinkler controller(s) only as shown and
- Conduits shall be installed with a minimum of 24" cover and terminated with long sweep ells and capped with non-cemented PVC
- pipe caps. C. Install pull boxes at all sharp bends and as recommended to assure
- D. Install pull cords as required. 3.24 FIELD QUALITY CONTROL

as directed.

- A. Tests: Make hydrostatic tests only in the Owner's Representative's
- presence. Plastic Pipe: After all welded joints have cured at least 24 hours, and before sprinkler heads are installed, flush out lines, then cap all outlets and test system under a pressure of 50 lbs. over normal water pressure in the presence of the Owner's Representative. Leave all joints exposed for inspection during pressure test. Center

load pipe with small amount of backfill to prevent arching or slipping

- under pressure. Test for not less than 24 hours. Automatic System: Test for 14 days prior to end of maintenance period. Installed work shall function satisfactorily without stoppage and other problems. Check out all sprinklers for proper alignment, coverage and make final adjustment to valves. Set timing for various valve stations as directed by the Owner's Representative.

Installation Reviews:

At the completion of all installations, and prior to the start of the planting operations, a review shall be made to check the overall coverage of the system by the Contractor and the Owner's Representative.

At the end of the Plant Maintenance Period, a final review shall be

made by the Owner's Representative and Contractor to check out

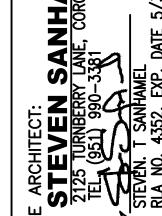
- the entire system Provide the Owner's Representative with three (3) working days
- prior notice to the requests. 3.25 IRRIGATION SYSTEM CONTROLS CHART
- A. Provide two (2) charts for each controller. The charts shall be a photographically reduced print of the actual record drawing of the system and color-shaded to clearly indicate the individual sets of sprinklers and the areas covered.
- Approved charts shall be sealed between two plastic sheets. Minimum thickness of plastic sheets shall be 20 mils. C. One (1) set of the charts shall be placed inside the controller

cabinets prior to the final review of the contract work. The other

set of charts shall be submitted to the Owner's Representative.

END OF SECTION

REVISIONS SUBMI 08/22 90% F 15/22 PLAN 09/23 PLAN



STAMP AD LANDSCAP

DATE PREPARED: 4-11-22

DRAWING SCALE: ___1"=20'-0'

DRAWN BY:

DESIGNED BY:

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Sheet $_{6}$ of $_{7}$

ISSUE DATE:

SECTION 329300 LANDSCAPING

PART 1.00- GENERAL 1.01 GENERAL CONDITIONS AND DIVISION ONE

The general conditions and supplemental general conditions are hereby made a part of this section.

1.02 DESCRIPTION A. WORK INCLUDED:

- 1. Furnish all labor, material, equipment, appliances and necessary incidentals for the complete execution of landscaping work as indicated on the drawings and as
- Work included in this Section (Items included but not limited to).
- Grade, including mounding, molding and shaping surfaces of all planting areas as indicated including the removal of existing vegetation unless other wise specified.
- b. Prepare and till soil in planting areas including furnishings of all soil amendments as specified. c. Furnish and plant all plant materials as indicated by the drawings and specifications.
- d. Perform all pruning as required.
- Stake and tie all plant material as specified. f. Provide for the maintenance of the planting until acceptance of the job by the

repaired or replaced at the Contractor's expense.

- Landscape Architect. Dispose of all debris and surplus materials.
- Clean-up

Maintenance B. RELATED WORK DESCRIBED ELSEWHERE:

1. Landscape irrigation as specified in section 328100

1. 03 QUALITY ASSURANCE

Guarantee

A. VERIFICATION OF SITE CONDITIONS:

- 1. The Contractor shall verify exact location of all existing subsurface utilities mechanical and electrical) prior to excavation so as to avoid disturbing or damaging such improvements. The Contractor shall promptly notify the Landscape Architect who will help resolve the conflict. Any utilities, A.C. paving, concrete work, etc., destroyed or damaged by any work under this contract shall be
- 2. Should subsurface drainage or soil conditions be encountered which would be detrimental to growth or survival of plant material, the Contractor shall notify the Landscape Architect in writing, stating the conditions and submitting a proposal for the correction cost. If the Contractor fails to notify the Landscape Architect of such conditions, he shall be responsible for plant material under the quarantee clause of the specifications.
- All scaled dimensions are approximate. Before proceeding with any work, the Contractor shall carefully check and verify all dimensions and quantities, and shall immediately inform the Landscape Architect of any discrepancy between the information on the drawings and actual conditions, refraining from doing any work in said areas until resolved with Landscape Architect.

B. SOIL AMENDMENTS:

1. All soil amendment types and quantities shall be per soils report.

- Topsoil shall consist of a fertile, friable natural loam, of uniform quality, free from subsoil, hard clods, stiff clay, hard pan, sods, partially disintegrated debris, or any other undesirable materials.
- 2. Topsoil shall not contain obnoxious weeds, such as morning glory, sorel, oxalis, spurge, annual poa, nut grass or bermuda grass.

D. PLANT MATERIALS:

- 1. Plant names used in the Plant List conform to "Standardized Plant Names" by American Joint Committee of Horticultural Nomenclature except in cases not covered therein. In these instances the established custom of the nursery trade is followed.
- 2. Plants shall be sound, healthy, vigorous, free from disease, insect pests or their eags and shall have healthy, normal root systems, well filling their containers. but not to the point of being root bound.
- 3. Plants shall not be pruned prior to delivery except as authorized by the Landscape Architect. In no case shall trees be topped before delivery. 4. All plant material shall be subject to approval of size, health, quality, character,
- etc., by the Landscape Architect. 5. The height and spread of all plant material shall be measured with branches in their 3
- normal position. 6. The caliper of the trees shall be measured 4' above the surface of the ground/ Where caliper or other dimensions of any plant materials are omitted from the
- plant list. it shall be understood that these plant materials shall be normal stock meeting industry standards.
- 8. Plant material shall be symmetrical, typical for variety and species, and shall conform to measurements specified in the plant list.
- 9. Plant material larger than those specified may be supplied if complying in all other aspects and at no additional cost to the Owner, upon approval of the Landscape Architect.
- 10. All plant materials must have been previously inspected at the nursery and approved by the County Horticultural Inspector, and shall be subject to acceptance as to quality by the Landscape Architect.
- 11. Substitutions will not be permitted unless approved by the governing Municipality. 12. Quantities shown on the call outs on the Planting Plan are for the convenience of the Contractor only. Quantities drawn on the plan (whether by circles or dots), are the final authority and shall be furnished and installed as drawn.

E. SEED MATERIALS:

- Seed shall be clean, fresh, new crop seed and shall be the mixture as noted on the
- 2. Seed shall be mixed by a dealer and furnished with the dealer's guaranteed statement of composition and percentage of purity which shall be furnished to the

Landscape Architect. F. STAKES:

1. All tree stakes shall be as per details

G. WEED CONTROL:

1. Contractor shall thoroughly water all landscape areas to be planted to germinate any existing weed seeds. Once the weeds have germinated, they are to be killed and removed prior to any soil preparation and planting. For further information on weed removal, see 'Planting Notes' on the Planting Plan.

H. SOIL PREPARATION:

- Before starting soil preparation the Contractor shall submit a soil report to the Owner and Landscape Architect. If no soil report is submitted it will be assumed that amendments were not added and the Contractor will be required to provide a credit to the Owner for the soil preparation. See the Planting Notes on the Planting Plan for soil report requirements. Soil areas compacted to more than 90% during site preparation shall be ripped to a minimum of 12" prior to beginning soil
- preparation. These areas shall be defined by the Landscape Architect and be negotiated as an additional service with the Owner. 3. All planter beds under 2 1/2: 1 slope are to have the soil preparation materials broadcast uniformly over the areas and worked to a depth of 6" by a rototiller or other acceptable mechanical means to obtain a uniform blend to the soil. If the
- slope is greater than $2 \frac{1}{2}$: 1, the planting pits is the only amending to occur. For soil amendment mix refer to the Planting Notes on the Planting Plan.
 4. In addition to the work specified above, the Contractor shall remove all extraneous material that is exposed on the surface and grade to facilitate positive drainage.
- 5. Supply delivery slips from the supplier for the soil amendments to the site to the Owner. Bulk loads from the Contractors' yard will not be accepted.

1. 04 PRODUCT HANDLING

A. PLANT MATERIAL

- Loading and unloading of all vegetation shall be accomplished in a manner not injurious to plant growth.
- Removal of plants from containers and installation into ground shall be accomplished in a manner to retain soil around roots without damage. Do not use plants that have root exposure.
- Replace all plant life damaged in transportation, installation or rejected by Landscape Architect.
- 4. Plants shall be protected at all times from sun and drying winds and shall be watered as required to maintain the stock in the same condition as it was when delivered to the site and accepted for the job by the owner. No planting shall take A. Sod shall be no. 1 grade, machine cut at a uniform thickness of 5/8" excluding top place during extremely hot, dry, windy or freezing weather.
- 5. Plant containers shall be removed when planting the plants.
- 6. At all times during construction, adequate protection shall be provided for all planted areas against damage of any king until final acceptance by the Landscape Architect.
- 7. The Contractor shall be held responsible for the care and preservation of all existing buildings and structures on the property and adjacent premises. Any part of the facility that is injured, damaged, or disturbed due to work performed by the Contractor shall be repaired, replaced and/or cleaned by the Contractor at the Contractor's expense.

1. 05 GUARANTEE

A. TREES:

- 1. Trees shall be guaranteed to live and grow in acceptable upright position for 12 months after the specified maintenance period and / or final acceptance by the B. SHRUBS:
- 1. All shrubs shall be guaranteed as to growth and health for a period of 6 months after completion of the specified maintenance period and / or acceptance by the

C. DEFINITION OF DEATH:

1. Plants that die or lose more than 30% of their original leaves shall be replaced.

The Contractor, within 7 days of written notification by the Owner, shall remove and replace all guaranteed plant materials which, for some reason, fail to meet the requirements of this guarantee. Replacement shall be made with plant materials as indicated or specified for the first planting, and all such replacement materials shall be guaranteed as specified for the original guarantee material.

2.01 MATERIALS

A. TOPSOIL (IF NECESSARY) Import topsoil from vicinity of the project.

delivered to the site.

Mix three parts topsoil with one part of soil conditioner. 3. All top soil must be soil tested for fertility and agricultural suitability and the test results must be reviewed and approved by the Landscape Architect before

B. SOIL CONDITIONER

- Redwood sawdust or Fir / Pine sawdust chemically treated so that it has been fortified with nitrogen.
- C. FERTILIZER: Manufactured by Tri-C Organics or approved equal

Aguinaga Fertilizer Forest Floor 3" minimum (shredded tree bark) or approved

- Pressure-treated pine lodgepole 12'-0" min long 2" diameter. Tree Ties: Use cinch-tie as Manufactured by V. I.T. Company or approved equal.
- 1. All plant materials are to be as defined in Section 1.04-A.

PART3. 00- EXECUTION

3. 01 PLANTING PREPARATIONS

A. Prior to installing any planting, inspect and accept areas to be landscaped, with special attention to the removal of all debris from all planting areas at least 24" deep, and removal of all turpentine, plaster, paint thinner, etc., or other items hazardous to healthy plant growth.

3. 02 PLANTING OPERATIONS

- A. Planting shall be performed by personnel familiar with planting procedures.
- B. Do not plant any plant life under unfavorable weather conditions.

C. PLANTING PROCEDURES:

- Complete soil preparation as outlined on drawings
- Finish grades shall be two (2) inches below the surfaces of retaining walls. walks. road, curbs, paved areas, and yard drains in all cases. without abrupt changes in gradient not only in the surface of the soil, but also where soil meets walks, curbs, pavement or other features, unless otherwise indicated on the plans. Soil areas adjacent to buildings shall slope away from the buildings at 2% minimum for thstart gravel beds in drainage areas as indicated on plans.
- Staking out plant locations: 4a. Install plants to allow proper growth without obstructing walks, hitting buildings
- Tree shall be protected at all times during the planting operation. Use proper equipment to prevent damage or scarring of roots, bark, or branches. Do not damage bark or break branches during or as a result of installation of tree supports. Reject all plant life with broken root balls.
- Plant holes shall be dug to twice the width of the rootball and as deep as the rootball as shown on the details. Set each plant in center of pit, plumb and straight. Set crown of plant at such a
- level that after settlement the crown will be one (1) inch above finish grade shown on the drawings. When plants are set, compact backfill mix by jetting with water as plant is
- settled into position and backfill is placed. When approximately six (6) inches of backfill mix has been placed, insert TRI-C MYCO tablets per manufacturers recommendations.
- Water thoroughly before installing remainder of backfill mix to top of pit. Allow no air pockets. Complete backfilling by jetting process. Immediately after planting, stake and fasten each tree to supports per details. Trees shall stand plumb after staking.
- Provide proper safeguards and protection of planted areas and plants, against trespassing or other work.

6. SHRUBS:

- A. Plant holes shall be twice the width of the root ball and the depth of the rootbal B. Set each plant in the hole with its root crown flush with finish grading. Backfill shall be placed around plant roots or ball. Backfill with one part nitrolized fir sawdust mixed with three parts topsoil.
- Fertilizer tablets in backfill at the rate of (2) Tri-C fertilizer tablets / 1-gallon can stock; (8) Tri-C fertilizer tablets / 5-gallon can stock; (8) Tri-C fertilizer tablets / 15-aallon can stock. Compact soil around root balls and water thoroughly. Form a berm around the edges
- of plant pits to form a basin for watering. Water basins should be at least 20" in GROUNDCOVER: Planting pits for groundcover shall be 4"x4" or adequate to accept material from
- flats without crushing or deforming the rootball. Place 1-7 gram Gro Power fertilizer tablet in each groundcover hole. Plant at spacings specified and in areas indicated on the drawings. Soil shall be
- firmly pressed around each plant, and the excess soil removed from the crown. Each section of groundcover shall be immediately watered upon completion of planting, and thereafter as required.

First row of groundcover should always be within 6" of the edge of the planting 3.06 CLEAN-UF

8. SEASONAL COLOR: Soil preparation:

- Prepare the soil as per these specifications and the Planting Notes on the Planting Plan.
- Areas shall be raked and floated smooth to provide a true and uniform surface.
- 2. Plants shall be healthy annual plant material in 4" pots. 3. Each plant pit for seasonal color shall be 6"x6"x6" with one teaspoon of bone meal mix into the backfill mix. (Use shrub backfill mix). Do not use Gro Power plant
- Plant at spacing and in areas indicated on the drawings. Soil shall be firmly pressed around each plant, and the excess soil removed from the crown.
- Each section of seasonal color shall be immediately watered upon completion of planting, and watered thereafter as required.
- 6. First row of seasonal color should always be within 6" of the edge of the planting C. Minor pick—up items may be completed during the basic maintenance period such as:
- 9. SOD LAWN MATERIALS & PLANTING (IF APPLICABLE): growth and thatch, weed free and shall be no less than eight months nor more than sixteen months old.

B. Installation shall take place within 24 hours after harvesting.

sod they must be filled with sand or have the sod relayed.

- Sod area prior to planting shall be rolled lightly and watered to a depth of 6" the day prior to planting. If any air pockets are found, the area shall be re-graded as necessary. Lightly water the area to be planted just prior to planting. Sod shall be laid in a staggered pattern, with tight joints and in the same direction each time. On all slopes sod shall be installed from the bottom up and
- the newly laid sod should be protected by walking on boards as installer moves upward. On slopes, pin the sod down with wooden pegs. No metal staples will be allowed. No sod of less than 18" in length will be allowed. Adjoin the section of sod firmly together. If air spaces occur between sections of
- F. Roll sod with an adequately weighted roller to smooth out the sod bed. G. Re-grade to protect the edges from drying if mowing edge is not used.
- H. After installation sod must be kept thoroughly watered to a depth of 6". No foot traffic should be allowed for 2 to 3 weeks from the date of installation.

- If there are any questions regarding the quality of sod installation a representative of the supplier shall be requested to inspect the installation and the Contractor called out by the supplier's representative.
- SEED LAWN PLANTING (IF APPLICABLE):
- A. Cultivate to a depth of 2" below finish grade, remove stones, foreign growth of any kind and extraneous matter, and grade to remove ridges and depressions so that areas after settlement will conform to the finish grade. Roll and rake lightly
- until the surface is smooth, friable and of uniform fine texture. B. Sow lawn seed in the area designated on the drawings at the rate as designated on the planting notes. Sow the lawn in two directions.
- Rake lightly, spread 1/4" of Par-5 top dressing with a mechanical spreader, roll with 200 lb. roller and water with a fine spray.

HYDROSEEDING SPECIFICATIONS (IF APPLICABLE):

- The hydro-mulch shall be applied in the form of a slurry consisting of wood cellulose fiber, seed, chemical additives, commercial fertilizer and water. When Hydraulically sprayed on the soil surface, the hydromulching shall form a blotter like ground cover impregnated uniformly with seed and fertilizer and shall allow the absorption of moisture and rainfall to percolate to the underlying soil. B. Hydraulic equipment used for the application of the fertilizer, seed and slurry of
- C. Operator shall spray the area with a uniform, visible coat by using the green color of the sod pulp as a guide. The slurry shall be applied in a sweeping motion, in an arched stream so as to fall like rain allowing the wood fibers to build on each other until a good coat is achieved and the material is spread at the required

prepared wood pulp shall be of the "super hydro-seeder" type as approved by the

- D. All slurry mixture which has not been applied to the slopes within four hours after mixing will be rejected and removed from the project at the contractor's expense. E. Special care should be exercised by the Contractor in preventing any of the slurry being sprayed inside any reservoir basin or onto drainage ditches and channels which may impede the free flow of rain or irrigation water. Any slurry spilled into restricted areas shall be cleaned up at the Contractor's expense to the
- satisfaction of the Landscape Architect or Owner. Once the slurry mulch has been applied and allowed to set for one day, the slopes shall then be irrigated. There is no set irrigation requirements in gallons per minute. Duration of time and number of gallons to be applied to the slopes will vary from day to day and system to system depending on the rate of growth and climatic conditions encountered. As a rule of thumb the soil surface must be kept moist at all times particularly during the seedling germination period (30 days)
- G. All bare spots shall be re-seeded (sodded, if hydroseed is turf mix), by the Contractor within 45 days providing the lack of cover growth or mulch is not due to inadequate sprinkling or erosion caused by excessive watering by the Owner.

3. 04 INSTALLATION OF ACCESSORIES

rate per acre.

- A. A non-selective pre-emergent appropriate for the season shall be applied to all shrub beds as per manufacturer's recommendations. Avoid application to any areas to be seeded. Acceptable products are: Ronstar, Devinol WP40, Treflan, or approved equal.
- Installation: Crushed rock mulch shall not be placed until the required water distribution systems and planting operations have been completed within the area. The surfaces upon which crushed rock mulch is to placed shall be graded and
- compacted to a density of 85 to 90 percent of the maximum density. Areas which shall not be compacted will be designated by the Landscape The areas on which crushed rock mulch is to placed shall be reasonably smooth
- and firm and free of all deleterious material. Rocks larger than one and one Crushed rock mulch shall be evenly distributed over the designated areas. The depth of the crushed rock mulch shall be at least the minimum depth shown on the project plans. All greas to receive mulch shall be as approved by the
- Landscape Architect prior to placement of the mulch. The contractor shall apply two applications of an approved pre-emergent herbicide on all mulch areas, one before and one following placement of the
- The contractor shall notify the Landscape Architect and obtain prior approval for the use of any herbicides for weed eradication. He shall keep a record of all applications; and the date and location of such applications. A copy of
- this record shall be submitted to the Landscape Architect. After placing, spreading and grading the mulch, the contractor shall water settle the total thickness of the mulch, removing the fine material from the
- Any erosion which occurs within the mulch areas shall be corrected by the contractor prior to final acceptance. Apply one additional application of pre-emergent prior to the ending of the
- 12. PRUNING: Limbs, branches, canes and runners which require trimming shall be removed to leave

maintenance period. Notify Landscape Architect prior to application.

a clean cut flush with trunk. 2. Prune plants in accordance with standard horticultural practice and under the

direction of the Landscape Architect. Do not shear plants unless otherwise directed.

3. LAWN MAINTENANCE:

- 3. 05 LANDSCAPE MAINTENANCE A. Maintenance shall begin immediately after planting is complete and accepted by the
- owner and shall continue for ninety (90) Days. B. It is the intent of these specifications that the landscaping will be well-maintained and present a pleasing appearance at all times. Reset time clocks as required where automatic systems exist. The complete landscape maintenance will include the following, but service is not limited by it:
- Repair and replenish all decorative stones, gravel areas, and shredded bark covers.
- Tree, shrub and shrub bed maintenance:
- Completely trim, edge, and weed all landscaping Stake and fertilize all trees.
- Prune and/or shape trees. Apply insect and disease control.
- Water all trees and shrub beds as required to ensure growth. Flower beds and/or herbaceous ground covers:
- Completely weed, trim, edge, fertilize and replant as required to meet the intent of this maintenance requirement at no longer than 10 day intervals.
- Mow, trim, and edge; re-seed and re-sod sparse areas. B. Fertilize, apply insect and fungus controls.
- 4. FLOWER BEDS and/or HERBACEOUS GROUND COVERS: A. Completely weed, trim, edge, fertilize and replant as required to meet the intent of this maintenance requirement at no longer than 10 day intervals.

All areas shall be kept in a neat and orderly condition at all times. Prior to final acceptance, clean-up and remove all materials and debris from the landscaped area to the satisfaction of the Landscape Architect or Owner's Representative.

- 3. 07 FINAL CONSTRUCTION INSPECTION: A. When all landscape improvements have been installed in accordance with the plans and specifications, the Contractor shall notify the Landscape Architect and request a "Final Construction" inspection. If the Landscape Architect determines the work to be substantially complete and in conformance with plans and specification, the
- contractor will be advised that the basic maintenance period is started. B. In order to be substantially complete, at least the following must have been finished: All fine grading, including elimination of low points that hold runoff.
- Installation of all plant materials. Seeding of all seeded areas.

Landscape Architect at the final inspection that work is or is not satisfactory.

A complete and operable irrigation system; system must be full coverage.

- Re-sodding of bare spots in lawn Replacement of damages or non-conforming plant material.
- Re-staking or tying of trees. Lowering of sprinkler heads to grade after turf has established. Filling of settled areas caused by application of normal watering. Replacement of

unauthorized substitutions.

- 3.08 FINAL MAINTENANCE INSPECTION: At the end of the maintenance period and when ground covers and turf have established and all pick-up items have been completed, the Contractor shall request a final maintenance inspection. The Contractor will be advised by the
- If the work is satisfactory, the basic maintenance period will end on the date of the final inspection. C. If the work is unsatisfactory, the basic maintenance period will continue at no expense to the Owner until the work has been completed, inspected and approved by

END OF SECTION

the Landscape Architect.

PALM TREE PLANTING

PART 1 – GENERAL

PRINCIPAL WORK IN THIS SECTION: The following guidelines are provided to assist in new planting and transplanting of

All palm tree heights specified on the plans are "Brown Trunk Height" unless

palm) and Washingtonia filifera (California fan palm).

otherwise noted. Trunk height shall be measured from finish grade to the base of

large palm trees in the planting area, including Washingtonia robusta (Mexican fan

Care should be taken in excavating, planting or working near existing utilities or irrigation systems. Developer should check existing utility drawings and as-built plans for existing utility and irrigation locations.

New palms to be planted in the area should be grown under similar climatic conditions. All palms selected for planting should be inspected for health, vigor

FERTILIZER: Root Growth Stimulant: Stimulant should be Vitamin B-1 as manufactured by Cal-liquid, Cooke, Chican, Ortho, or equivalent.

PALM BACKFILL SOIL:

The import planting soil shall consist of either fine sand or loamy sand textured soil. Silt clay content of this soil shall not exceed 20% by weight with a minimum 95% passing the 2.0 millimeter sieve. The sodium absorption ratio (SAR) should not exceed 5 and the electrical connductivity (Ece) of the saturation extract of this soil should exceed 3.0 milliosmol per centimeter at 25 centigrade. The boron content of this soil should be no greater than 1 PPM as measured on the saturation

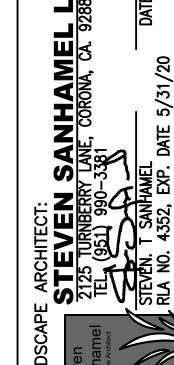
PART 3 - EXECUTION

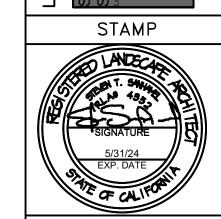
PLANTING: Planting of palms should not begin until May 1 nor after October 1 DEFRONDING AND TYING:

In preparing palm trees for relocation/planting, all dead fronds should be removed and, if so noted on the plans, the entire trunk skinned clean to the height of the green fronds. Care should be taken to prevent injury to the trunk of the tree. Green fronds below a horizontal position shall be neatly cut off, leaving a 4"

All remaining fronds should be lifted up and tied together in two locations around the crown in an upright position. Due caution should be taken not to bind or injure the crown. A lightweight cotton rope or cord, not less than 1/4" diameter. should be used in tying up the fronds; wire should not be used. After tying, the tips of the fronds should be "hedged-off" above the crown approximately 1/4 to 1/2 of the frond length. Defronding and tying work should be completed prior to digging the

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DATE PREPARED: 4-11-22

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> SCALE: AS NOTED ISSUE DATE: 04/11/22

Sheet $_{-}^{7}$ of $_{-}^{7}$

- SCOPE OF WORK: THIS PROJECT INVOLVES THE ANCHORAGE OF A PREMANUFACTURED CANOPY AT THE FRONT ENTRANCE
- 1. REFER TO PROJECT SPECIFICATIONS FOR PROJECT REQUIREMENTS.
- 2. ALL CONSTRUCTION AND WORKMANSHIP, INCLUDING MATERIALS, SHALL CONFORM TO THESE DRAWINGS AND THE CBC.
- 3. GOVERNING CODE AUTHORITY: CITY OF WESTMINISTER COMMUNITY DEVELOPMENT DEPARTMENT.
- 4. COMPLY FULLY WITH ALL CODES HAVING JURISDICTION OVER THE WORK. IF ANY WORK SHOWN OR INDICATED ON THE DRAWINGS IS IN CONFLICT WITH ANY CODE HAVING JURISDICTION, BRING IT TO THE ATTENTION OF THE OWNER PRIOR TO THE COMMENCEMENT OF ANY WORK WHICH WOULD BE AFFECTED BY IT.
- 5. WHERE NOT INDICATED OTHERWISE, THE LATEST EDITION OF ALL CITED DOCUMENTS SHALL GOVERN.
- 6. THE TERM CBC IN THESE DRAWINGS MEANS 2019 CALIFORNIA BUILDING CODE, CALIFORNIA CODE OF REGULATIONS,
- 7. ALL INFORMATION, DIMENSIONS, AND ELEVATIONS SHOWN OR NOTED TO EXISTING STRUCTURE ARE BASED ON BEST INFORMATION CURRENTLY AVAILABLE AT THE TIME OF THE PREPARATION OF THESE DRAWINGS. NO WARRANTY IS IMPLIED AS TO THE ACCURACY OF EXISTING CONDITIONS. THE CONTRACTOR SHALL REFER TO THE ORIGINAL CONSTRUCTION DOCUMENTS FOR INFORMATION REGARDING EXISTING CONSTRUCTION AND SHALL FIELD VERIFY ALL CONDITIONS. IF CONDITIONS BECOME APPARENT WHICH DIFFER FROM THE CONDITIONS SHOWN HEREIN, THEY SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE OWNER. HOWEVER, ANY SIGNIFICANT CONFLICTS SHALL BE RESOLVED AS NOTED.
- THE CONTRACTOR SHALL

TITLE 24, ALL PARTS AND VOLUMES.

- BECOME FAMILIAR WITH ALL CONTRACT DOCUMENTS.
- C. BE RESPONSIBLE FOR COORDINATION OF ALL TRADES TO ASSURE PROPER CONSTRUCTION OF THE PROJECT. ALL DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER AND SHALL BE RESOLVED BEFORE PROCEEDING WITH THE WORK.
- 9. DIMENSIONS: DIMENSIONS TAKE PRECEDENCE OVER SCALE OF DRAWING. RELY ON WRITTEN DIMENSIONS GIVEN AND FIELD VERIFICATION. IF DISCREPANCIES ARE FOUND, NOTIFY THE OWNER BEFORE THE COMMENCEMENT OR RESUMPTION OF WORK. IF NO DIMENSION ARE GIVEN, NOTIFY THE OWNER FOR CLARIFICATIONS. ALL NOTIFICATIONS SHALL BE BY "RFI".
- 10. DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. NOTES AND DETAILS ON DRAWINGS TAKE PRECEDENCE OVER "GENERAL NOTES" AND TYPICAL DETAILS. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED SUBJECT TO PRIOR REVIEW BY THE ENGINEER.
- 11. CONDITIONS NOTED AS "EXISTING" OR (E) ARE TO REMAIN U.N.O. PROTECT AS REQUIRED. "EXISTING" CONSTRUCTION REMOVED BY THE CONTRACTOR FOR ANY REASON SHALL BE REPLACED TO MATCH EXISTING AT NO ADDITIONAL COST TO THE OWNER. ALL MATERIALS, FEATURES OR CONDITIONS NOT SPECIFICALLY IDENTIFIED AS "EXISTING" OR (E) ARE CONSIDERED NEW WORK AND ARE PART OF THE PROJECT SCOPE OF WORK.
- 12. ALL EXISTING CONDITIONS, WHETHER OR NOT SPECIFICALLY NOTED ON THE DRAWINGS, SHALL BE VERIFIED PRIOR TO THE COMMENCEMENT OF ANY WORK. DO NOT PROCEED WITH ANY ITEM OR WORK THAT IS REASONABLY QUESTIONABLE WITHOUT ADVISING THE OWNER. OBTAIN DIRECTION FROM THE OWNER AS TO HOW TO PROCEED. SUBMIT ALL QUESTIONS ON "RFI" FORM.
- 13. ANY DISCREPANCIES FOUND IN THE CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION PRIOR TO COMMENCING ANY WORK.
- 14. SHOP DRAWINGS REQUIRED BY THE PROJECT SPECIFICATIONS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION. DRAWINGS ARE REVIEWED BY THE ENGINEER FOR GENERAL CONFORMANCE TO THE DESIGN. REGARDLESS OF THE ENGINEER'S REVIEW, THE CONTRACTOR IS FULLY AND SOLELY RESPONSIBLE FOR COMPLETE AND SATISFACTORY SUBMITTAL AND CONFORMANCE TO THE CONTRACT DOCUMENTS. SHOP DRAWINGS WILL BE REJECTED FOR INCOMPLETENESS, LACK OF CALCULATIONS (IF REQUIRED) OR CHANGES WITHOUT PRE-APPROVAL. ALL STRUCTURAL CALCULATIONS AND DRAWINGS AS PART OF THE SHOP DRAWINGS SUBMITTAL SHALL BE SIGNED AND STAMPED BY A CALIFORNIA REGISTERED STRUCTURAL ENGINEER. FOR RESUBMITTALS, ALL CHANGES FROM THE PRIOR SUBMITTAL SHALL BE TIGHTLY ENCLOSED BY A "CLOUD" SO AS TO INDICATE ONLY THOSE AREAS CHANGED. WHEN THE CLOUDED DRAWINGS ARE RESUBMITTED, ONLY THE CLOUDED AREAS WILL BE REVIEWED.
- 15. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK, AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES. THE SUPPORTING SERVICES BY T ENGINEER, WHETHER PERFORMED PRIOR TO, DURING, OR AFTER CONSTRUCTION, ARE PERFORMED SOLELY FOR THE PURPOSE OF ASSISTING IN QUALITY CONTROL AND IN ACHIEVING CONFORMANCE WITH CONTRACT DRAWINGS AND PROJECT SPECIFICATIONS; BUT THEY DO NOT GUARANTEE THE CONTRACTOR'S PERFORMANCE AND SHALL NOT BE CONSIDERED AS SUPERVISION OF CONSTRUCTION.
- 16. THE CONTRACTOR IS FULLY AND SOLELY RESPONSIBLE FOR ALL SHORING REQUIRED IN ORDER TO SAFELY ACHIEVE THE FINAL CONSTRUCTION SHOWN ON THE DRAWINGS. THIS INCLUDES, BUT IS NOT LIMITED TO, ANY TYPES OF SHORING REQUIRED FOR SOILS EXCAVATION AND BACKFILL WORK; SUPPORT OF STRUCTURAL ELEMENTS UNTIL THEY HAVE ACHIEVED THE NECESSARY STRENGTH TO PERFORM IN THE FINAL POSITION AND MANNER SHOWN ON THE DRAWINGS: AND SUPPORT OF STRUCTURAL ELEMENTS THAT ARE MODIFIED AND THEREBY REDUCED IN STRENGTH IN ANY WAY DURING CONSTRUCTION AS REQUIRED TO ACHIEVE THE FINAL CONSTRUCTION AS SHOWN ON THE DRAWINGS. ALL SHORING CALCULATIONS AND DRAWINGS SHALL BE STAMPED BY A CALIFORNIA REGISTERED ENGINEER AND SUBMITTED FOR REVIEW PRIOR TO PERFORMING THE WORK.
- 17. THE CONTRACTOR SHALL COORDINATE ALL UTILITY LOCATIONS WITH OTHER DRAWINGS AND SHALL CONDUCT A DETAILED SURVEY OF EXISTING UTILITIES TO IDENTIFY INTERFERENCES WITH THE NEW CONSTRUCTION. PROMPTLY NOTIFY THE ENGINEER OF ANY INTERFERENCES PRIOR TO PERFORMING THE WORK.
- 18. IN THE EVENT THAT THERE ARE ANY UTILITIES AFFECTED, ANY MODIFICATIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND NOT THAT OF THE OWNER. ALL OUTLETS EITHER ELECTRICAL OR MECHANICAL, OR ANY ASSOCIATED REWORK OR MODIFICATIONS WILL BE A PART OF THE BID AND NOT TO BE CONSTRUED AS THE WORK OF THE SUFFICIENT DUE DILIGENCE ON THE PART OF THE CONTRACTOR WILL ELIMINATE ANY POTENTIAL ISSUES AND ACCEPTANCE OF THE AGREEMENT SHALL BIND CONTRACTOR TO SAID ACCEPTANCE.
- 19. LOCATE ALL EMBEDDED ITEMS, REINFORCING STEEL AND TENDONS USING NON-DESTRUCTIVE MEANS PRIOR TO DRILLING OR CORING. DO NOT DAMAGE EMBEDDED ITEMS WITHOUT APPROVAL BY THE STRUCTURAL ENGINEER.
- 20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF WORK AREA DURING CONSTRUCTION PERIOD. THE CONTRACTOR SHALL PROTECT ADJACENT PROPERTY AND UTILITIES IN ACCORDANCE WITH ALL NATIONAL, STATE, AND LOCAL SAFETY ORDINANCES.
- 21. PROVIDE BARRICADING AND MAINTAIN ANY REQUIRED LIGHTS, WARNING, AND DIRECTIONAL SIGNS, AND OTHER PROTECTION NEAR AND ABOUT THE AREA OF THE WORK AS MAY BE REQUIRED BY THE OWNER, OR BY ANY OTHER GOVERNING AUTHORITY. PROVIDE NECESSARY MEANS TO PROTECT ANY SURROUNDING ADJACENT SITE STRUCTURES, PROPERTIES, SERVICING UTILITIES, PEDESTRIAN AND VEHICLE WAYS, AND MAINTAIN ALL SAFETY MEASURES UNTIL WORK IS COMPLETED.
- NON-CONSTRUCTION INDIVIDUALS MUST BE COORDINATED WITH AND APPROVED BY THE OWNER BEFORE PROCEEDING 23. PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE AND ADJACENT STRUCTURE(S), FINISHES AND

22. SECURE THE CONSTRUCTION SITE. ANY PARTS OF WORK AREA WHICH ARE TO BE BARRICADED OR SEALED TO

- UTILITIES DURING CONSTRUCTION.
- 24. PROVIDE AND ENGINEER ALL TEMPORARY STRUCTURAL AND SAFETY ELEMENTS REQUIRED TO ACCOMPLISH THE WORK.
- 25. THE CONTRACTOR SHALL EXERT EVERY EFFORT TO PREVENT DUST AND CONSTRUCTION DEBRIS FROM CONTAMINATING THE WORK AREA. THESE EFFORTS SHALL INCLUDE BUT NOT BE LIMITED TO PROVIDING A DAILY CLEANUP OF THE CONSTRUCTION AREA. THE CONTRACTOR SHALL REFER TO THE PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- 26. CUTTING, BORING, SAW-CUTTING OR DRILLING THROUGH NEW STRUCTURAL MEMBERS OTHER THAN THOSE DETAILED ON STRUCTURAL DRAWINGS SHALL NOT BE DONE WITHOUT THE ENGINEER'S APPROVAL.
- 27. PERFORM ALL PATCHING AND RESTORATION AS REQUIRED BY THE WORK. THE WORK SHALL MATCH ADJACENT SURFACES UNLESS SPECIFIED.

DESIGN CRITERIA

- DESIGN CONFORMS TO CBC 2019.
- NOT APPLICABLE
- A. CANOPY: SELF WEIGHT ONLY
- WIND ANALYSIS: WIND LOADS ARE BASED ON CBC WITH THE FOLLOWING FACTORS:

EXPOSURE CATEGORY C

WIND SPEED: Vutl = 95 MPH; Vasd = 85 MPH $GC_{pi} = \pm 0.55$

Kzt = 1.0

DESIGN WIND PRESSURE AND FORCES ON COMPONENTS AND CLADDING SHALL BE DETERMINED IN ACCORDANCE WITH CBC SECTION 1609A BY THE CALIFORNIA STATE REGISTERED PROFESSIONAL ENGINEER WHO IS RESPONSIBLE FOR THE DESIGN OF SUCH ELEMENTS, UNLESS NOTES OTHERWISE ON THE DRAWINGS.

SEISMIC ANALYSIS: NON-STRUCTURAL COMPONENTS PRODUCE:

SITE CLASS D SEISMIC DESIGN CATEGORY D

S₁ = 0.495 g $F_a = 1.2$

 $S_{DS} = 1.101 g$ AIR CONDITION UNITS COMPONENTS CONSTRUCTED OF SHEET METAL

R = 6.0 $\Omega = 2.0$

$a_{\rm p} = 2.5$

- 1. WOOD MEMBERS SHALL BE DOUGLAS FIR-LARCH PER WCLIB OR WWPA, VISUALLY GRADED DIMENSION LUMBER AND SHALL BE SURFACED DRY (19% MOISTURE CONTENT MAXIMUM). ALL LUMBER SHALL BEAR THE GRADE STAMP OF AN APPROVED TESTING AGENCY, EXCEPT EXPOSED LUMBER AT VISIBLE AREAS. STRUCTURAL FRAMING MEMBERS SHALL BE S4S AND GRADE MARKED AS No.1.
- 2. PLYWOOD SHEATHING SHALL MEET THE REQUIREMENTS OF THE LATEST EDITION OF U.S. PRODUCT STANDARDS PS 1-95. STRUCTURAL USE PANELS SHALL CONFORM TO NER-108 (APA-PRP-108). EACH PANEL SHALL BE IDENTIFIED WITH THE APPROPRIATE A.P.A. GRADE STAMP.
- . ROOF SHEATHING SHALL BE FIVE PLY WITH THICKNESS AND PANEL INDEX AS INDICATED ON DRAWINGS. STAGGER SHEETS PER PLAN. ROOF NAILING SHALL BE PER SCHEDULE ON DRAWINGS. OR AS INDICATED ON NOTES. INSTALL SHEETS WITH FACE GRAIN ACROSS SUPPORTS EXCEPT WHERE NOTED OTHERWISE.
- 4. ROOF AND FLOOR SHEATHING, AND SHEAR WALL PANELS NAILING AND INSTALLATION SHALL BE INSPECTED AND APPROVED PRIOR TO COVERING.
- BOLTS SHALL CONFORM TO ASTM A307. ALL BOLTS THROUGH WOOD SHALL HAVE STANDARD WASHERS. BOLT HOLES SHALL BE BORED $\frac{1}{32}$ " TO $\frac{1}{16}$ " LARGER THAN THE BOLT DIAMETER UNLESS NOTED OTHERWISE. ALL BOLTS SHALL BE TIGHTENED PRIOR TO BEING COVERED. WHERE PLATE WASHERS ARE SHOWN ON THE DRAWINGS THEY SHALL BE AS FOLLOWS:

MINIMUM	SIZE FOR SQUARE PLATE WASHERS
BOLT SIZE	PLATE SIZE
1/2"	³ ∕ ₁₆ " x 2" x 2"
5/8 "	1/ ₄ " x 21/ ₂ " x 21/ ₂ "
3/4"	⁵ ⁄ ₁₆ " x 2 ³ ⁄ ₄ " x 2 ³ ⁄ ₄ "
7/8"	⁵ ⁄ ₁₆ " x 3" x 3"
1"	³ / ₈ " x 3 ¹ / ₂ " x 3 ¹ / ₂ "

- 6. NAILS SHALL BE COMMON WIRE NAILS (0.131"Øx2-1/2" FOR 8d; 0.148"Øx3" FOR 10d; 0.148"Øx3-1/4" FOR 12d; 0.162"Øx3-1/2" FOR 16d) OR ACCESSORIES OF HARDWARE CONNECTORS. SEE CBC FOR MINIMUM NAILING SCHEDULE
- 7. HARDWARE CONNECTORS AND ACCESSORIES SHALL BE SIMPSON STRONG-TIE CONNECTORS OR APPROVED EQUAL.
- 8. NONBEARING PARTITIONS SHALL BE MINIMUM 2x4 STUD AT MAXIMUM 16" ON CENTER WITH TOP AND SILL PLATES AS SHOWN IN THE APPLICABLE DETAILS UNLESS OTHERWISE NOTED.
- 9. PLYWOOD NAILING SHALL HAVE A MINIMUM EDGE DISTANCE OF 3/8". NAIL HEADS SHALL BE FLUSH WITH TOP SURFACE OF PLYWOOD; SINKING NAIL HEADS IS PROHIBITED.
- 10. PROVIDE PLYWOOD EDGE NAILING AROUND THE PLYWOOD OPENINGS AND ALONG THE FULL HEIGHT OF ALL WOOD POSTS AND COLUMNS.
- 11. LAG SCREWS SHALL BE SCREWED, NOT DRIVEN, INTO WOOD MEMBERS WITH PRE-DRILLED HOLES. PRE-DRILLED HOLE DIAMETER IN SOFT STRUCTURAL WOODS SHALL EQUAL SCREW SHANK DIAMETER AT THE SCREW SHANK, AND SHALL BE UNDERSIZED BY 25% OF SCREW DIAMETER AT THE SCREW THREADS. FOR EXAMPLE, FOR A 3/8" SCREW, THE PRE-DRILLED HOLE SHALL BE 3/8" OVER THE LENGTH OF THE SCREW SHANK, AND SHALL BE 9/32" OVER THE LENGTH OF THE SCREW THREADS. FOR HARD WOODS USED IN A STRUCTURAL APPLICATION, PRE-DRILLED HOLE DIAMETER AT THE SHANK SHALL MATCH THE SCREW DIAMETER, AND THE HOLE DIAMETER OVER THE LENGTH OF THE SCREW THREADS SHALL BE UNDERSIZED BY 12.5% OF THE SCREW DIAMETER.
- 12. SILL PLATES IN DIRECT CONTACT WITH CONCRETE, MASONRY, OR EARTH, SHALL BE PRESSURE TREATED WOOD OR APPROVED EQUAL. PRESSURE TREATED WOOD SHALL BE TREATED WITH ALKALINE COPPER QUAT (ACQ-C AND ACQ-D), CARBONATE AZOLE (CBA-A), OR COPPER AZOLE (CA-B).
- 13. PROVIDE DOUBLE OR 4x FLOOR JOIST UNDER PARALLEL, NON-BEARING PARTITION WALL UNLESS OTHERWISE
- 14. PROVIDE LAMINATED DOUBLE STUDS UNDER EACH SUPPORT OF BEAMS UNLESS OTHERWISE NOTED.
- 15. SOLID BLOCKING SHALL BE PLACED BETWEEN JOISTS AT POINTS OF SUPPORT AND POINTS WHERE SHEATHING IS DISCONTINUOUS.
- 16. APPLY ADHESIVE TO CONTACT SURFACES BETWEEN HORIZONTAL PLYWOOD SHEATHING AND SUPPORTING WOOD
- 17. WOOD MEMBER WITH WANE SHALL NOT BE LOCATED AT PLYWOOD JOINT.
- 18. NO STRUCTURAL MEMBER SHALL BE CUT WITHOUT THE APPROVAL OF THE STRUCTURAL ENGINEER.
- 19. HARDWARE CONNECTING WOOD MEMBERS SHALL BE RECESSED WHEN REQUIRED BY ARCHITECTURAL FINISH. VERIFY WITH ARCHITECTURAL DRAWINGS.
- 20. 0.229"x2"x2" STEEL PLATE WASHERS (OR SIMPSON BP) SHALL BE USED FOR ALL SILL PLATE ANCHOR BOLTS AND HOLDOWN CONNECTOR BOLTS UNLESS OTHERWISE NOTED. SIMPSON BP SHALL BE PROTECTED WITH ZMAX (G185)
- 21. ALL BOLTS SHALL BE RE-TIGHTENED JUST PRIOR TO BEING COVERED.
- 22. BOLT HOLES AT WOOD MEMBERS SHALL NOT BE MORE THAN 1/16" LARGER THAN THE BOLT DIAMETER.
- 23. ALL HARDWARE AND FASTENERS IN CONTACT WITH TREATED WOOD SILL PLATES SHALL BE ZINC- COATED. ALL NAILS INTO TREATED SILL PLATES SHALL BE HOT-DIPPED ZINC-COATED GALVANIZED OR SIMPSON ZMAX (G185) COATED
- 24. SOLID BLOCKING OR EQUIVALENT CROSS-BRIDGING SHALL BE INSTALLED BETWEEN ALL ROOF AND FLOOR JOISTS AT THE SPACING PER CODE.
- 25. FIRE BLOCKING SHALL BE INSTALLED BETWEEN ALL WALL STUDS IF REQUIRED BY CODE.

STRUCTURAL OBSERVATION

- 1. THE OWNER SHALL EMPLOY THE ENGINEER OF RECORD REGISTERED/LICENSED IN THE STATE OF CALIFORNIA WHO IS RESPONSIBLE FOR THE STRUCTURAL DESIGN, TO DO STRUCTURAL OBSERVATION.
- 2. THE STRUCTURAL OBSERVATION IS REQUIRED FOR THE STRUCTURAL SYSTEM IN ACCORDANCE WITH CBC 2016, SECTION 1704. STRUCTURAL OBSERVATION IS THE VISUAL OBSERVATION OF THE ELEMENTS AND CONNECTIONS OF THE STRUCTURAL SYSTEM AT SIGNIFICANT CONSTRUCTION STAGES AND THE COMPLETE STRUCTURE FOR GENERAL CONFORMANCE TO THE APPROVED PLANS AND SPECIFICATIONS. STRUCTURAL OBSERVATION DOES NOT WAIVE THE RESPONSIBILITY FOR THE INSPECTIONS REQUIRED OF THE PROJECT INSPECTOR, DEPUTY INSPECTOR, SPECIAL INSPECTOR OR CITY INSPECTOR.
- 3. STRUCTURAL OBSERVER OF RECORD : YAZEN RABADI, S6764
- 4. THE STRUCTURAL OBSERVER SHALL PERFORM SITE VISITS AT THOSE STEPS IN THE PROGRESS OF THE CONSTRUCTION THAT ALLOW FOR CORRECTION OF DEFICIENCIES WITHOUT SUBSTANTIAL EFFORT OR UNCOVERING OF THE WORK INVOLVED. AT A MINIMUM, THE FOLLOWING SIGNIFICANT CONSTRUCTION STAGES REQUIRE A SITE VISIT AND AN OBSERVATION REPORT FROM THE STRUCTURAL OBSERVER.
- CONSTRUCTION STAGE ELEMENTS / CONNECTIONS TO BE OBSERVED; A. AFTER OPENING FINISH TO CONFIRM LEVEL OF DETERIORATION AND THE EXTENT OF REPAIRS.

B. FOLLOWING FRAMING REPAIRS PRIOR TO COVERING WITH FINISH.

- 5. STRUCTURAL OBSERVATION: ALL STRUCTURAL OBSERVATIONS SHALL BE DOCUMENTED USING THE CITY OF WESTMINISTER STRUCTURAL OBSERVATION REPORT FORM, AND SHALL BE STAMPED AND SIGNED BY THE STRUCTURAL OBSERVER OF RECORD.
- 6. OBSERVED DEFICIENCIES: ANY OBSERVED DEFICIENCIES SHALL BE DESCRIBED ON THE FORM; THE OBSERVER SHALL ALSO INDICATE WHETHER A RE-OBSERVATION IS REQUIRED TO VERIFY CORRECTIVE ACTIONS HAVE BEEN PROPERLY TAKEN OR THAT THE CORRECTIVE ACTIONS ARE DEEMED VERIFIABLE BY THE SPECIAL INSPECTOR OR CITY INSPECTOR PRIOR TO INSPECTION APPROVAL.

<u>NA</u>	<u>ILING</u>		
	CONNECTION	FASTENING ^{a, m}	LOCATION
1.	JOIST TO SILL OR GIRDER	3 - 8d COMMON ($2\frac{1}{2}$ " x 0.131")	TOENAIL
2.	BRIDGING TO JOIST	2 - 8d COMMON (2½" x 0.131")	TOENAIL EACH END
3.	1" x 6" SUBFLOOR OR LESS TO EACH JOIST	2 - 8d COMMON (2½" x 0.131")	FACE NAIL
4.	WIDER THAN 1" x 6" SUBFLOOR TO EACH JOIST	3 - 8d COMMON (2½" x 0.131")	FACE NAIL
5.	2" SUBFLOOR TO JOIST OR GIRDER	2 - 16d COMMON (3½" x 0.162")	BLIND AND FACE NAIL
6.	SOLE PLATE TO JOIST OR BLOCKING	16d (3½" x 0.135") AT 16" O.C.	TYPICAL FACE NAIL
	SOLE PLATE TO JOIST OR BLOCKING AT PANELS BRACED WALL PANEL	3 - 16d (3½" x 0.135") AT 16" O.C.	BRACED WALL
7.	TOP PLATE TO STUD	2 - 16d COMMON (3½" x 0.162")	END NAIL
8.	STUD TO SOLE PLATE	4 - 8d COMMON ($2\frac{1}{2}$ " x 0.131") 2 - 16d COMMON ($3\frac{1}{2}$ " x 0.162")	TOE NAIL END NAIL
9.	DOUBLE STUDS	16d (3½" x 0.135") AT 24" O.C.	FACE NAIL
10.	DOUBLE TOP PLATES DOUBLE TOP PLATES	16d (3½" x 0.135") AT 16" O.C. 8 - 16d COMMON (3½" x 0.162")	TYPICAL FACE NAIL LAP SPLICE
11.	BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE	3 - 8d COMMON (2½" x 0.131")	TOENAIL
12.	RIM JOIST TO TOP PLATE	8d (2½" x 0.131") AT 6" O.C.	TOENAIL
13.	TOP PLATES, LAPS AND INTERSECTIONS	2 - 16d COMMON (3½" x 0.162")	FACE NAIL
14.	CONTINUOUS HEADER, TWO PIECES	16d COMMON (3½" x 0.162")	16" O.C. ALONG EDGE
15.	CEILING JOISTS TO PLATE	3 - 8d COMMON (2½" x 0.131")	TOENAIL
16.	CONTINUOUS HEADER TO STUD	4 - 8d COMMON (2½" x 0.131")	TOENAIL
17.	CEILING JOISTS, LAPS OVER PARTITIONS (NOTE q.)	3 - 16d COMMON (3½" x 0.162") MINIMUM, TABLE 2308.10.4.1	FACE NAIL
18.	CEILING JOISTS TO PARALLEL RAFTERS (NOTE q.)	3 - 16d COMMON (3½" × 0.162") MINIMUM, TABLE 2308.10.4.1	FACE NAIL
19.	RAFTER TO PLATE (NOTE 4.)	3 - 8d COMMON (2½" x 0.131")	TOENAIL
20.	1" DIAGONAL BRACE TO EACH STUD AND PLATE	2 - 8d COMMON (2½" x 0.131")	FACE NAIL
21.	1" x 8" SHEATHING TO EACH BEARING	3 - 8d COMMON (2½" x 0.131")	FACE NAIL
22.	WIDER THAN 1" x 8" SHEATHING TO EACH BEARING	3 - 8d COMMON (2½" x 0.131")	FACE NAIL
23.	BUILT-UP CORNER STUDS	16d COMMON (3½" x 0.162")	24" O.C.
24.	BUILT-UP GIRDER AND BEAMS	20d COMMON (4" x 0.192") AT 32" O.C. 2 - 20d COMMON (4" X 0.192")	FACE NAIL AT TOP AND BOTTOM STAGGERED OPPOSITE SIDES FACE NAIL AT ENDS AND AT EACH SPLICE
25.	2" PLANKS	16d COMMON (3½" x 0.162")	AT EACH BEARING
26	.COLLAR TIE TO RAFTER	3 - 10d COMMON (3" x 0.148")	FACE NAIL
27.	JACK RAFTER TO HIP	3 - 10d COMMON (3" x 0.148") 2 - 16d COMMON (3 $\frac{1}{2}$ " x 0.162")	TOENAIL FACE NAIL
28.	ROOF RAFTER TO 2-BY RIDGE BEAM	2 - 16d COMMON (3½" x 0.162") 2 - 16d COMMON (3½" x 0.162")	TOENAIL FACE NAIL
29.	JOIST TO BAND JOIST	3 - 16d COMMON (3½" × 0.162")	FACE NAIL
30.	LEDGER STRIP	3 - 16d COMMON (3½" x 0.162")	FACE NAIL AT EACH JC
	WOOD STRUCTURAL PANELS AND PARTICILEBOARD ^b SUBFLOOR, ROOF AND WALL SHEATHING (TO FRAMING)	$\frac{1}{2}$ " AND LESS $6d^{c,1}$ $\frac{1}{3}$ 2" TO $\frac{3}{4}$ " $8d^d$ OR $6d^e$ $\frac{1}{3}$ 2" TO $\frac{3}{4}$ " $8d^d$ OR $6d^e$ $\frac{1}{6}$ 8" TO 1" $10d^d$ OR $8d^e$ $\frac{1}{8}$ " TO $1\frac{1}{4}$ " $10d^d$ OR $8d^e$	
	SINGLE FLOOR (COMBINATION SUBFLOOR - UNDERLAYMENT TO FRAMING)	$\frac{3}{4}$ " AND LESS $6d^{e}$ $\frac{7}{8}$ " TO 1" 8 d^{e} $\frac{1}{8}$ " TO $\frac{1}{4}$ " 10^{d} OR $8d^{e}$	
32.	PANEL SIDING (TO FRAMING)	1/2" AND LESS 6d ^f 5/8" 8d ^f	
33.	FIBERBOARDING SHEATHING ^g	1/2" 6d COMMON NAIL (2" x 0.113") 25/32" 8d COMMON NAIL (21/2" x 0.131")	
34.	INTERIOR PANELING	½" 4d ^j ¾" 6d ^k	
34.	INTERIOR PANELING	$(2\frac{1}{2}$ " x 0.131") 1/4" 4d ^j	

NAILING CONTINUOUS

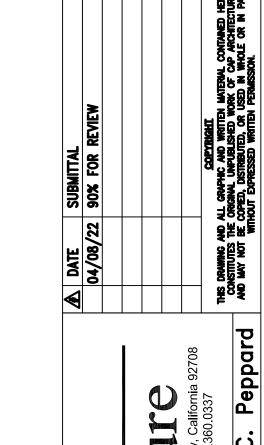
- a. COMMON OR BOX NAILS ARE PERMITTED TO BE USED EXCEPT WHERE OTHERWISE STATED. b. NAILS SPACED AT 6 INCHES ON CENTER AT EDGES, 12 INCHES AT INTERMEDIATE SUPPORTS EXCEPT 6 INCHES AT SUPPORTS WHERE SPANS ARE 48 INCHES OR MORE. FOR NAILING OF WOOD STRUCTURAL PANEL AND PARTICLE BOARD DIAPHRAGMS AND SHEAR WALLS, REFER TO SECTION 2305. NAILS FOR WALL SHEATHING ARE PERMITTED TO BE
- c. COMMON OR DEFORMED SHANK (6d 2" x 0.113"; 8d $2\frac{1}{2}$ " x 0.131"; 10d 3" x 0.148").
- d. COMMON (6d 2" x 0.113"; 8d $2\frac{1}{2}$ " x 0.131"; 10d 3 x 0.148").
- e. DEFORMED SHANK (6d 2" x 0.113"; 8d $2\frac{1}{2}$ " x 0.131"; 10d 3" x 0.148"). f. CORROSION-RESISTANT SIDING (6d - $1\frac{7}{8}$ " x 0.106"; 8d - $2\frac{3}{8}$ " x 0.128") OR CASING (6d - 2" x 0.099"; 8d - $2\frac{1}{2}$ " x 0.113") NAIL.
- g. FASTENERS SPACED 3 INCHES ON CENTER AT EXTERIOR EDGES AND 6 INCHES ON CENTER AT INTERMEDIATE SUPPORTS, WHEN USED AS STRUCTURAL SHEATHING. SPACING SHALL BE 6 INCHES ON CENTER ON THE EDGES AND 12 INCHES ON CENTER AT INTERMEDIATE SUPPORTS FOR NON-STRUCTURAL APPLICATIONS.
- h. CORROSION-RESISTANT ROOFING NAILS WITH $\frac{7}{16}$ -INCH-DIAMETER HEAD AND 1 $\frac{1}{2}$ -INCH LENGTH FOR $\frac{1}{2}$ -INCH SHEATHING AND $1\frac{3}{4}$ -INCH LENGTH FOR $2\frac{5}{32}$ -INCH SHEATHING.
- i. CORROSION-RESISTANT STAPLES WITH NOMINAL $\frac{1}{16}$ -INCH CROWN OR 1-INCH CROWN AND 1 $\frac{1}{4}$ -INCH LENGTH FOR $\frac{1}{2}$ -INCH SHEATHING AND $\frac{1}{2}$ -INCH LENGTH FOR $\frac{25}{32}$ -INCH SHEATHING. PANEL SUPPORTS AT 16 INCHES (20 INCHES IF
- STRENGTH AXIS IN THE LONG DIRECTION OF THE PANEL, UNLESS OTHERWISE MARKED).
- j. CASING ($1\frac{1}{2}$ " x 0.080") OR FINISH ($1\frac{1}{2}$ " X 0.072") NAILS SPACED 6 INCHES ON PANEL EDGES, 12 INCHES AT INTERMEDIATE k. PANEL SUPPORTS AT 24 INCHES. CASING OR FINISH NAILS SPACED 6 INCHES ON PANEL EDGES, 12 INCHES AT
- I. FOR ROOF SHEATHING APPLICATIONS, 8d NAILS ($2\frac{1}{2}$ " x 0.113") ARE THE MINIMUM REQUIRED FOR WOOD STRUCTURAL
- m. STAPLES SHALL HAVE A MINIMUM CROWN WIDTH OF $\frac{7}{16}$ INCH.
- n. FOR ROOF SHEATHING APPLICATIONS, FASTENERS SPACED 4 INCHES ON CENTER AT EDGES, 8 INCHES AT

q. CEILING JOIST AND RAFTER CONSTRUCTION SHALL BE IN ACCORDANCE WITH CBC SECTION 2308.10.

WALL SHEATHING AND 3 INCHES ON CENTER AT EDGES, 6 INCHES AT INTERMEDIATE SUPPORTS FOR ROOF SHEATHING. p. FASTENERS SPACED 4 INCHES ON CENTER AT EDGES, 8 INCHES AT INTERMEDIATE SUPPORTS.

o. FASTENERS SPACED 4 INCHES ON CENTER AT EDGES, 8 INCHES AT INTERMEDIATE SUPPORTS FOR SUB-FLOOR AND

SHEET INDEX										
SHEET #'S SHEET DESCRIPTION										
S0.1	GENERAL NOTES									
S1.1	(E) ROOF & NEW RTU W/ DETAILS									



REVISIONS

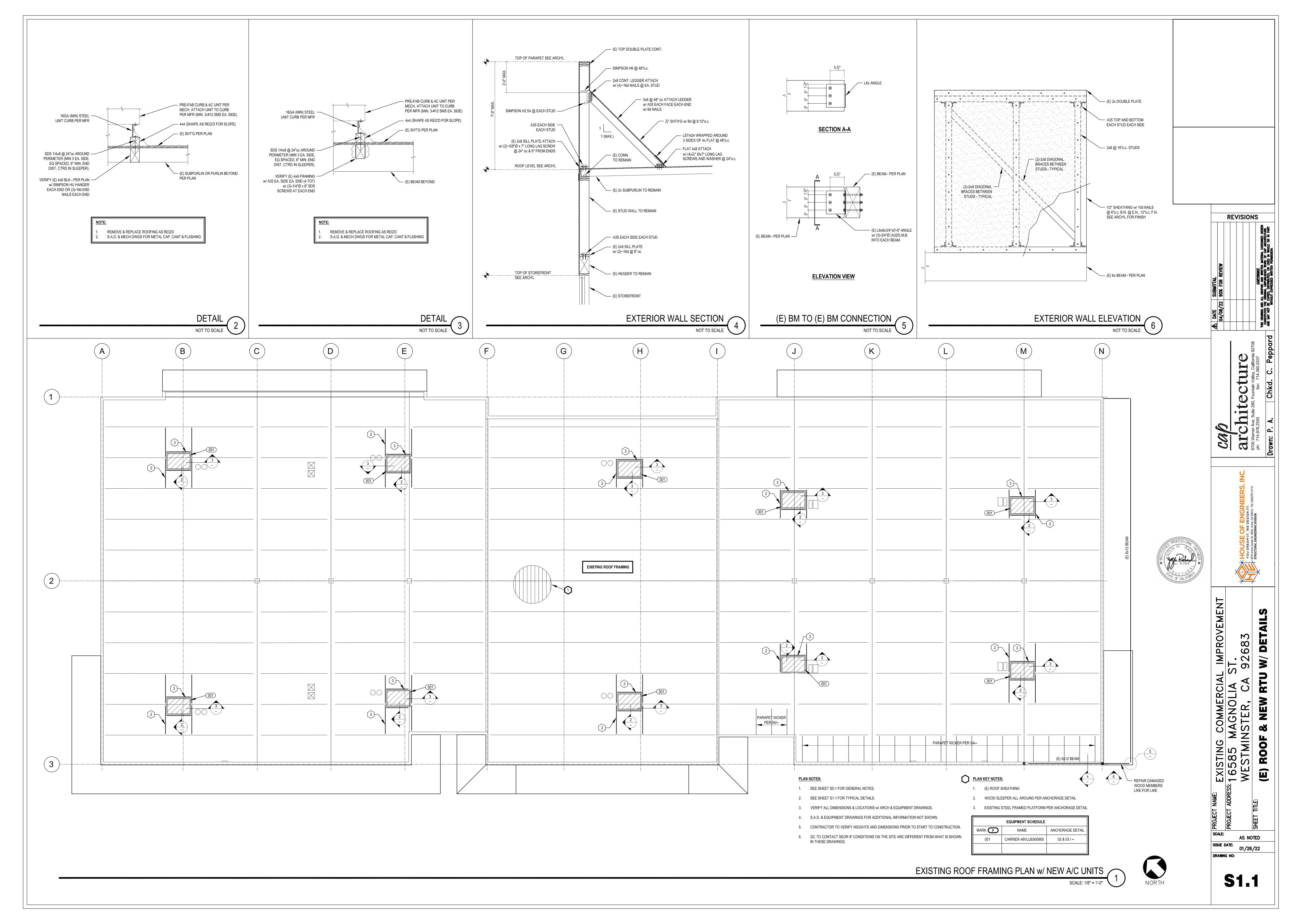


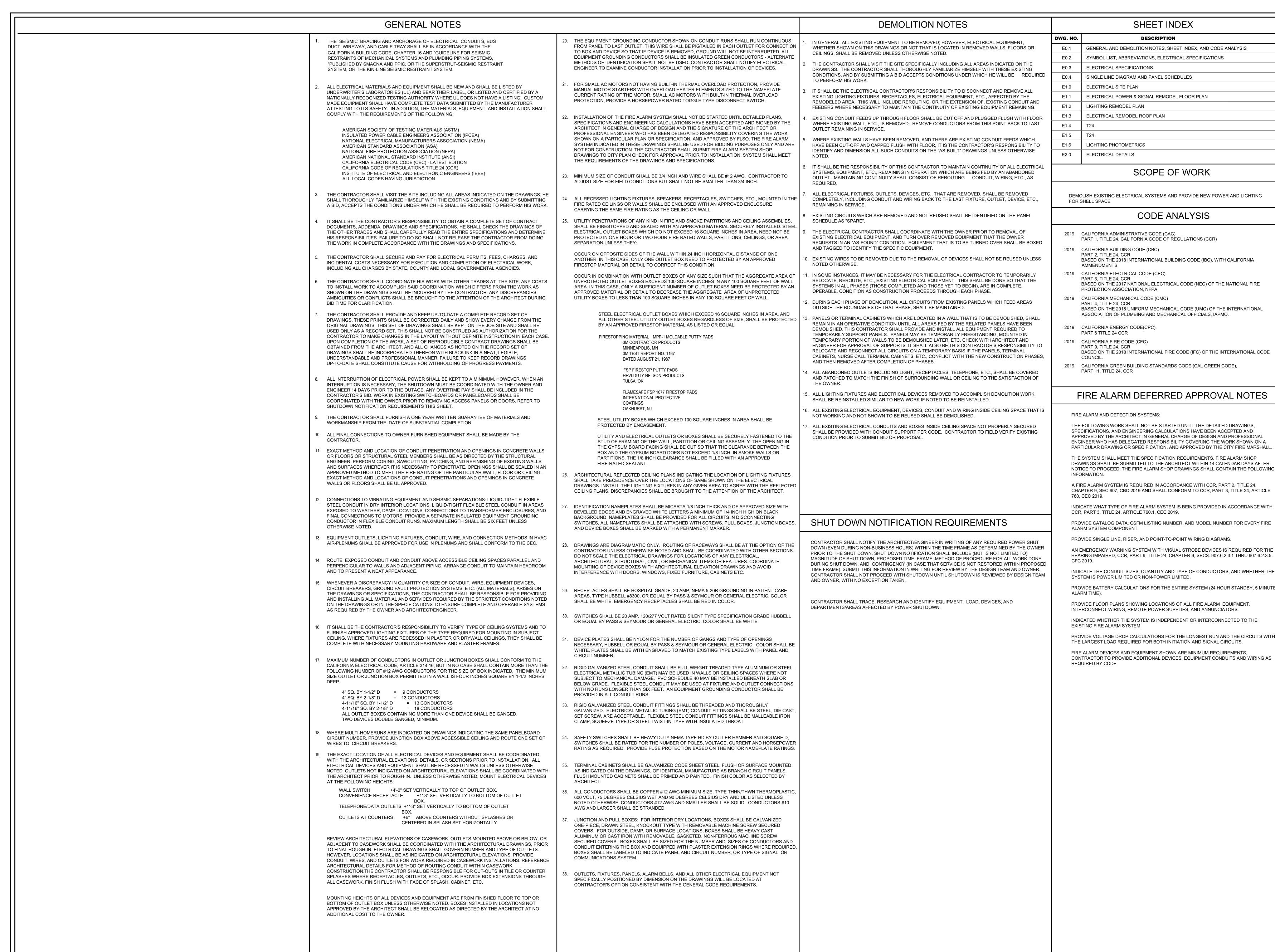


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AS NOTED

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SHEET INDEX **DESCRIPTION** GENERAL AND DEMOLITION NOTES, SHEET INDEX, AND CODE ANALYSIS SYMBOL LIST, ABBREVIATIONS, ELECTRICAL SPECIFICATIONS **ELECTRICAL SPECIFICATIONS** SINGLE LINE DIAGRAM AND PANEL SCHEDULES ELECTRICAL SITE PLAN ELECTRICAL POWER & SIGNAL REMODEL FLOOR PLAN LIGHTING REMODEL PLAN ELECTRICAL REMODEL ROOF PLAN LIGHTING PHOTOMETRICS **ELECTRICAL DETAILS** SCOPE OF WORK DEMOLISH EXISTING ELECTRICAL SYSTEMS AND PROVIDE NEW POWER AND LIGHTING

CODE ANALYSIS

2019 CALIFORNIA ADMINISTRATIVE CODE (CAC) PART 1, TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR)

2019 CALIFORNIA BUILDING CODE (CBC)

BASED ON THE 2018 INTERNATIONAL BUILDING CODE (IBC), WITH CALIFORNIA

2019 CALIFORNIA ELECTRICAL CODE (CEC) PART 3, TITLE 24, CCR

BASED ON THE 2017 NATIONAL ELECTRICAL CODE (NEC) OF THE NATIONAL FIRE PROTECTION ASSOCIATION, NFPA

BASED ON THE 2018 UNIFORM MECHANICAL CODE (UMC) OF THE INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS, IAPMO.

2019 CALIFORNIA ENERGY CODE(CPC),

2019 CALIFORNIA FIRE CODE (CFC) PART 9. TITLE 24. CCR BASED ON THE 2018 INTERNATIONAL FIRE CODE (IFC) OF THE INTERNATIONAL CODE

2019 CALIFORNIA GREEN BUILDING STANDARDS CODE (CAL GREEN CODE), PART 11, TITLE 24, CCR

FIRE ALARM DEFERRED APPROVAL NOTES

FIRE ALARM AND DETECTION SYSTEMS:

THE FOLLOWING WORK SHALL NOT BE STARTED UNTIL THE DETAILED DRAWINGS. SPECIFICATIONS, AND ENGINEERING CALCULATIONS HAVE BEEN ACCEPTED AND APPROVED BY THE ARCHITECT IN GENERAL CHARGE OF DESIGN AND PROFESSIONAL ENGINEER WHO HAS DELEGATED RESPONSIBILITY COVERING THE WORK SHOWN ON A PARTICULAR DRAWING OR SPECIFICATION, AND APPROVED BY THE CITY FIRE MARSHALL

THE SYSTEM SHALL MEET THE SPECIFICATION REQUIREMENTS. FIRE ALARM SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT WITHIN 14 CALENDAR DAYS AFTER NOTICE TO PROCEED. THE FIRE ALARM SHOP DRAWINGS SHALL CONTAIN THE FOLLOWING

A FIRE ALARM SYSTEM IS REQUIRED IN ACCORDANCE WITH CCR, PART 2, TITLE 24, CHAPTER 9, SEC 907, CBC 2019 AND SHALL CONFORM TO CCR, PART 3, TITLE 24, ARTICLE

CCR, PART 3, TITLE 24, ARTICLE 760.1, CEC 2019.

PROVIDE CATALOG DATA, CSFM LISTING NUMBER, AND MODEL NUMBER FOR EVERY FIRE

PROVIDE SINGLE LINE, RISER, AND POINT-TO-POINT WIRING DIAGRAMS.

AN EMERGENCY WARNING SYSTEM WITH VISUAL STROBE DEVICES IS REQUIRED FOR THE HEARING IMPAIRED, CCR, PART 9, TITLE 24, CHAPTER 9, SECS. 907.6.2.3.1 THRU 907.6.2.3.5,

INDICATE THE CONDUIT SIZES, QUANTITY AND TYPE OF CONDUCTORS, AND WHETHER THE SYSTEM IS POWER LIMITED OR NON-POWER LIMITED.

PROVIDE BATTERY CALCULATIONS FOR THE ENTIRE SYSTEM (24 HOUR STANDBY, 5 MINUTE

PROVIDE FLOOR PLANS SHOWING LOCATIONS OF ALL FIRE ALARM EQUIPMENT. INTERCONNECT WIRING, REMOTE POWER SUPPLIES, AND ANNUNCIATORS.

INDICATED WHETHER THE SYSTEM IS INDEPENDENT OR INTERCONNECTED TO THE

PROVIDE VOLTAGE DROP CALCULATIONS FOR THE LONGEST RUN AND THE CIRCUITS WITH THE LARGEST LOAD REQUIRED FOR BOTH INITIATION AND SIGNAL CIRCUITS.

FIRE ALARM DEVICES AND EQUIPMENT SHOWN ARE MINIMUM REQUIREMENTS, CONTRACTOR TO PROVIDE ADDITIONAL DEVICES, EQUIPMENT CONDUITS AND WIRING AS

REVISIONS

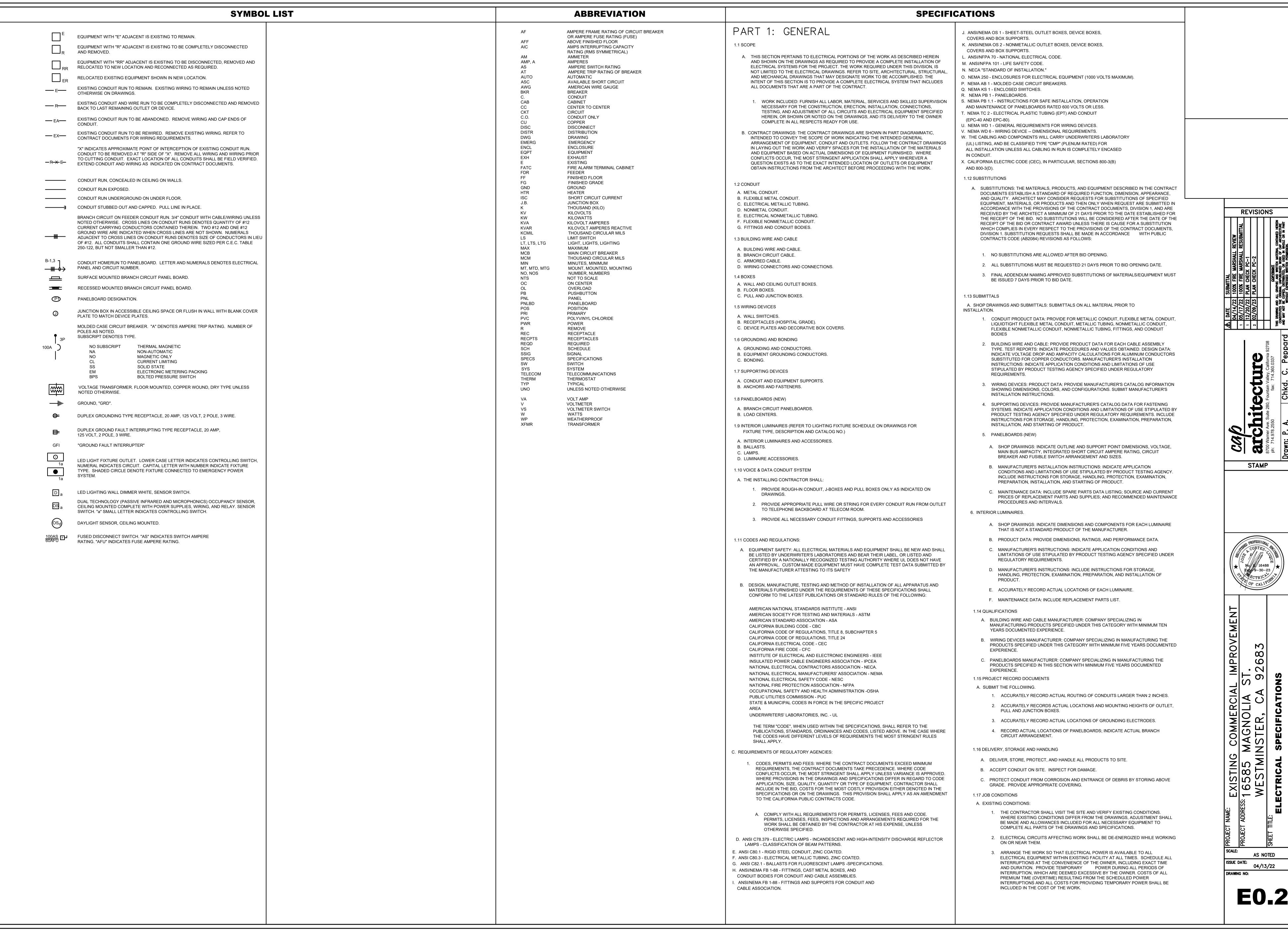
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- 1. PROTECTION OF APPARATUS, MATERIALS AND EQUIPMENT. TAKE SUCH PRECAUTIONS AS NECESSARY TO PROPERLY PROTECT ALL APPARATUS, FIXTURES, APPLIANCES, MATERIAL, EQUIPMENT AND INSTALLATIONS FROM DAMAGE OF ANY KIND. THE ENGINEER MAY REJECT ANY PARTICULAR PIECE OR PIECES OF MATERIAL, APPARATUS OR EQUIPMENT SCRATCHED, DENTED OR OTHERWISE DAMAGED.
- 2. SEAL EQUIPMENT OR COMPONENTS EXPOSED TO THE WEATHER AND MAKE WATERTIGHT AND INSECT PROOF. PROTECT EQUIPMENT OUTLETS AND CONDUIT OPENINGS WITH TEMPORARY PLUGS OR CAPS AT ALL TIMES THAT WORK IS NOT IN PROGRESS.

C. SEQUENCING AND SCHEDULING

- WORK LINES AND ESTABLISHED HEIGHTS SHALL BE IN STRICT ACCORDANCE WITH ARCHITECTURAL DRAWINGS AND SPECIFICATIONS INSOFAR AS THESE DRAWINGS AND SPECIFICATIONS EXTEND. VERIFY ALL DIMENSIONS SHOWN AND ESTABLISH ALL ELEVATIONS AND DETAILED DIMENSIONS NOT SHOWN.
- 2. LAY OUT AND COORDINATE ALL WORK WELL ENOUGH IN ADVANCE TO AVOID CONFLICTS OR INTERFERENCES WITH OTHER WORK IN PROGRESS SO THAT IN CASE OF INTERFERENCE THE ELECTRICAL LAYOUT MAY BE ALTERED TO SUIT THE CONDITIONS, PRIOR TO THE INSTALLATION OF ANY WORK AND WITHOUT ADDITIONAL COST TO THE OWNER. CONFLICTS ARISING FROM LACK OF COORDINATION SHALL BE THIS CONTRACTOR'S RESPONSIBILITY. MAINTAIN ALL CODE-REQUIRED CLEARANCES ABOUT ELECTRICAL EQUIPMENT. UNLESS SPECIFICALLY NOTED OTHERWISE, ESTABLISH THE EXACT LOCATION OF ELECTRICAL EQUIPMENT BASED ON THE ACTUAL DIMENSIONS OF EQUIPMENT FURNISHED.

D. VERIFY ROUTING AND TERMINATION LOCATIONS OF CONDUIT PRIOR TO ROUGH IN.

- E. CONDUIT ROUTING IS SHOWN ON DRAWINGS IN APPROXIMATE LOCATIONS UNLESS DIMENSIONED. ROUTE AS REQUIRED TO COMPLETE WIRING SYSTEM.
- F. BUILDING WIRE AND CABLE: VERIFY THAT FIELD MEASUREMENTS ARE AS SHOWN ON DRAWINGS CONDUCTOR SIZES ARE BASED ON COPPER. ALUMINUM CONDUCTORS SHALL NOT BE USED. WIRE AND CABLE ROUTING SHOWN ON DRAWINGS IS APPROXIMATE UNLESS DIMENSIONED. ROUTE WIRE AND CABLE AS REQUIRED TO MEET PROJECT CONDITIONS. WHERE WIRE AND CABLE ROUTING IS NOT SHOWN, AND DESTINATION ONLY IS INDICATED, DETERMINE EXACT ROUTING AND LENGTHS REQUIRED.

1.18 WORK IN COOPERATION WITH OTHER TRADES

- A. EXAMINE THE DRAWINGS AND SPECIFICATIONS AND DETERMINE THE WORK TO BE PERFORMED BY THE ELECTRICAL, MECHANICAL AND OTHER SECTIONS. PROVIDE THE TYPE AND AMOUNT OF ELECTRICAL MATERIALS AND EQUIPMENT NECESSARY TO PLACE THIS WORK IN PROPER OPERATION, COMPLETELY WIRED, TESTED AND READY FOR USE. THIS SHALL INCLUDE ALL CONDUIT, WIRE, MOTOR STARTERS, DISCONNECTS, RELAYS, TIME CLOCKS AND OTHER DEVICES FOR THE REQUIRED OPERATION SEQUENCE OF ALL ELECTRICAL. MECHANICAL AND OTHER SYSTEMS OR EQUIPMENT. WHERE A CONFLICT OCCURS ON DRAWINGS, THE MOST STRINGENT SHALL APPLY.
- B. PROVIDE CONDUIT AND WIRE FOR ALL CONTROLS AND OTHER DEVICES, BOTH LINE AND LOW VOLTAGE, DESCRIBED IN THIS OR OTHER PARTS OF THE CONTRACT DOCUMENTS. INSTALL ALL CONTROL HOUSINGS AND BACKBOXES REQUIRED FOR INSTALLING CONDUIT AND WIRE TO THE
- BUILDING WIRE AND CABLE: DETERMINE REQUIRED SEPARATION BETWEEN CABLE AND OTHER WORK, DETERMINE CABLE ROUTING TO AVOID INTERFERENCE WITH OTHER WORK.

1.19 TESTING AND ADJUSTMENT

A. UPON COMPLETION OF ALL ELECTRICAL WORK, THE CONTRACTOR SHALL PROVIDE ALL TESTING AS FOLLOWS

- . OPERATIONAL TEST: TEST ALL CIRCUIT BREAKERS, RECEPTACLES, MOTORS AND ALL OTHER ELECTRICAL AND COMMUNICATION EQUIPMENT. REPLACE ALL FAULTY DEVICES AND EQUIPMENT DISCOVERED DURING TESTING WITH NEW DEVICES AND EQUIPMENT AT NO ADDITIONAL COST, AND THAT PART OF THE SYSTEM (OR DEVICES OR EQUIPMENT) SHALL THEN BE RETESTED.
- 2. SECONDARY GROUNDING RESISTANCE: PERFORM GROUND CONTINUITY TEST BETWEEN MAIN GROUND SYSTEM AND EQUIPMENT FRAME, SYSTEM NEUTRAL AND/OR DERIVED

1.20 GUARANTEE/WARRANTY

A. GUARANTEE: FURNISH A WRITTEN GUARANTEE FOR A PERIOD OF ONE YEAR FROM DATE OF SUBSTANTIAL COMPLETION.

2.1 ELECTRICAL DEMOLITION

A. MATERIALS AND EQUIPMENT FOR PATCHING AND EXTENDING WORK.

2.2 CONDUIT

- A. REQUIREMENTS
- 1. MINIMUM SIZE: 3/4 INCH UNLESS OTHERWISE SPECIFIED.
- 2. WET AND DAMP LOCATIONS: USE RIGID STEEL AND ALUMINUM CONDUIT AND INTERMEDIATE METAL CONDUIT.
- DRY LOCATIONS:
- A. CONCEALED: USE RIGID STEEL AND ALUMINUM CONDUIT, INTERMEDIATE METAL CONDUIT, AND ELECTRICAL METALLIC TUBING.
- B. EXPOSED: USE RIGID STEEL, INTERMEDIATE METAL CONDUIT, AND ELECTRICAL METALLIC TUBING AND THICK WALL NONMETALLIC CONDUIT.

B. METAL CONDUIT

- 1. RIGID STEEL CONDUIT: ANSI C80.1.
- 2. RIGID ALUMINUM CONDUIT: ANSI C80.5.
- 3. INTERMEDIATE METAL CONDUIT (IMC): RIGID STEEL.
- 4. FITTINGS AND CONDUIT BODIES: ANSI/NEMA FB 1-88; ALL STEEL FITTINGS.

C. FLEXIBLE METAL CONDUIT

- DESCRIPTION: INTERLOCKED STEEL CONSTRUCTION.
- 2. FITTINGS: ANSI/NEMA FB 1-88.

D. ELECTRICAL METALLIC TUBING (EMT)

- 1. DESCRIPTION: ANSI C80.3: GALVANIZED TUBING.
- 2. FITTINGS AND CONDUIT BODIES: ANSI/NEMA FB 1-88; STEEL OR MALLEABLE IRON, COMPRESSION TYPE.

E. NONMETALLIC TUBING

- 1. DESCRIPTION: NEMA TC 2.
- 2. FITTINGS AND CONDUIT BODIES: NEMA TC 3.

2.3 BUILDING WIRE AND CABLE

- A. GENERAL: SINGLE CONDUCTOR INSULATED WIRE
- CONDUCTOR: COPPER.
- INSULATION VOLTAGE RATING: 600 VOLTS.
- 3. INSULATION: ANSI/NFPA 70; TYPE THHN/THWN OR XHHN INSULATION FOR FEEDERS AND BRANCH CIRCUITS.

B. BRANCH CIRCUIT CABLE: ANSI/NFPA 70, TYPE UF

- CONDUCTOR: COPPER
- INSULATION VOLTAGE RATING: 600 VOLTS.
- 3. INSULATION TEMPERATURE RATING: 90 DEGREES C.

C. WIRING CONNECTORS:

- SPLIT BOLT CONNECTORS.
- 2. SOLDERLESS PRESSURE CONNECTORS
- SPRING WIRE CONNECTORS.
- 4. COMPRESSION CONNECTORS

2.4 BOXES

A. OUTLET BOXES

- 1. SHEET METAL OUTLET BOXES: ANSI/NEMA OS 1; GALVANIZED STEEL.
 - A. LUMINAIRE AND EQUIPMENT SUPPORTING BOXES: RATED FOR WEIGHT OF EQUIPMENT SUPPORTED; INCLUDE 1/2-INCH MALE FIXTURE STUDS WHERE REQUIRED.
 - B. CONCRETE CEILING BOXES: CONCRETE TYPE.

2. NONMETALLIC OUTLET BOXES: ANSI/NEMA OS 2.

- 3. CAST BOXES: NEMA FB 1, TYPE FD, ALUMINUM OR CAST FERROALLOY. PROVIDE GASKETED COVER BY BOX MANUFACTURER. PROVIDE THREADED HUBS.
- B. PULL AND JUNCTION BOXES: SHEET METAL BOXES: ANSI/NEMA OS 1; GALVANIZED STEEL.

2.5 WIRING DEVICES

- A. WALL SWITCHES: NEMA WD 1, HEAVY-DUTY, AC ONLY HOSPITAL GRADE SNAP SWITCH. BODY AND HANDLE: WHITE PLASTIC WITH TOGGLE HANDLE. INDICATOR LIGHT: LIGHTED HANDLE TYPE SWITCH; RED COLOR HANDLE. LOCATOR LIGHT: LIGHTED HANDLE TYPE SWITCH; GREEN COLOR HANDLE. RATINGS: VOLTAGE: 120-277 VOLTS, AC. CURRENT: 20 AMPERES OR MATCH BRANCH CIRCUIT AND LOAD CHARACTERISTICS.
- B. RECEPTACLES: NEMA WD 1, HEAVY DUTY HOSPITAL GRADE RECEPTACLE. DEVICE BODY: WHITE PLASTIC. CONFIGURATION: NEMA WD 6, TYPE AS SPECIFIED AND INDICATED. CONVENIENCE RECEPTACLE: TYPE 5-20. GFCI RECEPTACLE: CONVENIENCE RECEPTACLE WITH INTEGRAL GROUND FAULT CIRCUIT INTERRUPTER TO MEET REGULATORY REQUIREMENTS.
- C. WALL PLATES: PLASTIC.

2.6 SUPPORTING DEVICES

- A. MATERIALS AND FINISHES: PROVIDE ADEQUATE CORROSION RESISTANCE.
- B. PROVIDE MATERIALS, SIZES, AND TYPES OF ANCHORS, FASTENERS AND SUPPORTS TO CARRY THE LOADS OF EQUIPMENT AND CONDUIT. CONSIDER WEIGHT OF WIRE IN CONDUIT WHEN SELECTING PRODUCTS.

C. ANCHORS AND FASTENERS:

- 1. CONCRETE STRUCTURAL ELEMENTS: USE PRECAST INSERT SYSTEM, EXPANSION
- ANCHORS, POWDER-ACTUATED ANCHORS AND PRESET INSERTS. 2. STEEL STRUCTURAL ELEMENTS: USE BEAMS CLAMPS WITH SEISMIC SAFETY STRAP,
- SPRING STEEL CLIPS, STEEL RAMSET FASTENERS, AND WELDED FASTENERS. 3. CONCRETE SURFACES: USE SELF-DRILLING ANCHORS AND EXPANSION ANCHORS.
- 4. HOLLOW MASONRY, PLASTER, AND GYPSUM BOARD PARTITIONS: USE TOGGLE BOLTS AND HOLLOW WALL FASTENERS.
- 5. SOLID MASONRY WALLS: USE EXPANSION ANCHORS AND PRESET INSERTS.
- SHEET METAL: USE SHEET METAL SCREWS.
- 7. WOOD ELEMENTS: USE WOOD SCREWS.

D. STEEL CHANNEL DESCRIPTION: GALVANIZED STEEL.

- E. POWDER ACTUATED ANCHORS: DESCRIPTION:
- F. SPRING STEEL CLIPS: DESCRIPTION

2.7 PANELBOARDS

A. MANUFACTURER: CUTLER HAMMER, EATON

B. BRANCH CIRCUIT PANELBOARDS

- 1. LIGHTING AND APPLIANCE BRANCH CIRCUIT PANELBOARDS: NEMA PB1, CIRCUIT BREAKER
- 2. PANELBOARD BUS: COPPER, RATINGS AS INDICATED. PROVIDE COPPER GROUND BUS IN EACH PANELBOARD. MINIMUM INTEGRATED SHORT CIRCUIT RATING: 10,000 AMPERES RMS SYMMETRICAL FOR
- 240 VOLT PANELBOARDS; 14,000 AMPERES RMS SYMMETRICAL FOR 480 VOLT PANELBOARDS, OR AS INDICATED ON DRAWINGS. MOLDED CASE CIRCUIT BREAKERS: NEMA AB 1, BOLT-ON TYPE THERMAL MAGNETIC TRIP
- CIRCUIT BREAKERS, WITH COMMON TRIP HANDLE FOR ALL POLES. PROVIDE CIRCUIT BREAKERS UL LISTED AS TYPE SWD FOR LIGHTING CIRCUITS. PROVIDE UL CLASS A GROUND FAULT INTERRUPTER CIRCUIT BREAKERS WHERE SCHEDULED. DO NOT USE TANDEM CIRCUIT BREAKERS. CURRENT LIMITING MOLDED CASE CIRCUIT BREAKERS: NEMA AB 1. PROVIDE CIRCUIT
- COORDINATED WITH AUTOMATICALLY RESETTING CURRENT LIMITING ELEMENTS IN EACH POLE. INTERRUPTING RATING 100,000 SYMMETRICAL AMPERES, LET-THROUGH CURRENT AND ENERGY LEVEL LESS THAN PERMITTED FOR SAME SIZE CLASS RK-5 FUSE.

BREAKERS WITH INTEGRAL THERMAL AND INSTANTANEOUS MAGNETIC TRIP IN EACH POLE

6. PROVIDE TYPED CIRCUIT DIRECTORY FOR EACH BRANCH CIRCUIT PANELBOARD.

2.8 INTERIOR LUMINAIRES

A. LUMINAIRES

- FURNISH PRODUCTS AS SPECIFIED IN SCHEDULE ON DRAWINGS.
- INSTALL BALLASTS, LAMPS, AND SPECIFIED ACCESSORIES AT FACTORY.
- B. BALLASTS: DESCRIPTION: ANSI C82.1, HIGH POWER FACTOR TYPE ELECTRONIC BALLAST, PROGRAMMED RAPID START.
 - 1. PROVIDE BALLAST SUITABLE FOR LAMPS SPECIFIED.
 - 2. VOLTAGE: MATCH LUMINAIRE VOLTAGE.
- 3. SOURCE QUALITY CONTROL: CERTIFY BALLAST DESIGN AND CONSTRUCTION BY CERTIFIED BALLAST MANUFACTURERS, INC.
- C. LAMPS: PROVIDE LAMP TYPE SPECIFIED FOR LUMINAIRE. REFLECTOR LAMP BEAM PATTERNS: ANSI C78.379.

PART 3: EXECUTION

- 3.1 DEMOLITION AND EXTENSION OF EXISTING ELECTRICAL WORK A. VERIFY FIELD MEASUREMENTS AND CIRCUITING ARRANGEMENTS ARE AS SHOWN ON
- B. VERIFY THAT ABANDONED WIRING AND EQUIPMENT SERVE ONLY ABANDONED FACILITIES.
- C. BEGINNING OF DEMOLITION MEANS INSTALLER ACCEPTS EXISTING CONDITIONS. D. DISCONNECT ELECTRICAL SYSTEMS IN WALLS, FLOORS, AND CEILINGS SCHEDULED FOR
- E. PROVIDE TEMPORARY WIRING AND CONNECTIONS TO MAINTAIN EXISTING SYSTEMS IN SERVICE
- DURING CONSTRUCTION. WHEN WORK MUST BE PERFORMED ON ENERGIZED EQUIPMENT OR CIRCUITS USE PERSONNEL EXPERIENCED IN SUCH OPERATIONS.
- F. DEMOLISH AND EXTEND EXISTING ELECTRICAL WORK AS INDICATED ON DRAWINGS.
- G. REMOVE, RELOCATE, AND EXTEND EXISTING INSTALLATIONS TO ACCOMMODATE NEW CONSTRUCTION.
- H. REMOVE ABANDONED WIRING TO SOURCE OF SUPPLY.
- REMOVE EXPOSED ABANDONED CONDUIT, INCLUDING ABANDONED CONDUIT ABOVE ACCESSIBLE CEILING FINISHES. CUT CONDUIT FLUSH WITH WALLS AND FLOORS, AND PATCH
- DISCONNECT ABANDONED OUTLETS AND REMOVE DEVICES. REMOVE ABANDONED OUTLETS IF CONDUIT SERVICING THEM IS ABANDONED AND REMOVED. PROVIDE BLANK COVER FOR ABANDONED OUTLETS THAT ARE NOT REMOVED.
- K. DISCONNECT AND REMOVE ABANDONED PANELBOARDS AND DISTRIBUTION EQUIPMENT.
- L. DISCONNECT AND REMOVE ELECTRICAL DEVICES AND EQUIPMENT SERVING UTILIZATION EQUIPMENT THAT HAS BEEN REMOVED. M. DISCONNECT AND REMOVE ABANDONED LUMINAIRES. REMOVE BRACKETS, STEMS, HANGERS,
- AND OTHER ACCESSORIES. N. REPAIR ADJACENT CONSTRUCTION AND FINISHES DAMAGED DURING DEMOLITION AND
- O. MAINTAIN ACCESS TO EXISTING ELECTRICAL INSTALLATIONS WHICH REMAIN ACTIVE. MODIFY INSTALLATION OR PROVIDE ACCESS PANEL AS APPROPRIATE.
- P. EXTEND EXISTING INSTALLATIONS USING MATERIALS AND METHODS COMPATIBLE WITH EXISTING ELECTRICAL INSTALLATIONS, OR AS SPECIFIED.

Q. INSTALL RELOCATED MATERIALS AND EQUIPMENT UNDER THE PROVISIONS OF DIVISION 1.

3.2 CONDUIT INSTALLATION A. GENERAL

EXTENSION WORK.

- INSTALL CONDUIT IN ACCORDANCE WITH NECA "STANDARD OF INSTALLATION."
- 2. INSTALL NONMETALLIC CONDUIT IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- ARRANGE SUPPORTS TO PREVENT MISALIGNMENT DURING WIRING INSTALLATION.
- 4. SUPPORT CONDUIT USING COATED STEEL OR MALLEABLE IRON STRAPS, LAY-IN ADJUSTABLE HANGERS, CLEVIS HANGERS, AND SPLIT HANGERS.
- 5. GROUP RELATED CONDUITS; SUPPORT USING CONDUIT RACK. CONSTRUCT RACK USING STEEL CHANNEL: PROVIDE SPACE ON EACH FOR 25 PERCENT ADDITIONAL CONDUITS.
- 6. FASTEN CONDUIT SUPPORTS TO BUILDING STRUCTURE AND SURFACES 7. DO NOT SUPPORT CONDUIT WITH WIRE OR PERFORATED PIPE STRAPS. REMOVE WIRE
- USED FOR TEMPORARY SUPPORTS 8. DO NOT ATTACH CONDUIT TO CEILING SUPPORT WIRES.
- 9. ARRANGE CONDUIT TO MAINTAIN HEADROOM AND PRESENT NEAT APPEARANCE.
- 10. ROUTE CONDUIT PARALLEL AND PERPENDICULAR TO WALLS. 11. ROUTE CONDUIT INSTALLED ABOVE ACCESSIBLE CEILINGS PARALLEL AND
- PERPENDICULAR TO WALLS.
- 12. ROUTE CONDUIT UNDER SLAB FROM POINT-TO-POINT. 13. DO NOT CROSS CONDUITS IN SLAB.
- 14. MAINTAIN ADEQUATE CLEARANCE BETWEEN CONDUIT AND PIPING.
- 15. MAINTAIN 12-INCH CLEARANCE BETWEEN CONDUIT AND SURFACES WITH TEMPERATURES EXCEEDING 104 DEGREES F.
- 16. CUT CONDUIT SQUARE USING SAW OR PIPECUTTER; DE-BURR CUT ENDS.
- 17. BRING CONDUIT TO SHOULDER OF FITTINGS; FASTEN SECURELY. 18. JOIN NONMETALLIC CONDUIT USING CEMENT AS RECOMMENDED BY MANUFACTURER. WIPE NONMETALLIC CONDUIT DRY AND CLEAN BEFORE JOINING. APPLY FULL EVEN COAT OF CEMENT TO ENTIRE AREA INSERTED IN FITTING. ALLOW JOINT TO CURE FOR 20
- 19. USE CONDUIT HUBS OR SEALING LOCKNUTS TO FASTEN CONDUIT TO SHEET METAL
- BOXES IN DAMP AND WET LOCATIONS AND TO CAST BOXES. 20. INSTALL NO MORE THAN EQUIVALENT OF THREE 90-DEGREE BENDS BETWEEN BOXES. USE CONDUIT BODIES TO MAKE SHARP CHANGES IN DIRECTION, AS AROUND BEAMS. USE HYDRAULIC ONE-SHOT BENDER TO FABRICATE BENDS IN METAL CONDUIT LARGER THAN
- 21. AVOID MOISTURE TRAPS; PROVIDE JUNCTION BOX WITH DRAIN FITTING AT LOW POINTS IN
- 22. PROVIDE SUITABLE FITTINGS TO ACCOMMODATE EXPANSION AND DEFLECTION WHERE CONDUIT CROSSES SEISMIC, CONTROL AND EXPANSION JOINTS.
- 23. PROVIDE SUITABLE PULL STRING IN EACH EMPTY CONDUIT EXCEPT SLEEVES AND
- 25. GROUND AND BOND CONDUIT
- 26. IDENTIFY CONDUIT
- B. INTERFACE WITH OTHER PRODUCTS: INSTALL CONDUIT TO PRESERVE FIRE RESISTANCE RATING OF PARTITIONS CEILING AND OTHER ELEMENTS. USING MATERIALS AND METHODS UNDER THE PROVISIONS OF ARCHITECTURAL SPECS.

24. USE SUITABLE CAPS TO PROTECT INSTALLED CONDUIT AGAINST ENTRANCE OF DIRT AND

3.3 BUILDING WIRE AND CABLE

A. GENERAL

- VERIFY THAT INTERIOR OF BUILDING HAS BEEN PROTECTED FROM WEATHER.
- 2. VERIFY THAT MECHANICAL WORK LIKELY TO DAMAGE WIRE AND CABLE HAS BEEN
- 3. COMPLETELY AND THOROUGHLY SWAB RACEWAY BEFORE INSTALLING WIRE.
- WIRING METHODS

OR XHHN INSULATION, IN RACEWAY

OR XHHN INSULATION, IN RACEWAY

- A. CONCEALED DRY INTERIOR LOCATIONS: USE ONLY BUILDING WIRE, TYPE THHN/THWN-2 OR XHHN INSULATION, IN RACEWAY. B. EXPOSED DRY INTERIOR LOCATIONS: USE ONLY BUILDING WIRE, TYPE THHN/THWN-2
- C. ABOVE ACCESSIBLE CEILINGS: USE ONLY BUILDING WIRE, TYPE THHN/THWN-2 OR XHHN INSULATION, IN RACEWAY.
- E. USE WIRING METHODS INDICATED ON DRAWINGS.

INSTALLATION

- A. INSTALL PRODUCTS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS
- B. USE SOLID CONDUCTOR FOR FEEDERS AND BRANCH CIRCUITS 10 AWG AND SMALLER.
- C. USE STRANDED CONDUCTORS FOR CONTROL CIRCUITS.

D. USE CONDUCTOR NOT SMALLER THAN 12 AWG FOR POWER AND LIGHTING CIRCUITS.

- E. USE CONDUCTOR NOT SMALLER THAN 16 AWG FOR CONTROL CIRCUITS.
- F. USE 10 AWG CONDUCTORS FOR 20 AMPERE, 120-VOLT BRANCH CIRCUITS LONGER THAN 75 FEET.
- G. USE 10 AWG CONDUCTORS FOR 20 AMPERE, 277-VOLT BRANCH CIRCUITS LONGER THAN 200 FEET.
- H. PULL ALL CONDUCTORS INTO RACEWAY AT SAME TIME.
- I. USE SUITABLE WIRE PULLING LUBRICANT FOR BUILDING WIRE 4 AWG AND LARGER.
- K. SUPPORT CABLES ABOVE ACCESSIBLE CEILING. USING SPRING METAL CLIPS OR METAL OR PLASTIC CABLE TIES TO SUPPORT CABLES FROM STRUCTURE. DO NOT
- L. USE SUITABLE CABLE FITTINGS AND CONNECTORS.

J. PROTECT EXPOSED CABLE FROM DAMAGE.

REST CABLE ON CEILING PANELS.

- M. NEATLY TRAIN AND LACE WIRING INSIDE BOXES, EQUIPMENT, AND PANELBOARDS.
- N. CLEAN CONDUCTOR SURFACES BEFORE INSTALLING LUGS AND CONNECTORS.

TAPE TO 150 PERCENT OF INSULATION RATING OF CONDUCTOR.

- O. MAKE SPLICES, TAPS, AND TERMINATIONS TO CARRY FULL AMPACITY OF CONDUCTORS WITH NO PERCEPTIBLE TEMPERATURE RISE. P. USE SPLIT BOLT CONNECTORS FOR COPPER CONDUCTOR SPLICES AND TAPS, 6 AWG
- Q. USE SOLDERLESS PRESSURE CONNECTORS WITH INSULATING COVERS FOR COPPER

AND LARGER. TAPE UNINSULATED CONDUCTORS AND CONNECTOR WITH ELECTRICAL

- CONDUCTOR SPLICES AND TAPS, 8 AWG AND SMALLER. R. USE INSULATED SPRING WIRE CONNECTORS WITH PLASTIC CAPS FOR COPPER CONDUCTOR SPLICES AND TAPS, 10 AWG AND SMALLER.
- 6. INTERFACE WITH OTHER PRODUCTS: IDENTIFY WIRE AND CABLE. IDENTIFY EACH CONDUCTOR WITH ITS CIRCUIT NUMBER OR OTHER DESIGNATION INDICATED ON

7. FIELD QUALITY CONTROL: INSPECT WIRE AND CABLE FOR PHYSICAL DAMAGE AND PROPER

CONNECTION. MEASURE TIGHTNESS OF BOLTED CONNECTIONS AND COMPARE TORQUE

MEASUREMENTS WITH MANUFACTURER'S RECOMMENDED VALUES. VERIFY CONTINUITY OF EACH BRANCH CIRCUIT CONDUCTOR.

SIMILAR DEVICES WITH EACH OTHER.

3.4 BOXES

A. GENERAL

2. INSTALL ELECTRICAL BOXES TO MAINTAIN HEADROOM AND TO PRESENT NEAT MECHANICAL APPEARANCE

1. INSTALL ELECTRICAL BOXES AS SHOWN ON DRAWINGS, AND AS REQUIRED FOR SPLICES,

TAPS, WIRE PULLING, EQUIPMENT CONNECTIONS, AND COMPLIANCE WITH REGULATORY

- 3. INSTALL PULLBOXES AND JUNCTION BOXES ABOVE ACCESSIBLE CEILING AND IN UNFINISHED AREAS ONLY.
- 4. INACCESSIBLE CEILING AREAS: INSTALL OUTLET AND JUNCTION BOXES NO MORE THAN 6 INCHES FROM CEILING ACCESS PANEL OR FROM REMOVABLE RECESSED LUMINAIRE. 5. INSTALL BOXES TO PRESERVE FIRE RESISTANCE RATING OF PARTITIONS, CEILINGS AND

OTHER ELEMENTS. USING MATERIALS AND METHODS UNDER THE PROVISIONS OF

- ARCHITECTURAL SPECS. 6. ALIGN ADJACENT WALL-MOUNTED OUTLET BOXES FOR SWITCHES, THERMOSTATS, AND
- 7. USE FLUSH MOUNTING OUTLET BOXES IN FINISHED AREA. 8. DO NOT INSTALL FLUSH MOUNTING BOXES BACK-TO-BACK IN WALLS; PROVIDE MINIMUM
- 9. SECURE FLUSH MOUNTING BOXES TO INTERIOR WALL AND PARTITION STUDS. ACCURATELY POSITION TO ALLOW FOR SURFACE FINISH THICKNESS.

6-INCH SEPARATION. PROVIDE MINIMUM 24 INCHES SEPARATION IN ACOUSTIC RATED

- 10. USE STAMPED STEEL BRIDGES TO FASTEN FLUSH MOUNTING OUTLET BOX BETWEEN
- 11. INSTALL FLUSH MOUNTING BOX WITHOUT DAMAGING WALL INSULATION OR REDUCING ITS
- 12. USE ADJUSTABLE STEEL CHANNEL FASTENERS FOR HUNG CEILING OUTLET BOX. 13. DO NOT FASTEN BOXES TO CEILING SUPPORT WIRES.
- 14. SUPPORT BOXES INDEPENDENTLY OF CONDUIT, EXCEPT CAST BOX THAT IS CONNECTED TO TWO RIGID METAL CONDUITS, BOTH SUPPORTED WITHIN 12 INCHES OF BOX.

15. USE GANG BOXES WHERE MORE THAN ONE DEVICE IS MOUNTED TOGETHER. DO NOT USE

- SECTIONAL BOXES. 16. USE GANG BOX WITH PLASTER RING FOR SINGLE DEVICE OUTLETS.
- 17. USE CAST OUTLET BOXES IN EXTERIOR LOCATIONS EXPOSED TO THE WEATHER AND WET LOCATIONS.

18. USE CAST FLOOR BOXES FOR INSTALLATIONS IN SLAB ON GRADE; FORMED STEEL BOXES

- 19. SET FLOOR BOXES LEVEL. 20. LARGE PULLBOXES: BOXES LARGER THAN 100 CUBIC INCHES IN VOLUME OR 12 INCHES IN
- ANY DIMENSION. 21. LOCATIONS: INTERIOR DRY LOCATIONS: USE HINGED ENCLOSURE. OTHER LOCATIONS:

B. INTERFACE WITH OTHER PRODUCTS

ARE ACCEPTABLE FOR OTHER INSTALLATIONS.

USE SURFACE-MOUNTED CAST METAL BOX.

1. COORDINATE LOCATIONS AND SIZES OF REQUIRED ACCESS DOORS. 2. LOCATE FLUSH MOUNTING BOX IN MASONRY WALL TO REQUIRE CUTTING OF MASONRY

UNIT CORNER ONLY. COORDINATE MASONRY CUTTING TO ACHIEVE NEAT OPENING.

3. COORDINATE MOUNTING HEIGHTS AND LOCATIONS OF OUTLETS MOUNTED ABOVE COUNTERS, BENCHES, AND BACKSPLASHES.

4. POSITION OUTLETS TO LOCATE LUMINAIRES AS SHOWN ON REFLECTED CEILING PLANS.

- C. ADJUSTING 1. ADJUST FLOOR BOX FLUSH WITH FINISH FLOORING MATERIAL.
- 2. ADJUST FLUSH-MOUNTING OUTLETS TO MAKE FRONT FLUSH WITH FINISHED WALL

2. VERIFY THAT WALL OPENINGS ARE NEATLY CUT AND WILL BE COMPLETELY COVERED BY

4. VERIFY THAT BRANCH CIRCUIT WIRING INSTALLATION IS COMPLETED, TESTED, AND

3. INSTALL KNOCKOUT CLOSURE IN UNUSED BOX OPENING.

3.5 WIRING DEVICES

WALL PLATES.

A. GENERAI

- 1. VERIFY THAT OUTLET BOXES ARE INSTALLED AT PROPER HEIGHT.
- 3. VERIFY THAT FLOOR BOXES ARE ADJUSTED PROPERLY

5. VERIFY THAT OPENINGS IN ACCESS FLOOR ARE IN PROPER LOCATIONS.

B. PREPARATION: PROVIDE EXTENSION RINGS TO BRING OUTLET BOXES FLUSH WITH FINISHED SURFACE. D. WET OR DAMP INTERIOR LOCATIONS: USE ONLY BUILDING WIRE, TYPE THHN/THWN-2

READY FOR CONNECTION TO WIRING DEVICES.

3.6 GROUNDING AND BONDING

A. FIELD QUALITY CONTROL

- 1. INSPECT GROUNDING AND BONDING SYSTEM CONDUCTORS AND CONNECTIONS FOR TIGHTNESS AND PROPER INSTALLATION. 3.7 SUPPORTING DEVICES
- A. INSTALL PRODUCTS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- B. PROVIDE ANCHORS, FASTENERS, AND SUPPORTS IN ACCORDANCE WITH NECA "STANDARD OF

C. DO NOT FASTEN SUPPORTS TO PIPES, DUCTS, MECHANICAL EQUIPMENT, AND CONDUIT.

F. OBTAIN PERMISSION FROM ARCHITECT BEFORE DRILLING OR CUTTING STRUCTURAL MEMBERS.

- D. DO NOT USE SPRING STEEL CLIPS AND CLAMPS.
- E. OBTAIN PERMISSION FROM ARCHITECT BEFORE USING POWDER-ACTUATED ANCHORS.
- G. FABRICATE SUPPORTS FROM STRUCTURAL STEEL OR STEEL CHANNEL. RIGIDLY WELD MEMBERS OR USE HEXAGON HEAD BOLTS TO PRESENT NEAT APPEARANCE WITH ADEQUATE
- STRENGTH AND RIGIDITY. USE SPRING LOCK WASHERS UNDER ALL NUTS. H. INSTALL SURFACE-MOUNTED CABINETS AND PANELBOARDS WITH MINIMUM OF FOUR
- I. IN WET AND DAMP LOCATIONS USES STEEL CHANNEL SUPPORTS TO STAND CABINETS AND

USE SHEET METAL CHANNEL TO BRIDGE STUDS ABOVE AND BELOW CABINETS AND PANELBOARDS RECESSED IN HOLLOW PARTITIONS.

3.8 PANELBOARDS (EXISTING AND NEW)

1. FIELD INSPECTION AND TESTING WILL BE PERFORMED. MEASURE STEADY STATE LOAD CURRENTS AT EACH PANELBOARD FEEDER; REARRANGE CIRCUITS IN THE PANELBOARD TO BALANCE THE PHASE LOADS TO WITHIN 20 PERCENT OF

TIGHTNESS OF CONNECTIONS FOR CIRCUIT BREAKERS, FUSIBLE SWITCHES, AND FUSES.

EACH OTHER. MAINTAIN PROPER PHASING FOR MULTI-WIRE BRANCH CIRCUITS. 3. VISUAL AND MECHANICAL INSPECTION: INSPECT FOR PHYSICAL DAMAGE, PROPER ALIGNMENT, ANCHORAGE, AND GROUNDING. CHECK PROPER INSTALLATION AND

3.9 INTERIOR LUMINAIRES

A. GENERAL

- EXAMINE EACH LUMINAIRE TO DETERMINE SUITABILITY FOR LAMPS SPECIFIED. B. INSTALLATION
 - SWIVEL HANGERS. PROVIDE PENDANT LENGTH REQUIRED TO SUSPEND LUMINAIRE AT
 - 3. SUPPORT LUMINAIRES INDEPENDENT OF CEILING FRAMING
 - 5. INSTALL SURFACE MOUNTED LUMINAIRES AND EXIT SIGNS PLUMB AND ADJUST TO ALIGN WITH BUILDING LINES AND WITH EACH OTHER. SECURE TO PROHIBIT MOVEMENT.
- CEILING TS. [FASTEN SURFACE MOUNTED LUMINAIRES TO CEILING T USING BOLTS, SCREWS, RIVETS, OR SUITABLE CLIPSI.
- 8. INSTALL RECESSED LUMINAIRES USING ACCESSORIES AND FIRESTOPPING MATERIALS TO MEET REGULATORY REQUIREMENTS FOR FIRE RATING.
- 11. CONNECT LUMINAIRES, EMERGENCY LIGHTING UNITS AND EXIT SIGNS TO BRANCH
- INSULATION SUITABLE FOR TEMPERATURE CONDITIONS WITHIN LUMINAIRE. 13. BOND PRODUCTS AND METAL ACCESSORIES TO BRANCH CIRCUIT EQUIPMENT

12. MAKE WIRING CONNECTIONS TO BRANCH CIRCUIT USING BUILDING WIRE WITH

- FURNISHED AND INSTALLED UNDER DIVISION 15

1. AIM AND ADJUST LUMINAIRES AS INDICATED ON DRAWINGS AND AS DIRECTED.

2. REMOVE DIRT AND DEBRIS FROM ENCLOSURE.

CLEAN FINISHES AND TOUCH UP DAMAGE

3. RELAMP LUMINAIRES THAT HAVE FAILED LAMPS AT SUBSTANTIAL COMPLETION.

A. FIELD QUALITY CONTROL

PANELBOARDS ONE INCH OFF WALL.

- 1. EXAMINE SUBSTRATE AND SUPPORTING GRIDS FOR LUMINAIRES.
- 2. INSTALL SUSPENDED LUMINAIRES AND EXIT SIGNS USING PENDANTS SUPPORTED FROM

1. 1. INSTALL IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS.

- 4. LOCATE RECESSED CEILING LUMINAIRES AS INDICATED ON REFLECTED CEILING PLAN.
- 6. EXPOSED GRID CEILINGS: SUPPORT SURFACE MOUNTED LUMINAIRES ON GRID CEILING DIRECTLY FROM BUILDING STRUCTURE AND PROVIDE AUXILIARY MEMBERS SPANNING
- 7. INSTALL RECESSED LUMINAIRES TO PERMIT REMOVAL FROM BELOW.
- 9. INSTALL CLIPS TO SECURE RECESSED GRID-SUPPORTED LUMINAIRES IN PLACE.
- CIRCUIT OUTLETS.

10. INSTALL ACCESSORIES FURNISHED WITH EACH LUMINAIRE.

14. INSTALL SPECIFIED LAMPS IN EACH LUMINAIRE, EMERGENCY LIGHTING UNIT AND EXIT

. INTERFACE WITH OTHER PRODUCTS: INTERFACE WITH AIR HANDLING ACCESSORIES

- D. FIELD QUALITY CONTROL: OPERATE EACH LUMINAIRE AFTER INSTALLATION AND CONNECTION. INSPECT FOR PROPER CONNECTION AND OPERATION.
- 2. ADJUST EXIT SIGN DIRECTIONAL ARROWS AS INDICATED.

E. ADJUSTING

GROUNDING CONDUCTOR.

1. CLEAN ELECTRICAL PARTS TO REMOVE CONDUCTIVE AND DELETERIOUS MATERIALS.

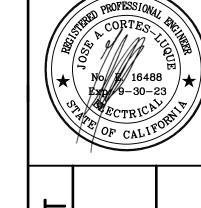
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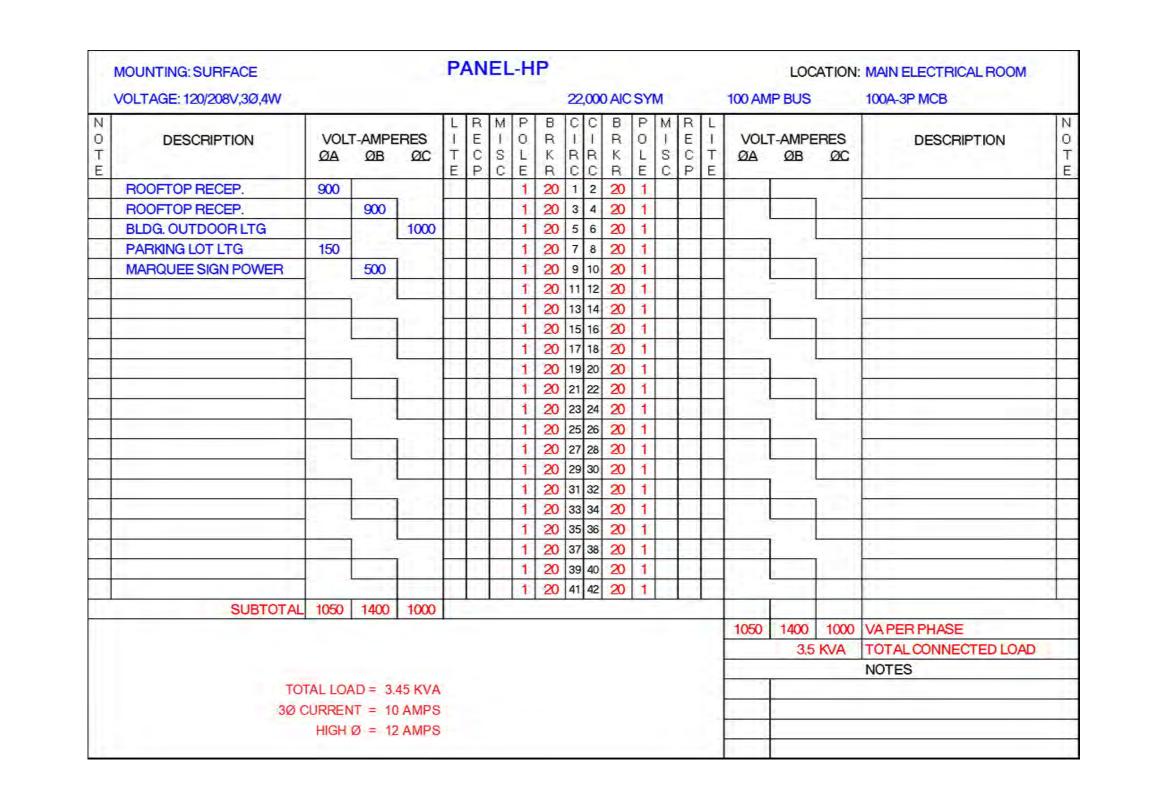
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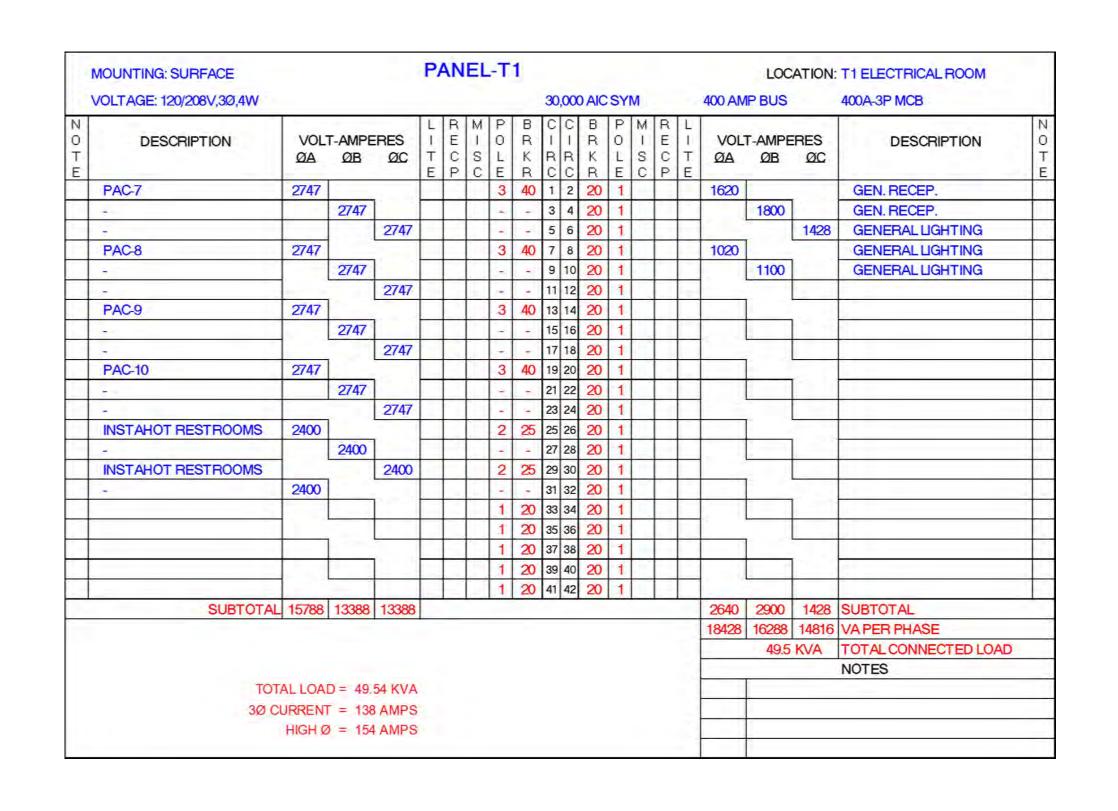
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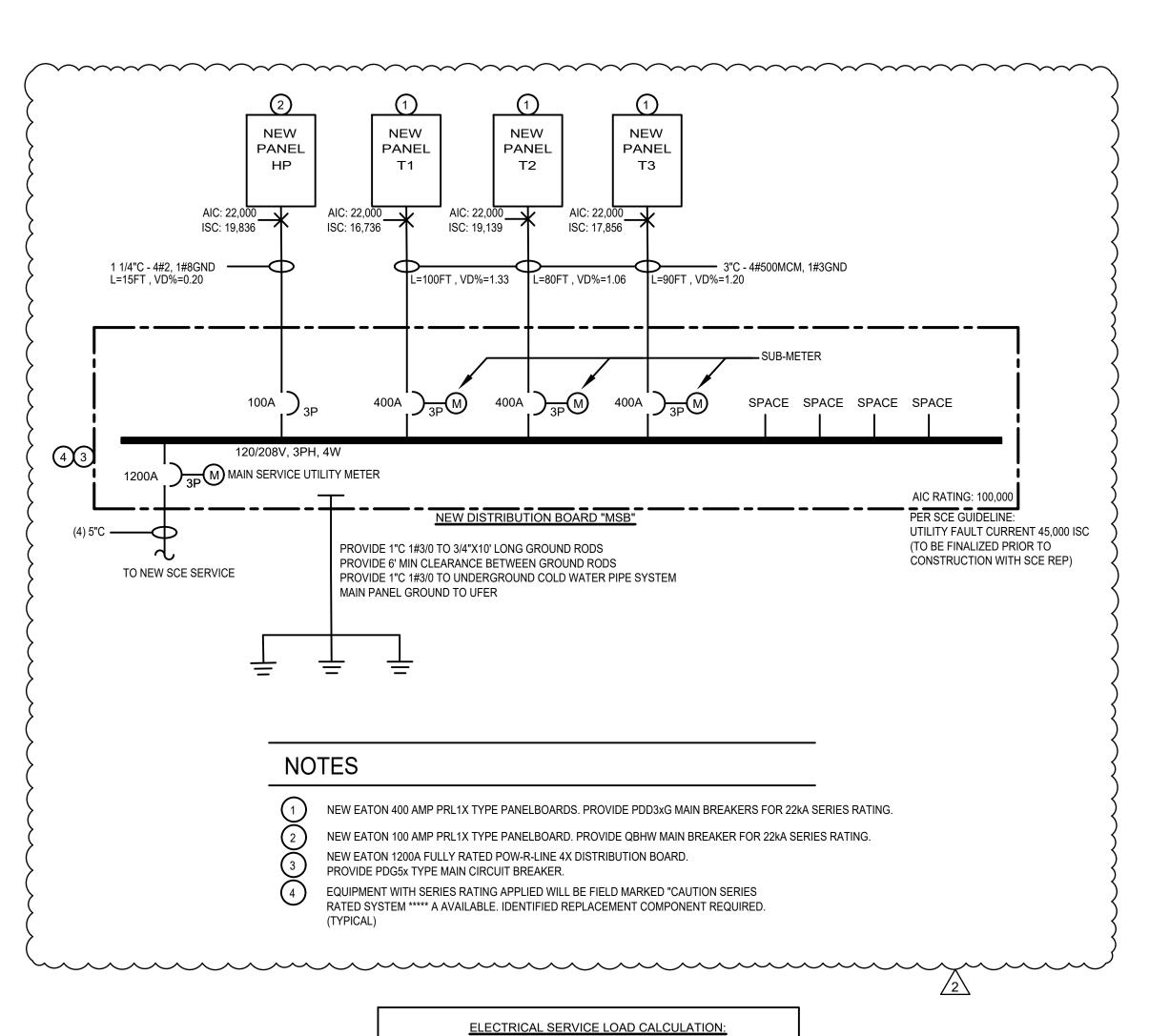
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AS NOTED







GENERAL LIGHT LOAD: 2VA/SQ.FT. X 24,869

GENERAL POWER LOAD: 1VA/SQ.FT. X 24,869

HVAC LOAD: 10 PACKAGE UNITS @ 8,241 VA

SERVICE: 208V/120 3PH, 4W 1200 A

TOTAL CONNECTED LOAD:

FUTURE USE/SPECIAL EQUIP LOAD: 6VA/SQFT X 24,869

49,738 VA

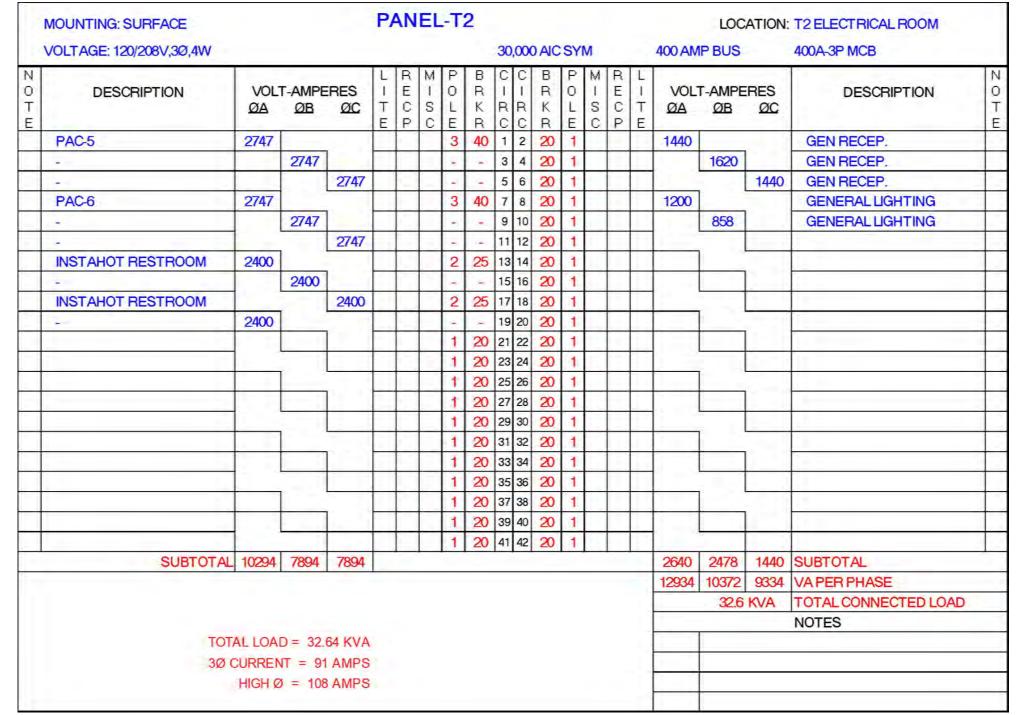
24,869 VA

82,410 VA

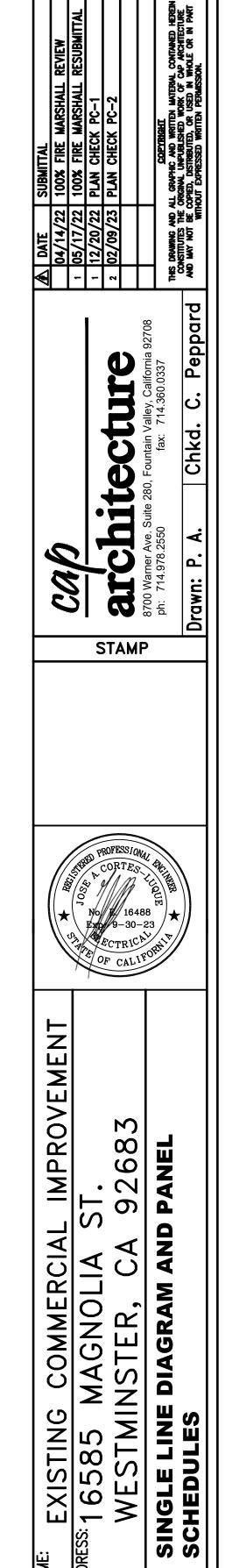
149,214 VA

306,231 VA

OR 850 A



	MOUNTING: SURFACE				P	AN	EL	T	3									LOC	ATION:	T3 ELECTRICAL ROOM	
	VOLTAGE: 120/208V,3Ø,4W									30	,000) AIC	SY	M			400 AM	PBUS		250A-3P MCB	
	DESCRIPTION	VOL ³	T-AMPE ØB	RES ØC	LITE	RECP	M I S C	POLE	BRKR	CIRC	CIRC	B R K R	P O L E	M I S C	RECP	LITE	VOLT ØA	Γ-AMPE ØB	RES ØC	DESCRIPTION	N C T
	PAC-1	2747			Ī	Ĺ	Ē	3	40	1	2	20	1		Ì		1440			GEN RECEP.	
	•		2747					-	-	3	4	20	1					1440		GEN RECEP.	
1				2747			Н	-	÷.	5	6	20	1						1440	GEN RECEP.	
	PAC-2	2747						3	40	7	8	20	1				900			GEN RECEP.	1111
7	*		2747						-	9	10	20	1					1412		GENERALLIGHTING	
	*			2747					-	11	12	20	1						1284	GENERALLIGHTING	
	PAC-3	2747						3	40	13	14	20	1				1406			GENERALLIGHTING	
			2747					_	-	15	16	20	1								
				2747					-	17	18	20	1								
	PAC-4	2747						3	40	19	20	20	1				1				-110
			2747					-	1	21	22	20	1								
	-			2747				~	6	23	24	20	1								- 1 C
	INSTAHOT RESTROOM	2400						2	25	25	26	20	1								
	<u>.</u>	_	2400				E		-	27	28	20	1								
	INSTAHOT RESTROOM			2400			F	2	25	29	30	20	1								
	-	2400						-		31	32	20	1								
	INSTAHOT BREAKROOM		4750					2	50	33	34	20	1								
	+			4750				-	-	35	36	20	1								
							Fi	1	20	37	38	20	1		-						
								1	20	39	40	20	1								
								1	20	41	42	20	1								
	SUBTOTAL	15788	18138	18138													3746	2852	2724	SUBTOTAL	
																	19534	20990	20862	VA PER PHASE	
																		61.4	KVA	TOTAL CONNECTED LOAD)
																				NOTES	
	TOT	AL LOA	D = 61.	39 KVA																	
	3Ø C	JRRENT	T = 171	AMPS																	
		HIGH @) = 175	AMPS																	

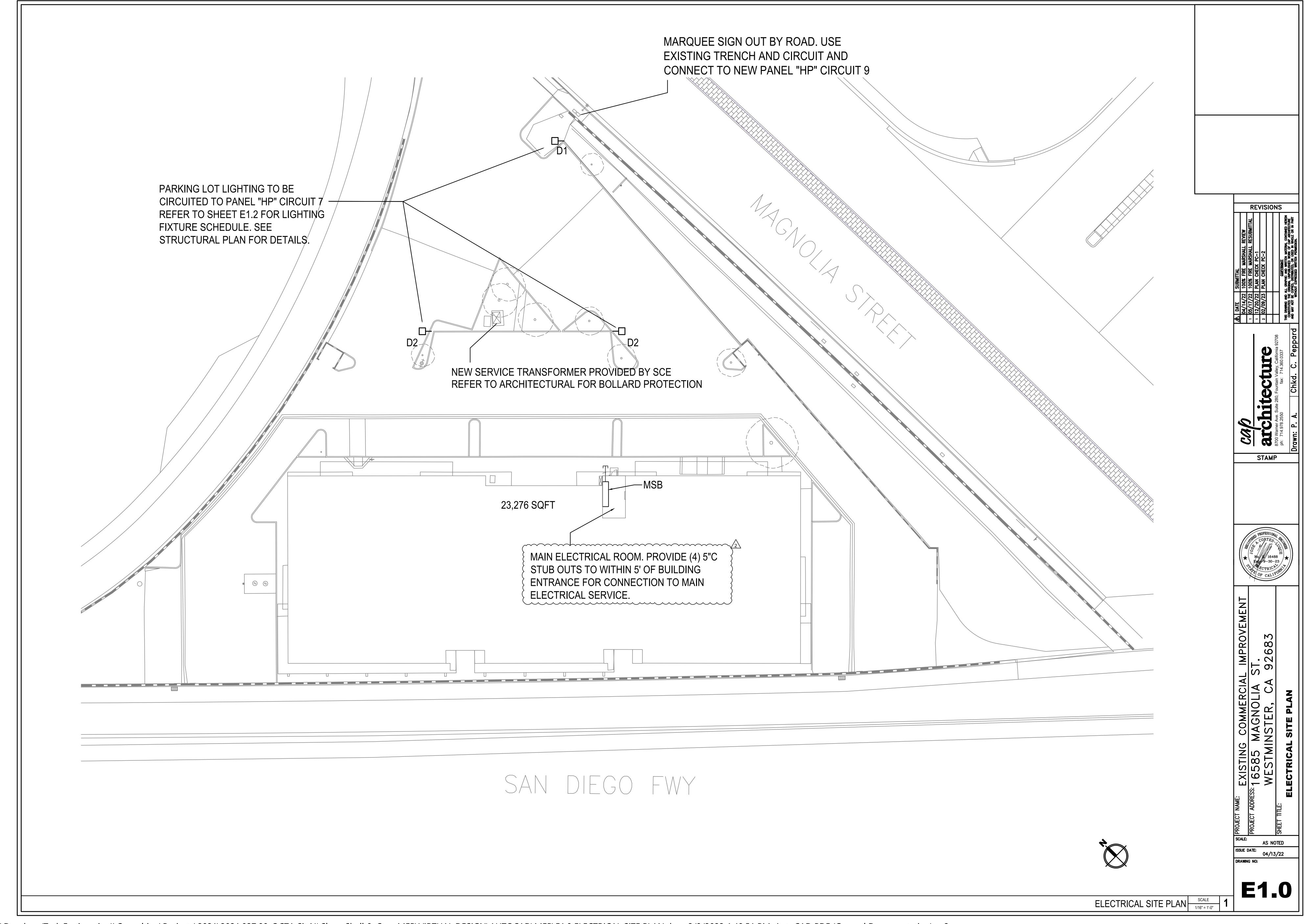


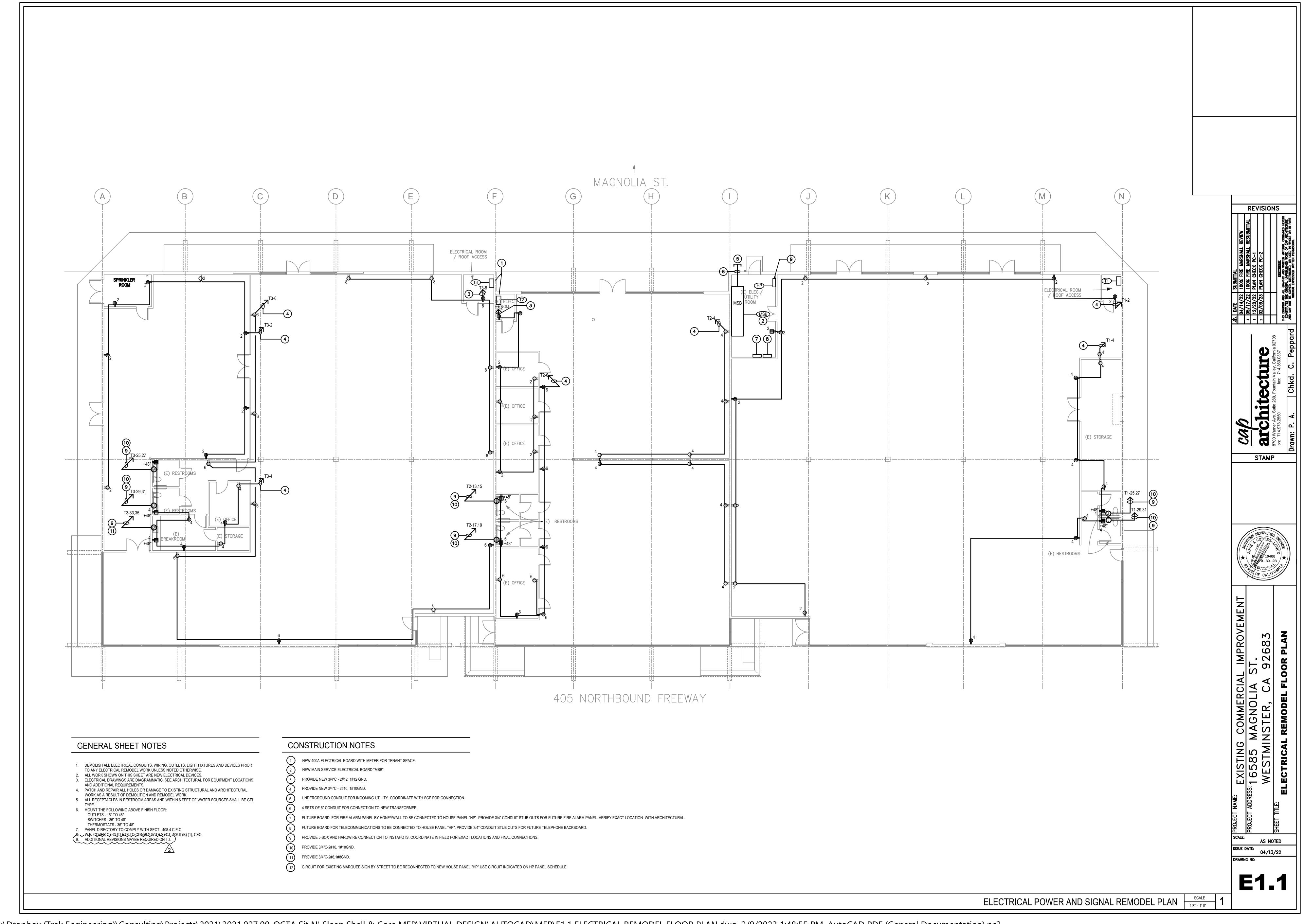
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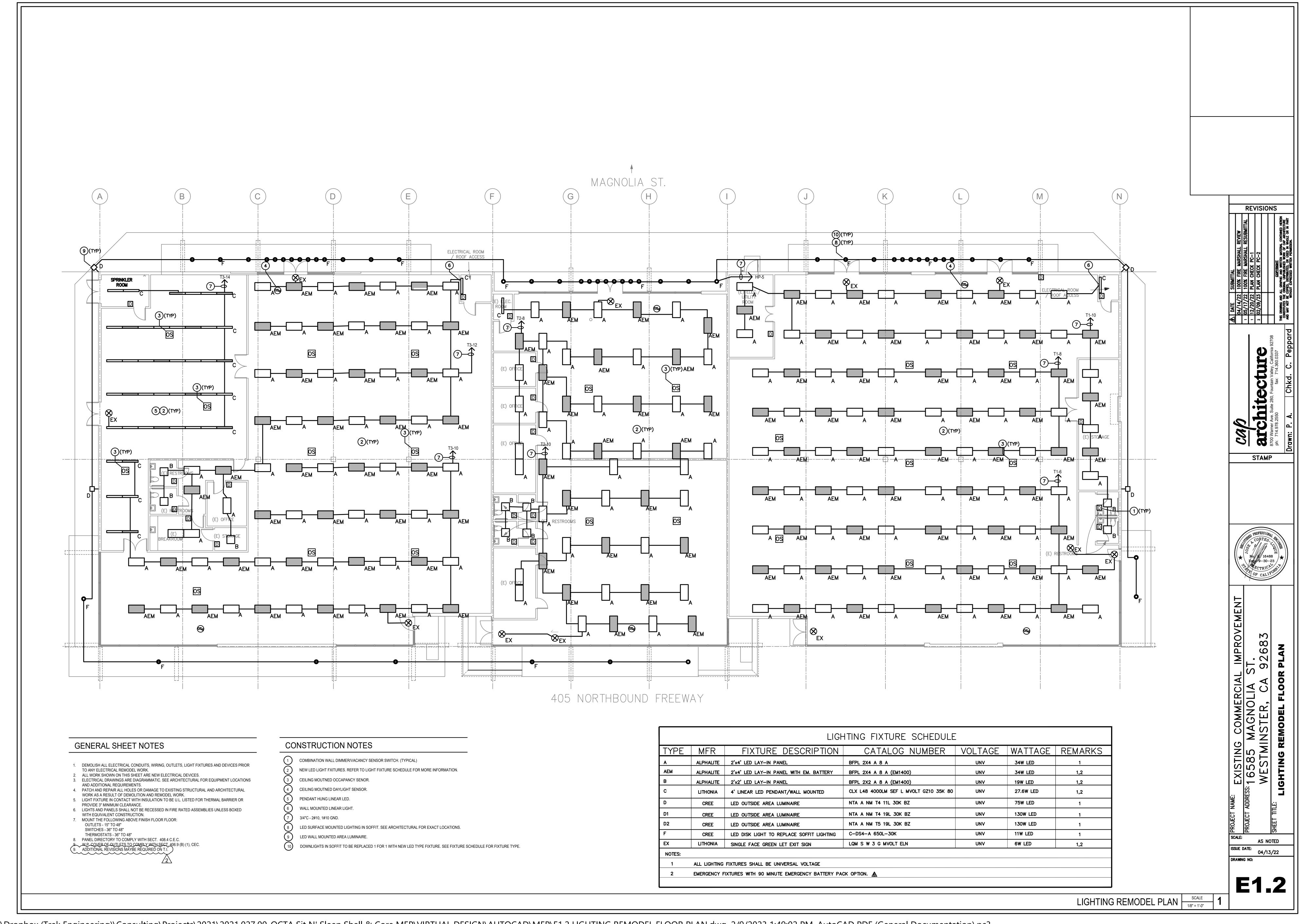
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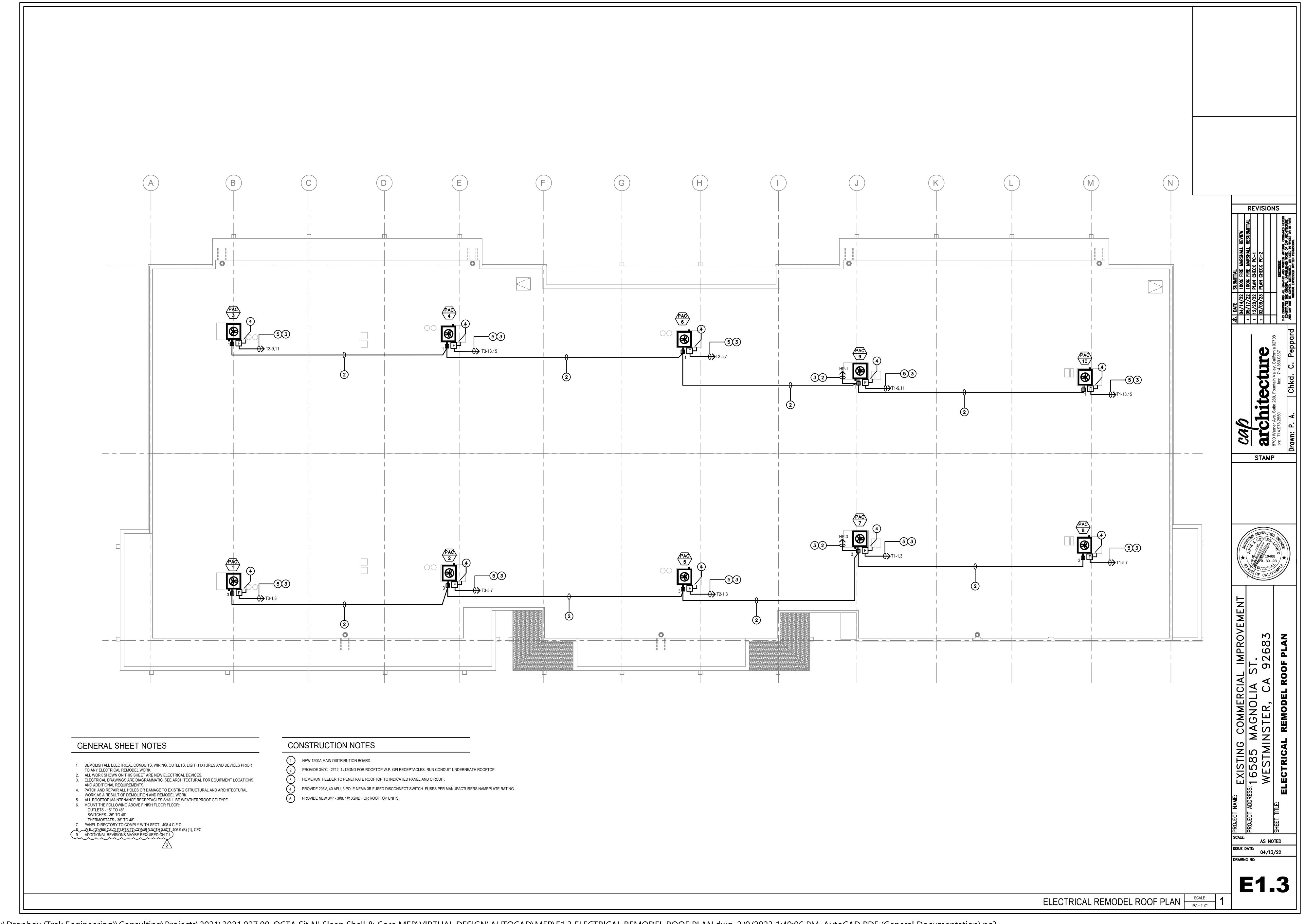
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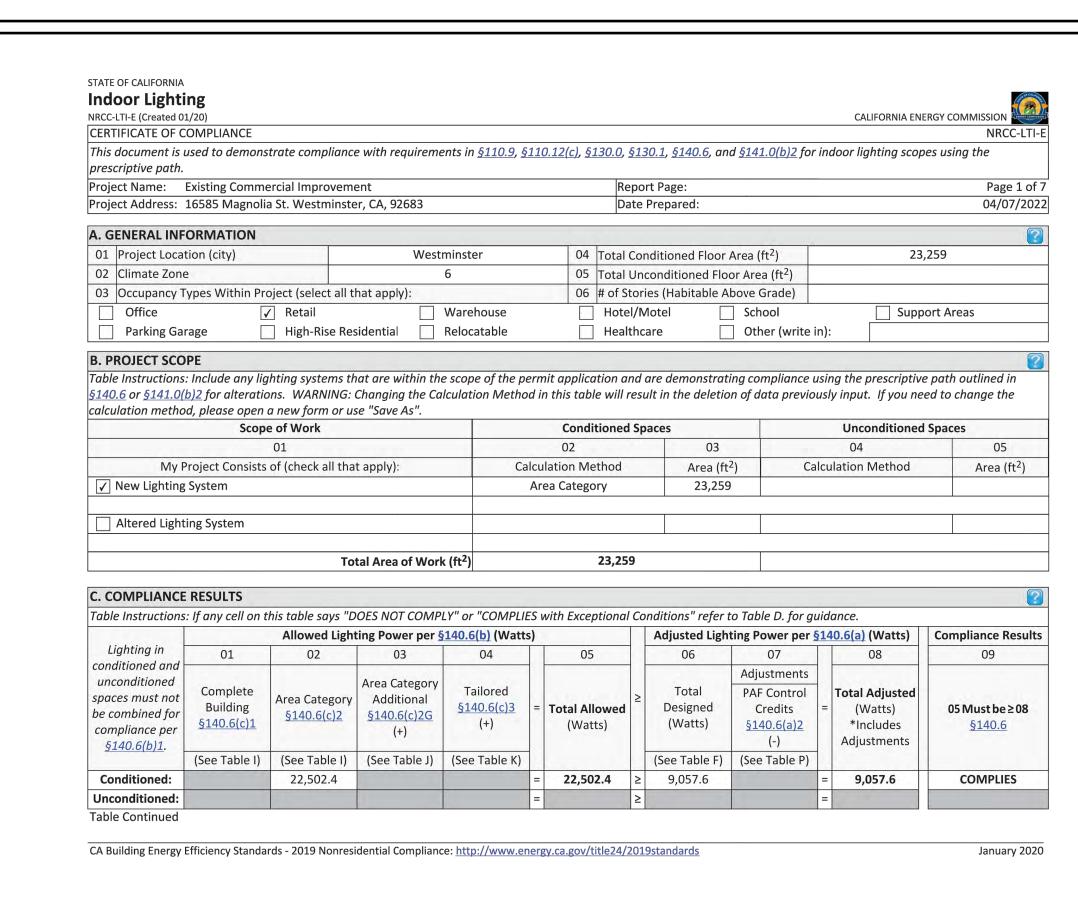
STATE OF CALIFORNIA			
Indoor Lighting			CALIFORNIA ENERGY COMMISSION
NRCC-LTI-E (Created 01/20)	,		
CERTIFICATE OF COMPLIANCE			NRCC-LT
	ercial Improvement	Report Page:	Page 7 of
Project Address: 16585 Magnoli	ia St. Westminster, CA, 92683	Date Prepared:	04/07/20
DOCUMENTATION AUTHOR'S	S DECLARATION STATEMENT		
I certify that this Certificate of Co	ompliance documentation is accurate and comple	ete	2
Documentation Author Name:	Alexander Clavel	Documentation Author Signature:	Mhelled
Company:	TREK Consulting Inc.	Signature Date:	04/07/2022
Address:	321 N. Rampart St. Suite 203	CEA/ HERS Certification Identificatio	n (if applicable):
City/State/Zip:	Orange/ CA/ 92868	Phone:	(310) 947-1567
 The information provided on I am eligible under Division 3 Compliance (responsible desi The energy features and perf Certificate of Compliance cor The building design features compliance documents, work I will ensure that a complete to the enforcement agency for 	ormance specifications, materials, components, iform to the requirements of Title 24, Part 1 and or system design features identified on this Certics sheets, calculations, plans and specifications suld signed copy of this Certificate of Compliance sh	t. responsibility for the building design or sys and manufactured devices for the building Part 6 of the California Code of Regulation ificate of Compliance are consistent with th bmitted to the enforcement agency for app nall be made available with the building pe	design or system design identified on this s. ne information provided on other applicable
Responsible Designer Name:	Joseph Cortes	Responsible Designer Signature:	
Company :	TREK Consulting Inc.	Date Signed:	04/07/2022
Address:	321 N. Rampart St. Suite 203	License:	E16488
City/State/Zip:	Orange/ CA/ 92868	Phone:	(714) 769-9700
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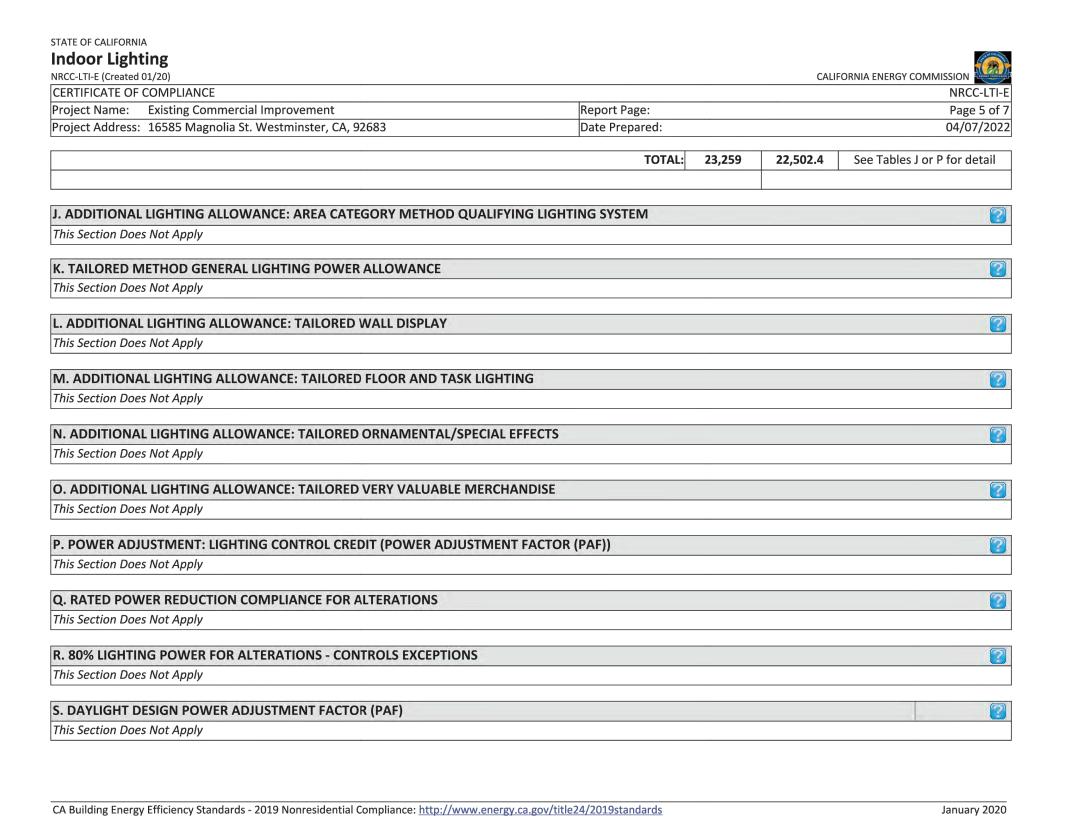
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: http://www.energy.ca.gov/title24/2019standards

January 2020

Indoor Lighting NRCC-LTI-E (Created 01/20)				CAL	IFORNIA ENERGY COMM	1ISSION		
CERTIFICATE OF COMPLIANCE						NRCC-LT		
Project Name: Existing Commercia	•	Report Page:	·			Page 4 c		
Project Address: 16585 Magnolia St.	. Westminster, CA, 92683	Date Prepared:				04/07/20		
01	02	03	04	05	06			
Area Description	Complete Building or Area Category Primary Function Area	Allowed Density (W/ft ²)	Area (ft²)	Allowed Wattage (Watts)	Additional Allowances / Adjustment			
Conditioned Spaces		((())		(watts)	Area Category	PAF		
01	02	03	04	05	06			
Area Description	Complete Building or Area Category Primary Function Area	Allowed Density	Area (ft²)	Allowed Wattage	Additional Allowances / Adjustment			
	Timaly Function Area	(W/ft ²)	(11.)	(Watts)	Area Category	PAF		
Retail Tenant 1	Retail Merchandise Sales, Wholesale Showroom	1	8,471	8,471				
Retail Tenant 2	Retail Merchandise Sales, Wholesale Showroom	1	4,507	4,507		100		
Retail Tenant 3	Retail Merchandise Sales, Wholesale Showroom	1	6,495	6,495				
Retail Tenant 3.1	Retail Merchandise Sales, Wholesale Showroom	1	1,903	1,903				
Restroom 1 (tenant 1)	Restroom	0.65	36	23.4				
Restroom 2 (tenant 1)	Restroom	0.65	36	23.4		-		
Storage (tenant 1)	Commercial and Industrial Storage	0.6	337	202.2		1		
Electrical Room (Tenant 1)	Electrical, Mechanical, Telephone Rooms	0.4	31	12.4				
Main Electrical Room	Electrical, Mechanical, Telephone Rooms	0.4	235	94				
Electrical Room (Tenant 2)	Electrical, Mechanical, Telephone Rooms	0.4	32	12.8				
Office (Tenant 2)	Office (≤ 250 square feet)	0.7	92	64.4				
Office (Tenant 2)	Office (≤ 250 square feet)	0.7	96	67.2				
Office (Tenant 2)	Office (≤ 250 square feet)	0.7	186	130.2	14			
Restroom (Tenant 2)	Restroom	0.65	37	24.05				
Restroom (Tenant 2)	Restroom	0.65	37	24.05		100		
Office (Tenant 2)	Office (≤ 250 square feet)	0.7	192	134.4		互		
Restroom (Tenant 3)	Restroom	0.65	45	29.25				
Restroom (Tenant 3)	Restroom	0.65	45	29.25				
Breakroom (Tenant 3)	Lounge	0.65	136	88.4		-		
Storage (Tenant 3)	Commercial and Industrial Storage	0.6	47	28.2				
Office (Tenant 3)	Office (≤ 250 square feet)	0.7	112	78.4				
Sprinkler Room (Tenant 3)	All Other Space Types	0.4	98	39.2				
Electrical Room (Tenant 3)	Electrical, Mechanical, Telephone Rooms	0.4	53	21.2				

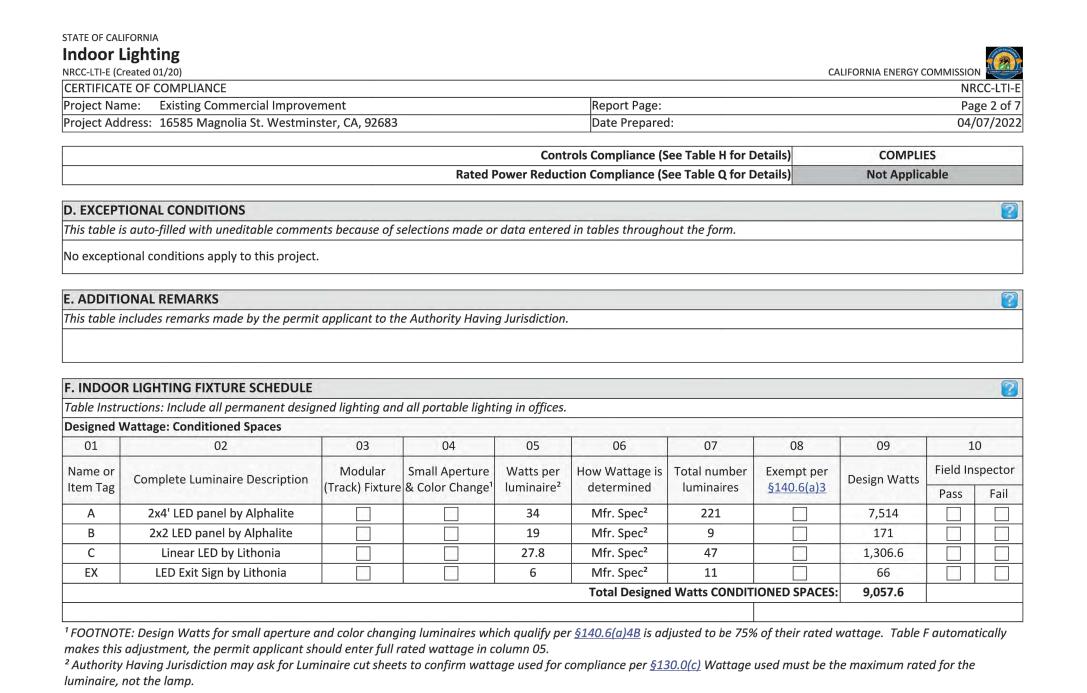
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: http://www.energy.ca.gov/title24/2019standards

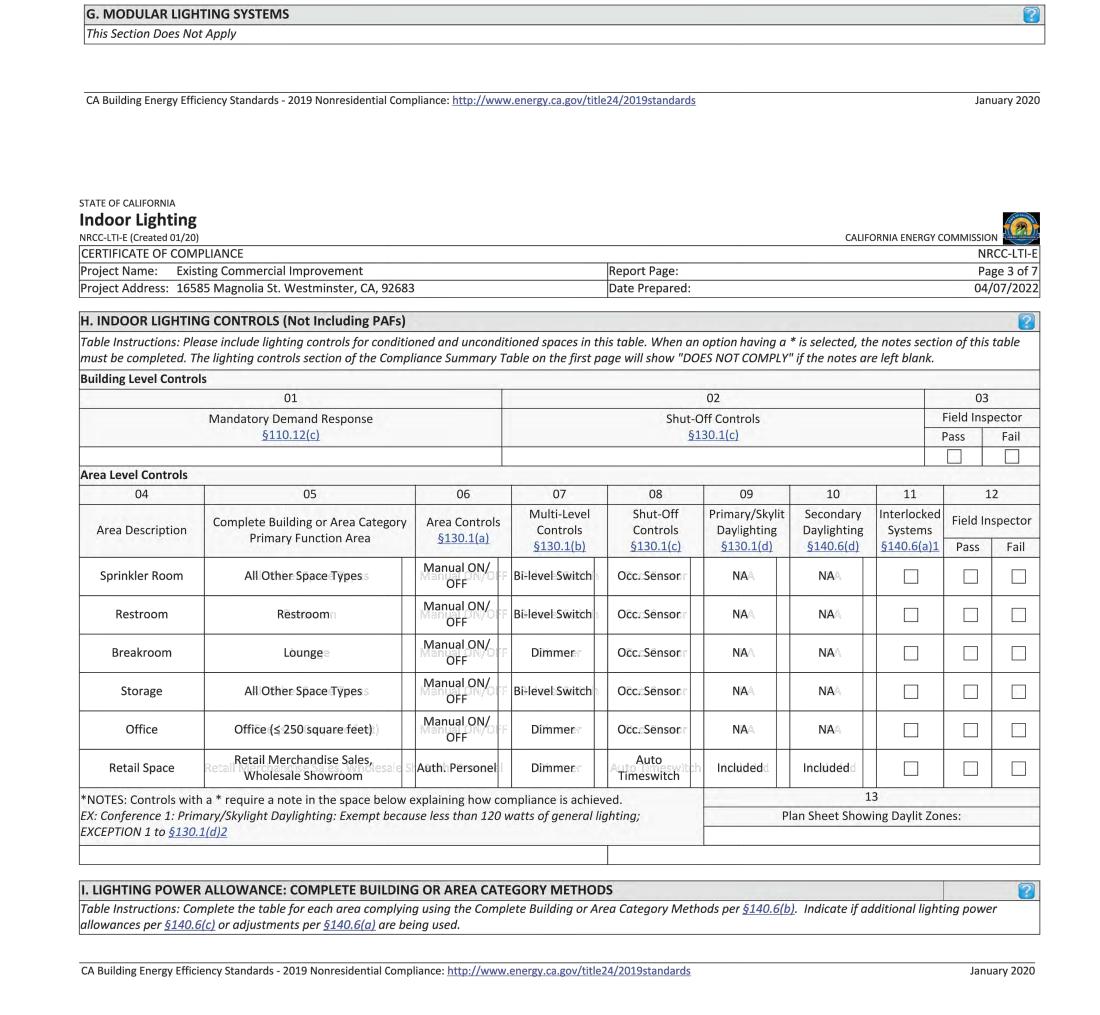


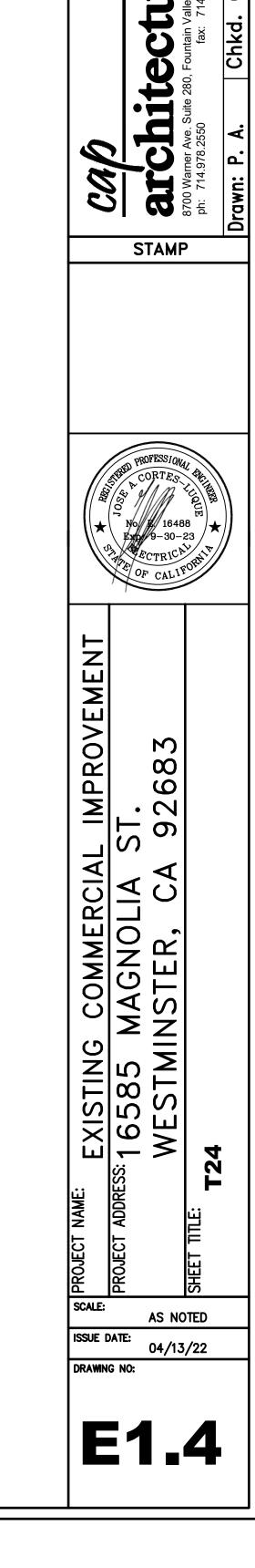


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NRCC-LTI-E (Cro		IANICE	CALIFORNIA I	ENERGY COMM	NRCC-LT					
Project Nam		g Commercial Improvement	Report Page:		Page 6 c					
		Magnolia St. Westminster, CA, 92683	Date Prepared: 04,							
		, ,	,							
T. DECLAR	ATION OF	REQUIRED CERTIFICATES OF INSTALLATION								
Table E. Add	ditional Rem	tions have been made based on information provided in previous table arks. These documents must be provided to the building inspector during compliance_documents/Nonresidential_Documents/NRCI/								
YES	NO	Form/Title		Field In	spector					
123	INO.	Torny ruce		Pass	Fail					
•	0	NRCI-LTI-01-E - Must be submitted for all buildings								
0	•	NRCI-LTI-02-E - Must be submitted for a lighting control system, or fo recognized for compliance.	r an Energy Management Control System (EMCS), to be							
0	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.									
0	•	NRCI-LTI-05-E - Must be submitted for a Power Adjustment Factor (PA	AF) to be recognized for compliance.							
0	NRCI-LTI-06-E - Must be submitted for additional wattage installed in a video conferencing studio to be recognized for compliance.									
II DECLAR	ATION OF	REQUIRED CERTIFICATES OF ACCEPTANCE								
Table Instru Table E. Add	ıctions: Seled ditional Rem	tions have been made based on information provided in previous table arks. These documents must be provided to the building inspector durician Certification Provider (ATTCP). For more information visit: <a -a"="" form="" href="http://www.http://w</td><td>ng construction and any with " in="" k<="" must="" name="" td="" the=""><td></td><td></td>								
Acceptance	Test recrim	Jan Certification Provider (ATTCP). For more information visit: <u>http://w</u>	ww.energy.ca.gov/title24/attcp/providers.ntml							
YES	NO	Form/Title		Field In	spector					
				Pass	Fail					
•	0	NRCA-LTI-02-A - Must be submitted for occupancy sensors and auton	natic time switch controls.							
•	0	NRCA-LTI-03-A - Must be submitted for automatic daylight controls.								
0	•	NRCA-LTI-04-A - Must be submitted for demand responsive lighting c	ontrols.							
0	•	NRCA-LTI-05-A - Must be submitted for institutional tuning power adj	ustment factor (PAF).							
0	•	NRCA-ENV-03-F - Must be submitted for daylighting design power ad	ustment factors (PAF).							

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: http://www.energy.ca.gov/title24/2019standards
January 2020

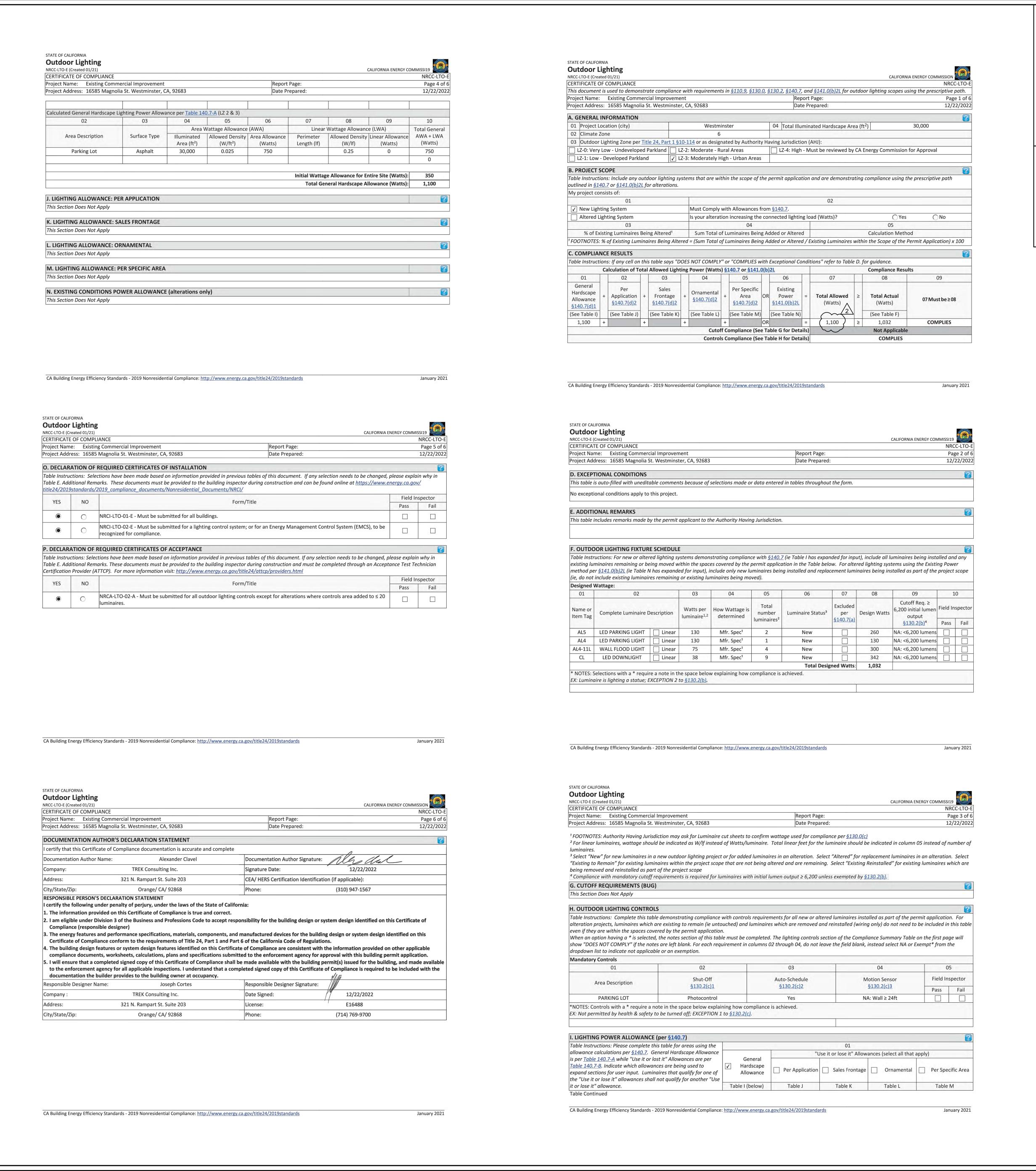






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STATE OF CALIFORNIA



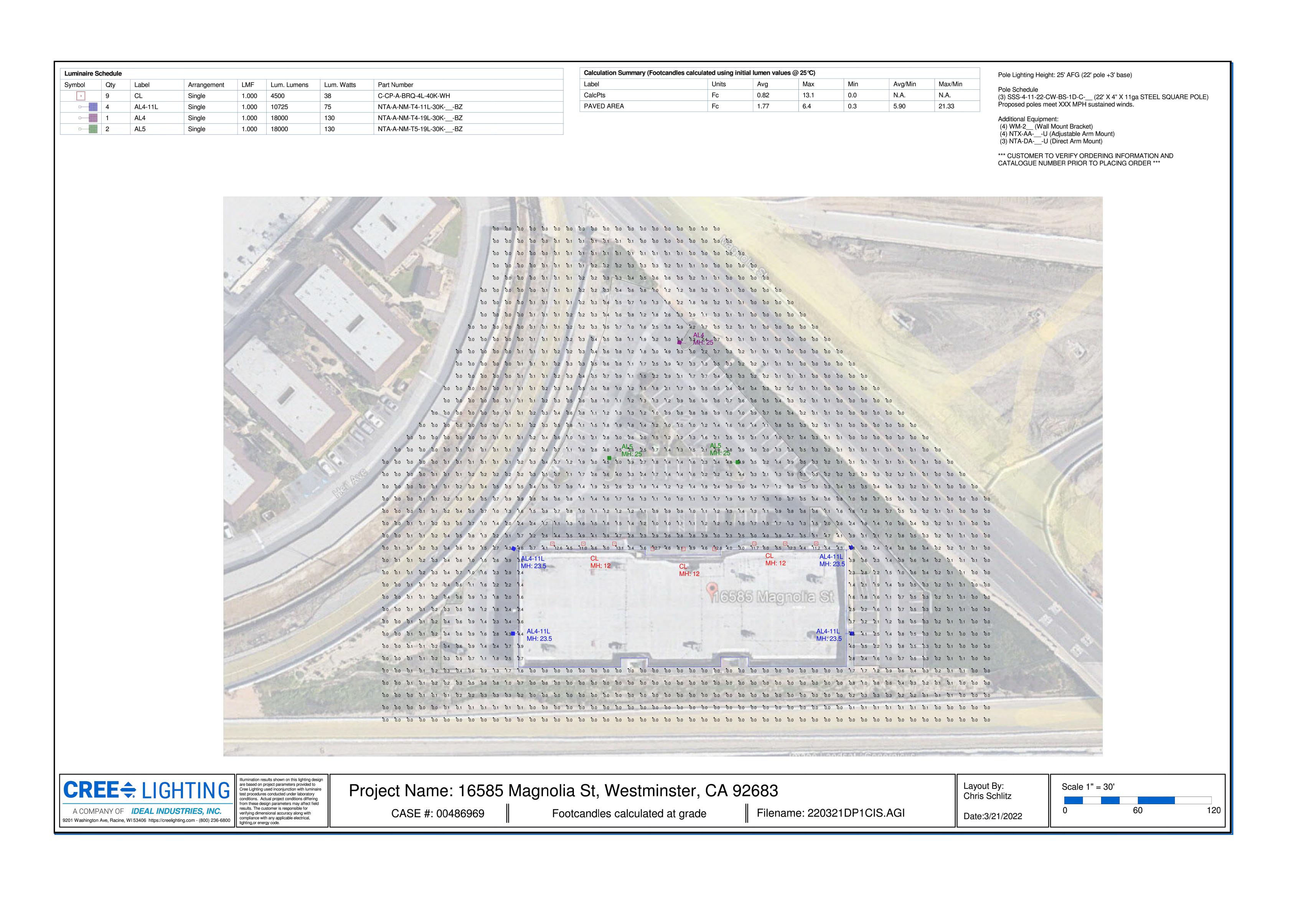
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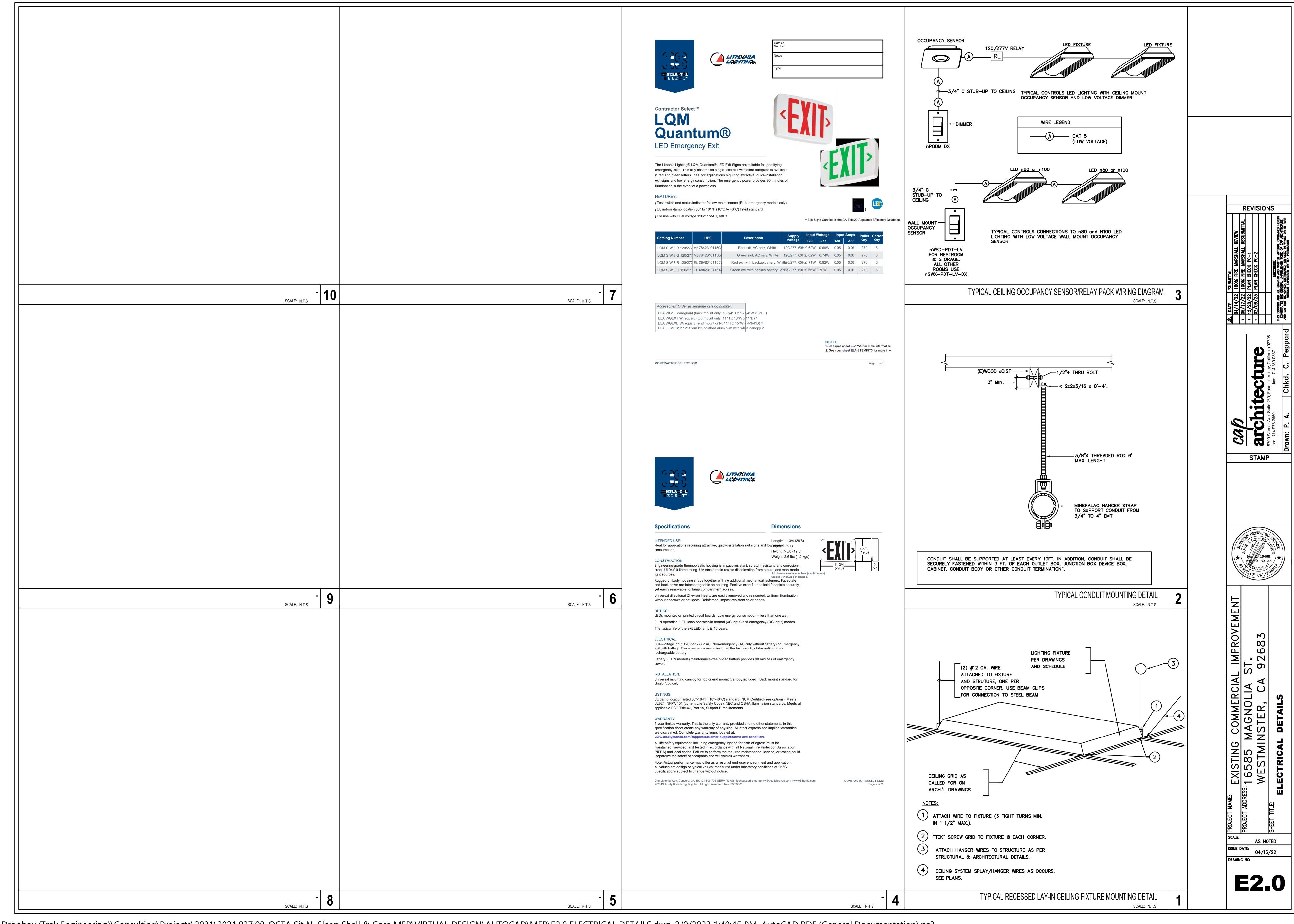
ISSUE DATE:



STAMP AS NOTED 04/13/22

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				CONNECTIO	N PIPE SIZE	(IN.)								
I. D. NUMBER	FIXTURE NAME	WASTE	TRAP	VENT	COLD WATER	HOT WATER	MISC.	REMARKS						
L 1	LAVATORY AMERICAN STANDARD (0.38 GPM)	2"	1-1/2"	1-1/2"	1/2"	1/2"	-	LAVATORY: AMERICAN STANDARD "LUCERNE" #0356.421, WALL HUNG, VITREOUS CHINA, COMPLETE WITH J.R. SMITH #0722 CARRIER FAUCET: CHICAGO #410-E2805ABCP, SINGLE HOLE, DECK MOUNTED MANUAL SINK FAUCET, VANDAL PROOF PRESSURE COMPENSATING 0.5 GPM LAMINAR SPRAY, AND CHICAGO #1017-ABCP ANGLE STOPS, McGUIRE PROFESSIONAL LINE P-TRAP AND PLUMBEREX PRO-EXTREME UNDER-LAV COVER						
WC 1	WATER CLOSET AMERICAN STANDARD (1.1 GPF)	-	-	-	3/4"	-	-	WATER CLOSET: AMERICAN STANDARD MODEL #2467.100 "CADET FLOWISE", VITREOUS CHINA, PRESSURE ASSISTED TOILET, 1.1 GPF ELONGATED BOWL W/ OPEN FRONT SEAT (2019 CPC SEC. 411.3), FLOOR-MOUNTED, RIGHT HEIGHT WITH CHICAGO ANGLE STOPS.						
S 1	SINK JUST MFG.	2"	2"	1-1/2"	3/4"	3/4"	-	SINK: JUST MFG. #SL-ADA-17519-A-GR, LEDGE TYPE SINGLE BOWL, 18 GAUGE STAINLESS STEEL. FAUCET: CHICAGO #786-245ABCP, DECK MOUNTED MANUAL SINK FAUCET WITH 8" CENTERS, 5-1/4" GOOSENECK SPOUT, 1.5 GPM (60psi), WRISTBLADE HANDLE, AND CHICAGO #1017-ABCP ANGLE STOPS, McGUIRE PROFESSIONAL LINE P-TRAP AND PLUMBEREX PRO-EXTREME UNDER-LAV COVER.						
•					PLUME	SING EC	QUIPM	ENT SCHEDULE						
I. D. IUMBER	DESCRIPTION													
1 IWH	INSTANTANEOUS WATER HE EEMAX MODEL# AMT005240 UL, ASSE 1070, LEAD FREE		PHZ, 20AMP											
(IWH)	INSTANTANEOUS WATER HE EEMAX MODEL# AM010240T UL, ASSE 1070, LEAD FREE		PHZ, 40AMP											

TREK Consulting Inc.										
				Trust, I	Reliabilty, E	xperience	, Knowledo	ge		
						FIX	TURE (COUNT	(2019 (CPC)
BY:	Jay Par	ngilina	n		DATE:		April 0	8, 2022		
			SUBJEC [*]	Γ:	Existing C	ommercial	Improveme	ent		
QUAN.		TRAP SIZE	WASTE UNITS	T.W.U.	C.W. UNITS	T.C.W.U	H.W. UNITS	T.H.W.U.	H.W. G.P.H.	REMARKS
QUAN. PUB. WATER CLOSET (F.V.)	6			T.W.U. 24.00		T.C.W.U 30.00		T.H.W.U.		REMARKS Public
PUB. WATER	6	SIZE	UNITS		UNITS			T.H.W.U. - 4.50		1
PUB. WATER CLOSET (F.V.)		SIZE INT.	UNITS 4.00	24.00	UNITS 5.00	30.00	UNITS -	-	G.P.H.	1

DO	MESTIC WATER HYD	RAULIC CALCULATIONS					
Project Number							
Project Address	16585 Magnolia	St. Westminster, CA 9268	3				
Street Pressure:							
Max Pressure	60						
Minimum Pressure	55						
Water supply Fixture Units - Total 38							
GPM Equivalent 25							
Building Height							
Developed Length		341	341				
A. Min. Pressure	at City Main		55				
	t Pressure Reducing	Valve	0				
C. Pressure Loss	Through Water Met	er	0.5				
	Through Backflow Pr	reventer	13				
E. Pressure Loss	Through Pressure Re	educing Valve	0				
F. Pressure Loss	Through Softener or	Other Equipment	0				
G. Pressure Loss I	Due to Elevation (Blo	lg. Ht x 0.433)	6,928				
H. Residual Press	ure @ Flush Valve W	/C (WC are flush tanks)	20				
 Total Pressure 	Losses		40.428				
 Total Develope 	ed Length (Develope	d Length x 1.25)	426.25				
K. Pressure Avail	able for Friction Loss	s in the System	3.42				
Min. Pressure	- Total Pressure Los	s/TDL	psi/100				

Friction Loss psi 100 ft	Nominal Pipe Diameter (inches) Internal Pipe Diameter (inches)	0.5 0.545	0.75 0.785	1 1.025	1.25 1.265	1.5 1.505	2 1,985	2.5 2.465	3 2.945	3.5 3.425	4 3.905
	Cold Water - Flush Valve	0	0	0	0	10	63	245	596	1091	1668
3	Cold Water - Flush Tank	0	4	12	24	46	155	380	665	1091	1668
	Hot Water (5 ft/s max)	0	4	12	24	46	119	245	406	585	840

NATURAL GAS PIPE SIZING								
LENGTH (FEET)		PIPE SIZE (INCH)						
400 FT.	1/2" 3/4" 1" 1-1/4" 1-1/2" 2				2	2-1/2"		
CAPACITY IN CUBIC FT. PER HOUR (CFH)								
	23	49	92	189	283	546	870	

FROM: CPC 2019, TABLE 1215.2 (1) SCHED. 40 METALLIC PIPE (NFPA 54:TABLE 6.2(B)

CONTRACTOR VERIFICATION: BEFORE COMMENCEMENT OF WORK, THE CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS, ELEVATIONS AND CHARACTERISTICS OF ALL UTILITIES AND PIPING AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.

BUILDING SHUTDOWN: CONTRACTOR SHALL ALSO CAREFULLY INVESTIGATE AND ESTABLISH ON HIS SHOP DRAWINGS THE FIELD LOCATIONS OF (E) SHUT-OFF VALVES ON (E) PIPING SYSTEMS BEING AFFECTED BY THE WORK ON THIS CONTRACT IN ORDER TO AVOID PROLONGED SHUT DOWN PERIODS OF (E) PIPING SYSTEMS DURING INSTALLATION AND CONNECTION OF (N) PIPING SYSTEMS, VALVES AND/OR EQUIPMENT.

FIELD VERIFICATION: BEFORE FABRICATION OR INSTALLATION, THIS CONTRACTOR SHALL VERIFY EXACT LOCATIONS OF ALL MECHANICAL EQUIPMENT AND EQUIPMENT PROVIDED UNDER ANOTHER SECTION OF SPECIFICATIONS. EXACT ROUGH-IN LOCATIONS AND REQUIREMENTS SHALL BE COORDINATED IN FIELD.

COORDINATION: THE PLUMBING CONTRACTOR SHALL COORDINATE ALL REQUIREMENTS FOR ALL POINTS OF CONNECTION WITH THE GENERAL CONTRACTOR AND OTHER TRADES PRIOR TO BID.

CONNECTIONS TO EXISTING SERVICES: ALL CONNECTIONS TO EXISTING SERVICES SHALL BE MADE OF SUCH THAT INTERRUPTION TIME WILL BE AS SHORT AS POSSIBLE. THE CONTRACTOR SHALL GIVE THE OWNER'S REPRESENTATIVE SUFFICIENT NOTICE OF SUCH INTERRUPTION AND THE ACTUAL SHUT-DOWN TIME SHALL BE AT A TIME DESIGNATED BY THE OWNER'S REPRESENTATIVE.

<u>FIXTURE:</u> EXACT LOCATIONS, MOUNTING HEIGHTS AND COLORS OF PLUMBING FIXTURES SHALL BE OBTAINED FROM THE ARCHITECTURAL DRAWING AND SHALL BE IN COMPLIANCE WITH THE LATEST STATE AND CITY CODES. PRODUCT REPORT ANY FIXTURE SPECIFIED BUT NOT ALLOWED MAY BE SUBSTITUTED WITH AN APPROVED EQUAL.

HANDICAP FIXTURE: SEE ARCHITECTURAL DRAWINGS FOR HANDICAP FIXTURE LOCATIONS AND MOUNTING HEIGHTS. (INSULATE ALL EXPOSED HOT WATER AND DRAWING PIPING BELOW HANDICAP LAVATORIES AND SINKS AS SPECIFIED.

INTERFERENCE: ALL PLUMBING WORK SHALL BE INSTALLED SO AS TO AVOID STRUCTURAL FRAMING.

ACCESS PANELS: THE CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL CEILING ACCESS PANELS WITH ARCHITECTURAL REFLECTED CEILING PLAN AND THE ELECTRICAL LIGHTING LAYOUT. ACCESS TO SHUT-OFF VALVES, STRAINERS, CIRCUIT SETTERS, ETC. SHALL BE WITH 24" OF ACCESS PANEL.

PIPE INSULATION: ALL HOT WATER PIPING SHALL BE INSULATED WITH 1" THICK FOR SIZES UP TO 2". 1-1/2" THICK FOR SIZES 2-1/2" AND LARGER. MINIMUM THERMAL RESISTANCE SHALL BE MIMINAL PER CODE. ALL EXPOSED PIPING INSIDE OR OUTSIDE SHALL BE COVERED WITH PLASTIC JACKET, WEATHERD PROOFED AT JOINTS.

CLEANOUTS: ALL CLEANOUTS SHALL BE INSTALLED WHERE READILY ACCESSIBLE. THE CONTRACTOR SHALL COORDINATE ALL CLEANOUT LOCATIONS WITH EQUIPMENT, CABINETS, ETC., AND THE ARCHITECT PRIOR TO ANY INSTALLATION.

FULL SIZE: ALL VALVES, UNIONS, ETC. TO BE THE SAME SIZE AS THE LINE SIZE UNLESS OTHERWISE NOTED ON THE DRAWINGS.

LATERAL SUPPORT: ALL EQUIPMENT SHALL BE LATERALLY SUPPORTED IN ALL DIRECTIONS TO RESIST SEISMIC LATERAL FORCE. DESIGN LATERAL FORCES SHALL BE DETERMINED PER CBC 2019 & ASCE 7-16.

CODE COMPLIANCE: ALL WORK AND MATERIAL SHALL BE PERFORME AND INSTALLED IN COMPLIANCE WITH THE CODES FOUND IN 2019 CO ANALYSIS ON THIS SHEET AS ADOPTED AND AMENDED BY THE INSPECTING AUTHORITY NOTHING IN THESE DRAWINGS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES OR OTHERS APPLICABLE TO THIS PROJECT.

10A. <u>CODE CONFORM:</u> ALL WORK SHALL CONFORM TO LOCAL CODES & ALL OTHER CODES & AUTHORITIES HAVING JURISDICTION.

ISOMETRICS: THE CONTRACTOR SHALL PROVIDE ALL RISER DIAGRAMS OR ISOMETRICS THAT MAY BE REQUIRED BY GOVERNING AUTHORITIES.

CERTIFIED FIXTURES: ALL PLUMBING FIXTURES, SHOWER HEADS AND FAUCETS SHALL BE CERTIFIED BY THE STATE OF CALIFORNIA ENERGY COMMISSION AS REQUIRED BY THE CALIFORNIA ENERGY EFFICIENCY STANDARDS SECTION S-5314.

PIPE SLOPE: ALL WASTE AND VENT PIPING SHALL SLOPE AT 2% UNLESS

ACCESSIBILITY: ALL VALVES, TRAP PRIMERS OR OTHER EQUIPMENT SHOWN IN WALLS OR ABOVE NON-ACCESSIBLE CEILINGS SHALL BE INSTALLED WITHIN 24" OF AND BEHIND AND ACCESS PANEL.

SERVICE

WATER

WASTE &

NATURAL GAS

VENT

EQUIPMENT NOT UNDER THIS SECTION OF SPECIFICATION: THE ONTRACTOR SHALL BE RESPONSIBLE FOR ROUGH-IN AND ALL FINAL CONNECTIONS. REFERENCES SHALL BE MADE TO FINAL SHOP DRAWINGS FOR EXACT ROUGH-IN AND FLOOR SINK LOCATIONS, DIMENSIONS AND ELEVATIONS AND SHALL BE ADHERED TO AS CLOSELY AS POSSIBLE. THE CONTRACTOR SHALL PROVIDE ALL TRAPS (CHROME PLATED CAST BRASS),

(CW) (HW) IN ■

(G) IN

OUT

OUT

CLEANOUTS, WATER HAMMER ARRESTORS STOPS, SHUT-OFF VALVES, PRESSURE REGULATORS, FILTERS, STRAINERS, VACUUM BREAKERS, GAS COCKS, INDIRECT WASTE PIPING AND NECESSARY TRIM WHICH MAY BE REQUIRED TO COMPLETE THE INSTALLATION. COORDINATE ALL PLUMBING REQUIREMENTS WITH EACH EQUIPMENT MANUFACTURER PRIOR TO ANY INSTALLATION OR FABRICATION. (SEE KITCHEN ROUGH-IN SCHEDULE).

GENERAL NOTES

FIRE PROTECTION FOR EXISTING BUILDING: THE EXISTING AUTOMATIC FIRE SPRINKLER SYSTEM SHALL BE MODIFIED AND EXTENDED AS REQUIRED TO PROVIDE PROTECTION (TO MEET THE LIFE/SAFETY REQUIREMENTS) (FOR NEW TENANT DEVELOPMENT) IN ACCORDANCE WITH THE REQUIREMENTS OF THE INSURANCE UNDERWRITER. THE EXISTING SYSTEM SHALL BE KEPT IN OPERATION AT ALL TIMES EXCEPT WHEN "CUT-OVER" TIE-INS ARE NECESSARY. ALL MATERIALS SHALL MATCH EXISTING UNLESS OTHERWISE NOTED. CONTRACTOR SHALL SUBMIT FIRE DEPARTMENT STAMPED "APPROVED" PLANS FOR REVIEW PRIOR TO INSTALLATION OR FABRICATION.

SPECIFICATION: THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH, AND BE CONSIDERED TO BE A PART OF THE SPECIFICATIONS.

18. <u>PATCHING:</u> THE CONTRACTOR SHALL BE RESPONSIBLE FOR PATCHING AND REPAIRING ALL AREAS WHICH ARE EXCAVATED AN/OR DAMAGED BY HIS OPERATIONS. IN ADDITION, THE CONTRACTOR SHALL RESTORE TO THEIR ORIGINAL CONDITION ALL PLANTED AREAS DAMAGED BY HIS OPERATIONS.

EXISTING PIPING DAMAGED: ALL EXISTING PIPING DAMAGED DURING EXCAVATION SHALL BE REPAIRED WITH MATERIALS TO MATCH EXISTING BY THE CONTRACTOR.

DISPOSAL OF EXISTING: ALL EXISTING PIPING AND EQUIPMENT THAT IS REMOVED SHALL BE DISPOSED OF AS DIRECTED BY THE OWNER'S

REPRESENTATIVE.

RED BRASSS PIPE.

EQUIPMENT.

21. <u>SAW CUTTING/CORE DRILLING:</u> ALL CUTTING OF EXISTING PAVING, WALKS AND/OR FLOORS SHALL BE MACHINE SAW CUTTING. HOLES FOR PIPING IN CONCRETE WALLS OR FLOORS SHALL BE DONE USING CORE DRILLING

INCOMPATIBLE MATERIAL CONNECTION: CONNECTION BETWEEN INCOMPATIBLE MATERIALS ABOVE GRADE AND INSIDE THE BUILDING SHALL BE MADE WITH 2 DIELECTRIC UNIONS SEPARATED BY A 12" SECTION OF

23. <u>EXISTING FIXTURES REMOVED:</u> EXISTING FIXTURES TO BE REMOVED BY PLUMBING CONTRACTOR, CAP OR PLUG EXISTING SERVICES BELOW FLOOR. ABOVE CEILING, OR BEHIND WALLS UNLESS OTHERWISE NOTED. DISPOSE OR SET IN STORAGE AS DIRECTED BY OWNER'S REPRESENTATIVE HAVING JURISDICTION.

24. <u>EXISTING ROUGH-IN ALTERED:</u> EXISTING ROUGH-IN SERVICES TO BE ALTERED BY PLUMBING CONTRACTOR TO SUIT NEW FIXTURES, OR RELOCATION FIXTURES.

25. EXISTING FIXTURE TO REMAIN: EXISTING PLUMBING FIXTURE TO REMAIN. CLEAN AND REPAIR FIXTURE AS NECESSARY TO MAKE FULLY OPERATIONAL.

26. <u>SHOP DRAWING:</u> THE PLUMBING CONTRACTOR SHALL SUBMIT SHOP DRAWINGS ON ALL WORK PRIOR TO FABRICATION AND INSTALLATION

FABRICATION. SUBMITTALS: THE PLUMBING CONTRACTOR SHALL SUBMIT ALL FIXTURES,

EQUIPMENT AND ACCESS FOR REVIEW PRIOR TO ORDERING, FABRICATING

AND INSTALLATION. 28. <u>SUBMITTALS AND SHOP DRAWINGS:</u> THE PLUMBING CONTRACTOR SHALL SUBMIT SHOP DRAWINGS ON ALL WORK AND SUBMITTALS ON ALL

FIXTURES, EQUIPMENT AND ACCESSORIES FOR REVIEW PRIOR TO ORDERING, FABRICATION AND INSTALLATION. 29. BASE BUILDING STANDARDS: THE CONTRACTOR SHALL VERIFY THROUGH

THE ARCHITECT THAT ALL BASE BUILDING STANDARDS INCLUDING FIXTURES, EQUIPMENT, COLOR, TYPE OF FIRE SPRINKLER HEADS ETC ARE CONFORMED TOO. ANY CHANGE PERMITTED SHALL BE IN WRITING.

30. <u>FIXTURE LISTING:</u> ALL FIXTURES AND PARTS ARE TO BE LOS ANGELES CITY TESTING LAB LISTED AND APPROVED FOR INSTALLATION. ANY FIXTURE SPECIFIED BUT NOT ALLOWED MAY BE SUBSTITUTED WITH AN APPROVED EQUAL.

BURRED ENDS AND TOOLS: ALL BURRED ENDS OF WATER PIPING AND TUBING SHALL BE REAMED TO THE FULL BORE OF THE PIPE OR TUBE AND ALL CHIPS SHALL BE REMOVED. ADDITIONALLY, TOOLS USED IN CUTTINR OR REAMING SHALL BE KEPT FREE FROM OIL OR GREASE AND WHERE SUCH CONTAMINATION HAS OCCURRED. THE ITEMS AFFECTED SHALL BE REWORKED AND RINSED.

SEISMIC BRACING: PROVIDE SEISMIC BRACING TO ALL NEW AND EXISTING PIPING AND DUCTWORK WITH IN AREA OF WORK. SEISMIC BRACING SHALL BE IN ACCORDANCE WITH ASCE 7-10, SEE SEISMIC NOTES ON THIS SHEET.

CHLORINATION ALTERNATE: SWAB COPPER TUBING AND FITTINGS WITH A 0% CHLORINE AND 50% WATER MIXTURE AND LET DRY. COPPER TUBING IS THEN READY FOR INSTALLATION AND FLUSH PIPING AFTER INSTALLATION PENDING APPROVAL BY THE AUTHORITY HAVING JURISDICTION.

CAPPING EXISTING LINES: PLUMBING CONTRACTOR TO REMOVE ALL UNUSED EXISTING PLUMBING UTILITIES AND CAP BACK TO NEAREST

OR BRANCH LINE.

PIPE MATERIAL SCHEDULE

BALL VALVE - WATTS LFFBV-3C.

ALL WATER LINES IN ROOM TO BE INSULATED.

PROVIDE FM-1680 APPROVED COUPLINGS.

REMARKS

FITTINGS: ASME B16.3 MALLEABLE IRON OR ASTM A234 FORGED STEEL WELDING

JOINTS: THREADED - 2" PIPE AND SMALLER, WELDED - 2-1/2" AND LARGER.

REPLACE EXISTING PLUMBING FIXTURES WITH NEW.

SCOPE OF WORK

INSULATING WATER LINES: PLUMBING CONTRACTOR TO INSULATE ALL HOT WATER LINES AS REQUIRED BY CODE.

DWG. NO. DESCRIPTION LEGEND, SCHEDULES, SYMBOLS, GENERAL NOTES, AND SHEET INDEX P0.1 P0.2 PLUMBING SPECIFICATIONS PLUMBING DEMO FLOOR PLAN P1.1 P1.2 PLUMBING DEMO ROOF PLAN P2.1 PLUMBING REMODEL FLOOR PLAN P2.2 PLUMBING REMODEL ROOF PLAN P3.0 PLUMBING DETAILS

SHEET INDEX

CODE ANALYSIS

BUILDING OCCUPANCY CLASSIFICATION: GROUP I, DIVISION 1 THE CONSTRUCTION OF THIS PROJECT SHALL CONFORM TO THE REQUIREMENTS OF:

2019 CALIFORNIA ADMINISTRATIVE CODE (CAC) PART 1, TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR)

2019 CALIFORNIA BUILDING CODE (CBC) PART 2, TITLE 24, CCR BASED ON THE 2018 INTERNATIONAL BUILDING CODE (IBC)

2019 CALIFORNIA ELECTRICAL CODE (CEC)

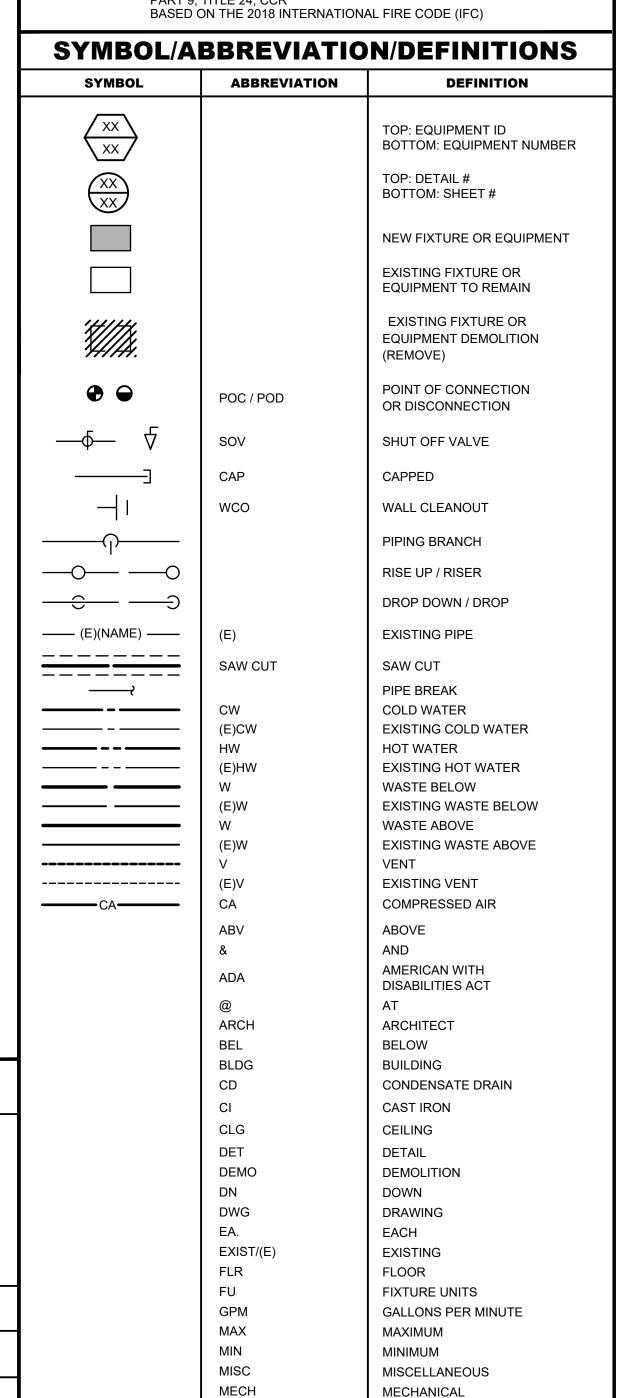
PART 3, TITLE 24, CCR BASED ON THE 2017 NATIONAL ELECTRICAL CODE (NEC)

2019 CALIFORNIA MECHANICAL CODE (CMC) PART 4, TITLE 24, CCR

BASED ON THE 2018 UNIFORM MECHANICAL CODE (UMC) 2019 CALIFORNIA PLUMBING CODE (CPC)

PART 5, TITLE 24, CCR BASED ON THE 2018 UNIFORM PLUMBING CODE (UPC)

CALIFORNIA FIRE CODE (CFC) PART 9, TITLE 24, CCR



NEW

PLUMBING

(GAUGE)

THROUGH TYPICAL

WITH

STAINLESS STEEL

VENT THROUGH ROOF

POUNDS PER SQUARE INCH

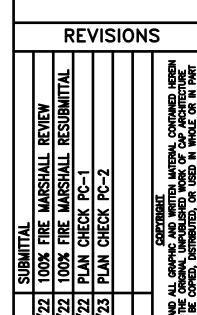
PLBG

PSI

SS

THRU

VTR



STAMP

M32264 Exp. 12/31/24 MECHANICAL

<u>a</u>|

AS NOTED

 PROVIDE NEW COLD WATER PIPING DISTRIBUTION. REPLACE EXISTING GAS PIPING FROM INSIDE THE BUILDING UP TO ROOF SERVICE. PROVIDE CONDENSATE PIPING FOR NEW ROOF TOP UNITS.

PART 1: GENERAL PLUMBING SPECIFICATION:

1.1 DESCRIPTION

- A. FURNISH MATERIALS AND PERFORM LABOR REQUIRED TO EXECUTE THIS WORK AS INDICATED ON THE DRAWINGS. AS SPECIFIED AND AS NECESSARY TO COMPLETE THE CONTRACT, INCLUDING BUT NOT LIMITED TO THESE MAJOR ITEMS.
- 1. SANITARY SEWER AND VENT SYSTEM INCLUDING CONNECTIONS
- 2. COLD WATER, HOT WATER AND HOT WATER RETURN PIPING SYSTEMS INCLUDING CONNECTIONS, TO EXISTING, ETC.
- 3. MEDICAL GAS PIPING 4. CONDENSATE PIPING

TO EXISTING, ETC.

- 5. PLUMBING FIXTURES, FITTINGS, TRIM, ACCESSORIES, ETC.
- PIPE INSULATION. 7. TESTING AND APPROVAL OF ALL SYSTEMS.

1.2 RELATED WORK SPECIFIED ELSEWHERE

ELECTRICAL, CONCRETE, PAINTING, STRUCTURAL AND AIR CONDITIONING WORK EXCEPT AS NOTED.

1.3 GENERAL REQUIREMENTS

- A. THE GENERAL CONDITIONS OF THE SPECIFICATIONS APPLY TO ALL WORK INCLUDED UNDER THIS SECTION.
- B. ACCESS TO PORTIONS OF THE BUILDING MAY BE RESTRICTED AND SHALL

BE AS DIRECTED AND SCHEDULED BY THE OWNER.

1.4 SITE INSPECTION

A. CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE CONDITIONS AT THE SITE UNDER WHICH HE WILL BE REQUIRED TO OPERATE INCLUDING EXIST. PIPING TO BE RAISED OR REROUTED AND VERIFYING ALL POINTS OF CONNECTION, ETC. NO ALLOWANCE WILL BE MADE SUBSEQUENTLY TO THE CONTRACTOR FOR ANY ERROR THROUGH NEGLIGENCE IN OBSERVING THE SITE CONDITIONS

1.5 ORDINANCE, REGULATIONS, AND CODES

- A. THE INSTALLATION SHALL COMPLY WITH ALL OF THE LATEST APPLICABLE ORDINANCES, REGULATIONS, CODES AND REQUIREMENTS OF ANY AGENCY HAVING JURISDICTION, INCLUDING BUT NOT LIMITED TO THE STATE FIRE MARSHAL, DIVISION OF INDUSTRIAL SAFETY, O.S.H.A., N.F.P.A. 13 AND 99, CALIFORNIA ELECTRIC CODE, CALIFORNIA PLUMBING CODE, CALIFORNIA MECHANICAL CODE, AND THE CALIFORNIA ENERGY CONSERVATION
- B. NOTHING IN THESE DRAWINGS AND SPECIFICATIONS IS TO BE CONSTRUED TO PERMIT WORK IN VIOLATION THEREOF. REGULATIONS AND CODES ARE TO BE CONSTRUED AS MINIMUM REQUIREMENTS.
- C. NO EXTRAS WILL BE PAID FOR FURNISHING ITEMS REQUIRED BY CODES BUT NOT SPECIFIED OR SHOWN ON THE DRAWINGS.
- D. RULINGS, REGULATIONS, AND INTERPRETATIONS OF THE ENFORCING AGENCIES SHALL BE CONSIDERED AS PART OF THE CODES.
- E. THE RESPONSIBILITY OF THE ARCHITECT TO CONDUCT CONSTRUCTION REVIEW OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES IN, OR NEAR THE CONSTRUCTION SITE.

1.6 PERMITS, FEES, AND INSPECTIONS

A. OBTAIN AND PAY FOR ALL NECESSARY PERMITS, FEES, ASSESSMENTS, COMPLEMENTARY DRAWINGS AND CALCULATIONS REQUIRED BY ANY AUTHORITIES HAVING JURISDICTION. ARRANGE AND PAY FOR ANY REQUIRED INSPECTIONS OR EXAMINATIONS AND DELIVER CERTIFICATES OF SUCH INSPECTIONS TO THE ARCHITECT.

1.7 DRAWINGS AND SPECIFICATIONS

- A. THE ARCHITECT'S DECISION WILL BE FINAL ON INTERPRETATION OF THE DRAWINGS AND SPECIFICATIONS.
- B. THE DRAWINGS AND SPECIFICATIONS ARE COMPLEMENTARY AND ANY WORK CALLED FOR ON ONE AND NOT THE OTHER SHALL BE FURNISHED AS THOUGH FULL SET FORTH IN BOTH.
- C. SHOULD THERE APPEAR AN ERROR OR DISCREPANCY IN OR BETWEEN THE DRAWINGS AND SPECIFICATIONS, THE CONTRACTOR SHALL REFER THE MATTER TO THE ARCHITECT FOR ADJUSTMENT BEFORE PROCEEDING WITH THE WORK. SHOULD THE CONTRACTOR PROCEED WITH THE WORK WITHOUT SO REFERRING TO THE MATTER, HE DOES SO ON HIS OWN RESPONSIBILITY AND AT HIS OWN EXPENSE. D. DRAWINGS ARE DIAGRAMMATIC.
- E. THE DATA GIVEN HEREIN AND ON THE DRAWINGS ARE AS EXACT AS COULD BE SECURED BUT THEIR EXTREME ACCURACY CANNOT BE GUARANTEED. THE DRAWINGS AND SPECIFICATIONS ARE FOR ASSISTANCE AND GUIDANCE OF THE CONTRACTOR AND EXACT LOCATIONS, DISTANCES, LEVELS, ETC. WILL BE GOVERNED BY THE BUILDING. THIS CONTRACTOR SHALL ACCEPT THIS DATA WITH THIS UNDERSTANDING. ALL DATA CONCERNING EXISTING CONDITIONS, UTILITIES, POINTS OF CONNECTION, INVERT ELEVATIONS, ETC. SHALL BE FIELD VERIFIED.

1.8 SUBMITTALS

- A. BEFORE STARTING WORK, THE CONTRACTOR SHALL FURNISH TO THE ARCHITECT SIX (6) BOUND SETS OF DIMENSIONED SHOP DRAWINGS AND ITEMIZED EQUIPMENT LISTS, COMPLETE IN ALL DETAILS, WHICH HE PROPOSES TO INSTALL. ALL ITEMS SHALL BE SUBMITTED AT THE SAME TIME. THESE SUBMITTALS WILL BE CHECKED BY THE ARCHITECT AND RETURNED TO THE CONTRACTOR WITHIN A REASONABLE LENGTH OF TIME AFTER RECEIPT OF SAME BY THE ARCHITECT.
- B. COPIES RETURNED TO THE CONTRACTOR WILL BE REVIEWED WITH NO EXCEPTION TAKEN, WITH EXCEPTIONS NOTED THEREON OR WILL CALL FOR RESUBMITTAL.THE CONTRACTOR SHALL MAKE ALL REVISIONS NOTED, RESUBMIT IF INDICATED, BEFORE COMMENCING THE WORK INVOLVED.
- C. SUBMITTALS SHALL INCLUDE BUT NOT NECESSARILY BE LIMITED TO THE
- FOLLOWING: 1. INSULATION
- 2. PIPE AND FITTINGS 3. PIPE ISOLATORS
- 4. PLUMBING FIXTURES 5. SEISMIC BRACING VALVES
- D. IN THE EVENT THAT THE CONTRACTOR INSTALLS EQUIPMENT OR MATERIALS IN A MANNER NOT ACCEPTABLE TO THE ARCHITECT WITHOUT HAVING FIRST SUBMITTED SHOP DRAWINGS AND EQUIPMENT LIST FOR APPROVAL, ANY CHANGES WHICH ARE REQUIRED SHALL BE MADE AT THE CONTRACTOR'S EXPENSE.

1.9 AS-BUILT DRAWINGS

A. THE CONTRACTOR SHALL KEEP UP TO DATE, AN ACCURATE DIMENSIONED SET OF BLUELINE PRINTS SHOWING ALL WORK WHICH IS INSTALLED DIFFERENTLY FROM THAT SHOWN ON THE DRAWINGS. THIS SHALL INCLUDE LOCATION, ETC., AS REFERRED TO CONCEALED LINES AND EQUIPMENT. ALL IN A LEGIBLE WORKMAN LIKE MANNER. THIS CONTRACTOR SHALL GUARANTEE THAT HIS "AS BUILT" DRAWINGS ARE ACCURATE.

1.10 QUALITY OF EQUIPMENT, MATERIALS, AND WORKMANSHIP

A. UNLESS OTHERWISE SPECIFIED, ALL EQUIPMENT AND MATERIALS USED IN THE INSTALLATION SHALL MEET ASME, ASTM, NFPA, U.L. AND IAPMO REQUIREMENTS AND SHALL BE NEW AND IN PERFECT CONDITION WHEN INSTALLED. ALL ARTICLES PROVIDED FOR THE SAME GENERAL PURPOSE OR USE SHALL BE OF THE SAME MAKE. ALL WORKMANSHIP SHALL BE OF THE BEST QUALITY AND NONE BUT COMPETENT MECHANICS SKILLED IN THEIR TRADES SHALL BE EMPLOYED. THE CONTRACTOR SHALL FURNISH THE SERVICES OF AN EXPERIENCED SUPERINTENDENT, WHO SHALL BE CONSTANTLY IN CHARGE OF THE WORK, TOGETHER WITH ALL NECESSARY JOURNEYMEN, HELPERS AND LABORERS REQUIRED. ALL MATERIALS SHALL BE INSTALLED AS RECOMMENDED BY THE MANUFACTURER.

1.11 APPROVALS

A. THE ARCHITECT SHALL HAVE THE RIGHT TO ACCEPT OR REJECT EQUIPMENT, MATERIALS, WORKMANSHIP AND TEST AND DETERMINE WHEN THE CONTRACTOR HAS COMPLIED WITH THE REQUIREMENTS HEREIN SPECIFIED.

1.12 SELECTION AND ORDERING OF EQUIPMENT AND MATERIALS

A. IMMEDIATELY AFTER AWARD OF THE CONTRACT AND FINAL RETURN OF SUBMITTALS BY THE ARCHITECT, THE CONTRACTOR SHALL ARRANGE FOR THE PURCHASE AND DELIVERY OF ALL EQUIPMENT AND MATERIALS REQUIRED, IN AMPLE QUANTITIES AND AT THE PROPER TIME. HE SHALL DELIVER TO THE ARCHITECT A COMPLETE LIST OF EQUIPMENT AND MATERIALS ORDERED GIVING DESCRIPTION, PLATE NUMBERS, AND BROCHURES, NAME OF THE WHOLESALER, DATE OF ORDERS, AND APPROXIMATE DELIVERY DATES.

1.13 LOCATIONS AND ACCESSIBILITY

A. INSTALL ALL NEW PIPING ABOVE CEILINGS AND AS HIGH AS POSSIBLE. RAISE ALL EXISTING PIPING NOT ABOVE NEW CEILING HEIGHTS TO ABOVE NEW CEILING HEIGHTS. INSTALL ALL EQUIPMENT IN SUCH A MANNER AS TO BE READILY ACCESSIBLE FOR MAINTENANCE AND REPAIRS. INSTALL ALL PIPING AND EQUIPMENT IN SUCH A MANNER AS TO PRESERVE HEADROOM, AVOID OBSTRUCTIONS, AND KEEP OPENINGS AND PASSAGEWAYS CLEAR.

- B. IF CHANGES IN THE INDICATED LOCATIONS OR ARRANGEMENTS ARE REQUIRED, THEY SHALL BE MADE BY THE CONTRACTOR WITHOUT ADDITIONAL
- C. THE CONTRACTOR SHALL COORDINATE ANY POINTS OF CONFLICT BETWEEN HIS WORK AND THAT OF OTHER TRADES SO THAT THE CONFLICT MAY BE PROPERLY ADJUSTED BEFORE THE WORK IS INSTALLED. WORK INSTALLED BY THIS CONTRACTOR WHICH INTERFERES WITH THE WORK OF OTHER TRADES SHALL BE REMOVED AND REINSTALLED AT THE CONTRACTOR'S EXPENSE WHEN SO DIRECTED BY THE ARCHITECT OR HIS REPRESENTATIVE. IT SHALL BE UNDERSTOOD THAT NO EXTRAS TO THE CONTRACTOR WILL BE PERMITTED TO ACCOMPLISH THE ABOVE RESULTS.

1.14 COOPERATION WITH OTHER TRADES

- A. THE CONTRACTOR SHALL COOPERATE WITH THE OTHER TRADES IN THE INTEREST OF OBTAINING THE MOST PRACTICAL OVERALL ARRANGEMENT OF EQUIPMENT, PIPING, LIGHTING, CONDUIT AND DUCTS TO MAINTAIN MAXIMUM HEADROOM AND ACCESSIBILITY.
- B. AREAS OF LIMITED CLEARANCE SHALL BE LAID OUT TO 3/4" = 1'0" SCALE WITH ALL PIPING, DUCTS, CONDUITS, LIGHTING, BEAMS, ETC.,

1.15 VERIFICATION OF EXISTING SERVICES

A. THE CONTRACTOR SHALL VERIFY LOCATIONS, SIZES AND INVERT ELEVATIONS OF ALL EXISTING PIPING AND CONNECTIONS PRIOR TO INSTALLING OF NEW PIPING AND/OR RELOCATION OF PIPING. ANY PIPING INSTALLED PRIOR TO VERIFYING POINTS OF CONNECTION AND COORDINATION WITH OTHER TRADES SHALL BE DONE AT THE CONTRACTOR'S RESPONSIBILITY AND EXPENSE.

1.16 GUARANTEES

- A. THE CONTRACTOR SHALL GUARANTEE ALL WORKMANSHIP, EQUIPMENT AND MATERIAL INSTALLED BY HIM FOR A PERIOD OF NOT LESS THAN ONE (1) YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION. SHOULD ANY DEFECTS OCCUR DURING THIS PERIOD, THE CONTRACTOR SHALL PROMPTLY REPAIR OR REPLACE THE DEFECTIVE ITEM FREE OF CHARGE TO THE OWNER. INCLUDING COST OF LABOR, BASED UPON NORMAL WORKING HOURS. B. HE SHALL GUARANTEE THE COMPLETE AND PERFECT OPERATION OF THE ENTIRE SYSTEM INSTALLED BY HIM AND THAT ALL APPARATUS WILL
- C. HE SHALL GUARANTEE THAT ALL EQUIPMENT OR PIPING INSTALLED BY HIM SHALL BE SUPPORTED IN SUCH A MANNER AS TO BE FREE FROM OBJECTIONABLE VIBRATION AND NOISE.

PERFORM IN ACCORDANCE WITH THE DETAILED DRAWINGS AND

1.17 PROTECTION OF EQUIPMENT AND MATERIALS

A. THE CONTRACTOR SHALL PROVIDE ADEQUATE AND PROPER STORAGE FACILITIES FOR ALL EQUIPMENT AND MATERIALS AND PROTECT SUCH EQUIPMENT AND MATERIALS FROM DAMAGE.

1.18 CLOSING-IN OF UN-INSPECTED WORK

SPECIFICATIONS.

- A. THE CONTRACTOR SHALL NOT ALLOW OR CAUSE ANY OF THE WORK TO BE COVERED UP OR ENCLOSED UNTIL IT HAS BEEN INSPECTED AND TESTED.
- B. SHOULD ANY OF HIS WORK BE COVERED UP OR ENCLOSED BEFORE SUCH INSPECTION AND TEST, HE SHALL, AT HIS OWN EXPENSE, UNCOVER THE WORK AND AFTER IT HAS BEEN INSPECTED AND TESTED, MAKE ALL REPAIRS WITH SUCH MATERIALS AS MAY BE NECESSARY TO RESTORE ALL HIS WORK AND THAT OF THE OTHER TRADES TO ITS ORIGINAL AND PROPER CONDITION.

1.19 OPENINGS

A. FURNISH INFORMATION TO AFFECTED SECTIONS ON SIZE AND LOCATION OF OPENINGS WHICH ARE REQUIRED IN NEW WALLS. ETC., FOR PIPING AND EQUIPMENT. ANY OPENINGS OR CHANGES TO THE EXISTING WALLS, SLABS, ETC., SHALL BE CORE DRILLED BY THE CONTRACTOR AS DIRECTED BY THE ARCHITECT WITH PRIOR APPROVAL BY THE STRUCTURAL ENGINEER.

1.20 DAMAGE BY LEAKS

A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE TO ANY PART OF THE PREMISES CAUSED BY LEAKS OR BREAKS IN PIPING, EQUIPMENT. OR FIXTURES FURNISHED AND/OR INSTALLED BY HIM FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION.

1.21 EQUIPMENT LABELS

A. ALL EQUIPMENT FURNISHED AND INSTALLED UNDER THIS SECTION SHALL BE PROVIDED WITH THE MANUFACTURER'S METAL IDENTIFICATION LABELS ATTACHED TO EACH PIECE OF EQUIPMENT, SHOWING COMPLETE PERFORMANCE CHARACTERISTICS, SIZE, MODEL, SERIAL NUMBER, ETC.

1.22 MAINTAINING EXISTING SERVICES

- A. THE PREMISES AND EXISTING BUILDING AT THE SITE WILL BE IN USE AT THE TIME THE WORK OF THIS CONTRACT IS IN PROGRESS. THE CONTRACTOR SHALL CONDUCT HIS WORK SO AS TO CAUSE NO INCONVENIENCE OR DANGER TO THE PERSONNEL OR PREMISES.
- B. HE SHALL MAINTAIN CONTINUITY OF SERVICE TO THE EXISTING WATER, AND SANITARY SEWER SYSTEMS EXCEPT FOR DESIGNATED INTERVALS DURING WHICH CONNECTIONS CAN BE MADE. THE SCHEDULING OF THE SHUT DOWN PERIOD SHALL BE AT A TIME DIRECTED BY THE OWNER.

1.23 PAINTING

A. PAINTING OF ALL PIPING AND MISCELLANEOUS METALS IS INCLUDED UNDER ANOTHER SECTION OF THE WORK; HOWEVER, ALL SURFACES EXPOSED TO THE WEATHER WHICH ARE NOT FACTORY FINISHED SHALL BE PAINTED WITH ONE COAT OF METAL PRIMER IMMEDIATELY FOLLOWING FABRICATION.

1.24 PIPE AND VALVE IDENTIFICATION

- A. PIPING SHALL BE PROVIDED WITH WESTLINE KOLBI "CUSTOM" OR SETON "SETMARK" PIPE MARKERS. INSTALLED IN ACCORDANCE WITH THE OSHA AND 2015 NFPA 99 STANDARDS AND AS RECOMMENDED BY THE MANUFACTURER. B. ALL VALVES SHALL BE PROVIDED WITH NUMBERED VALVE TAG WITH
- ABBREVIATION "PLBG" COMPLETE WITH "S" MOUNTING CLIP. C. PROVIDE A TYPED VALVE IDENTIFICATION LIST MOUNTED IN A SETON NO. A-11G METAL FRAME UNDER GLASS, OR APPROVED EQUAL, LOCATED AS DIRECTED BY THE ARCHITECT.

1.25 ELECTRICAL WORK

- A. FURNISH ALL CONTROLS, WITH INSTRUCTIONS FOR MAKING THE CONNECTIONS, AND BE RESPONSIBLE FOR THE PROPER OPERATION OF HIS
- B. THE LINE VOLTAGE ELECTRICAL WORK IS UNDER ELECTRICAL SPECS. AND LOW VOLTAGE CONDUIT WHEN REQUIRED IS SPECIFIED AND INSTALLED UNDER THIS SECTION OR SPECIFICATIONS.

PART 2: PRODUCTS AND MATERIALS

2.1 MATERIALS

2.2 MAKING-UP PIPE

A. SOIL AND WASTE PIPING: SHALL BE COATED SERVICE WEIGHT, NO-HUB CAST IRON SOIL PIPE AND FITTINGS, WITH HEAVY DUTY STAINLESS STEEL COUPLINGS APPROVED BY OSHPD AND FACTORY MUTUAL. B. VENT PIPING: SHALL BE COATED SERVICE WEIGHT NO-HUB CAST IRON SOIL

APPROVED BY OSHPD AND FACTORY MUTUAL.

C. COLD WATER, HOT WATER, HOT WATER RETURN AND CONDENSATE DRAIN PIPING: ASTM B88, TYPE L, HARD DRAWN COPPER TUBE.

PIPE AND FITTINGS WITH HEAVY DUTY STAINLESS STEEL COUPLINGS

- FITTINGS: ANSI B16.22, WROUGHT COPPER OR BRASS, SOLDER SOLDERED, LEAD FREE, ASTM B32-
- CAST BRONZE OR COPPER, GROUND JOINT, NON-

FERROUS SEAT, 150 PSI. SHUTOFF VALVES SHALL BE SOLDERED ENDS, BRONZE - BODIED, DOUBLESEAL, FULL FLOW, UNION BALL - APOLLO 82-100 SERIES, 3 PIECE BRONZE, FULL PORT PACKING, DESIGNED FOR WORKING PRESURES UP TO

D. WHEREVER DISSIMILAR PIPING IS CONNECTED, THE CONTRACTOR SHALL PROVIDE A DIELECTRIC FITTING BY "CAPITOL", "EPCO" OR "WEDGESEAL".

A. SCREWED PIPE JOINTS SHALL BE MADE UP WITH APPROVED PIPE COMPOUND APPLIED TO THE MALE THREAD ONLY WITH NOT MORE THAN TWO THREADS LEFT EXPOSED. ENDS OF PIPE SHALL BE REAMED TO THE FULL

COUPLINGS OR EQUAL.

CURRENT CAST IRON SOIL PIPE INSTITUTE SPECIFICATIONS.

B. CAST IRON PIPE JOINTS SHALL BE MADE UP WITH APPROVED IDEAL C. ALL CAST IRON SOIL PIPE AND FITTINGS SHALL CONFORM TO THE

D. ALL BURRED ENDS OF ALL WATER PIPING AND TUBING SHALL BE REAMED (SEE CALIFORNIA PLUMBING CODE, 2010 EDITION).

2.3 HANGERS AND SUPPORTS

- A. SUPPORT HORIZONTAL PIPING WITH ELCEN NO. 89, PHD NO. 151 OR GRINNEL NO. 70, ADJUSTABLE STEEL BAND; PIPE HANGERS AND ROD SUPPORTS WITH FARTHQUAKE BRACING AS PRE-APPROVED SYSTEMS. SUCH AS MASON INDUSTRIES, INC. OPM-0043-13 OR B-LINE/TOLCO OPM-0052-13, USE INSULATION PROTECTION SHIELD FOR INSULATED PIPING.
- B. COPPER PIPE SHALL HAVE HANGERS EVERY 10 FEET, EXCEPT 1-1/2 INCH AND SMALLER, EVERY 6 FEET.
- C. CAST IRON PIPE SHALL HAVE A HANGER AT THE JOINT OF EACH PIPE
- D. WHERE PIPING IS CONCEALED IN WALLS, SUPPORTS SHALL BE "UNISTRUT", "SPEED STRUT", "SUPER STRUT", OR "FAMET" CHANNEL. E. IN NO CASE SHALL PIPING COME IN CONTACT WITH THE BUILDING STRUCTURE. WHERE PIPE MUST COME IN CONTACT, PROVIDE PIPE ISOLATORS AS HEREIN SPECIFIED.

2.4 PIPE ISOLATORS

- A. ISOLATE ALL PIPE HANGERS OR PIPING SUPPORTS FROM HOT WATER, COLD WATER AND MEDICAL GAS PIPING WITH SEMCO "TRISOLATORS"
- 2.5 PIPE SLEEVES AND PLATES A. WHERE FIREPROOFING IS REQUIRED, THE SPACE BETWEEN PIPE AND
- SLEEVES SHALL BE CAULKED WITH 3M BRAND FIRE BARRIER OR CSFM APPROVED EQUAL.

B. PROVIDE CHROME PLATED SET SCREW FLANGE ON ALL PIPING

PENETRATING FINISHED FLOORS, WALLS AND CEILINGS.

C. IN EXISTING CONSTRUCTION, PIPE OPENINGS SHALL BE CORE DRILL WHERE PERMITTED BY THE ARCHITECT, AND AS PREVIOUSLY APPROVED BY THE STRUCTURAL ENGINEER.

2.6 PIPE IDENTIFICATION

A. ALL SERVICE PIPING WHICH IS ACCESSIBLE FOR MAINTENANCE OPERATIONS (EXCEPT PIPING IN INACCESSIBLE SPACES) SHALL BE IDENTIFIED WITH SEMIRIGID PLASTIC IDENTIFICATION MARKERS, SETMARK PIPE MARKERS, OR EQUAL.

2.7 INSULATION:

A. ALL HOT WATER PIPING INSULATION SHALL BE TESTED BY UNDERWRITERS LABORATORIES, INC. (UL). TEST SHALL INCLUDE INSULATION, JACKETS, FITTINGS, ADHESIVES, COATINGS AND ACCESSORIES. COMPOSITE PRODUCTS SHALL MEET THE FIRE HAZARD REQUIREMENTS OF NFPA 90A.

INSULATION MATERIALS, INCLUDING FACINGS, ADHESIVE FOR FACINGS AND ANY OTHER COMPONENTS, SHALL HAVE A FLAME-SPREAD RATING NOT TO EXCEED 25. AND A SMOKE DENSITY NOT TO EXCEED 50 WHEN TESTED IN ACCORDANCE WITH U.B.C. STANDARD NO. 42-1. EXCEPT WHERE MORE STRINGENT REQUIREMENTS ARE NOTED. FURNISH AFFIDAVIT FROM MANUFACTURER THAT PRODUCTS DELIVERED TO PROJECT MEET REQUIREMENTS SPECIFIED.

HOT PIPING, TEMPERATURE TO 450°F: GLASS FIBER, ONE-PIECE (HD) SECTIONAL PIPE INSULATION WITH FACTORY APPLIED JACKETS (AP-T) WITH SELF SEALING LAPS FIBERGLASS INSULATION (HD) SHALL HAVE THERMAL CONDUCTIVITY (AT 75°F MEAN) NOT MORE THAN 0.23 BTU/HR. SQ. FT./F/IN. 3 P.C.F. DENSITY MINIMUM.

INSULATION SHALL BE AS MANUFACTURED BY: JOHNS-MANVILLE. OWENS-CORNING OR NATIONAL GYPSUM

2.8 PLUMBING FIXTURES

A. GENERAL

- 1. PLUMBING FIXTURE TRIM SHALL BE BRASS WITH HEAVY POLISHED CHROMIUM PLATED FINISH, UNLESS OTHERWISE SPECIFIED. INDIVIDUAL LOOSE KEY STOPS SHALL BE PROVIDED FOR ALL SUPPLIES AND SHALL BE MOUNTED UNDER THE FIXTURES, UNLESS OTHERWISE SPECIFIED.
- 2. WHERE SERVICES PASS THROUGH A WALL, FLOOR OR CEILING, PROVIDE FOR AND ESCUTCHEON HEAVILY CHROME PLATED AND FASTENED WITH
- 3. FIXTURE HEIGHTS SHALL BE AS DIRECTED BY THE ARCHITECT.
- 4. ALL VOIDS BETWEEN THE COUNTERTOP AND THE FIXTURE SHALL BE FILLED WITH DAP OR APPROVED EQUAL FIXTURE GROUT.
- 5. FIXTURES AND ACCESSORIES SHALL BE AMERICAN STANDARD, KOHLER, BRIGGS, CRANE, JUST OR ELKAY AS EQUAL, UNLESS OTHERWISE NOTED. FIXTURES AND TRIM SHALL BE OF ONE MANUFACTURER.

PART 3: EXECUTION

3.1 CLEANING UP A. ALL EQUIPMENT, PIPING AND EXPOSED SURFACES SHALL BE LEFT SMOOTH AND CLEAN, AND ALL PLATED WORK SHALL BE POLISHED. THE ENTIRE PREMISES SHALL BE CLEANED OF UNUSED MATERIAL, RUBBISH, DEBRIS,

3.2 SLEEVING, CUTTING AND PATCHING

GREASE SPOTS.

A. THE CONTRACTOR SHALL DO ALL CORE DRILLING AND PATCHING AND SHALL PROVIDE ALL OPENINGS COMPLETE WITH SLEEVES AND SUPPORTS WHICH MAY BE REQUIRED FOR THE INSTALLATION OF THE WORK UNDER THIS SECTION OF THE SPECIFICATIONS. PATCHING SHALL BE OF THE SAME MATERIALS, WORKMANSHIP AND FINISH AS, AND SHALL ACCURATELY MATCH, ALL SURROUNDING CONSTRUCTION. ALL CORE DRILLING OR PATCHING SHALL BE DONE UNDER THE ARCHITECT'S DIRECTION. WHERE PIPES ARE TO PASS THROUGH, OR INTERFERE WITH ANY STRUCTURAL MEMBER, THE WORK SHALL BE DONE A DIRECTED BY THE ARCHITECT. MEMBRANE CUTTING AND PATCHING SHALL BE PROVIDED UNDER THIS SECTION OF THE WORK AS DIRECTED BY THE ARCHITECT.

3.3 GENERAL PLUMBING INSTALLATION

A. ROUGH-IN SHALL PROCEED AS RAPIDLY AS THE BUILDING CONSTRUCTION WILL PERMIT AND SHALL BE COMPLETE AND THE PIPING TESTED BEFORE BEING ENCLOSED.

B. ALL PIPING SHALL BE THOROUGHLY CLEANED BEFORE INSTALLATION AND ALL PIPE OPENINGS CAPPED TO EXCLUDE DEBRIS UNTIL FIXTURES ARE

- INSTALLED AND FINAL CONNECTIONS MADE. C. ALL JOINTS SHALL BE SMOOTH INSIDE, PIPE ENDS REAMED TO REMOVE BURRS. EACH LENGTH TO BE CAREFULLY INSPECTED AND ALL
- OBSTRUCTIONS REMOVED PRIOR TO FABRICATION. D. EXPOSED PLATED. POLISHED OR ENAMELED CONNECTIONS FROM FIXTURES SHALL BE CAREFULLY MADE; SHALL SHOW NO TOOL MARKS OR THREADS AND SHALL BE PROVIDED WITH NEAT PLATED ESCUTCHEONS WITH ROUND
- CAREFULLY TAPED. E. HORIZONTAL SANITARY AND DRAIN PIPING SHALL BE RUN AT A UNIFORM

GRADE OF 1/4" PER FOOT, UNLESS OTHERWISE NOTED.

INSTALLED IN UNACCESSIBLE LOCATIONS.

HEAD SCREWS OF THE SAME FINISH. ALL FINISHED SURFACES SHALL BE

- H. UNLESS FLANGES ARE INDICATED, A UNION SHALL BE INSTALLED ON ONE SIDE OF ALL SCREWED SHUTOFF VALVES, EQUIPMENT CONNECTIONS AND ELSEWHERE AS INDICATED OR REQUIRED FOR EASE OF INSTALLATION AND SERVICING. UNDER NO CIRCUMSTANCES SHALL UNIONS BE
- . MAKE SUITABLE PROVISION FOR MAXIMUM EXPANSION AND CONTRACTION OF ALL PIPING. PROVIDE SWING FITTINGS AND ANCHORS AS REQUIRED AND/OR AS DIRECTED ON THE JOB.
- J. REDUCING FITTINGS SHALL BE USED IN LIEU OF BUSHINGS. CLOSE NIPPLES WILL NOT BE PERMITTED.
- K. NO HOT WATER LINE SHALL BE RUN PARALLEL TO A COLD WATER LINE NEARER THAN 8", EXCEPT NEAR FIXTURES OR EQUIPMENT, CONNECTIONS. L. IN MAKING UP LINES OF BRASS OR CHROME PIPE, AN APPROVED TYPE

FRICTION WRENCH SHALL BE USED TO AVOID MARKING OF THE PIPE.

3.4 TESTING AND ADJUSTING

- A. EACH PIECE OF EQUIPMENT AND ALL OF THE SYSTEMS SHALL BE ADJUSTED TO INSURE PROPER FUNCTIONING OF ALL CONTROLS. ELIMINATING OF NOISE AND VIBRATION AND LET IN FIRST CLASS OPERATING CONDITION.
- B. THE ARCHITECT SHALL BE NOTIFIED TWENTY-FOUR (24) HOURS IN ADVANCE WHEN THE PIPING IS READY FOR TESTING. ALL PIPES SHALL BE TESTED IN ACCORDANCE WITH CITY AND STATE ORDINANCES, N.F.P.A., AND THE TESTS OPERATED IN THE PRESENCE OF THE INSPECTOR OF RECORD.

C. SHOULD ANY PIECE OF APPARATUS, ANY WORK OR MATERIAL FAIL IN ANY OF THESE TESTS, IT SHALL BE IMMEDIATELY REMOVED AND REPLACED BY PERFECT MATERIAL AT THE CONTRACTOR'S EXPENSE. THE PORTION OF THE WORK REPLACED SHALL AGAIN BE TESTED BY THE CONTRACTOR AT HIS OWN EXPENSE IN THE PRESENCE OF THE INSPECTOR OF RECORD.

D. ALL EQUIPMENT WHICH WOULD BE SUBJECT TO DAMAGE AT THE TEST PRESSURE SHALL BE ISOLATED FROM THE SYSTEM.

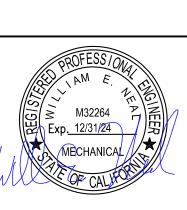
E. TESTS: 1. WATER SYSTEMS: INSTALLATION, TESTING AND STERILIZATION SHALL BE IN ACCORDANCE WITH AWWA C651-92 STANDARDS.

- REFER TO 2019 CPC, SEC 609.9
- * INJECTION PORTS COMPLETE WITH ISOLATION VALVES SHALL BE INSTALLED FOR CHLORINATION.
- 2. WASTE AND VENT SYSTEMS: INSTALLATION AND TESTING SHALL BE IN ACCORDANCE WITH 2010 C.P.C. AND I.A.P.M.O. STANDARDS AND RECOMMENDATIONS.

END OF SECTION

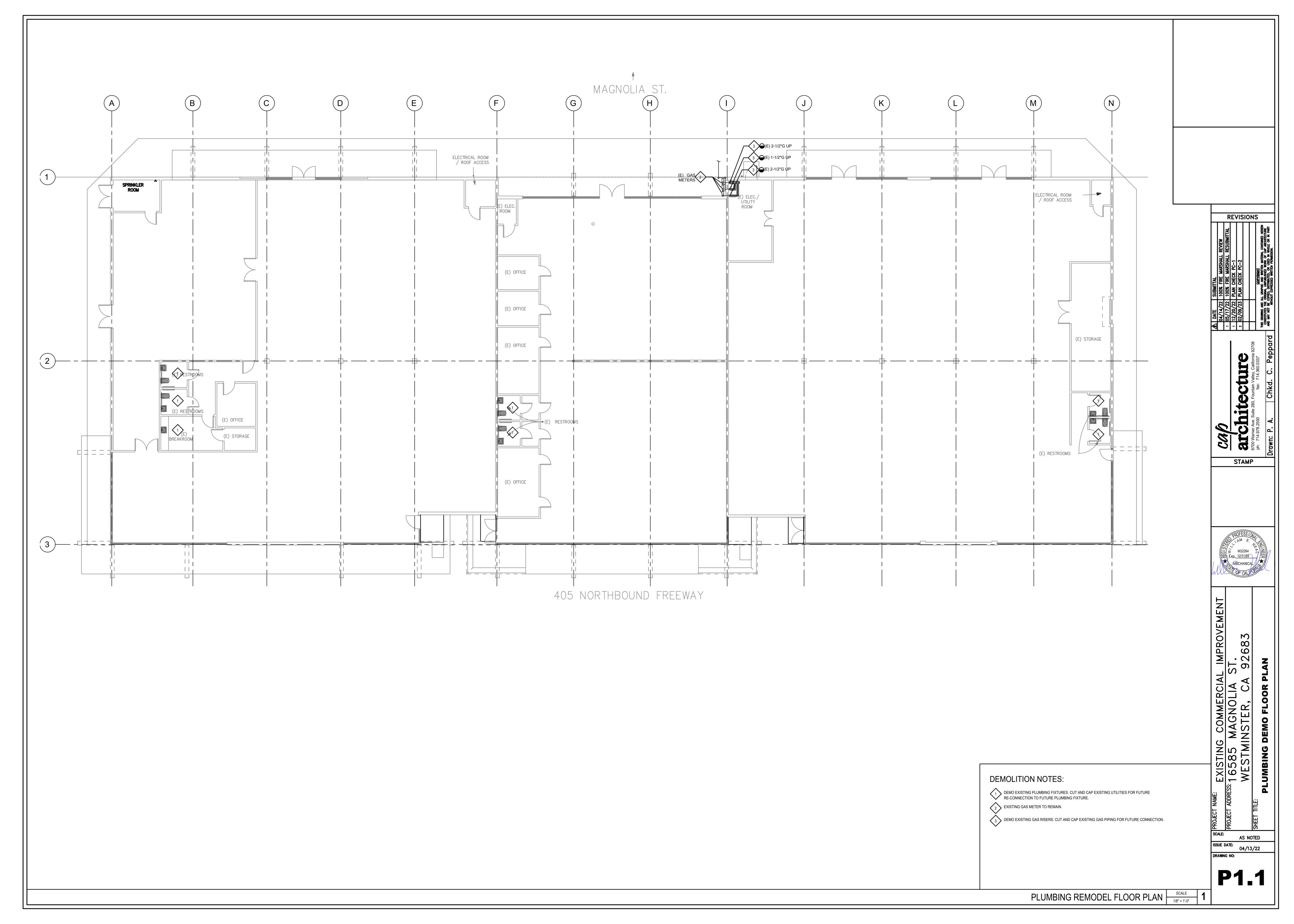
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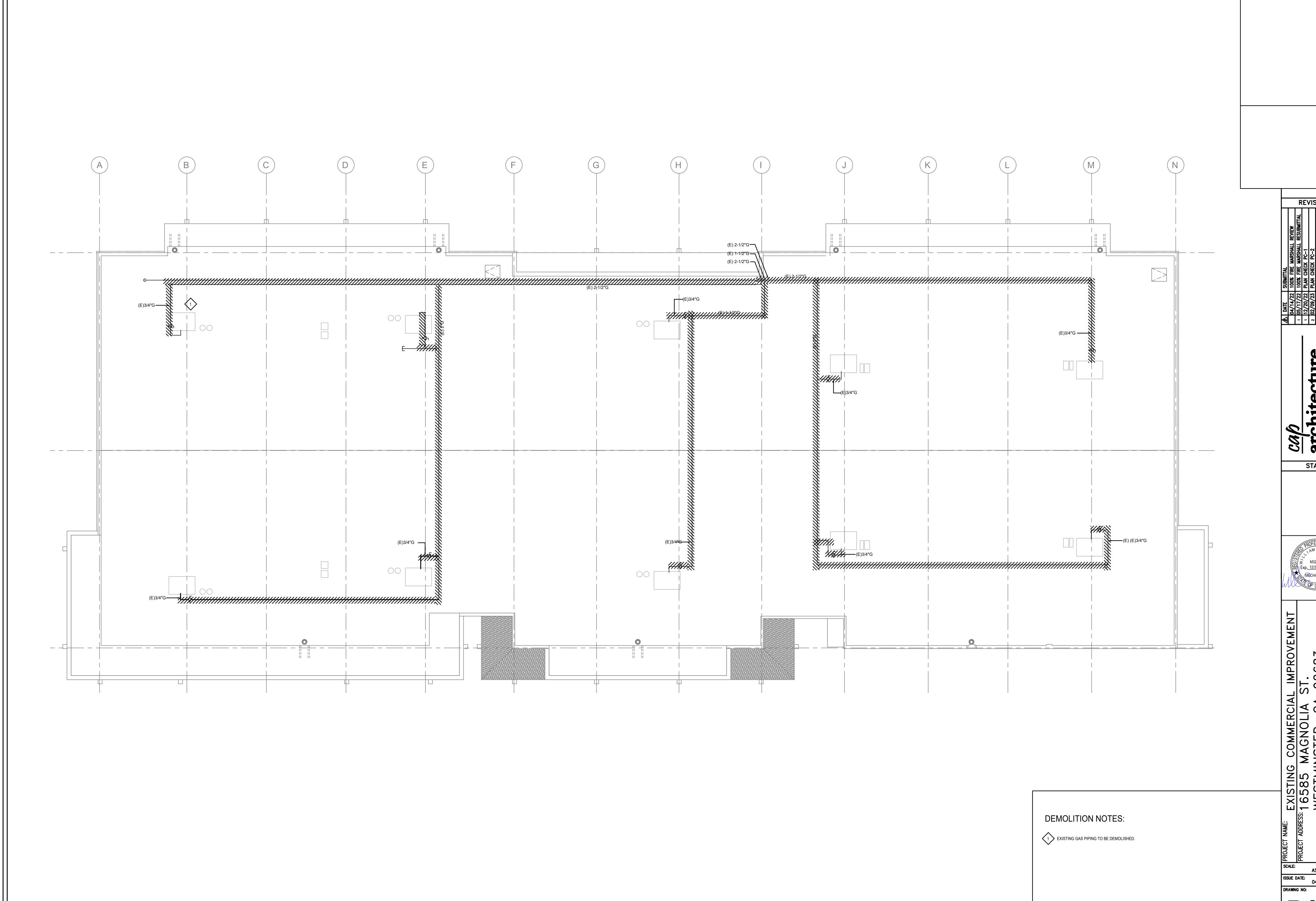
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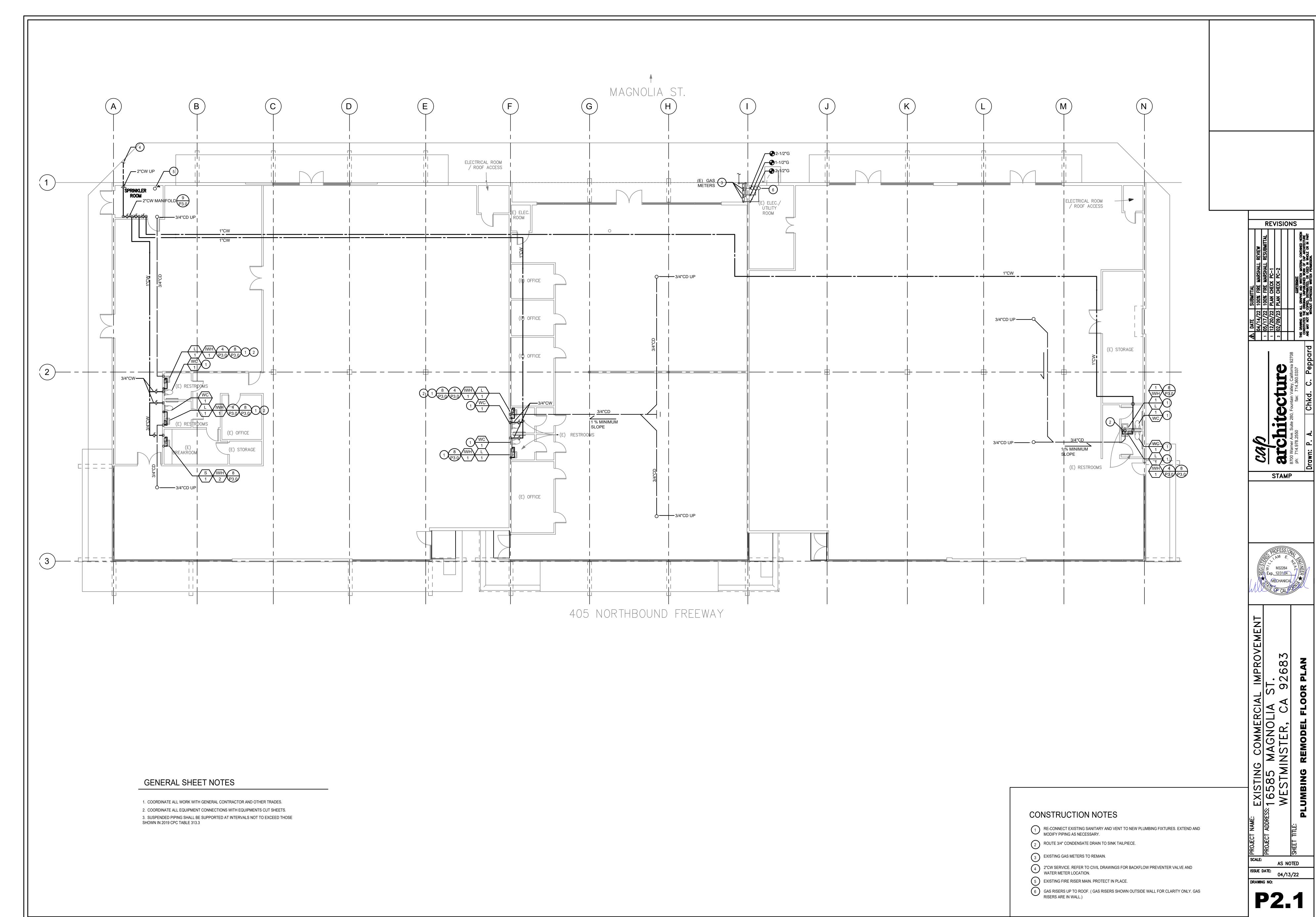




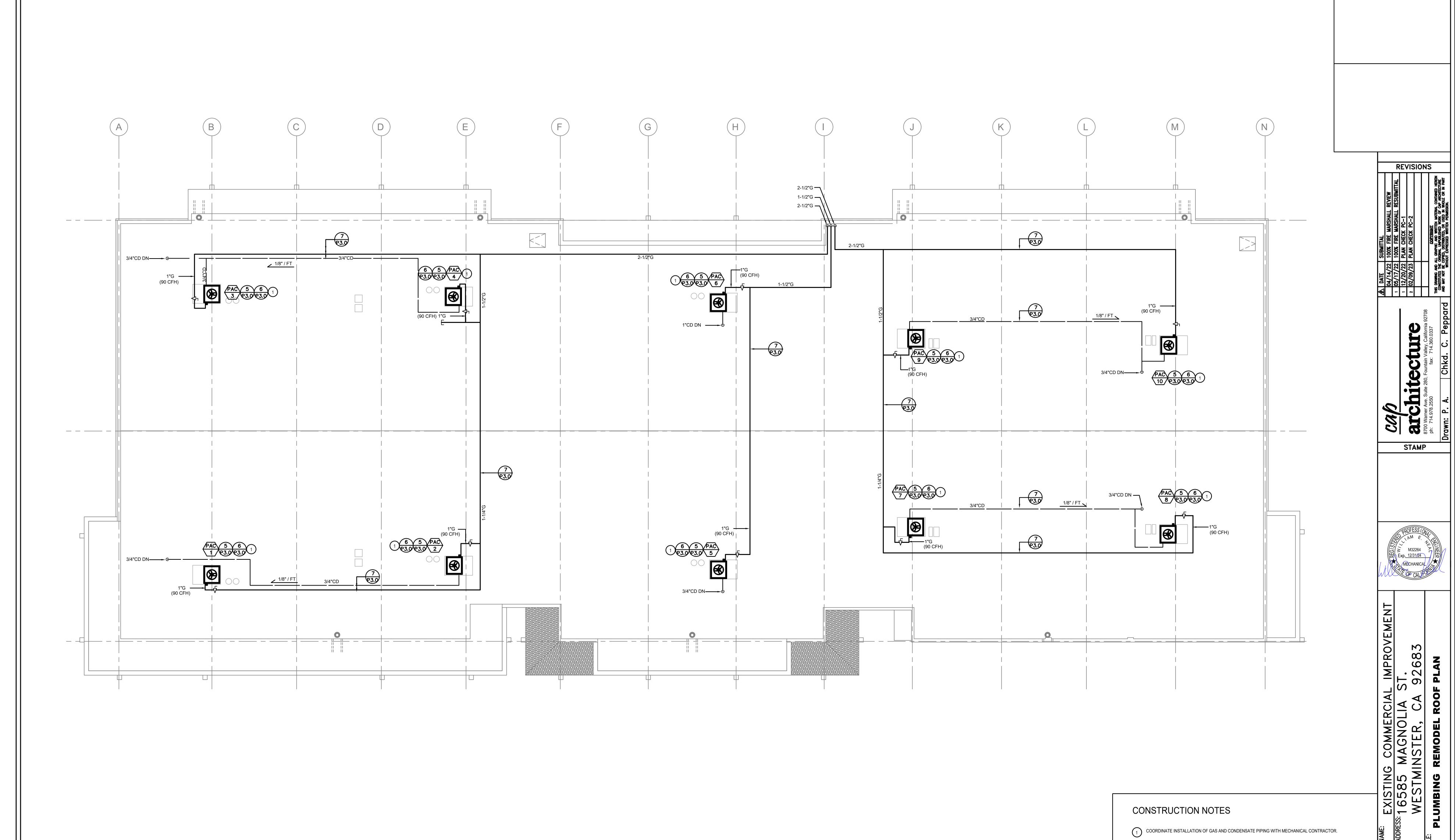
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P1.2



PLUMBING REMODEL FLOOR PLAN SCALE 1/8" = 1'-0"

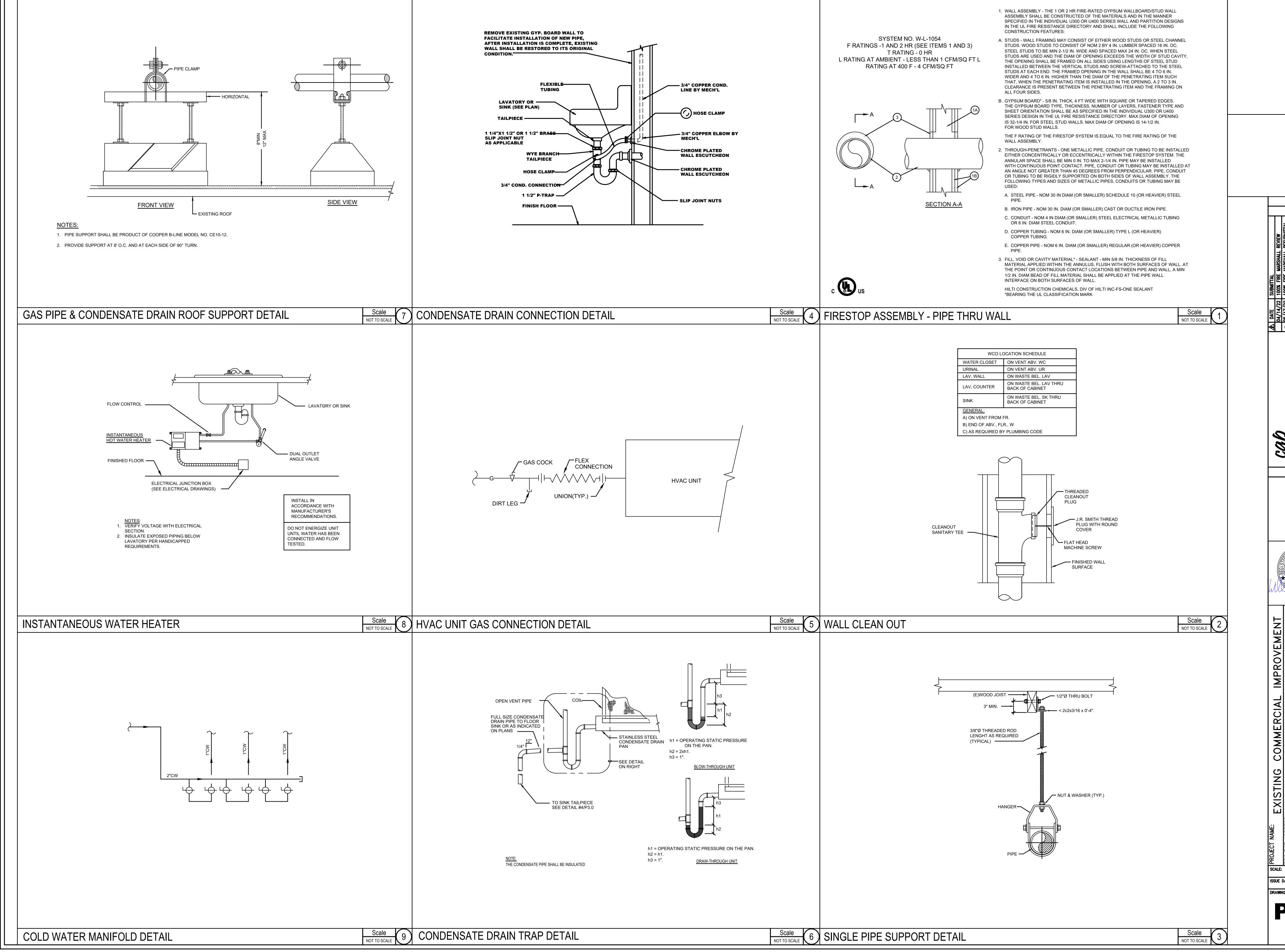


CONSTRUCTION NOTES

COORDINATE INSTALLATION OF GAS AND CONDENSATE PIPING WITH MECHANICAL CONTRACTOR.

AS NOTED

P2.2



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	GENERAL NOTES						
1.	THESE DOCUMENTS WERE PREPARED WITHOUT AS-BUILT DOCUMENTS AS NONE WERE AVAILABLE. FIELD VEI ALL EXISTING CONDITIONS (SIZE, LOCATION, ETC.) PRIOR TO BEGINNING CONSTRUCTION. NOTIFY ARCHITECT ENGINEER OF ANY DISCREPANCIES BETWEEN CONTRACT DOCUMENTS AND EXISTING CONDITIONS.						
2.	COORDINATE THE LOCATION AND ELEVATION OF EQUIPMENT, DUCTWORK AND PIPING WITH OTHER TRADES, AVOID INTERFERENCES.						
3	PROVIDE ADEQUATE SUPPORT (THRUST RESTRAINTS, ETC.) FOR PIPING AT POINTS WHERE EQUIPMENT IS						

3. PROVIDE ADEQUATE SUPPORT (THRUST RESTRAINTS, ETC.) FOR PIPING AT POINTS WHERE EQUIPMENT IS DISCONNECTED FROM THE SYSTEM.

4. CONNECTION, DEMOLITION OR INTERRUPTION TO EXISTING SERVICES SHALL BE MINIMIZED AND COORDINATED WITH THE OWNER'S REPRESENTATIVE.

MANUFACTURERS RECOMMENDATIONS. EQUIPMENT DESIGNED TO BE FIXED IN POSITION SHALL BE SECURELY FASTENED IN PLACE. SEE SEISMIC NOTES.

5. EQUIPMENT SHALL BE INSTALLED, DUCTED AND/OR PIPED IN ACCORDANCE APPLICABLE CODES AND

INSTALL PIPING OUT OF NATURAL WALKWAYS AND IN COMPLIANCE WITH CAL-OSHA SAFETY STANDARDS. 8. PROVIDE (7) FOOT MINIMUM HEAD CLEARANCE AT OVERHEAD PIPING AND EQUIPMENT UNLESS OTHERWISE

NOTED ON ARCHITECTURAL OR STRUCTURAL PLANS. 9. FACTORY-MADE AIR DUCTS SHALL BE APPROVED FOR THE USE INTENDED OR SHALL CONFORM TO THE REQUIREMENTS OF THE CALIFORNIA MECHANICAL CODE (C.M.C.).

10. DUCT SYSTEMS CONSTRUCTED OF METAL SHALL COMPLY WITH C.M.C. STANDARD 6-2.

11. HORIZONTAL RECTANGULAR AND ROUND DUCTS WHEN SUSPENDED ABOVE SHALL BE SUPPORTED USING MATERIALS AND INTERVALS SPECIFIED BY C.M.C. TABLE 6-E.

12. SUPPLY AND RETURN AIR DUCTS AND PLENUMS OF HEATING AND COOLING SYSTEMS SHALL BE INSULATED WITH NOT LESS THAN THE AMOUNT SET FORTH PER THE TITLE-24.

UNLESS OTHERWISE NOTED ON DRAWINGS, MAKE TAKE-OFFS FROM MAIN AND BRANCH DUCTS WITH CONICAL SPIN-IN CONNECTORS. PROVIDE A VOLUME DAMPER IMMEDIATELY AFTER BRANCH TAKE-OFF.

14. PROVIDE AND INSTALL VOLUME DAMPERS ON ALL SUPPLY, RETURN AND EXHAUST AIR BRANCH DUCTS AS REQUIRED FOR PROPER BALANCING OF THE SYSTEM.

15. EXHAUST VENTS SHALL BE AT LEAST 10 FEET IN A HORIZONTAL DIRECTION OR 3 FEET ABOVE THE OUTSIDE-AIR INTAKES OF HVAC EQUIPMENT. PLUMBING VENTS SHALL TERMINATE NOT LESS THAN 10 FEET FROM, NOT LESS THAN 3 FEET ABOVE A OPENABLE WINDOW, DOOR, OPENING, AIR INTAKE, OR VENT SHAFT, OR NOT LESS THAN 3 FEET IN EVERY DIRECTION FROM A LOT LINE, ALLET AND STREET.

16. DUCT CONNECTIONS TO CEILING DIFFUSERS IN EXPOSED LOCATIONS SHALL BE MADE WITH RIGID DUCT. NO FLEX DUCT WILL BE ALLOWED AT THESE CONNECTIONS.

17. COMBINATION SMOKE/FIRE DAMPERS SHALL BE PROVIDED AT ALL FIRE RATED PENETRATIONS AND SHALL CONFORM TO THE REQUIREMENTS OF THE STATE OF CALIFORNIA. PROVIDE DUCT MOUNTED SMOKE DETECTOR FOR COMBINATION SMOKE/FIRE DAMPERS. MECHANICAL AND GENERAL CONTRACTOR SHALL CALL OUT NUMBER OD SMOKE DAMPERS IN BID BUT SHALL BE RESPONSIBLE AT NO ADDITIONAL COST TO OWNER FOR PROVIDING ALL FIRE SMOKE DAMPERS AS REQUIRED FOR FIRE DEPARTMENT OR BUILDING DEPARTMENT APPROVAL WHETHER CALLED OUT OR IMPLIED IN THE DRAWINGS. IF OWNER DIRECTS A FIELD CHANGE THAT CAUSES ADDITIONAL FIRE SMOKE DAMPERS TO BE REQUIRED AND GENERAL CONTRACTOR OR SUBCONTRACTOR HAVE NOT PROVIDED A UNIT PRICE SCHEDULE FOR ADDITIONAL WORK, THE COST OF THE ADDITIONAL DAMPER OF ANY KIND WILL BE THE DIRECT MATERIAL WITH NO MARKUP OR LABOR.

18. DUCT AND PIPE PENETRATIONS AT FIRE-RATED WALLS AND AT FLOORS SHALL BE SLEEVED AND WITH SEALED

FIRE STOP TO PREVENT THE PASSAGE OF SMOKE. 10 DUCTWORK AND PIPING SHALL PASS THROUGH WALLS WITHOUT RIGID CONNECTIONS. PENETRATION POINTS SHALL BE SLEEVED TO ALLOW PASSAGE OF PIPING OR DUCTWORK AND TO MAINTAIN 3/4" MIN. & 1-1/4" MAX. CLEARANCE AROUND THE OUTSIDE SURFACE. THIS CLEARANCE SHALL BE SHALL BE TIGHTLY PACKED WITH ONE POUND DENSITY GLASS FIBER AND CAULKED AIRTIGHT WITH NON-HARDENING SEALANT AFTER INSTALLATION OF PIPING OR DUCTWORK. INTEGRITY OF FIRE RATED WALLS OF FLOORS SHALL BE MAINTAINED WITH SUITABLE FIRE

20. DUCT SIZES SHOWN ON DRAWINGS ARE INSIDE CLEAR DIMENSION. WHERE DUCT LINER IS INSTALLED IN DUCT, INCREASE DUCT SIZE TO PROVIDE INSIDE CLEAR DIMENSIONS SHOWN ON DRAWINGS.

22. THE LOCATION OF ACCESS PANELS FOR CONCEALED VALVES, FUSIBLE LINKS, DAMPER OPERATORS AND EQUIPMENT SHALL BE COORDINATED WITH THE ARCHITECTURAL TRADES.

23. BE RESPONSIBLE FOR PATCHING AND REPAIRING AREAS, PIPING, DUCTWORK, ETC., EXISTING OR NEW,

DAMAGED AS A RESULT OF THE WORK. REPAIR TO MATCH EXISTING CONDITIONS.

HORIZONTAL PIPING AND TUBING SHALL BE SUPPORTED AT SUFFICIENTLY CLOSE INTERVALS TO KEEP IT IN ALIGNMENT AND PREVENT EXCESSIVE SAGGING. SUPPORT EACH PIPE INDEPENDENTLY FROM OTHER PIPES. DO NOT USE WIRE OR PLUMBERS TAPE FOR HANGING OR STRAPPING PIPES.

UNIONS SHALL BE PROVIDED AND INSTALLED PRIOR TO EQUIPMENT CONNECTIONS. PROVIDE DIELECTRIC UNIONS, GASKETS AND FASTENERS AT DISSIMILAR METAL CONNECTIONS OR CONTACT POINTS.

26. PROVIDE 1/2" HIGH STENCIL LETTERING PAINTED ON MECHANICAL EQUIPMENT WITH PERMANENT PAINT, OR A SHEET METAL PLAQUE WITH ENLARGED LETTERING MOUNTED ON THE SIDE OF THE UNIT WITH SHEET METAL SCREWS IDENTIFYING UNIT NUMBER AND AREA SERVED BY SUCH UNIT.

LABEL INSIDE THERMOSTAT HOUSING WITH A PERMANENT MARK TO CORRESPONDING UNIT OR ZONE TERMINAL AS SHOWN ON PLANS. MOUNT THERMOSTATS WHERE INDICATED ON PLAN 48" A.F.F.

INTERCONNECT A/C UNITS TO DUCT SMOKE DETECTION SYSTEM COMPLYING TO CODE TO ACCOMPLISH UNIT SHUT DOWN UPON DETECTION OF ANY SMOKE DETECTOR. COORDINATE WIRING WITH ELECTRICAL

29. ACCURATE "AS-BUILT" DRAWINGS SHALL BE MAINTAINED DURING CONSTRUCTION AND SUBMITTED FOR APPROVAL UPON COMPLETION OF INSTALLATION.

MECHANICAL SYSTEMS SHALL BE TESTED, BALANCED AND OPERATED TO DEMONSTRATE TO THE OWNER OR DESIGNATED REPRESENTATIVE THAT THE INSTALLATION AND PERFORMANCE OF THE SYSTEMS CONFORM TO THE DESIGN INTENT. ALL TESTING AND BALANCING SHALL BE PERFORMED BY A QUALIFIED INDEPENDENT AGENCY CERTIFIED BY THE ASSOCIATION AIR BALANCE COUNCIL (AABC) OR THE NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB). TEST RESULTS SHALL BE DOCUMENTED AND SUBMITTED FOR APPROVAL.

31. REFRIGERANT PIPING SHALL COMPLY WITH CHAPTER 11 OF THE MECHANICAL CODE.

32. CONTRACTOR TO REPAIR ALL EXISTING WALL, FLOOR, CEILING, AND ROOF CONDITIONS TO MATCH EXISTING FOR EQUIPMENT REMOVED. COORDINATE WITH GC.

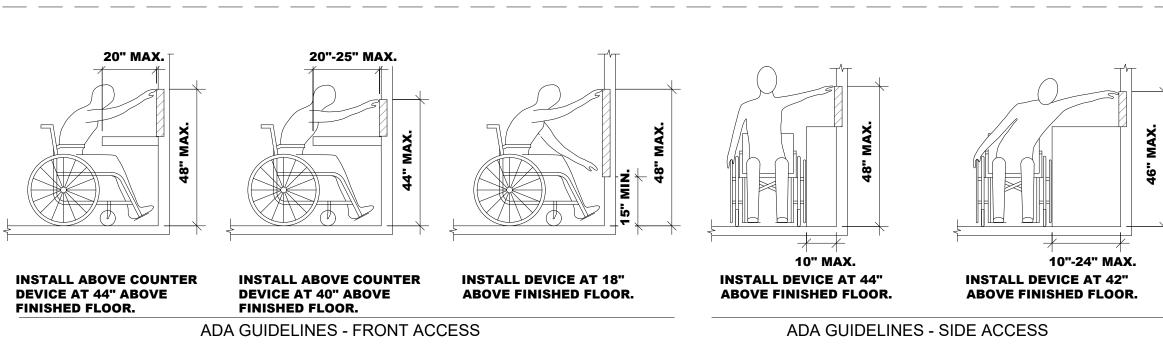
33. DUCTS SHALL BE PROTECTED ON THE EXTERIOR BY PAINT OR OTHER SUITABLE WEATHER PROTECTIVE COATING. PER CMC SEC. 510.6.1.

34. PORTIONS OF SUPPLY AND RETURN AIR DUCTS IN COMMERCIAL USE BUILDINGS CONVEYING HEATED OR COOLED AIR LOCATED IN THE FOLLOWING SPACES SHALL BE INSULATED WITH A MINIMUM R-8 INSULATION.

 OUTDOORS. 2. IN A SPACE BETWEEN THE ROOF AND UNSULATED CEILING.

IN AN UNCONDITIONED CRAWLSPACE AND AND IN OTHER UNCONDITIONED SPACES. 4. PORTIONS OF SUPPLY AIR DUCTS THAT ARE NOT IN THE ABOVE 1-4 SPACS SHALL BE INSULATED WITH MINIMUM R-4.2.

GENER	RAL LEGEND	STIVID	IATION/DEFINITION		
YMBOL	DESCRIPTION	SYMBOL	ABBREVIATION	DEFINITION	
	SQUARE SUPPLY AIR DIFFUSER 4-WAY THROW			ARROW INDICATES DIRECTION OF FLOW	
	RETURN OR TRANSFER GRILLE			ARROW INDICATES DIRECTION OF PIPE SLOPING DOWN	
	EXHAUST GRILLE			CAPPED PIPE	
$\frac{1}{2} = \frac{1}{2} = \frac{1}$	SIDEWALL SUPPLY GRILLE			PIPE DOWN	
	SIDEWALL OUT ET SINELL	——O		PIPE UP	
	SIDEWALL RETURN OR EXHAUST GRILLE			TEE DOWN	
	LINEAR SLOT	—— ∑		VALVE IN RISER	
		$\neg \phi \vdash$		BALL VALVE	
	DUCT ELBOW TURNING VANES	-	CV	CHECK VALVE	
→ FS/FD	COMBINATION FIRE/SMOKE DAMPER	— —	GV	GATE VALVE	
→ FD	FIRE DAMPER	— — —	GLV	GLOBE VALVE	
	EXISTING TO REMAIN	— — ——————————————————————————————————	PRV	PRESSURE REDUCING VALVE	
	EXISTING BELOW GRADE			MOTORIZED 2-WAY ELECTRIC VALVE	
/////////	EXISTING TO BE REMOVED			MOTORIZED 3-WAY ELECTRIC VALVE	
	NEW DELOW CRADE			PNEUMATIC 2-WAY CONTROL VALVE	
Ø	NEW BELOW GRADE ROUND DUCT INDICATOR			PNEUMATIC 3-WAY CONTROL VALVE	
M	MOTOR OPERATED				
T	THERMOSTAT	+		"Y" STRAINER	
(DP)	DIFFERENTIAL PRESSURE SENSOR	* 1		"Y" STRAINER WITH SHUTOFF VALVE	
(SD)	DUCT SMOKE DETECTOR	**		RELIEF VALVE (R) OR SAFETY VALVE (S)	
				ANGLE VALVE	
$\stackrel{\bigcirc}{\rightarrow}$	PUMP SUPPLY AIR SYMBOL			FLOW CONTROL VALVE	
→	RETURN AIR SYMBOL			FLOW METER	
		-1 		GAS COCK	
		$ \Gamma$ Γ		BUTTERFLY VALVE	
				ELECTRONIC CONTROL VALVE	
		\dashv		UNION	
				FLANGE	
		<u> </u>	PG	PRESSURE GAGE	
				THERMOMETER IN WELL	
				AUTOMATIC AIR VENT	
				PIPE SIZE INCREASER	
				BACKFLOW PREVENTER	
		₩		TEMPERATURE GAUGE	
		CWS	_	CHILLED WATER SUPPLY	
		CWR	_	CHILLED WATER RETURN	
		———— HWS ————	-	HEATING WATER SUPPLY	
		HWR	_	HEATING WATER RETURN	
		UC-\>		DOOR UNDERCUT	



ADA STANDARDS FOR ACCESSIBLE DESIGN THERMOSTAT MOUNTING DETAIL

MECHANICAL SHEET INDEX						
SHEET NO.	SHEET NAME					
M0.1	MECHANICAL COVER SHEET					
M0.2	MECHANICAL SCHEDULES AND DETAILS					
M1.1	MECHANICAL DEMO FLOOR PLAN					
M1.2	MECHANICAL DEMO ROOF PLAN					
M2.1	MECHANICAL REMODEL FLOOR PLAN					
M2.2	MECHANICAL REMODEL ROOF PLAN					

TITLE 24 NOTES

DUCTWORK, INCLUDING INSULATION, SHALL CONFORM TO CALIFORNIA ADMINISTRATIVE CODE, 2019 TITLE 24, AND THE CMC LOW VELOCITY DUCT CONSTRUCTION STANDARDS, LATEST 2019 EDITION.

THE PIPING FOR ALL SPACE CONDITIONING AND SYSTEMS SHALL BE INSULATED IN ACCORDANCE WITH TABLE 4-3 OF THE CALIFORNIA ENERGY COMMISSION, 2016 ENERGY EFFICIENCY STANDARDS MANUAL.

TRANSVERSE JOINTS FOR ALL AIR SUPPLY DUCTS INSTALLED WHERE AIR LEAKAGE WOULD BE NON-BENIFICIAL TO THE OCCUPIED AREA TEMPERATURE REQUIREMENTS SHALL BE SEALED WITH APPROVED MASTIC TAPE.

A MAINTENANCE LABEL SHALL BE AFFIXED TO MECHANICAL EQUIPMENT AND A MAINTENANCE MANUAL SHALL BE PROVIDED FOR

DUCT SYSTEMS USED WITH BLOWER TYPE EQUIPMENT WHICH ARE PORTIONS OF A HEATING, COOLING, ABSORPTION,

EVAPORATIVE COOLING OR OUTDOOR AIR VENTILATION SYSTEM SHALL BE SIZED IN ACCORDANCE WITH CHAPTER 16, PART II REFERENCE STANDARDS OF THE CALIFORNIA MECHANICAL CODE.

THE PERSON WITH THE OVERALL RESPONSIBILITY FOR CONSTRUCTION OR THE PERSON RESPONSIBLE FOR THE INSTALLATION OF REGULATED MANUFACTURED DEVICES SHALL POST, OR MAKE AVAILABLE WITH THE BUILDING PERMIT(S) ISSUED FOR THE BUILDING, THE INSTALLATION CERTIFICATE(S) FOR THE MANUFACTURED DEVICES REGULATED BY THE APPLIANCE STANDARDS OR PART 6. SUCH INSTALLATION CERTIFICATE(S) SHALL BE MADE AVAILABLE TO THE ENFORCEMENT AGENCY FOR ALL APPROPRIATE INSPECTIONS. THESE CERTIFICATES SHALL:

I) IDENTIFY FEATURES REQUIRED TO VERIFY COMPLIANCE WITH THE APPLIANCE STANDARDS AND PART 6.

II) INCLUDE A STATEMENT INDICATING THAT THE INSTALLED DEVICES CONFORM TO THE APPLIANCE STANDARDS AND PART 6 AND THE REQUIREMENTS FOR SUCH DEVICES GIVEN IN THE PLANS AND SPECIFICATIONS APPROVED BY THE LOCAL ENFORCEMENT

III) STATE THE NUMBER OF THE BUILDING PERMIT UNDER WHICH THE CONSTRUCTION OR INSTALLATION WAS PERFORMED.

AFTER INSTALLING WALL, CEILING, OR FLOOR INSULATION, THE INSTALLER SHALL MAKE AVAILABLE TO THE ENFORCEMENT AGENCY OR POST IN A CONSPICUOUS LOCATION IN THE BUILDING A CERTIFICATE SIGNED BY THE INSTALLER STATING THAT THE INSTALLATION IN CONSISTENT WITH THE PLANS AND SPECIFICATIONS DESCRIBED IN SECTION 10-103(A)2A. THE CERTIFICATE SHALL ALSO STATE THE MANUFACTURERS NAME, MATERIAL IDENTIFICATION, AND INSTALLED R-VALUE.

JOINTS AND OTHER OPENINGS IN THE BUILDING ENVELOPE THAT ARE SOURCES OF AIR LEAKAGE SHALL BE CAULKED, GASKETED, WEATHERSTRIPPED, OT OTHERWISE SEALED TO LIMIT INFILTRATION AND EXFILTRATION.

INSULATING MATERIAL SHALL BE INSTALLED IN COMPLIANCE WITH THE FLAMESPREAD RATING AND SMOKE DENSITY

REQUIREMENTS OF SECTIONS 707 OF THE CBC. 10. THE BUILDER SHALL PROVIDE THE BUILDING OWNER OR THE PERSON(S) RESPONSIBLE FOR THE BUILDING MAINTENANCE (IN CASE OF MULTI-TENANT OR CENTRALLY OPERATED BUILDINGS) AT OCCUPANCY THE FOLLOWING:

II) MAINTENANCE INFORMATION. REQUIRED ROUTINE MAINTENANCE ACTION SHALL BE CLEARLY STATED AND INCORPORATED ON A READILY ACCESSIBLE LABEL. THE LABEL MAY BE LIMITED TO IDENTIFYING THE MAINTENANCE MANUAL.

III) VENTILATION INFORMATION. A DESCRIPTION OF THE QUANTITIES OF OUTDOOR AND RECALCULATED AIR THAT THE VENTILATION SYSTEM ARE DESIGNED TO PROVIDE TO EACH AREA.

I) OPERATING INFORMATION. A LIST OF THE HEATING, COOLING, WATER HEATING, AND LIGHTING SYSTEMS AND FEATURES,

MATERIALS, COMPONENTS, AND MECHANICAL DEVICES INSTALLED IN THE BUILDING, AND INSTRUCTIONS ON HOW TO OPERATE

11. CERTIFICATE OF ACCEPTANCE (MECH-2A AND ENV-2A) AND ALL RELATED ACCEPTANCE DOCUMENTS SHALL BE SUBMITTED TO THE FIELD INSPECTOR DURING CONSTRUCTION. CERTIFICATE OF OCCUPANCY WILL NOT BE ISSUED UNTIL THESE FORMS ARE REVIEWED AND APPROVED.

DUCT CONSTRUCTION STANDARDS WORK SHALL CONFORM TO THE FOLLOWING 2019 CMC STANDARDS **TABLE** DESCRIPTION INSULATION OF DUCTS DUCT SUPPORTS LOW PRESSURE RECTANGULAR DUCT CONSTRUCTION LOW PRESSURE, CIRCULAR AND OVAL DUCT CONSTRUCTION APPENDIX A STD. 6-1 STANDARD FOR METAL DUCTS

FIRE RATED CONSTRUCTION REQUIREMENTS

1. MATERIALS EXPOSED WITHIN DUCTS OR PLENUMS SHALL HAVE A FLAME-SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED RATING OF NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH STANDARD CBC 8-1.

APPLICABLE CODES

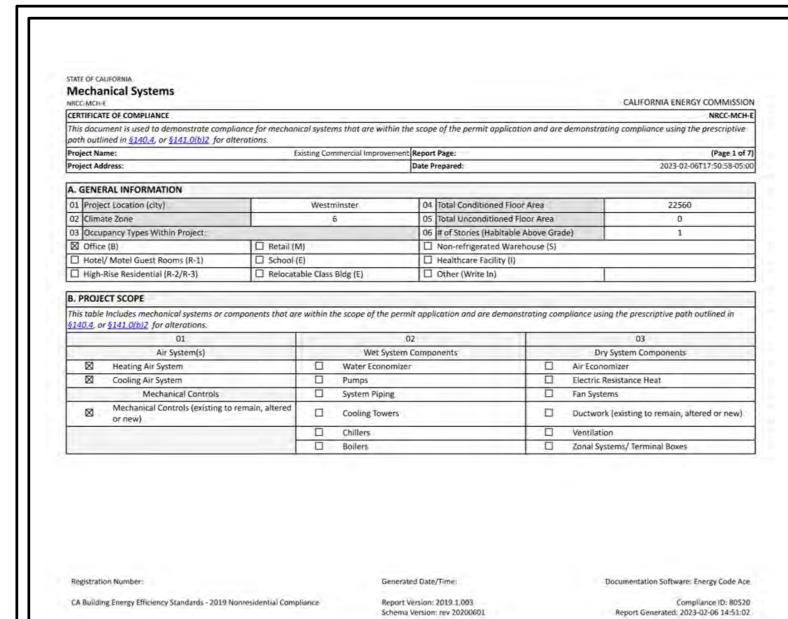
1. 2019 CALIFORNIA PLUMBING CODE 2. 2019 CALIFORNIA MECHANICAL CODE

DRAV	DRAWING/DETAIL REFERENCE KEY							
SYMBOL	DESCRIPTION							
1	PLAN REFERENCE / KEY NOTE							
<u></u>	REVISION							
$\langle A \rangle$	AIR DEVICE CALLOUT							
•	POINT OF CONNECTION							
	POINT OF DISCONNECTION/DEMOLITION							
RE: 2/N	REFER TO DRAWING/DETAIL NUMBER 10.01							
	SHEET NUMBER OF DRAWING/DETAIL							

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STATE OF CALIFORNIA Mechanical Systems CALIFORNIA ENERGY COMMISSION CERTIFICATE OF COMPLIANCE Existing Commercial Improvement Report Page: Project Name: 2023-02-06T17:50:58-05:00 Project Address:

				put into the co ional Condition									table b	y the user. If this t	able says "DOES
01		02		03		04		05		06		07		08	09
System Summary <u>6110.1</u> , <u>6110.2</u> , <u>6140.4</u>	AND	Pumps §140.4(k)	AND	Fans/ Economizers 5140.4(c), 5140.4(e)	AND	System Controls §110.2, §120.2, §140.4(f)	AND	Ventilation §120.1	AND	Terminal Box Controls 6140,4(d)	AND	Distribution §120.3, §140.4(i)	AND	Cooling Towers §110.2(e)2	Compliance Result
(See Table F)		(See Table G)		(See Table H)		(See Table I)		(See Table J)	12.5	(See Table K)		(See Table L)		(See Table M)	
Yes	AND		AND		AND	Yes	AND		AND		AND		AND		COMPLIES
				Mandatory	Measu	res Complian	ce (See	Table Q for D	etails)				COMP	LIES	

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form. E. ADDITIONAL REMARKS This table includes remarks made by the permit applicant to the Authority Having Jurisdiction. neral Remarks) N/A

Registration Number:	Generated Date/Time:	Documentation Software: Energy Code Ace
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance	Report Version: 2019.1.003 Schema Version: rev 20200601	Compliance ID: 80520 Report Generated: 2023-02-06 14:51:02

CERTIFICATE OF CO	DAADCIANCE									RCC-MCH
Project Name:	DIVIPLIANCE	Existing Commorcial Improve	mont Panart Car	0):						Page 3 of
Project Address:	-	Existing Commercial Improvement Report Page: Date Prepared:						20	23-02-06T17	
F. HVAC SYSTEM	M SUMMARY (DRY & WET	SYSTEMS)								
This table is used	to demonstrate compliance	for mechanical equipment with mandator	y requirements	found in §11	0.1 and <u>51</u>	10.2(a) and	prescriptive	requireme	nts found in	5140.40
5140.4(b) and 5	140.4(k) or <u>§141.0(b)2</u> for a	Ilterations.								
		onditioners, condensers, heat pumps, VRI	,							
01	02	03 04 05 06 07 08						09	10	11
					Equipme		r Mechanica 140.4 (a&b)		(kBtu/h)	
			Smallest Size	Size Heating Output ^{2.3}			Cooling C	Output ^{2,3}	Load Calc	ulations ³
Name or Item Tag	Equipment Category per Tables 110.2	Equipment Type per Tables 110.2 / Title 20	Available ¹ §140.4(a)	Per Design (kBtu/h)	Rated (kBtu/h)	Supp. Heating Output (kBtu/h)	Sensible Per Design (kBtu/h)	Rated (kBtu/h)	Total Heating Load (kBtu/h)	Total Sensible Coolin Load (kBtu/l
PAC-1, PAC-2, PAC-3, PAC-4, PAC-5, PAC-6, PAC-7, PAC-8, PAC-9, PAC-10	Furnace + AC	AC, air cooled, single pkg + warm-air central furnace, gas-fired	Yes	28400	73000	0	34900	56000	28440	45400

§140.4(a). Healthcare facilities are excepted. ²It is common practice to show rated output capacity on the equipment schedule. Sensible cooling output comes from specification sheet tables. If equipment is heating only, leave cooling output and load blank, if equipment is cooling only, leave heating output and load blank. ⁴ Authority Having Jurisdiction may ask for load calculations used for compliance per §140.4(b).

STATE OF CALIFORNIA

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Registration Number:	Generated Date/Time:	Documentation Software: Energy Code Ace
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance	Report Version: 2019.1.003	Compliance ID: 80520
	Schema Version: rev 20200601	Report Generated: 2023-02-06 14:51:02

CERTIFICATE OF CO	MPLIANCE									NRCC-MCH
Project Name:			Existing Commerc	cial Improvement	Report Page:					(Page 4 of
Project Address:						2023-0	2-06T17:50:58-05:0			
E HVAC SYSTEM	SUMMARY (DRY & V	VET SYSTEMS								
		2 7		ners (DTAC) and	Parkago Terminal	Heat Pumps (PTHS	1)			
01		t Efficiency (other than Package Terminal Air Conditioners (PTAC) and Package Terminal Heat Pumps (PTHP)) 02 03 04 05 06 07								I 09
			** 1	Hea	ing Mode	1		Cooli	08 ng Mode	1 40
				1100	Minimum				nimum.	
Name or Item	Size Cate	gory	Rating		Efficiency			1	iciency	
Tag	(Btu/i	-	Condition	Efficiency Unit	Required per	Design Efficiency	Efficiency U			Design Efficient
			(*F)		Tables 110.2 /					115
					Title 20			Ti	tle 20	
PAC-1, PAC-2,										
PAC-3, PAC-4,	100 miles 100 miles						EER		11	11
PAC-5, PAC-6,	<65kBtuh cooling/ <2	25kBtuh heatin	g	AFUE	0.8	0.81	SEER	-	14	14
							Decit			
PAC-7, PAC-8,				1						
PAC-7, PAC-8, PAC-9, PAC-10				~			\wedge		Δ	
PAC-9, PAC-10				<u>\</u>			^		<u> </u>	رر
PAC-9, PAC-10 G. PUMPS				<u>\</u>			^		<u> </u>	رر
PAC-9, PAC-10 G. PUMPS	not apply to this project.			<u>\</u>			2		<u> </u>	رر
PAC-9, PAC-10 G. PUMPS This section does							<u>^</u>		<u> </u>	
PAC-9, PAC-10 G. PUMPS This section does H. FAN SYSTEMS	S & AIR ECONOMIZER	s		<u>\</u>			<u>^</u>		<u> </u>	
PAC-9, PAC-10 G. PUMPS This section does H. FAN SYSTEM:		s					<u>^</u>		<u> </u>	
PAC-9, PAC-10 G. PUMPS This section does H. FAN SYSTEM: This section does	5 & AIR ECONOMIZER not apply to this project.	s					2			
PAC-9, PAC-10 G. PUMPS This section does H. FAN SYSTEMS This section does I. SYSTEM CONT	S & AIR ECONOMIZER not apply to this project.	S								
PAC-9, PAC-10 G. PUMPS This section does H. FAN SYSTEMS This section does I. SYSTEM CONT This table is used	S & AIR ECONOMIZER not apply to this project. TROLS to demonstrate complia	S	atory controls in <u>§11</u>	0.2 and §120.2	and prescriptive of	ontrols in §140.4(f)		requirements	in <u>\$141.0(</u>	b)2E for altered
PAC-9, PAC-10 G. PUMPS This section does H. FAN SYSTEM This section does I. SYSTEM CONT This table is used space conditioning	S & AIR ECONOMIZER not apply to this project. TROLS to demonstrate complian g systems.	s nce with mando			-3-4				in <u>5141.0(</u>	
PAC-9, PAC-10 G. PUMPS This section does H. FAN SYSTEMS This section does I. SYSTEM CONT This table is used	S & AIR ECONOMIZER not apply to this project. TROLS to demonstrate complia	nce with manda	ntory controls in §11	0.2 and §120.2	06	ontrols in <u>\$140.4(f)</u>		requirements 08	in <u>\$141.0(</u>	b)2E for altered
PAC-9, PAC-10 G. PUMPS This section does H. FAN SYSTEM! This section does I. SYSTEM CONT This table is used space conditionin 01	S & AIR ECONOMIZER not apply to this project. TROLS to demonstrate complia g systems. 02	nce with manda	04 Thermostats	Shut	06 Off Isolation	07	and (n) or r	08 Supply Air		09
PAC-9, PAC-10 G. PUMPS This section does H. FAN SYSTEM This section does I. SYSTEM CONT This table is used space conditioning	S & AIR ECONOMIZER not apply to this project. TROLS to demonstrate complia g systems. 02 System	nce with mando	04 Thermostats §110.2(b) & (c	Shut	Off Isolation Zone Controls	07 Demand Res	and (n) or r	08 Supply Air Temp. Reset	Windo	09 w Interlocks per
PAC-9, PAC-10 G. PUMPS This section does H. FAN SYSTEM! This section does I. SYSTEM CONT This table is used space conditionin 01	S & AIR ECONOMIZER not apply to this project. TROLS to demonstrate complia g systems. 02	03 Conditioned Floor Area Being Served	04 Thermostats	Shut	Off Isolation Zone Controls	07	and (n) or r	08 Supply Air	Windo	09
PAC-9, PAC-10 G. PUMPS This section does H. FAN SYSTEM! This section does I. SYSTEM CONT This table is used space conditionin 01	S & AIR ECONOMIZER not apply to this project. TROLS to demonstrate complia g systems. 02 System	nce with mando	04 Thermostats §110.2(b) & (c	05 Shut Cont 0(b)2E 5120.	06 Off Isolation Zone Controls \$120.2(g)	07 Demand Res	and (n) or r	08 Supply Air Temp. Reset	Windo	09 w Interlocks per
PAC-9, PAC-10 G. PUMPS This section does H. FAN SYSTEM! This section does I. SYSTEM CONT This table is used space conditionin 01	S & AIR ECONOMIZER not apply to this project. TROLS to demonstrate complia. g systems. 02 System Zoning	03 Conditioned Floor Area Being Served	04 Thermostats §110.2(b) & (c	Shut	06 06 Isolation Zone Controls 5120.2(g) day NA: Single	07 Demand Res	and (n) or response	08 Supply Air Temp. Reset	Windo	09 w Interlocks per

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NON RES. MANDATORY MEASURES	
SECTION 5.410 - BUILDING MAINTENANCE AND OPERATION	
5.410.3 PROCEDURES. PERFORM TESTING AND ADJUSTING PROCEDURES IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND APPLICABLE STANDARDS ON EACH SYSTEM.	DUCTWO
5.410.4.3.1 HVAC BALANCING. IN ADDITION TO TESTING AND ADJUSTING, BEFORE A NEW SPACE-CONDITIONING SYSTEM SERVING A BUILDING OR SPACE IS OPERATED FOR NORMAL USE, BALANCE THE SYSTEM IN ACCORDANCE WITH THE PROCEDURES DEFINED BY THE TESTING ADJUSTING AND BALANCING BUREAU NATIONAL STANDARDS; THE NATIONAL ENVIRONMENTAL BALANCING BUREAU PROCEDURAL STANDARDS; ASSOCIATED AIR BALANCE COUNCIL NATIONAL STANDARDS OR AS APPROVED BY THE ENFORCING AGENCY.	
SECTION 5.504 - POLLUTANT CONTROL.	
5.504.1 TEMPORARY VENTILATION. THE PERMANENT HVAC SYSTEM SHALL ONLY BE USED DURING CONSTRUCTION IF NECESSARY TO CONDITION THE BUILDING OR AREAS OF ADDITION OR ALTERATION 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, OR, IF THE BUILDING IS OCCUPIED DURING ALTERATION, AT THE CONCLUSION OF CONSTRUCTION.	
5.504.3 COVERING OF DUCT OPENINGS AND 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	FLEXIBLE
COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, SHEETMETAL OR OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY TO REDUCE THE AMOUNT OF DUST, WATER AND DEBRIS WHICH MAY ENTER THE SYSTEM.	FLEXIBLE CONNECT
5.504.5.3 FILTERS. IN MECHANICALLY VENTILATED BUILDINGS, PROVIDE REGULARLY OCCUPIED AREAS OF THE BUILDING WITH AIR FILTRATION MEDIA FOR OUTSIDE AND RETURN AIR THAT PROVIDES AT LEAST A MINIMUM EFFICIENCY REPORTING VALUE (MERW	DUCT LINE INSULATIO
OF 13. MERV 13 FILTERS SHALL BE INSTALLED PRIOR TO OCCUPANCY, AND RECOMMENDATIONS FOR MAINTENANCE WITH FILTERS OF THE SAME VALUE SHALL BE INCLUDED IN THE OPERATION AND MAINTENANCE MANUAL.	DUCT WRA
EXCEPTIONS: EXISTING MECHANICAL EQUIPMENT.	THERMOS
5.504.5.3.1 LABELING. INSTALLED FILTERS SHALL BE CLEARLY LABELED BY THE MANUFACTURER INDICATING THE MERV RATING.	
SECTION 5.506 - INDOOR AIR QUALITY	
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 CALIFORNIA ENERGY CODE, OR THE APPLICABLE LOCAL CODE, WHICHEVER IS MORE STRINGENT, AND DIVISION 1, CHAPTER 4 OF CCR, TITLE 8.	
5.506.2 CARBON DIOXIDE (CO2) MONITORING. FOR BUILDINGS OR ADDITIONS EQUIPPED WITH DEMAND CONTROL VENTILATION, CO2 SENSORS AND VENTILATION CONTROLS SHALL BE SPECIFIED AND INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE CALIFORNIA ENERGY CODE, SECTION 120.1(C)(4).	
SECTION 5.508 - OUTDOOR AIR QUALITY	
5.508.1 OZONE DEPLETION AND GREENHOUSE GAS REDUCTIONS. INSTALLATIONS OF HVAC, REFRIGERATION AND FIRE SUPPRESSION EQUIPMENT SHALL COMPLY WITH SECTIONS 5.508.1.1 AND 5.508.1.2.	

SECTIONS 5.508.1.1 AND 5.508.1.2.

CERTIFICATE OF COMPLIANCE

Mandatory Measures Note Block

Compliance ID: 80520

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Q. MANDATORY MEASURES DOCUMENTATION LOCATION

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

This table is used to indicate where mandatory measures are documented in the plan set or construction documentation

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5.508.1.1 CHLOROFLUOROCARBONS (CFCs). INSTALL HVAC, REFRIGERATION

5.508.1.2 HALONS. INSTALL HVAC, REFRIGERATION AND FIRE SUPPRESSION EQUIPMENT THAT DO NOT CONTAIN HALONS.

AND FIRE SUPPRESSION EQUIPMENT THAT DO NOT CONTAIN CFCS

NRCC-MCH-E

(Page 2 of 7

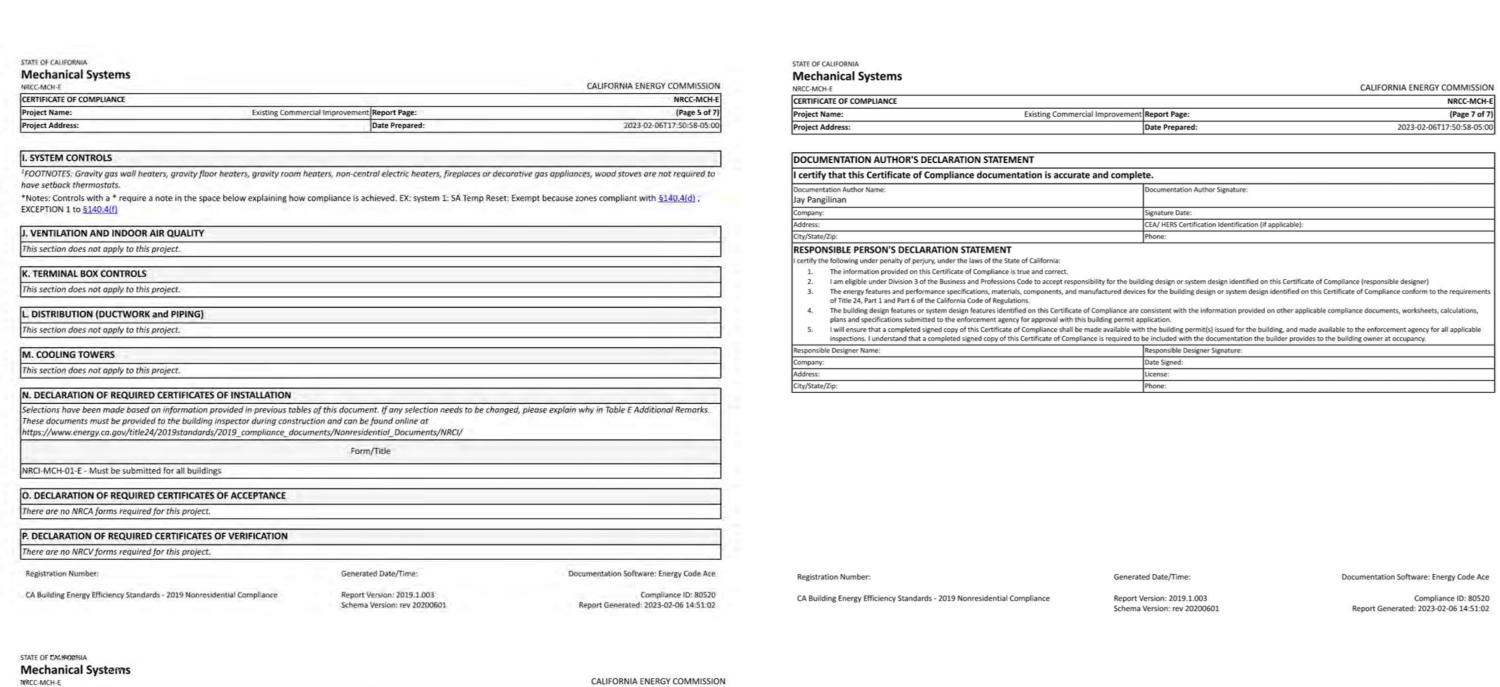
		MATE	ERIAL SCHE	DULE						
DUCTWORK	RIGID DUCT MATERIAL SHALL BE OF GALVANIZED SHEET METAL CONFORMING TO THE CMC.									
	DUCT GAUGES SHA	ALL BE PER CMC.								
	DUCT SUPPORTS S	SHALL BE PER CMC.								
	DUCT CONSTRUCT CONSTRUCTION ST		HALL CONFORM WITH (CMC AND AND/OR SMACNA DUCT						
	INTO THE BUILDING		UTILITY FANS, ETC., S	M OF 3 FEET FROM ANY OPENINGS HALL BE 3 FEET AWAY FROM IC.						
	DUCT SIZE SCHEDU	JLE:								
	<u>CFM</u>	DUCT SIZE	<u>CFM</u>	DUCT SIZE						
	0-90 91-190 191-350 351-490	6" DIA 8" DIA 10" DIA 12" DIA	491-850 851-1200 1201-1650 1651-2200	14" DIA 16" DIA 18" DIA 20" DIA						
	RECTANGULAR DU DUCTULATOR.	CTS MAY BE SUBSTITUTE	D WITH EQUIVALENT R	OUND DUCTS BY USING						
	THE ABOVE SCHEDULE IS APPLICABLE FOR HARD DUCTS ONLY. FLEXIBLE DUCTS SHALL BE UPSIZED ACCORDINGLY TO ACCOUNT FOR INCREASE IN STATIC PRESSURE.									
FLEXIBLE DUCT	FLEXIBLE DUCT MATERIAL SHALL CONFORM WITH UL 181, CLASS 1, NFPA 90A AND 90B. FLEXIBLE DUCT SHALL NOT BE MORE THAN 5 FEET IN LENGTH AND SHALL NOT BE USED IN LIEU OF RIGID ELBOWS OR FITTING PER CMC SEC 603.4.1.									
FLEXIBLE DUCT CONNECTOR	PROFLEX NEOPRENE COMMERCIAL, CONFORMING WITH NFPA 90A AND 90B.									
DUCT LINER INSULATION	CERTAINTEED TOUGHGARD WITH ENHANCED SURFACE (OR APPROVED EQUAL) RIGID LINER BOARD INSULATION, 1" THICK, 3 PCF.									
DUCT WRAP INSULATION	CERTAINEED SOFT PCF, FSK FACING.	TOUCH #75 (OR APPROVE	ED EQUAL) DUCT WRAP	INSULATION, 1-1/2" THICK, 0.75						
THERMOSTAT	MANUFACTURER O	R EQUIPVALENT THERMO	STAT.							

DULE					PAC	KAGE	D ROO	FTOP (JNIT	SCHE	DULE	•				
ONE ODMING TO THE OMO	OVANDOL	MANUFACTURER	HEATING (MBH)	COOLIN	IG (MBH)		ELECTRICA	L			SEER/		OPER.			
ONFORMING TO THE CMC.	SYMBOL	& MODEL NO.	TOTAL	TOTAL	SENSIBLE	MCA	МОСР	VOLT PH	CFM	ESP	EER	OSA	WT. (lbs.)	REMARKS		
	PAC THRU PAC 10	CARRIER 48VL-ULN-08PD	89	56.00	39	28.6	40	208 3Ø	2,128	0.5	13.5/ 11.5	-	523.25	12 (5)		
CMC AND AND/OR SMACNA DUCT													!			
JM OF 3 FEET FROM ANY OPENINGS SHALL BE 3 FEET AWAY FROM MC. DUCT SIZE 14" DIA 16" DIA 18" DIA 20" DIA	2 PROVIDE DUCT AND LISTED BY MFR. APPROVE 3 NEW DISCONN CONTRACTOR	CALIFORNIA STATE DINSTALLATION INS ECTS BY ELECTRICA	UL 268A AND LABI FIRE MARSHALL F STRUCTIONS. NL	ELED BY AN A	APPROVED A 「INSTALLATI	GENCY. API	PROVED	2 5	CONTRAC	TOR TO PF	ROVIDE ME	ERV 13 FI	ILTERS PR	RIOR TO OCCUPANCY OF BUILDING.		
ROUND DUCTS BY USING																
LEXIBLE DUCTS SHALL BE UPSIZED																

2) INTERLOCK EXHAUST FAN WITH LIGHT SWITCH.

NRCC-MCH-E

FAN SCHEDULE												
SYMBOL	MANUFACTURER MODEL	SERVICE	TYPE LOCATION	CFM	E.S.P. INCHES	RPM	W		TRICAL VOLT DH	FLA	WEIGHT (LBS)	REMARKS
EF THRU EF 6	GREENHECK SP-A90	RESTROOM	CENTRIF CEILING	80	0.25	900	16	0.01	115 1Ø	0.17	12	1 2
NOTES: 1 PROVIDE LIGHT SV	WITCH, DISCONNEC	Г, ROOF CURB, BD	D AND CAP \	WITH INSE	CT SCREE	N.						

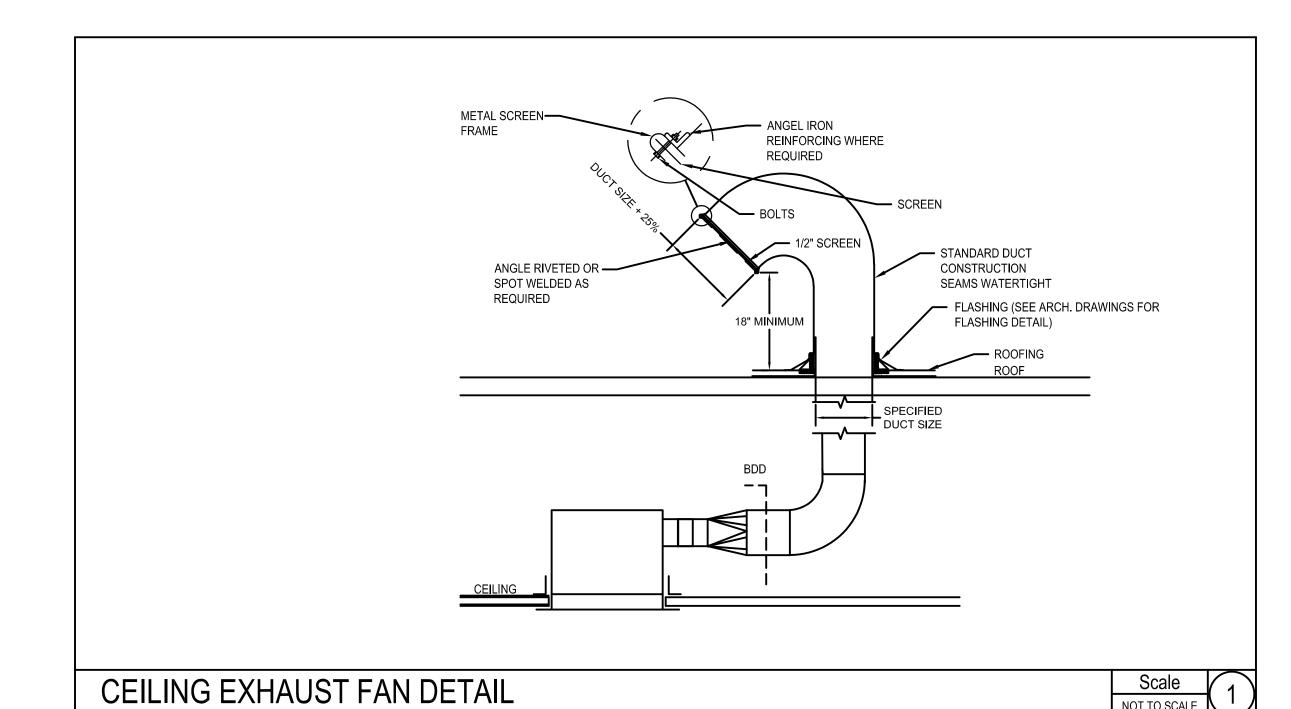


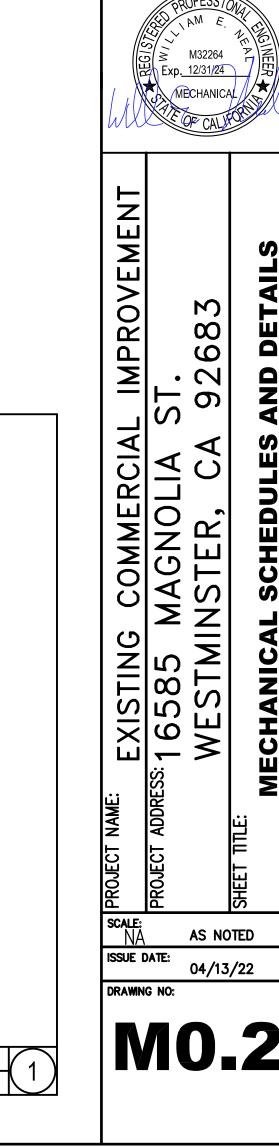
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M0.2

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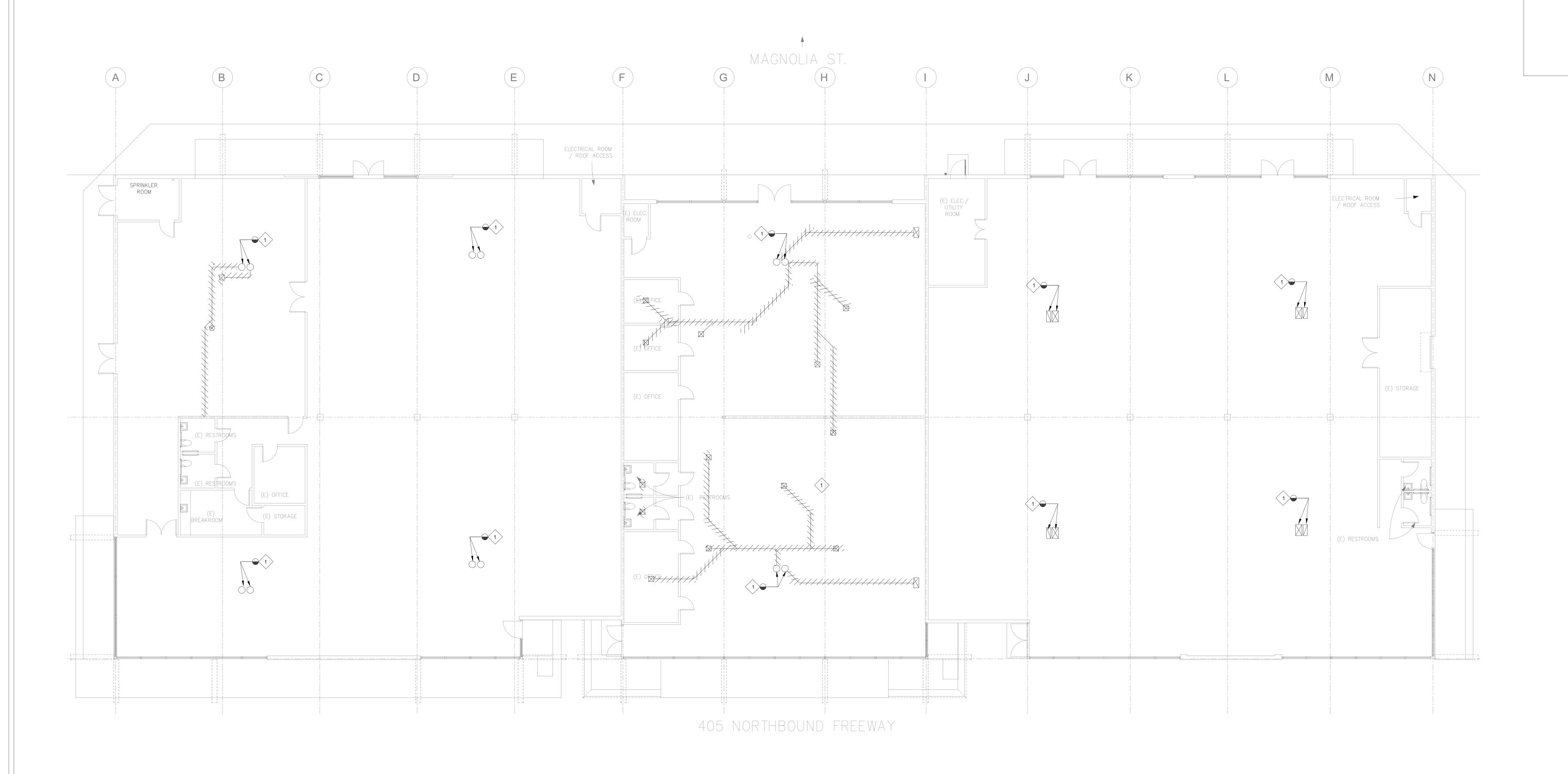
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1. VERIFY ALL EXISTING CONDITIONS PRIOR TO BEGINNING WORK. BRING ANY DISCREPANCIES FROM THE DRAWINGS AND NOTES TO THE ARCHITECT IMMEDIATELY. 2. EXISTING EQUIPMENT AND DUCTWORK NOT TO BE UTILIZED IN THE COMPLETED BUILDING SHALL BE DISCONTINUED OR REMOVED AS REQUIRED. 3. COORDINATE WITH GENERAL CONTRACTOR THE REMOVAL AND REPLACEMENT OF ALL EXISTING CEILINGS, WALLS, ETC. AS REQUIRED FOR MECHANICAL DEMOLITION WORK.

DEMOLITION NOTES:

DEMOLISH EXISTING SUPPLY AIR AND RETURN AIR DUCT UP TO 24" BELOW ROOF, CUT AND CAP FOR FUTURE CONNECTION. EXISTING DIFFUSERS AND REGISTERS TO BE DEMOLISHED. ALL MATERIALS TO BE SAVED ON SITE. OWNER TO DIRECT THE CONTRACTOR WHAT TO DO WITH THEM.

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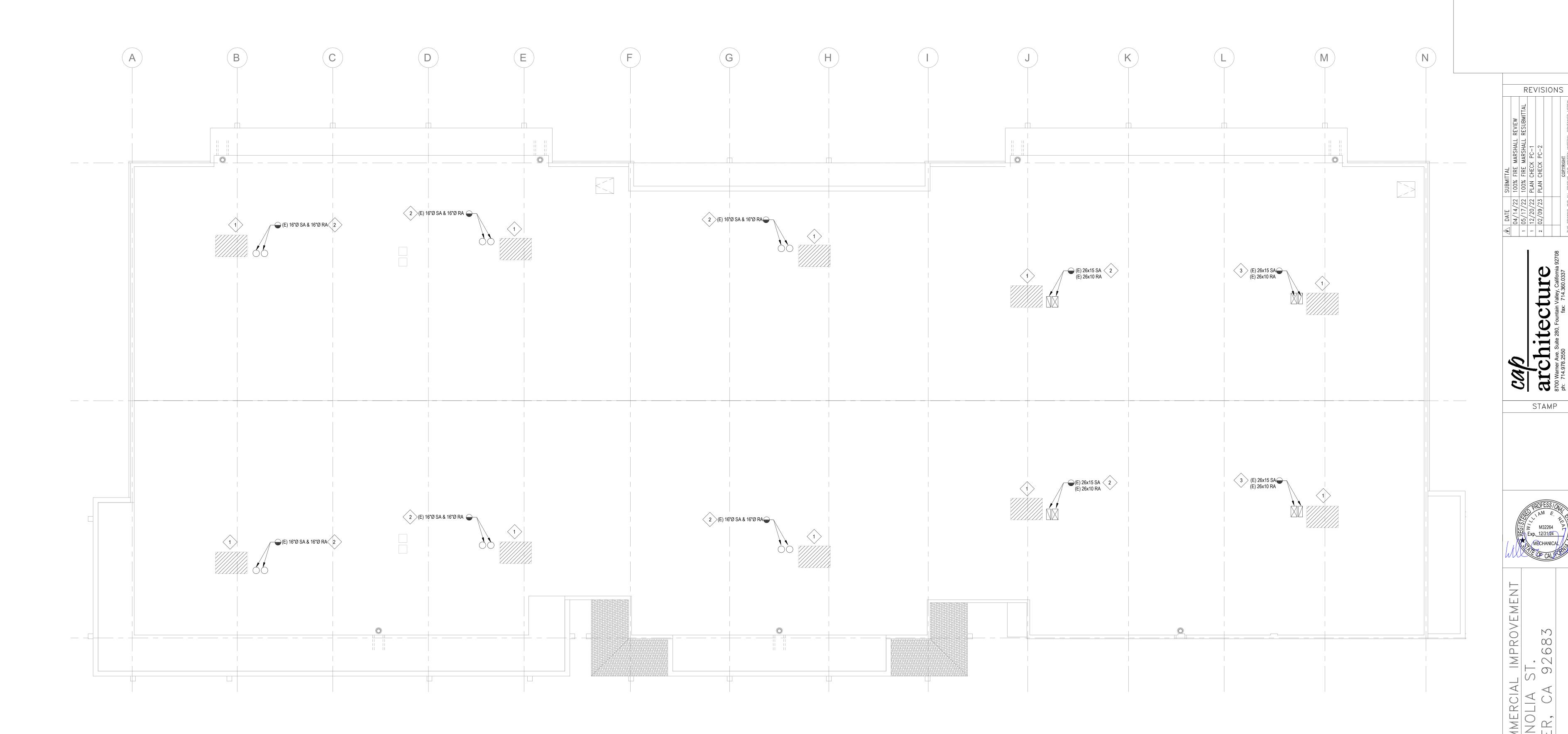
REVISIONS



MMERCIAL IMPROVEMENT NOLIA ST. ER, CA 92683

AS NOTED ISSUE DATE: 04/13/22 DRAWING NO:

M1.1



1. VERIFY ALL EXISTING CONDITIONS PRIOR TO BEGINNING WORK. BRING ANY DISCREPANCIES FROM THE DRAWINGS AND NOTES TO THE ARCHITECT IMMEDIATELY. 2. EXISTING EQUIPMENT AND DUCTWORK NOT TO BE UTILIZED IN THE COMPLETED BUILDING SHALL BE DISCONTINUED OR REMOVED AS REQUIRED. 3. COORDINATE WITH GENERAL CONTRACTOR THE REMOVAL AND REPLACEMENT OF ALL EXISTING CEILINGS, WALLS, ETC. AS REQUIRED FOR MECHANICAL DEMOLITION WORK.

DEMOLITION NOTES:

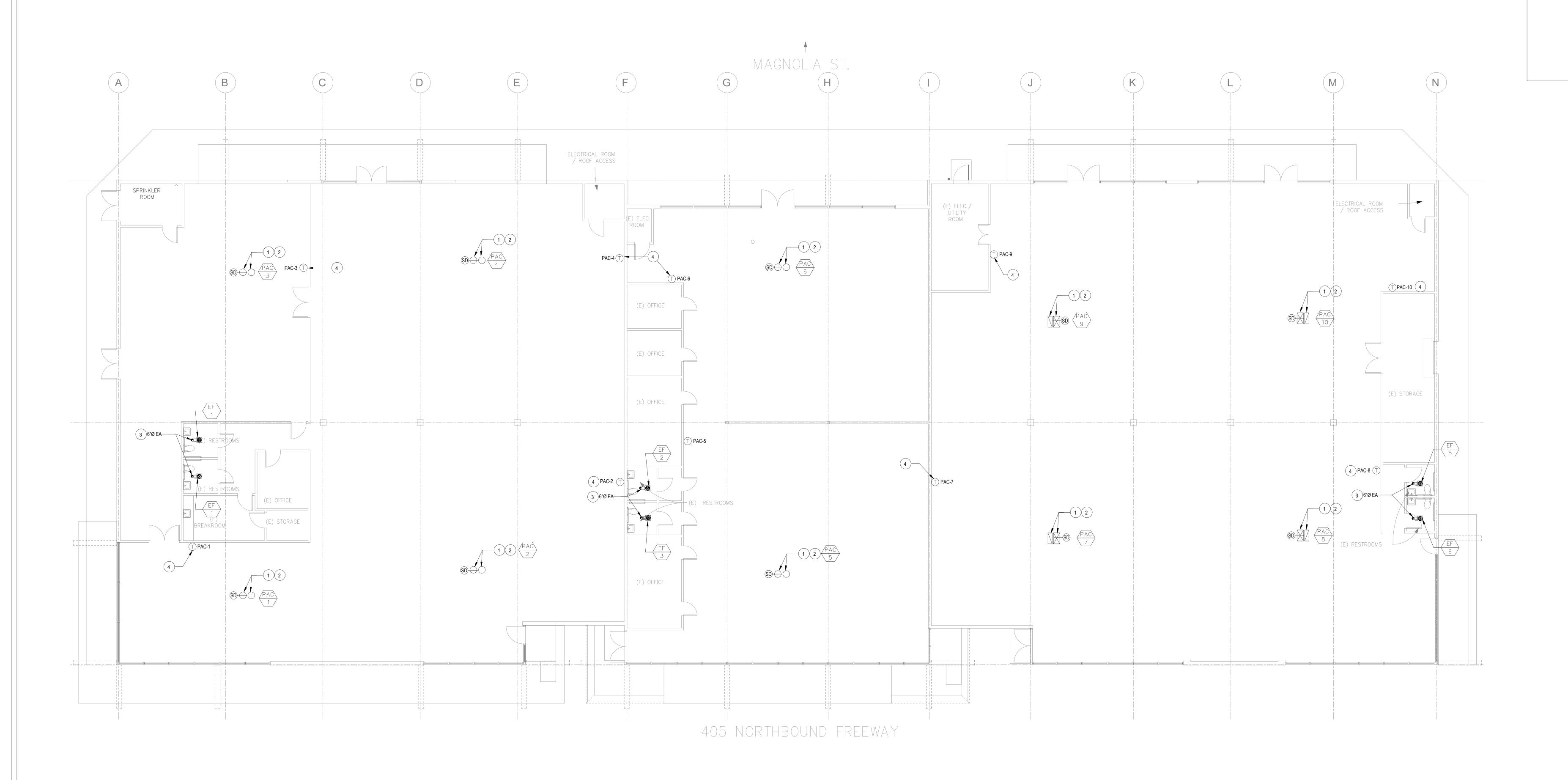
21 EXISTING ROOF TOP UNIT TO BE DEMOLISHED. EXISTING ROOF CURB TO REMAIN, PROTECT IN PLACE.

EXISTING SUPPLY AND RETURN AIR DUCT TO BE DEMOLISHED UP TO MINIMUM 6" ABOVE ROOF LEVEL. CAP EXISTING DUCTWORK FOR FUTURE CONNECTION.

04/13/22 DRAWING NO:

ISSUE DATE:

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1. COORDINATE ALL WORK WITH GENERAL CONTRACTOR AND OTHER TRADES. 2. COORDINATE ALL EQUIPMENT CONNECTIONS WITH EQUIPMENTS CUT SHEETS. 3. AIR HANDLING DUCT SYSTEMS, EXCEPT GREASE EXHAUST DUCT SYSTEM, SHALL BE CONSTRUCTED, INSTALLED AND INSULATED AS PROVIDED IN CHAPTER 6 OF 2019 CMC. 4. MATERIALS EXPOSED WITHIN DUCTS OR PLENUMS SHALL BE NONCOMBUSTIBLE OR SHALL HAVE A FLAME SPREAD INDEX NOT GREATER THAN 25 AND A SMOKE DEVELOPED INDEX NOT GREATER THAN 50 (2019 CMC SECTION 602.2).

CONSTRUCTION NOTES

(E) SUPPLY AND RETURN AIR DUCT FROM ROOFTOP UNIT.

PROVIDE DUCT SMOKE DETECTOR ON SUPPLY AIR DUCT. PROVIDE DUCT INSULATION. SMOKE DETECTOR SHALL BE EXPOSED AND ACCESSIBLE FOR PRIOR TO FINAL APPROVAL OF THE MECHANICAL PERMIT, A SMOKE DETECTOR 2 SHUT-OFF TEST SHALL BE REQUIRED. (3) 6"Ø EA UP THRU ROOF OPENING.

4 REFER TO SHEET M0.1 FOR THERMOSTAT HEIGHT INSTALLATION.

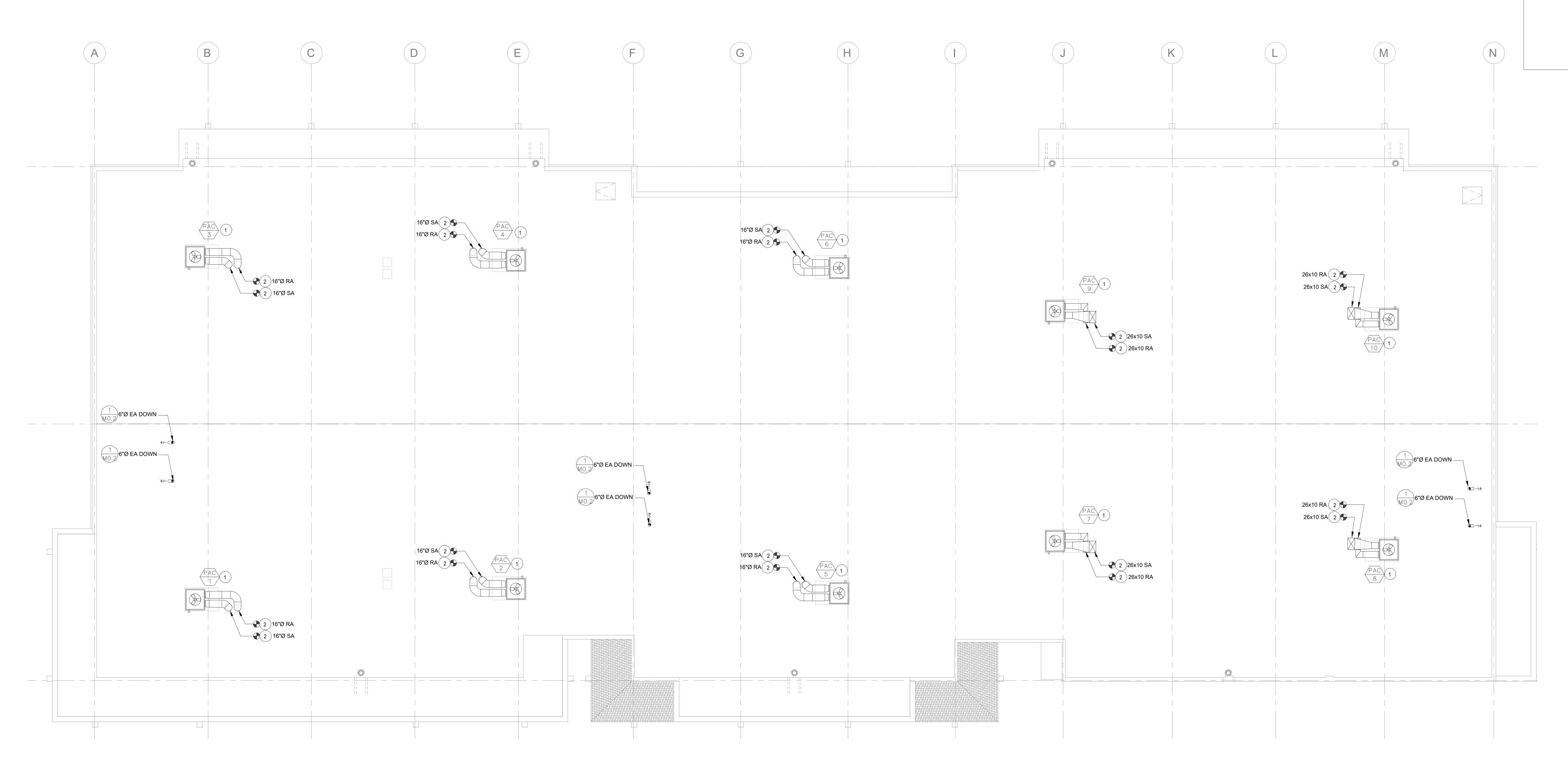


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AS NOTED

ISSUE DATE: 04/13/22 DRAWING NO:



COORDINATE ALL WORK WITH GENERAL CONTRACTOR AND OTHER TRADES.
 COORDINATE ALL EQUIPMENT CONNECTIONS WITH EQUIPMENTS CUT SHEETS.

3. ENSURE ALL EXHAUST OUTLETS TO MAINTAIN MINIMUM 3 FEET CLEARANCE FROM BUILDING PROPERTY LINE.

4. PROVIDE PERMANENT IDENTIFICATION ON EACH EQUIPMENT AND THE

CONSTRUCTION NOTES

1 REFER TO STRUCTURAL DETAIL 2 & 3/S1.1 FOR ROOFTOP EQUIPMENT ANCHORAGE.

2 CONNECT SA & RA DUCT TO EXISTING SA AND RA DUCT THRU ROOF. REFER TO PLAN FOR DIMENSIONS.

STOD Warner Ave. Suite 280, Fountain Valler ph: 714.978.2550 fax: 714

PROFESS/ONA PM E.

M32264

Exp. 12/31/24

MECHANICAL

MECHANICAL

ING COMMERCIAL IMPROVEMENT
5 MAGNOLIA ST.
FMINSTER, CA 92683

DUECT NAME: EXISTING CON DUECT ADDRESS: 16585 MAG

SCALE:
AS NOTED

ISSUE DATE:
04/13/22

M2.2

~PROJECT LOCATION EXISTING COMMERCIAL IMPROVEMENT PLAN **GENERAL NOTES:** FOR 16585 MAGNOLIA STREET ALL WORK DONE SHALL CONFORM TO CITY STANDARD PLANS AND SPECIFICATIONS. DEVELOPER OR AGENT WILL FURNISH SIGNED PLANS TO ALL UTILITY AGENCIES CONTRACTOR SHALL NOTIFY ALL UTILITY AGENCIES CONCERNED 48 HOURS PRIOR TO START OF CONSTRUCTION. IN THE CITY OF WESTMINSTER CONTRACTOR SHALL NOTIFY THE ORANGE COUNTY FIRE AUTHORITY (OCFA) AT 714/893-0571, THE CITY OF WESTMINSTER POLICE DEPARTMENT AT 714/898-3315, AND UNDERGROUND SERVICE ALERT (USA) AT 800/422-4133 FORTY-EIGHT (48) HOURS PRIOR TO START OF CONSTRUCTION. CONTRACTOR SHALL NOTIFY WATER DIVISION AT 714/895-2876 AT LEAST FORTY-EIGHT (48) HOURS PRIOR ALL WORK IS SUBJECT TO INSPECTION. CONTRACTOR SHALL NOTIFY THE CITY'S INSPECTION OFFICE AT VICINITY MAP HAND RAIL PER SPPWC -714-548-3465 AT LEAST 24 HOURS PRIOR TO START OF CONSTRUCTION. DETAIL 606-5 HEREON CONTRACTOR SHALL ASCERTAIN THE TRUE LOCATION OF ANY UNDERGROUND UTILITIES AND SHALL BE NOT TO SCALE 1" CHAMFER RESPONSIBLE FOR DAMAGES TO ANY PUBLIC OR PRIVATE UTILITIES. IN ACCORDANCE WITH THE CITY'S EXCAVATION ORDINANCE, ANY EXISTING PAVEMENT DISTURBED BY THE INSTALLATION OF UNDERGROUND UTILITIES SHALL BE COVERED BY A PERMIT AND SAID DISTURBED PAVEMENT SHALL BE RESURFACED AS DIRECTED BY THE CITY'S REPRESENTATIVE A SOILS REPORT SHALL BE FURNISHED BY A LICENSED CIVIL ENGINEER INDICATING RECOMMENDED STREET SECTIONS AND "R" VALUE. NO STREET SECTION SHALL BE LESS THAN THE MINIMUM PER CITY STANDARDS. CONCRETE WALKWAY AFTER ROUGH GRADING HAS BEEN COMPLETED, THE CITY'S REPRESENTATIVE SHALL RE-EXAMINE THE NATIVE SOIL CONDITION AND IF NECESSARY, MAKE A CHANGE IN THE REQUIRED BASE MATERIAL ALL SEWER MANHOLES SHALL BE LEFT BELOW SUBGRADE. CONTRACTOR SHALL RAISE MANHOLE FRAMES AND 305mm COVERS TO FINISHED GRADE AND MAKE NECESSARY REPAIRS TO THE PAVEMENT. 305mm (1'-0") MIN NO NEW DRIVEWAY APPROACHES ARE TO BE CONSTRUCTED UNLESS SHOWN ON THE PLANS OR APPROVED BY THE PUBLIC WORKS DIRECTOR/CITY ENGINEER. GAS AND WATER LATERALS TO EACH LOT SHALL BE INSTALLED PRIOR TO PAVING OF STREETS. CONCRETE HEIGHT BASE ALL EXISTING STREET INTERSECTIONS ARE TO BE OPEN FOR TRAFFIC AT THE END OF EACH WORKING DAY - EXIST. R/W CU M — CF/F1 CALTRANS R/W~ PRIOR TO PLACING FLOOR SLABS, ENGINEER SHALL PROVIDE A LETTER OF CERTIFICATION THAT SHOWS FINISHED FLOOR FORMS ARE IN CONFORMANCE TO THE APPROVED GRADING PLANS. 475mm (1'-6") 305mm (1'-0") 0.042 cu m (1.50 cu ft.) NO CONSTRUCTION WORK SHALL START PRIOR TO HAVING A PRE-CONSTRUCTION MEETING BETWEEN THE GENERAL CONTRACTOR, ITS SUB-CONTRACTORS, AND THE CITY OF WESTMINSTER PUBLIC WORKS STAFF, INCLUDING, BUT NOT LIMITED TO, DEVELOPMENT ENGINEER, PUBLIC WORKS INSPECTOR, WATER SUPERVISOR, ON RAMP INDEX MAP |610mm (2'-0")|305mm (1'-0")|.057 cu m (2.00 cu ft.)ALL ON-SITE RAMPS AND PARKING SPACES ACCESSIBLE TO THE DISABLED SHALL BE REVIEWED AND APPROVED AND INSPECTED BY THE BUILDING DIVISION. THEY ARE SHOWN ON THE GRADING PLANS OR ANY **VARIABLE HEIGHT CURB** PLANS APPROVED BY THE ENGINEERING DIVISION FOR REFERENCE ONLY. IT IS THE RESPONSIBILITY OF THE APPLICANT TO COORDINATE ALL PLANS (CIVIL, BUILDING, AND SAFETY, LANDSCAPE, ETC.). THE CITY WILL NOT BE RESPONSIBLE FOR ANY DISCREPANCY THAT IS DISCOVERED FOLLOWING THE APPROVAL OF THE PLANS. 19. ALL SUBMITTED PLANS SHALL BE DRAFTED BY A CAD PROGRAM **ESTIMATED QUANTITIES CONSTRUCTION NOTES** STRIPING NOTES 1) JOIN EXISTING 6" CURB. **GRADING NOTES:** 2) CONSTRUCT 6" TYPE A3-6 CURB (NO GUTTER) PER SPPWC 1 REMOVE EXISTING SLURRY COAT & WHITE PARKING STALL STRIPING. — 87 FA STD. NO. 120-3 ON SHEET 5. 1. ALL GRADING SHALL BE PER THE LATEST EDITION OF CALIFORNIA BUILDING CODE, APPENDIX J, CITY OF (3)CONSTRUCT VARIABLE HEIGHT CURB PER DETAIL 3 ON SHEET ————————————————————————61 LF WESTMINSTER GRADING POLICY, AND ANY SPECIAL REQUIREMENTS OF THE PERMIT AND SOIL REPORT. $\langle 2 \rangle$ —INSTALL 4" WHITE PAINT PARKING STALL LINE PER DETAIL 'A' ON SHEET 4. — 87 EA (4) INSTALL TYPE 'A' HAND RAILS PER SPPWC STD. NO. 606-5 _______ 146 LF 2. SOIL REPORTS AND SUBSEQUENT REPORTS AND ADDENDUM SHALL BE CONSIDERED PART OF THIS PLAN. ON SHEET 5. (5) CONSTRUCT AC PAVEMENT TO MATCH EXISTING IN KIND. 3. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SECURE APPROVED PLANS AND ANY NECESSARY PERMITS PRIOR TO STARTING CONSTRUCTION. UNDERGROUND SERVICE ALERT (USA) MUST BE CONTACTED 48 HOURS 6 CONSTRUCT 4" PCC CONCRETE SIDEWALK PER CITY OF 4 INSTALL ACCESSIBLE PARKING STALL PER DETAIL 'C' ON SHEET NO. 4. _______ 3 EA PRIOR TO ANY COMMENCEMENT OF WORK AT 1-800-227-2600. WESTMINSTER STD. 202 ON SHEET 5. 7) EXISTING FIRE HYDRANT TO BE RELOCATED. **DEMOLITION NOTES** 4. ALL DIMENSIONS SUPERSEDE SCALED DISTANCES. AN ENGINEER'S SCALE MUST BE USED. 8) INSTALL FIRE HYDRANT PER CITY OF WESTMINSTER STD. 5. IF CONSTRUCTION IS LOCATED IN A SPECIAL FLOOD HAZARD AREA, A REGISTERED CIVIL ENGINEER OR LAND 1 REMOVE EXISTING CURB. SURVEYOR SHALL SUBMIT A PRE-CONSTRUCTION ELEVATION CERTIFICATE PRIOR TO COMMENCEMENT OF WORK (9) CONSTRUCT 6' WHEEL STOP PER DETAIL 9 ON SHEET 5. AND A POST CONSTRUCTION ELEVATION CERTIFICATE PRIOR TO OCCUPANCY OF THE STRUCTURE CERTIFYING THAT THE STRUCTURE IS IN COMPLIANCE WITH THE CITY'S FLOOD DAMAGE PREVENTION ORDINANCE NO. 2239. 2 REMOVE EXISTING AC PAVEMENT. 10) CONSTRUCT TRUNCATED DOMES PER SPPWC STD. NO. 111-5.)CONSTRUCT ADA CURB RAMP PER DETAIL ON SHEET 5. 6. DUST CONTROL SHALL BE PROPERLY MAINTAINED AT ALL TIMES. 3 -EXISTING TREE TO BE REMOVE. INSTALL ON-SITE LIGHTING, LIGHTING STANDARD PER 7. ALL DEVELOPERS, LAND OWNERS, AND CONTRACTORS SHALL COMPLY WITH THE REQUIREMENTS OF THE ELECTRICAL PLANS AND FOOTING PER DETAIL S1 ON SHEET NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES), ORANGE COUNTY DRAINAGE AREA 4 -EXISTING WHEEL STOP TO BE REMOVED. MANAGEMENT PLAN (DAMP), AND THE CITY OF WESTMINSTER WATER QUALITY ORDINANCE NO. 2031. THE DEVELOPER MAY BE REQUIRED TO SUBMIT A WATER QUALITY MANAGEMENT PLAN (WQMP) FOR REVIEW AND 5 -EXISTING PARKING STRIPING TO BE REMOVED. LEGEND APPROVAL. IF SITE IS LARGER THAN ONE ACRE, NOTICE OF INTENT (NOI) AND A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) SHALL BE FILED WITH THE STATE WATER RESOURCE CONTROL BOARD. **PLANS COORDINATION STATEMENT** — CENTERLINE **ABBREVIATION** THE APPLICANT, OWNER, ARCHITECT, ENGINEER(S), AND R/W(NEW) NEW RIGHT OF WAY LANDSCAPE ARCHITECT ARE RESPONSIBLE FOR INVERT CURVE DELTA — — — — EASEMENT COORDINATING PLANS THAT ARE PREPARED BY SEPARATE R/W(OLD) OLD RIGHT OF WAY CURVE LENGTH ANGLE POINT CONSULTANTS. SUCH PLANS MAY INCLUDE CIVIL DRAWINGS. R/W(ULT) ULTIMATE RIGHT OF WAY NATURAL GAS BOTTOM OF PIPE ENGINEER'S NOTICE TO CONTRACTORS SHEET INDEX GRADING PLAN, ARCHITECTUAL, STRUCTURAL, ELECTRICAL, — LOT LINE RECYCLED WATER OVERHEAD CURB AND GUTTER MECHANICAL AND PLUMBING PLANS, FIRE PROTECTION, PROPERTY INFORMATION PROPOSED CURB AND GUTTER STORM DRAIN TITLE SHEET LANDSCAPE AND SIGN PLANS. POINT OF INTERSECTION THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITY PLANS OR CENTERLINE APN NUMBER SEWER DEMOLITION PLAN STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED BY A SEARCH PROPERTY/LOT LINE PROPOSED WATER LINE DOMESTIC WATER **BUILDING ADDRESS** 16585 MAGNOLIA STREET BY SIGNING THIS STATEMENT, THE APPLICANT PRECISE GRADING PLAN OF AVAILABLE RECORDS. THE CONTRACTOR SHALL TAKE DUE STA STATION PROPOSED ======= EXISTING CURB AND GUTTER OCCUPANCY CLASSIFICATION LOCAL BUSINESS EXISTING GRADE STRIPING PLAN ACKNOWLEDGES THAT IF ERRORS ARE FOUND DUE TO LACK PRECAUTIONS OF THE RECORDED UTILITIES AS WELL AS ANY NOT **TANGENT** INTERSECTION DETAILS OF COORDINATION BETWEEN APPROVED PLANS, THERE MAY SHOWN AND SHALL CONFIRM ALL ALIGNMENTS AND GRADES BY FIELD PER BUILDING CODE EXISTING SEWER LINE RADIUS TOP OF BERM BE ADDITIONAL PLAN CHECK CHARGES FOR REVISIONS, AND FIRE HYDRANT RECYCLED WATER LINE STATE OF CALIFORNIA - DEPT OWNER'S NAME RECLAIMED WATER THAT THE APPLICANT WILL HOLD THE CITY HARMLESS FROM TOP OF PIPE/STRUCTURE FINISH SURFACE OF TRANSPORTATION EXISTING FORCE MAIN LINE ANY ADDITIONAL COST OR DELAYS INCURRED DUE TO REINFORCED CONCRETE PIPE V GAS PLANNING COMMISSION DISCREPANCIES IN THE PLANS. EXISTING SEWER MANHOLE RIGHT OF WAY VITRIFIED CLAY PIPE EXISTING RIGHT OF WAY STORM DRAIN LINE WATER APPLICANT NAME: DENNIS MARK NEAREST CROSS STREET HEIL AVENUE WATER METER/SERVICE AREA OF SITE 89,380 SF EXISTING STORM DRAIN CATCH BASIN SIGNATURE: AREA OF BUILDING 23,276.08 SF EXISTING NATURAL GAS LINE CITY OF WESTMINSTER PLANNING DIVISION CITY OF WESTMINSTER WATER DIVISION EXISTING OVERHEAD LINE FLOOD ZONE INFORMATION PROPOSED FIRE HYDRANT FLOOD ZONE A DESIGNATION FEMA PANEL NUMBER / DATE 06059C0251J/12-3-2009 EXISTING FIRE HYDRANT SIGNATURE DATE DATE SIGNATURE A SEPARATE DEMOLITION PERMIT IS REQUIRED FOR DEMOLITION CITY OF WESTMINSTER BUILDING DIVISION GEOTECHNICAL REPORT MIDWAY CITY SANITATION DISTRICT **ENGINEER:** OWNER: BENCH MARK: THESE PLANS HAVE BEEN PREPARED UNDER MY SUPERVISION: - THE GRADING SHOWN HEREON WILL NOT DIVERT DRAINAGE FROM ITS NATURAL STATE OF CALIFORNIA -DEPT. OF FD PUNCHED 2" OCS ALUMINUM CAP, STAMPED DOWNSTREAM COURSE OR OBSTRUCT THE DRAINAGE OF ADJACENT PROPERTIES EXISTING GROUND CONTOURS AND ELEVATIONS WERE OBTAINED BY FIELD SURVEY "8— 76", DOWN 1.6' IN WELL MONUMENT. STATION 1750 E. 4TH ST #100 IS LOCATED AT THE CENTERLINE INTERSECTION OF SANTA ANA, CA 92705 DATE: 2/9/2*0*23 MAGNOLIA ST. AND HEIL AVE. SIGNATURE DATE SIGNATURE DATE (657) 328-6000 Corona, CA 92882 (951) 280-3300 EXP 3-31-23 ENGINEERING SCALE: 1" =10' PREPARED UNDER THE SUPERVISION OF: DRAWING NUMBER: **EXISTING COMMERCIAL REPAIR** DATE: REFERENCES REVISIONS APPROVALS KEVIN M. CIFOR, RCE 89816 THIS PLAN IS SIGNED BY THE CITY TITLE SHEET ENGINEER FOR CONCEPT AND ADHERENCE TO CITY STANDARDS COMMENDED: AND REQUIREMENTS ONLY, THE APN 107-232-05 CITY ENGINEER IS NOT JAKE NGO - PWD/CITY ENGINEER RESPONSIBLE FOR DESIGN, City Of Westminster – Engineer Dept. SHEET 1 OF 5 R.C.E NO. C73699 ASSUMPTIONS, OR ACCURACY DATE: 11/30/2022

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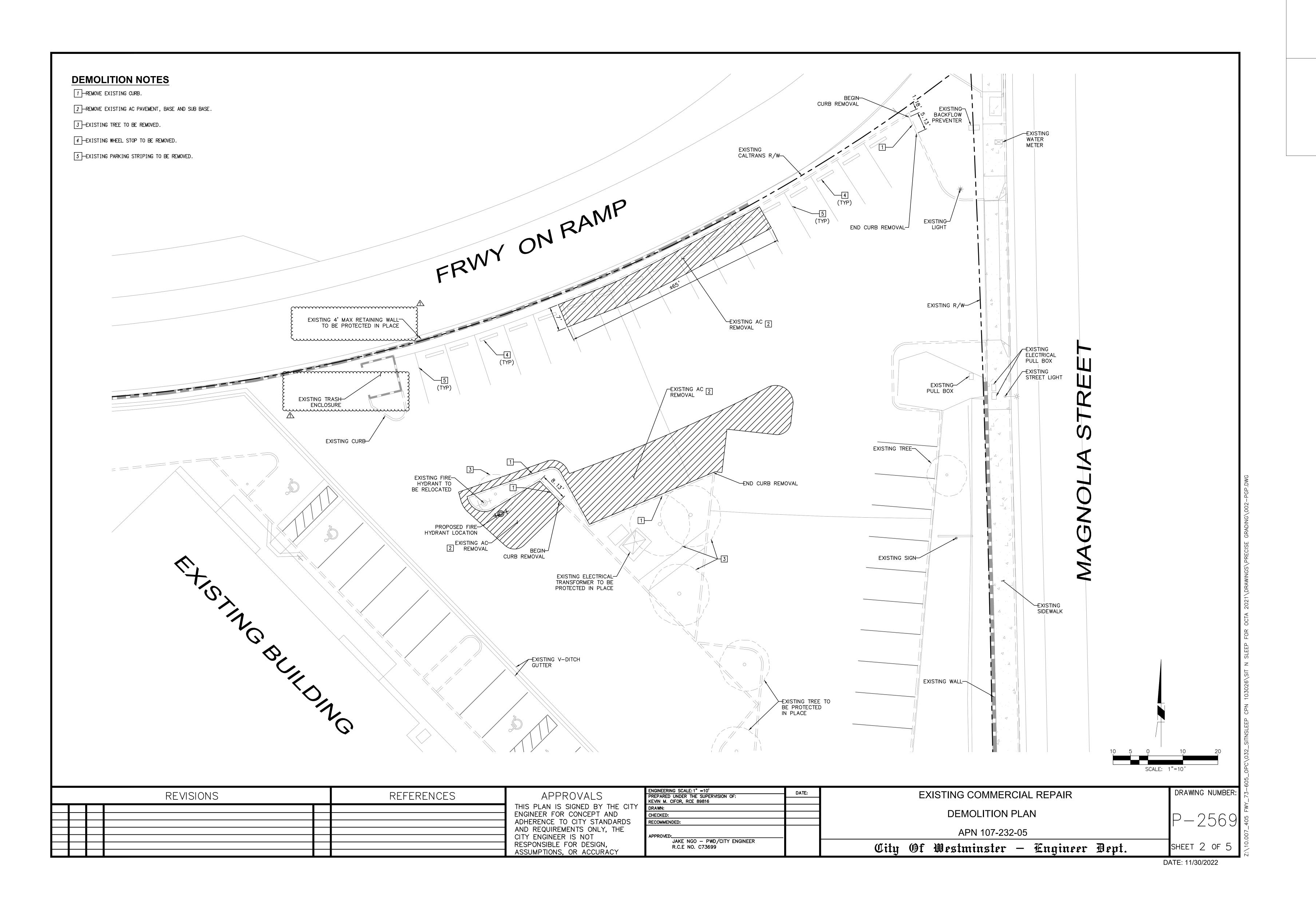


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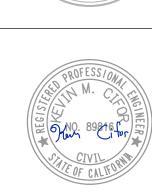
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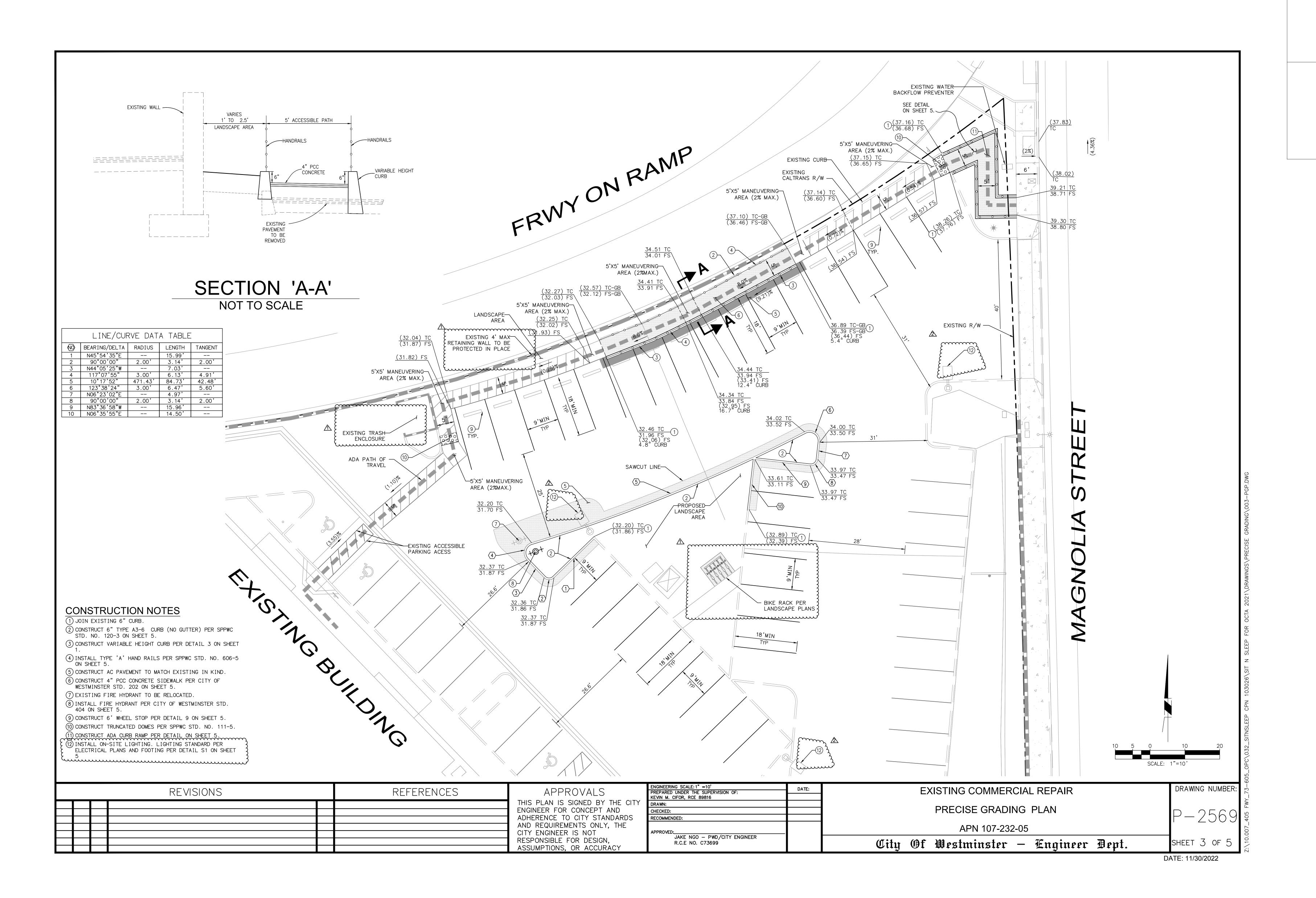


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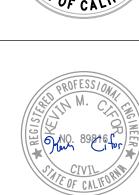
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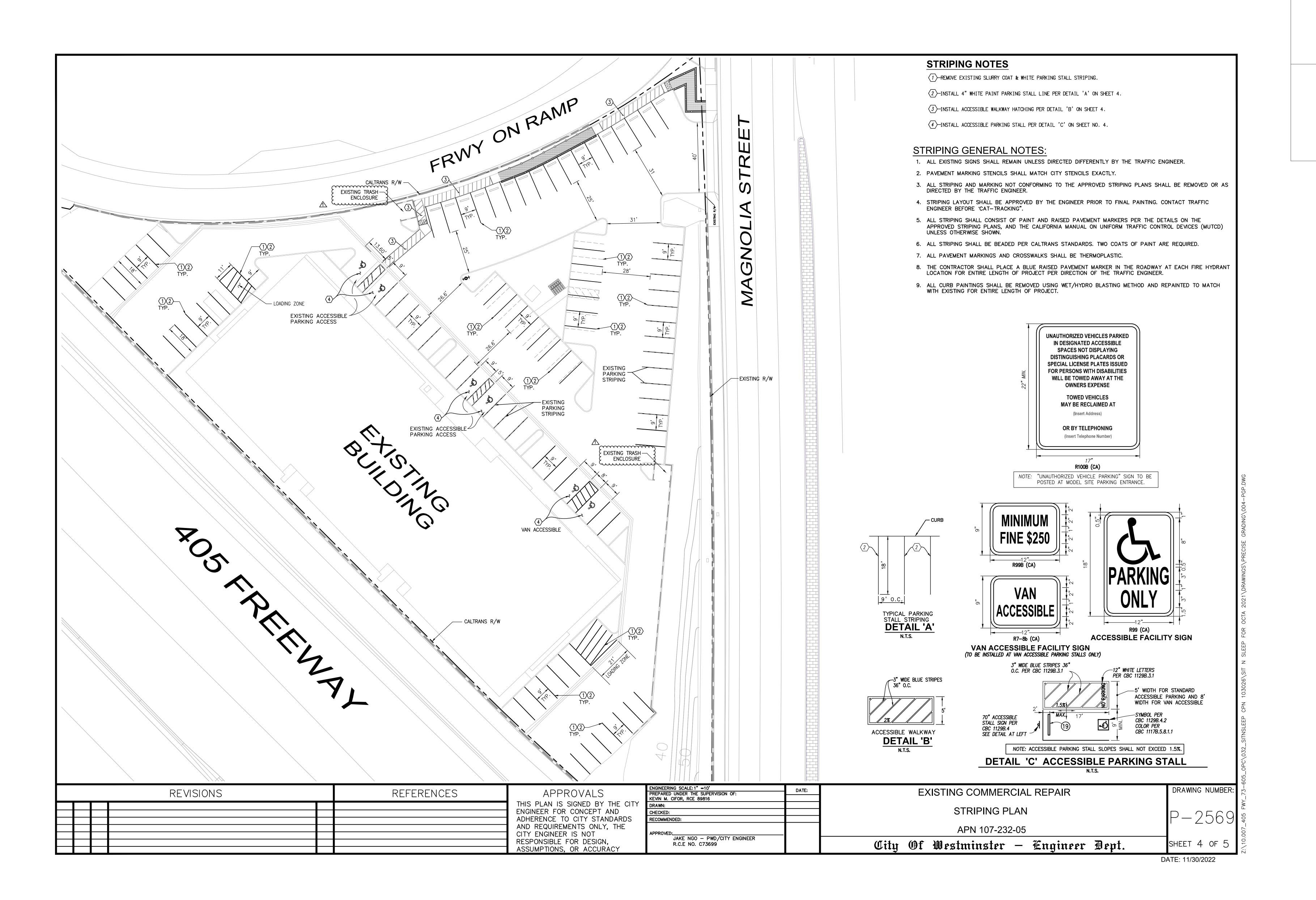
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AS NOTED ISSUE DATE: 02/09/23

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14/12 SUBMITTAL

14/14/22 100% FIRE MARSHALL REVIEW

15/17/22 100% FIRE MARSHALL RESUBMITTAL

15/20/22 PLAN CHECK PC-1

15/09/23 PLAN CHECK PC-2

16/09/23 PLAN CHECK PC-2

17/09/23 PLAN CHECK PC-2

18/09/23 PLAN CHECK PC-2

18/09/20 PLAN CHECK PC-2

18/09/20 PLAN CHECK PC-3

20/09/20 PLAN CHECK PC-3

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amer Ave. Suite 280, Fountain Valley, California 92708
4.978.2550

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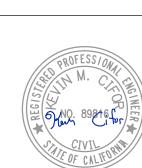
CATHERINE ANNE TO PEPPARB

No. C-29591

O1-31-2023

RENEWAL DATE

OF CALIFORNIA



STING COMMERCIAL IMPROVEMENT S85 MAGNOLIA ST. STMINSTER, CA 92683

JECT NAME: EXISTING
JECT ADDRESS: 16585
WESTMI

SCALE:

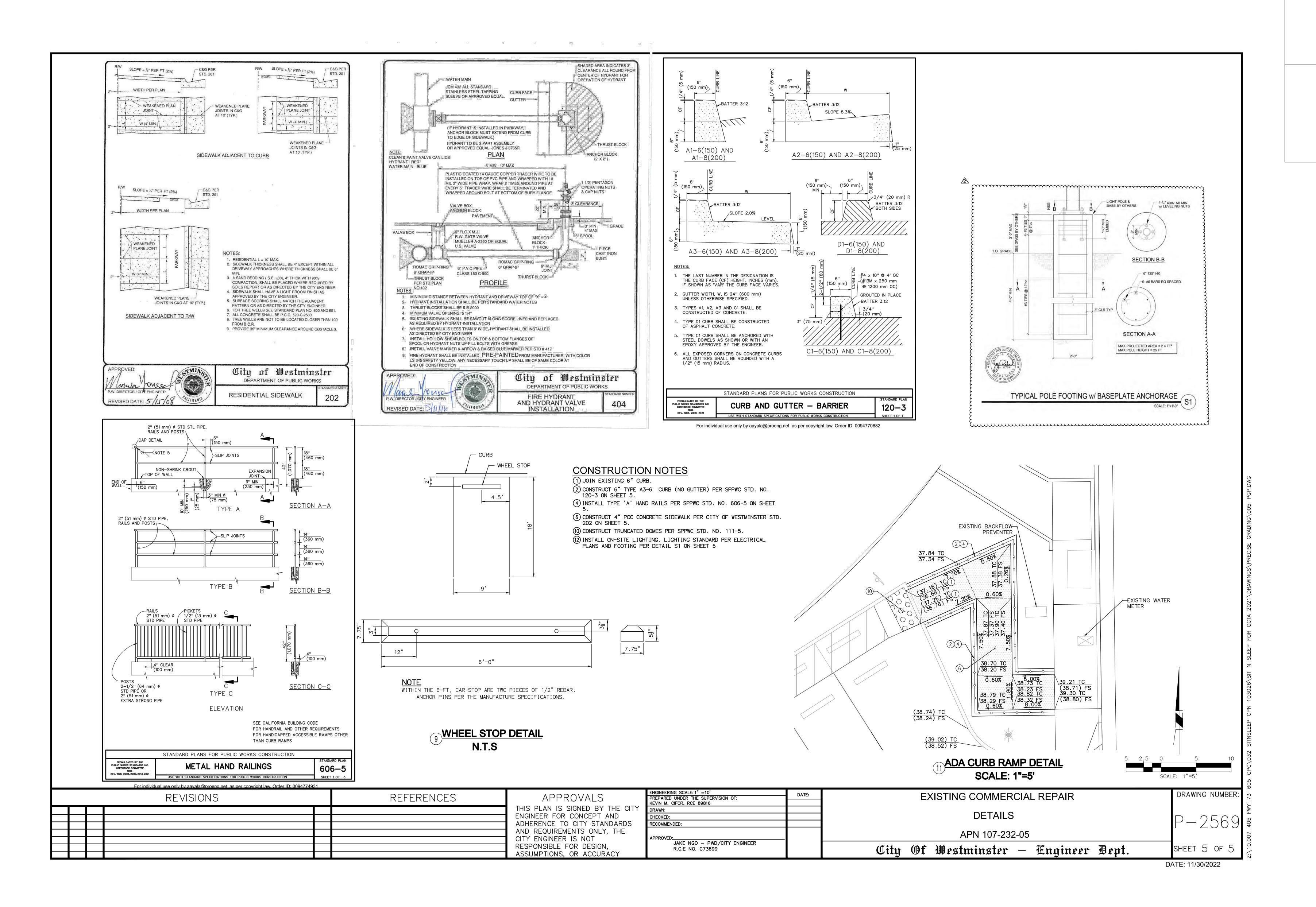
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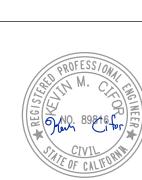
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ISSUE DATE: 02/09/23

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SECTION VIII: LEVEL 3 HEALTH, SAFETY AND ENVIRONMENTAL SPECIFICATIONS – EXHIBIT H

LEVEL 3 HEALTH, SAFETY AND ENVIRONMENTAL (HSE) SPECIFICATIONS

REQUIRED HSE SUBMITTAL SUMMARY

The contractor shall submit copies of the items listed below for contract scope work on OCTA projects and property. Copies shall be provided prior to contractor's mobilization onto OCTA projects and property. Contractor shall provide compliant written Health, Safety & Environmental (HSE) submittals within 30 days of the contract notice to proceed.

HSE submittals shall comply with the 1988 Drug Free Workplace Act, or the Department of Transportation (DOT), or the Federal Transportation Administration (FTA) requirements (according to OCTA procurement funding guidelines) and comply with the California Code of Regulations (CCR) Title 8 regulatory standards.

Contractor's established written programs/plans shall comply with CCR Title 8 regulatory standards. All HSE related programs/plans submitted to OCTA for acceptance shall be prepared and submitted by a qualified HSE professional who is recognized by an organization of industry standard (i.e., CSP, CIH, CHST, CHMM, etc.) and is experienced in developing compliant written HSE programs. The site safety HSE representative shall participate in the HSE submittal process.

- 1. Contractor shall provide a copy of Company's Injury Illness Prevention Program in accordance with CCR Title 8, Section 3203.
- 2. Contractor shall provide a copy of their Company HSE Policy/Procedure Manual, in compliance with CCR Title 8 Standards for awarded scope.
- 3. Contractor shall provide a copy of their Policy or Substance Abuse Prevention Program.
- 4. Contractor shall provide a copy of their Hazard Communication Program and SDS Management Program in compliance with CCR Title 8, Section 5194, Hazard Communication Standard.
- 5. On-Site HSE Representative:
 - On Facility Modification Projects, The Contractor shall submit a resume of the designated on-site qualified HSE Representative. The HSE Representative shall possess a current certification from the Board of Certified Safety Professionals (BCSP), plus five (5) years construction or scope agreement HSE experience enforcing HSE compliance on heavy or industrial construction project sites, the last two years of which have been administering HSE in the construction or scope discipline for which the Contractor is contracting with the Authority. The designated HSE Representative shall participate in all HSE related submittals through completion of scope.

On Capital Programs, The Contractor's on-site qualified HSE Representative shall be a Certified Safety Professional (CSP) with current standing from the Board of Certified Safety Professionals (BCSP) or a Construction Health and Safety Technician (CHST) with current standing from the (BCSP) or a Certified Industrial Hygienist (CIH) with current standing from the American Board of Industrial

Hygiene (ABIH), or an equal professional HSE Certificate of standing from The National Examination Board in Occupational Safety and Health (NEBOSH), that is acceptable to the Authority. The Contractor's on-site HSE Representative(s) shall provide a resume and have a minimum of seven (7) years heavy construction experience in administering HSE programs on heavy construction project sites, the last two years of which have been administering HSE in the construction/scope discipline for which Contractor is contracting with the Authority.

6. A Detailed Site Specific HSE Work Implementation Plan:

This plan shall be prepared and submitted by a recognized HSE professional experienced in developing compliant written HSE programs. Indicate the methods and procedures, and include the sequence of tasks as listed on the project schedule, include the hazards, tools and equipment, and the safe work practices to mitigate the hazards in a format acceptable OCTA. Specify safety measures in accordance with applicable Cal/OSHA standards, South Coast Air Quality Management District (SCAQMD) rules, National Fire Protection Association (NFPA), National Electric Code (NEC), American National Standards Institute (ANSI) codes and regulations, job hazard analysis, policies, procedures, HSE training requirements and known and potential hazards of Contractor's scope. Plans shall be prepared as specified above, and may require if necessary a professional engineer licensed to practice in the state of California, when so required by the provisions of the California Board for Professional Engineer and Surveyors.

PART I - GENERAL

- 1.0 GENERAL HEALTH, SAFETY AND ENVIRONMENTAL REQUIREMENTS
 - A. The Contractor, its subcontractors, suppliers, and employees have the obligation to comply with all Authority health, safety and environmental compliance department (HSEC) requirements of this safety specification, project site requirements, and bus yard safety rules, as well as all federal, state, and local regulations pertaining to scope of work or agreements with the Authority including California Department of Transportation safety requirements and special provisions. Additionally, manufacturer requirements are considered incorporated by reference, as applicable, to this scope of work.
 - B. Observance of unsafe acts or conditions, serious violation of health and safety standards, non-conformance of Authority HSEC requirements, or disregard for the intent of these safety specifications to protect people and property, by Contractor may be reason for termination of scope or agreements with the Authority, at the sole discretion of the Authority.
 - C. The Authority HSEC requirements, and references contained within this scope of work shall not be considered all-inclusive as to the hazards that might be encountered. Safe work practices shall be pre-planned and performed, and safe conditions shall be maintained during the course of this work scope.

- D. The Contractor shall specifically acknowledge that it has primary responsibility to prevent and correct all health, safety and environmental hazards for which it and its employees, or its subcontractors (and their employees) are responsible. The Contractor shall further acknowledge their expertise in recognition and prevention of hazards in the operations for which they are responsible, that the Authority may not have such expertise, and is relying upon the Contractor for such expertise. The Authority retains the right to notify the Contractor of potential hazards and request the Contractor to evaluate and, as necessary, to eliminate those hazards.
- E. The Contractor shall provide all necessary tools, equipment, and related safety protective devices to execute the scope of work in compliance with the Authority's HSEC requirements, CCR Title 8 Standards, and recognized safe work practices.
- F. The Contractor shall instruct all its employees, and all associated subcontractors under contract with the Contractor who works on Authority projects in the following; recognition, identification, and avoidance of unsafe acts and/or conditions applicable to its work.

PART II - SPECIFIC REQUIREMENTS

While these safety specifications are intended to promote safe work practices, Contractors are reminded of their obligation to comply with all federal (Code of Federal Regulations (CFR) Sections 1926 & 1910 Standards), state (CCR Title 8 Standards), local and municipal safety regulations, and Authority health, safety and environmental requirements applicable to their project scope. Failure to comply with these standards may be cause for termination of scope or agreements with the Authority, at the sole discretion of the Authority.

2.1 REQUIRED DOCUMENTATION / REPORTING REQUIREMENTS

The Contractor at a minimum shall provide the following documents to the Authority's Project Manager. Items A through E below shall be submitted and accepted by the Authority's Project Manager prior to Contractor mobilization. Item F upon each occurrence, and for items G through K, contractor shall verify the following documentation is in place, prior to and during contract scope and make the same available to the Authority upon request within 72 hours.

Contractor's established written programs/plans shall comply with CCR Title 8 regulatory standards. All new programs/plans shall be prepared and submitted by a qualified HSE professional who is recognized by an organization of industry standard (i.e., CSP, CIH, CHST, STS, CHMM, etc.) and is experienced in developing compliant written HSE programs. The site safety HSE representative shall participate in the scope submittal process.

- A. A Comprehensive Project Specific Health, Safety, and Environmental (HSE) Work Plan.
 - a. The Contractor shall develop a site project plan that may include, but is not limited to: Permits, Evacuation, Emergency Plan, Roles and

Responsibilities, Scope and Construction Activity Details, Constructability Review, Contractor Coordination Process, Safe Work Methods, Hazard Identification & Risk Control, First Aid and Injury Management, Emergency Procedures, Public Protection, Authority and Contractor Site Rules, Incident Reporting and Investigation, Specialized Work or Licensing, Training and Orientation Requirements, Chemical Management, and Subcontractor Management.

- b. A Detailed Site Specific HSE Implementation Plan: This plan shall be prepared and submitted by a recognized HSE professional (current BCSP Certification in good standing, i.e., CSP, CHST, OHST) experienced in developing compliant written HSE programs, acceptable to OCTA. Indicate the methods and procedures, and include the sequence of tasks as listed on the project schedule, include the hazards, tools and equipment, and the safe work practices to mitigate the hazards in a format acceptable OCTA. Specify safety measures in accordance with applicable Cal/OSHA standards, SCAQMD rules, NFPA, NEC, ANSI codes and regulations, job hazard analysis, policies, procedures, HSE training requirements and known and potential hazards of Contractor's scope. Plans shall be prepared as specified above, and may require if necessary a professional engineer licensed to practice in the state of California, when so required by the provisions of the California Board for Professional Engineer and Surveyors.
- B. Contractor shall provide a copy of their Company HSE Policy/Procedure Manual, in compliance with CCR Title 8 Standards for awarded scope.
- C. Contractor shall provide a copy of Company's Injury Illness Prevention Program in accordance with CCR Title 8, Section 3203.
- D. Contractor shall provide a copy of their Policy or Substance Abuse Prevention Program that complies with the 1988 Drug Free Workplace Act.
- E. Contractor shall provide the resume and qualifications/certifications of assigned project designated Onsite HSE Representative for this scope as identified in section 2.3 of this specification.
- F. Accident/Incident investigation report within 24 hours of event (immediate verbal notification to Authority Project Manager, followed by Written Report).

The following required documentation shall be provided to the Authority's Project Manager, upon Authority request, within 72 hours.

- G. A copy of Contractor weekly site safety inspection report with status of corrections, upon request, within 72 hours.
- H. Contractor shall provide a copy of the Contractors and subcontractors competent person list (submit to Authority Project Manager, upon Authority request, within 72 hours).

- I. Contractors and subcontractors training records for qualified equipment operators, electrical worker certification (NFPA 70E), confined space training, HAZWOPER training, and similar personnel safety training certificates as applicable to the agreement scope and as requested by the OCTA Project Manager and/or HSEC department, upon Authority request, within 72 hours and prior to starting or during the scope activity (submit to Project Manager).
- J. A monthly report that includes number of workers on project, a list of subcontractors, work hours (month, year to date, & project cumulative) of each contractor, labor designation, OSHA Recordable injuries and illnesses segregated by medical treatment cases, restricted workday cases, number of restricted days, lost workday cases, and number of lost work days, and recordable incident rate. Contractor shall provide to the Authority, upon request, within 72 hours.

K. TRAINING DOCUMENTATION

To ensure that each employee is qualified to perform their assigned work, when applicable to scope work, Contractor shall verify training documentation is in place, prior to and during contract scope, and make available to the Authority, upon request, within 72 hours. Training may be required by the Authority or CCR Title 8 Standards and required for activity on Authority's property and/or Authority projects. Contractor shall provide to Authority, upon request, within 72 hours.

2.2 HAZARD COMMUNICATION (CCR Title 8, Section 5194)

- A. Contractor shall comply with CCR Title 8, Section 5194 Hazard Communication Standard. Prior to chemical use on Authority property and/or project work areas the Contractor shall provide to the Authority Project Manager copies of Safety Data Sheet (SDS) for all applicable products used, if any.
- B. All chemicals including paint, solvents, detergents and similar substances shall comply with SCAQMD Rules 103, 1113, and 1171.

2.3 DESIGNATED HEALTH, SAFETY, ENVIRONMENTAL (HSE) REPRESENTATIVE

- A. Before beginning on-site activities, the Contractor shall designate an On-site HSE Representative. This person shall be a Competent or Qualified Individual as defined by the Occupational, Safety, and Health Administration (OSHA), familiar with applicable CCR Title 8 Standards, and has the authority to affect changes in work procedures that may have associated cost, schedule and budget impacts.
- B. The Contractor's on-site qualified HSE Representative for all Authority projects is subject to acceptance by the Authority Project Manager and the HSEC Department Manager. All contact information of the On-site HSE Representative (name, phone, and fax and pager/cell phone number) shall be provided to the Authority Project Manager.

QUALIFICATIONS - On Capital Programs, the Contractor shall submit a resume of the full time, on-site qualified HSE Representative(s) who reports directly to the Contractor's Project Manager or Superintendent, and who is responsible for HSE oversight for field operations on the project no later than ten (10) days after receipt of Notice to Proceed, and prior to mobilization. The Contractor's On-site HSE Representative(s) shall have a minimum of seven (7) years heavy construction experience in administering HSE programs on heavy construction project sites, the last two years of which have been administering HSE in the construction discipline for which Contractor is contracting with the Authority. The Contractor's On-site HSE Representative shall be a Certified Safety Professional (CSP) with current standing from the Board of Certified Safety Professionals (BCSP), or a Construction Health and Safety Technician (CHST) with current standing from the BCSP or a Certified Industrial Hygienist (CIH) with current standing from the American Board of Industrial Hygiene (ABIH), or an equal professional HSE Certificate of standing from The National Examination Board in Occupational Safety and Health (NEBOSH), that is acceptable to the Authority. The Contractor's On-site HSE Representatives(s) shall be on site during all operational hours. The On-site HSE Representative(s) shall set up, carry forward and aggressively and effectively maintain the project specific safety program and IIPP covering all phases of the work. If at any time the Contractor wishes to replace their On-site HSE Representative(s), the Contractor must provide written notice thirty (30) days prior to change of personnel to the Authority. The Contractor shall take all precautions and follow all procedures for the safety of, and shall provide all protection to prevent injury to, all persons involved in any way in the scope work and all other persons, including, without limitation, the employees, agents, guests, visitors, invitees and licensees of the Authority who may be involved. This requirement applies continuously and is not limited to normal working hours. The designated HSE Representative shall participate in all HSE related submittals. The Authority reserves the right to allow for an exception to modify these minimum qualification requirements for unforeseen circumstances, at the sole discretion of the Authority Project Manager and HSEC Department Manager.

On Facility Modification Projects, the Contractor shall submit a resume of the full time qualified on-site HSE Representative who reports directly to the Contractor's Project Manager or Superintendent, and who is responsible for safety oversight for field operations on the project no later than ten (10) days after receipt of Notice to Proceed, and prior to mobilization. The Contractor's On-Site HSE Representative shall hold a current certification from the BCSP, plus five (5) years construction or scope HSE experience enforcing HSE compliance on heavy construction or industrial construction project sites, the last two years of which have been administering HSE in the construction or scope discipline for which Contractor is contracting with the Authority. The Contractor's On-site HSE Representative(s) shall be on site during all operational hours. The designated HSE Representative shall participate in all HSE related submittals. The Authority reserves the right to allow for an exception and to modify these minimum qualification requirements for unforeseen circumstances, at the sole discretion of the Authority Project Manager and HSEC Department Manager.

- 1. Capital Programs may include, but are not limited to, projects involving demolition and construction of; heavy construction, rail projects, highway projects, parking lots and structures, fuel stations, building construction, facility modifications, bus base construction, EPA/DTSC remediation, AQMD air or soil monitoring, fuel tank removal or modification, major bus base modifications, handling potential hazardous waste projects, and similar projects as deemed a Capital Program at the sole discretion by the Authority.
- 2. Facility Modification Projects may include, but are not limited to, projects involving minor demolition and construction or improvement projects for transportation centers, bus base sites and/or building modifications, equipment and/or building upgrades, and similar projects as deemed a Facility Modification Project at the sole discretion by the Authority.
- 3. Competent Individual means an individual who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees and/or property, and who has authorization to take prompt corrective measures to eliminate them.
- 4. Qualified Individual means an individual who by possession of a recognized degree, certificate, certification or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated his/her ability to solve or resolve problems relating to the subject matter, the work, or the project.
- C. The Contractor shall designate a Competent Individual for each task, as required by Cal-OSHA standards or laws. The task Competent Individual shall be responsible for the prevention of accidents. If the Authority or any public agency with jurisdiction notifies the Contractor of any claimed dangerous condition at the site that is within the Contractor's care, custody or control, the Contractor shall take immediate action to rectify the condition at no additional cost to the Authority. The Contractor shall be responsible for the payment of all fines levied against the Authority for deficiencies relating to the Contractor's supervision or conduct and/or control of the scope agreement.
- D. On Facility Modification Projects, the Authority Project Manager reserves the right to require the Contractor to provide one additional full-time safety representative with qualifications as identified in section 2.3 (C), above whenever the number of individuals from the Contractor, its subcontractors, suppliers, and vendors meets or exceeds 15 workers, there are multiple scope work sites, or as warranted by the scope of work at the sole discretion by the Authority.
- E. On Capital Programs, the Authority's Project Manager reserves the right to require the Contractor to provide one additional full-time safety representative with qualifications as identified in item 2.3 (C) above whenever the number of individuals from the Contractor, its subcontractors, suppliers, and vendors meets or exceeds 50 workers, or is warranted by the scope of work.

2.4 SITE HSE ORIENTATION

The Contractor shall conduct and document a project site safety orientation for all Contractor personnel, subcontractors, suppliers, vendors, and new employees assigned to the project prior to performing any work on Authority projects, a copy of the HSE orientation attendance list shall be provided to the Authority Project Manager. The safety orientation, at a minimum, shall include, as applicable, Personal Protection Equipment (PPE) requirements, eye protection, ANSI class 2 reflective vests, designated smoking, eating, and parking areas, traffic speed limit and routing, cell phone policy, and barricade requirements. When required by scope, additional orientation shall include fall protection, energy isolation lock-out/tag-out (LOTO), confined space, hot work permit, security requirements, and similar project safety requirements.

2.5 INCIDENT NOTIFICATION AND INVESTIGATION

- A. The Authority shall be promptly notified of any of the following types of incidents:
 - 1. Damage to Authority property (or incidents involving third party property damage);
 - 2. Reportable and/or recordable injuries (as defined by the U. S. Occupational Safety and Health Administration);
 - 3. Incidents impacting the environment, i.e. spills or releases on Authority property.
- B. Notifications shall be made to Authority representatives, employees and/or agents. This includes incidents occurring to contractors, vendors, visitors, or members of the general public that arise from the performance of Authority contract work. An initial immediate verbal notification, followed by a written incident investigation report shall be submitted to Authority's Project Manager within 24 hours of the incident.

A final written incident investigative report shall be submitted within seven (7) calendar days, and include the following information. The current status of anyone injured, photos of the incident area, detailed description of what happened, the contributing factors that led to the incident occurrence, a copy of the company policy or procedure associated with the incident and evaluation of effectiveness, copy of the task planning documentation, and the corrective action initiated to prevent recurrence. This information shall be considered the minimum elements required for a comprehensive incident report acceptable to OCTA.

C. A Serious Injury, Serious Incident, OSHA Recordable Injury / Illness, or Significant Near Miss shall require a formal incident review at the discretion of the Authority's Project Manager. The incident review shall be conducted within seven (7) calendar days of the incident. This review shall require a senior executive from the Contractors' organization to participate in the presentation. The serious incident presentation shall include action taken for the welfare of the injured, a status report of the injured, causation factors leading to the incident, a root cause analysis, and a detailed recovery plan that identifies corrective actions to prevent a similar incident, and actions to enhance safety awareness.

- <u>Serious Injury:</u> includes an injury or illness to one or more employees, occurring in a place of employment or in connection with any employment, which requires inpatient hospitalization for a period in excess of twenty-four hours for other than medical observation, or in which an employee suffers the loss of any member of the body, or suffers any serious degree of physical disfigurement.
- 2. <u>Serious Incident:</u> includes property damage of \$500.00 or more, an incident requiring emergency services (local fire, paramedics and ambulance response), news media or OCTA media relations response, and/or incidents involving other agencies (Cal/OSHA, EPA, AQMD, DTSC, etc.) notification or representation.
- 3. OSHA Recordable Injury / Illness: includes and injury / illness resulting in medical treatment beyond First Aid, an injury / illness which requires restricted duty, or an injury / illness resulting in days away from work.
- 4. <u>Significant Near Miss Incident;</u> includes incidents where no property was damaged and no personal injury sustained, but where, given a slight shift in time or position, damage and/or injury easily could have occurred.

2.6 REGULAR INSPECTIONS & THIRD PARTY INSPECTIONS

- A. Frequent and regular inspections of the project jobsite shall be made by the Contractor's On-site HSE Representative, or another Competent Individual designated by the Contractor. Unsafe acts and/or conditions noted during inspections shall be corrected immediately.
- B. The Contractor is advised that representatives of regulatory agencies (i.e., CAL-OSHA, EPA, SCAQMD, etc.), upon proper identification, are entitled to access onto Authority property and projects. The Authority Project Manager shall be notified of their arrival as soon as possible.

2.7 ENVIROMENTAL REQUIREMENTS

- A. The Contractor shall comply with Federal, State, county, municipal, and other local laws and regulations pertaining to the environment, including noise, aesthetics, air quality, water quality, contaminated soils, hazardous waste, storm water, and resources of archaeological significance. Expense of compliance with these laws and regulations is considered included in the agreement. Contractor shall provide water used for dust control, or for prewetting areas to be paved, as required; no payment will be made by OCTA for this water.
- B. The Contractor shall prevent pollution of storm drains, rivers, streams, irrigation ditches, and reservoirs with sediment or other harmful materials. Fuels, oils,

bitumen, calcium chloride, cement, or other contaminants that would contribute to water pollution shall not be dumped into or placed where they will leach into storm drains, rivers, streams, irrigation ditches, or reservoirs. If operating equipment in streambeds or in and around open waters, protect the quality of ground water, wetlands, and surface waters.

- C. The Contractor shall protect adjacent properties and water resources from erosion and sediment damage throughout the duration of the contract. Contractor shall comply with applicable NPDES permits and Storm Water Pollution Prevention Plan (SWPPP) requirements.
- D. Contractor shall comply with all applicable EPA, Cal EPA, Cal Recycle, DTSC, SCAQMD, local, state, county and city standards, rules and regulations for hazardous and special waste handling, recycling and/ disposal. At a minimum, Contractor shall ensure compliance where applicable with SCAQMD Rule 1166, CCR Title 8, Section 5192, 29 CFR Subpart 1910.120, 49 CFR Part 172, Subpart H, 40 CFR Subpart 265.16 and CCR Title 22 Section 6625.16. Contractor shall provide OCTA a schedule of all hazardous waste and special or industrial waste disposal dates in advance of transport date. Only authorized OCTA personnel shall sign manifests for OCTA generated wastes. Contractor shall ensure that only current registered transporters are used for disposal of hazardous waste and industrial wastes. The Contractor shall obtain approval from OCTA for the disposal site locations in advance of scheduled transport date.
- E. If the Contractor encounters on the site material reasonably believed to be asbestos, polychlorinated biphenyl (PCB) or other Hazardous Substance (as defined in California Health and Safety Code, and all regulations pursuant thereto) which has not been rendered harmless, the Contractor shall immediately stop work in that area affected and report the condition to the Authority in writing. The work in the affected area shall not thereafter be resumed except by written agreement of the Authority and Contractor if in fact the material is asbestos or polychlorinated biphenyl (PCB) or other hazardous substance and has not been rendered harmless. The work in the affected area shall be resumed in the absence of asbestos or polychlorinated biphenyl (PCB) or other hazardous substance, or when it has been rendered harmless, by written agreement of the Authority and the Contractor, or in accordance with a final determination by an Environmental Consultant employed by the Authority.
- F. The Contractor shall not permit any hazardous substances to be brought onto or stored at the Project Site or used in the construction of the work, except for specified materials and commonly used construction materials for which there are no reasonable substitutes. All such materials shall be handled in accordance with all manufacturers' guidelines, warnings and recommendations and in full compliance with all applicable laws. All notices required to be given with respect to such materials shall be given by the Contractor. The Contractor shall not intentionally release or dispose of hazardous substances at the Project Site or into the soil, drains, surface or ground water, or air, nor shall the Contractor allow any Sub-Contractor, subcontractor or supplier or any other person for whose acts the Contractor or any subcontractor, vendor or supplier may be liable, to do so. For purposes of Contract Documents, "hazardous

substance" means any substance or material which has been determined or during the time of performance of the work is determined to be capable of posing a risk of injury to health, safety, property or the environment by any federal, state or local governmental authority.

2.8 VEHICLE AND ROADWAY SAFETY REQUIREMENTS

- A. The Contractor shall ensure that all Contractor vehicles, including those of its subcontractors, suppliers, vendors and employees are parked in designated parking areas, are identified by company name and/or logo, and comply with traffic routes, and posted traffic signs in areas other than the employee parking lots.
- B. Personal vehicles belonging to Contractor employees shall not be parked on the traveled way or shoulders including any section closed to public traffic, or areas of the community that may cause interference or complaints
- C. The Contractor shall comply with California Department of Transportation safety requirements and special provisions when working on highway projects.
- D. The Contractor shall conform to American Traffic Safety Services Association (Quality Standard for Work Zone Control Devices 1992).

2.9 LANGUAGE REQUIREMENTS

For safety reasons, the Contractor shall ensure employees that do not read, or understand English, shall be within visual and hearing range of a bilingual supervisor or responsible designee at all times when on the Authority property or projects.

2.10 PERSONAL PROTECTIVE EQUIPMENT AND CLOTHING

Contractors, and all associated subcontractors, vendors and suppliers are required to provide their own personal protective equipment (PPE), including eye, head, foot, and hand protection, respirators, reflective safety vests, and all other PPE required to perform their work safely on Authority projects.

- A. RESPIRATORS (CCR Title 8, Section 5144) The required documentation for training and respirator use shall be provided to the Authority's Project Manager upon request within 72 hours. All compliance documentation as required by CCR Title 8, Section 5144, Respiratory Protective Equipment.
- B. EYE PROTECTION The Authority requires eye protection on construction projects and work areas that meet ANSI Z-87.1 Standards.
- C. BUS BASE Minimum PPE required includes but is not limited to; Eye protection, class 2 reflective vest, steel toe or construction type footwear that meets ANSI Z41 1991 are recommended.

- D. CONSTRUCTION PROJECTS Minimum PPE required includes but is not limited to; hard hat, eye protection, hand protection, class 2 reflective vest, safety toe footwear that meets ANSI Z41 1991 are recommended.
- E. HARD HATS: Approved hard hat that meet ANSI Z89. 1 (latest revision). Hard hats should be affixed with the company/agency logo and/or name. The bill shall be worn forward. Metal hard hats and cowboy style are forbidden on Authority projects.
- F. FOOTWEAR: Enclosed leather that covers the ankles, such as a construction type boot. Employees shall not wear casual dress shoes, open toe, sneakers, sandals, canvas-type shoes, or other shoes that have thin soles or heels that are higher than normal in construction work areas. Safety toe footwear that meets ANSI Z41 1991 are recommended on construction sites and in operating facilities.
- G. CLOTHING/SHIRTS: minimum or waist length shirts with sleeves (4" minimum).
- H. CLOTHING/TROUSERS: Cover the entire leg. If flare-legged trousers are worn, the trouser bottoms must be tied to prevent catching. No sweat pants, or trousers with holes.

2.11 AERIAL DEVICES (CCR Title 8, Section 3648)

Aerial devices are defined in CCR Title 8 as any vehicle-mounted or self-propelled device, telescoping extensible or articulating, or both, which is primarily designed to position personnel. If aerial devices are to be used, the required documentation in CCR Title 8, Section 3648 shall be provided to the Authority's Project Manager, upon request, within 72 hours.

2.12 CONFINED SPACE ENTRY (CCR Title 8, Section 5157)

Before any employee will be allowed to enter a confined space, the required documentation as required by CCR Title 8, Section 5157 shall be provided to the Authority's Project Manager, upon request, within 72 hours.

A. RECOMMENDED: a copy of the most recent calibration record for each air monitoring unit, 3-gas monitor or "sniffer" to be used by the Entry Supervisor prior to entering permit-required confined spaces.

2.13 CRANES

A. Crane activity shall comply with 29 CFR 1926.550, CCR Title 8 Standards, manufacture's recommendations and requirements, applicable American Society of Mechanical Engineers (ASME), and ANSI Standards. In addition, Contractor shall comply with the following requirements: Prior to using mobile cranes, the Contractor shall provide to the Authority Project Manager, items I,

- 2 & 3 of the following documentation a minimum of seven (7) days prior to activity, and item 4 on each day of crane activity.
- 1. Cranes require a submittal of the annual certification, and copy of the cranes most recent quarterly inspection.
- 2. A copy of each crane operator's qualification (NCCCO or equivalent) of company-authorized crane operators that have been properly trained in the equipment's use and limitations. Operator certification as required by CCR Title 8, Section 5006.1.
- 3. A rigging plan is required for all lifts. Critical lifts require an engineered plan designed by a registered professional engineer licensed in the State of California.
- 4. Contractor shall provide the name and qualifications of each "Qualified Rigger" as defined by OSHA.
- 5. Rigging scope activity shall comply with 29 CFR Subparts1926.250, 1929.753 and CCR Title 8 Standards.
- 6. All rigging equipment shall be free from defects, in good operating condition and maintained in a safe condition.
- 7. Rigging equipment shall be inspected by a designated, competent employee prior to initial use on the project, prior to each use, and documented inspections performed regularly. Records shall be kept on jobsite of each of these inspections by contractor and be made available to the Authority upon request within 72 hours.
- 8. Only one (1) sling eye should be in a hook, for multiple slings a shackle shall be used to prevent separation of slings, and prevent stress on weak points of the hook.
- 9. Contractor shall prepare a documented daily crane inspection report.
- B. Pick and carry with rubber tired cranes is forbidden on Authority projects.
- C. Engineered Critical Lifts

A critical lifts is established where any one of the following conditions are created:

- 1. Where in the crane's current configuration at any point during the lift, a gross load weight exceeds 75% of the capacity of the crane.
- 2. A gross weight equal to, or greater than 10 tons.
- 3. Lifts over buildings, equipment, public roadways, structures, or power lines.

- 4. A single lift where two or more cranes are used, including tandem lifts and tailing cranes.
- 5. Lifts made in close proximity of power lines, as defined by CCR Title 8 voltage clearance specifications.
- 6. Lifts involving helicopters, and specialized or unique and complex rigging equipment.
- 7. Hoisting of suspended work platforms.
- 8. Static tower crane erection and dismantlement.
- Making lifts below the ground level where the crane is positioned.
 Note: Where the below the ground lift is minimal (evaluated by California registered professional engineer), a critical lift plan may not be required.

D. Critical Lift Plan

Where a critical lift will be performed, a written critical lift plan shall be submitted to the Authority Project Manager prior to commencing with the lift. The written plan shall include the following:

- 1. Crane manufacturer, capacity, and all specifications for the configuration to be used for the lift.
- 2. Load chart data for the crane to be used to make the lift. Total calculated weight of the load to be lifted including all rigging and other deductions consistent with the manufacturer's load chart.
- Engineering data shall be provided on the hook assembly (manufacture's certification or independent laboratory testing and load testing within the past 60 days), below-the hook rigging, and all specialized below-the-hook lifting devices.
- 4. Diagrams of the lift that provides geometrical conditions of the load, rigging, and all crane positions during the lift. The drawing shall provide the following:
 - A. Locations of all components to be lifted prior, during and after the lift is completed.
 - B. Radius points.
 - C. Swing patterns.

- D. In the event that the lift must be aborted, positions where the load may be safely landed.
- E. Areas where any personnel, public, and vehicles must be evacuated during the lift.
- 5. Potential ground loading for each point of contact by the crane in selected locations in which the crane will perform the critical lift.
- 6. Soil and subsurface data and information pertaining to the location on which the crane used for the critical lift will be positioned. This information shall be procured from an authoritative source such as a geotechnical engineer or a professional civil engineer registered in the state of California.

Note: This information may be available from the Authority for selected locations on some projects.

- 7. An engineer shall use the data provided in #5 and #6 above to verify and confirm the following:
 - A. That the soil and subsurface conditions are capable of supporting all loads imposed during the critical lift.
 - B. That the designs of cribbing and other supports used under the crane load points are appropriate to safely transfer such loads.
- 8. Signature and stamp on the plan by a California registered professional engineer, evidencing review of the plan as meeting the requirements that all loads and load information and calculations contained in the plan are approved, acceptable and safe to perform.
- 9. Operator qualifications.
- 10. Method by which communication will be provided to the crane operator. (Designated signal person, two-way radio, hard wire phone system, etc.).
- 11.A critical lift hazard analysis which identifies the particular hazards (including weather, wind, obstructions, etc.) associated with the lift and the means and methods to reduce, mitigate, or eliminate the hazards.
- 12. Emergency action plan.
- 13. Documentation of lift and pre-job meeting shall be conducted by Contractor's Project Manager.

The written plan shall be submitted 7 days prior to any critical lift for review by the Authority Project Manager and the Authority HSEC department. No critical lifts shall be conducted prior to such review.

E. OVERHEAD CRANES

Before using the Authority overhead cranes, each Contractor shall designate a limited number of employees to attend a training session on the use and limitations of overhead cranes with designated Authority personnel.

2.14 DEMOLITION OPERATIONS (CCR Title 8, Section 1734)

Before starting demolition activities the required documentation shall be provided to the Authority's Project Manager, upon request, within 72 hours. Contractor shall provide all compliance documentation as required by CCR Title 8 Article 31.

- A. The Contractor shall be responsible for visiting and examining the project site to assess and personally determine the extent of demolition, associated work, debris removal, disposal and general work to be done under this section.
- B. The Contractor shall take possession of all demolished materials, except as noted otherwise in the Contract Documents, and be responsible for disposing of them in accordance with applicable laws and regulations. On-site burning or burial of demolition materials will not be permitted.
- C. Provide continuous noise and dust abatement as required, preventing disturbances and nuisances to the public, workers, and the occupants of adjacent premises and the surrounding areas. Dampen areas affected by demolition operation as necessary to prevent dust nuisance.
- D. Site demolition plan: Indicate methods, procedures, equipment, and structures to be employed. Specify safety measures in accordance with applicable codes including signs, barriers, and temporary walkways. Plans shall be prepared by a qualified person (CSP, CIH, CHST, CHMM, etc.), or as necessary by a professional engineer licensed to practice in the State of California, when so required by the provisions of the California Board for Professional Engineer and Surveyors.
- E. Equipment, haul routes, and disposal sites to be used in the demolition and disposal work. Copy of manifests showing delivery of disposed materials in accordance with the plan and permit conditions. Certification that all demolished materials removed from the site have been disposed of in accordance with applicable laws and regulations.

2.15 EXCAVATION OPERATIONS (CCR Title 8, Section 1541)

Before starting excavation activities more than 5 feet deep into which people shall enter, the required documentation shall be provided to the Authority's Project Manager, upon request, within 72 hours. All compliance documentation shall comply with the following CCR Title 8, Section 1541 requirements:

- A. A copy of the Contractor's Excavation Permit.
- B. Attention is directed to the applicable sections of the Labor Code concerning trench excavation safety plans, "Trench Safety." Excavation for any trench 5 feet or more in depth shall not begin until the Contractor has received approval from the Engineer of the Contractor's detailed plan for worker protection from the hazards of caving ground during the excavation of that trench and any design calculations used in the preparation of the detailed plan. Excavations 20 feet or greater shall be engineered and plan stamped by a California registered professional engineer.
- C. The detailed plan shall show the details of the design of shoring, bracing, sloping or other provisions to be made for worker protection during the excavation. No plan shall allow the use of shoring, sloping or a protective system less effective than that required by the Construction Safety Orders of the Division of Occupational Safety and Health. If the plan complies with the shoring system standards established by the Construction Safety Orders, the plan shall be submitted at least five (5) days before the Contractor intends to begin excavation for the trench.
- D. Excavations and trenches shall be inspected by a "Competent Person" daily and after every rainfall to determine if they are safe. Daily inspections shall be recorded. Documentation is to be kept on site and available for review upon request.
- E. Excavations are considered class 'C' soil unless documented testing in accordance with 29 CFR Subpart P, Section 1926.650 and CCR Title 8 Standards supports a class 'B' soil classification and is confirmed and stamped by a California registered professional engineer. In no case will excavations be classified as class 'A' soil.
- 2.16 FALL PROTECTION (CCR Title 8, Sections 1669-1671)

The following standards are required when performing work on Authority property. The required documentation shall be provided to the Authority's Project Manager, upon request, within 72 hours.

- A. Fall protection is required for workers exposed to falls in excess of six (6) feet.
- B. When conventional fall protections methods are impractical or create a greater hazard, a written plan in conformance with CCR Title 8, Article 24, shall be submitted to the Authority a minimum of seven (7) days in advance of the scheduled activity.
- 2.17 FORKLIFTS, BACKHOES AND OTHER INDUSTRIAL TRACTORS (CCR Title 8, Section 3664)

CCR Title 8 defines backhoes as "industrial tractors". All compliance documentation shall be provided as required by CCR Title 8, Section 3664. The following required documentation shall be provided to the Authority's Project Manager, upon request, within 72 hours:

A. A copy of each operator's certificate or a list of company-authorized industrial tractor operators that have been properly trained in the equipment's use and limitations. Please state which equipment, and model each operator has been authorized to operate (i.e. forklifts, backhoe, bulldozer, front-end loader, etc.).

2.18 ELECTRICAL OPERATIONS

HIGH VOLTAGE (CCR Title 8, Sections 2700-2974)

Any work on electrical equipment defined by OSHA as high-voltage, at or above 600 volts, requires specialized training certifications and personal protective equipment. Before any high-voltage work commences, the Authority Project Manger must be notified and must provide approval. The following required NFPA 70E certification and a certificate of training from a recognized organization of a two day high voltage safety training course shall be provided to the Authority's Project Manager, upon request, within 72 hours:

A. A list of the name(s) of the company-designated high voltage Qualified Electrical Worker(s)

LOW VOLTAGE (CCR Title 8, Sections 2299-2599)

Only qualified persons shall work on electrical equipment or systems.

A. <u>Electrical Certification of Training;</u> Contractor employees working on or around electrical panels, wiring, motors, electrical energy sources or similar electrical devices shall have attended a NFPA 70E, Electrical Safety Course and provide to the OCTA Project Manager a copy of employees' NFPA 70E qualification certificate of training for each employee assigned to electrical tasks on OCTA property or projects.

2.19 POWDER-ACTUATED TOOLS (CCR Title 8, Section 1685)

Before using tools such as "Hilti guns" or other powder-actuated tools, the following required documentation shall be provided to the Authority's Project Manager, upon request, within 72 hours.

A. A copy of each qualified person's valid operator card.

2.20 SCAFFOLDS (CCR Title 8, Sections 1635.1-1677)

Scaffold erection shall be in compliance with CCR Title 8 Standards. All compliance documentation shall be provided as required by CCR Title 8, Sections 1635.1-1677. In addition, the Contractor shall comply with the following additional requirements.

A. All scaffolds on Authority project shall be inspected by a competent person qualified for scaffolds in accordance with CCR Title 8 Standards.

- B. Contractor shall arrange for a third party inspection, at least quarterly, by a credentialed professional (insurance carrier, scaffold manufacturer representative, or similar) in addition to the contractors daily self inspections.
- C. A proper scaffold inspection and tagging system shall be maintained identifying compliance status (Example: Green/safe, Yellow/modified-fall protection required, Red/unsafe-do not use).
- D. Contractor shall have a fall protection plan that meets CCR Title 8 Standards for scaffold erectors, an erection/dismantling plan shall be submitted to Authority Project Manager for review prior to start of activity.
- E. Scaffold erection/dismantling shall install handrails beginning on the first level above ground erected, and erectors shall plan erection and dismantling in a manner to maximize handrail protection and minimize employees at unprotected areas.

2.21 WARNING SIGNS AND DEVICES

Signs, signals, and/or barricades shall be visible at all times when and where a hazard exists. Overhead tasks, roofing tasks, excavations, roadwork activity, demolition work, and other recognized hazards shall have guardrail protection, warning barricades, or similar protective measures acceptable to the Authority's Project Manager. Signs, signals, and/or barricades shall be removed when the hazard no longer exists.

2.22 STEEL ERECTION

Steel Erection scope activity shall comply with 29 CFR Subpart R, Section 1926.750, and CCR Title 8 Standards. In addition to OSHA Standards, Contractor shall comply with the following requirements.

- A. Erection planning should incorporate installation methods using aerial devices (man-lifts) and elevated work platforms (scissor lift) to minimize fall hazards of climbing steel where possible. A detailed written job safety analysis (JSA) shall identify installation methods, equipment, and control methods to minimize potential fall hazards.
- B. The Contractor shall not allow any employee to walk the steel unprotected from falls. Contractor employees must be tied-off and "coon" the beam until safety cables are provided to which employees shall use 100% tie-off protection. Two lanyards are required to ensure 100% tie-off protection.
- C. A safe means of access to the level being worked shall be planned. Climbing and sliding down columns are not considered safe access and are forbidden on Authority projects.
- D. A qualified rigger shall inspect the rigging prior to each shift and each lift.

E. Multiple lift rigging (Christmas Treeing) lifts are forbidden on Authority property and controlled projects.

2.23 AUDITS

- A. The Authority may make periodic patrols of the project site as a part of its normal security and safety program. The Contractor shall not be relieved of its aforesaid responsibilities and the Authority shall not assume same, nor shall it be deemed to have assumed, any responsibility otherwise imposed upon the Contractor, as a result of safety patrols by the Authority.
- B. The Authority may audit the Contractor's safety program for HSE compliance at various intervals of the project, at the sole discretion of the Authority. Elements may include, but are not limited to: OSHA injury & illness records and logs, Job Safety Analysis and safety plans, equipment operator licenses and training records, incident reports, meeting minutes, engineered plans, safety meeting records, crane and rigging plans, equipment inspection records, qualifications of and interviews with key Contractor management personnel, and other similar information. The Contractor shall support and cooperate with these audits at no additional compensation or schedule impacts with this contract.

2.24 RAILWAY SAFETY PRECAUTIONS

- A. Work on operating railways shall be in compliance with 49 CFR, Part 214, CCR Title 8 Standards, and the Southern California Regional Rail Authority (SCRRA).
- B. New construction rail projects require that all employers and contractors are responsible to assure employees are trained and understand on-track safety procedures, and follow roadway worker rules identified in 49 CFR, Part 214, CCR Title 8, SCRRA, the California Department of Transportation (CalTrans), and OCTA HSE Construction Management Requirements (i.e., item E references).
- C. Minimum PPE for workers include hard hat, safety glasses, orange (i.e., rail company approved color) class 2 reflective vest, safety toe footwear that meets ANSI Z41 1991 (lace-up type over the ankle) and hearing protection (on person and worn as necessary).

2.25 FINES

The Contractor shall be responsible for the payment of all fines levied against the Authority for HSE violations arising from or related to activities over which Contractor has responsibility per the contract..

2.26 COMPLIANCE COSTS

Compliance with Health, Safety and Environmental Compliance identified in these aforementioned Authority Safety Specifications shall be at the expense of the Contractor, and included in Bid Documents to the Authority for the Contractor's scope. The Authority shall incur no additional cost or schedule impacts by Contractor, for compliance with California Construction Safety Orders, CCR Title 8 Standards, Federal OSHA Standards, and the Authority Safety Specifications for the protection of persons and property.

2.27 REFERENCES

- A. CCR Title 8 Standards (Cal/OSHA)
- B. CFR Including 1910 and 1926 Standards
- C. NFPA, NEC, ANSI, NIOSH Standards
- D. USACE Construction Quality Management Manuel (EM-385-1-1)
- E. Construction Industry Institute (CII)
- F. OCTA Construction Management Procedures Manual
- G. OCTA Yard Safety Rules

END OF DOCUMENT

BID BOOKLET INVITATION FOR BID (IFB) 3-2208 BOOK 2 OF 2

RESTORATION OF A COMMERCIAL PROPERTY



ORANGE COUNTY TRANSPORTATION AUTHORITY

550 South Main Street P.O. Box 14184 Orange, CA 92863-1584 (714) 560-6282

Key IFB Dates

Issue Date: March 13, 2023

Pre-Bid Conference/Site Visit: March 21, 2023

Questions/Approved Equal Submittal: March 24, 2023

Bids Submittal Date: April 12, 2023

BID DOCUMENT SUBMISSION CHECKLIST

IFB NO	
PROJECT TITLE:	
The Orange County Transportation Authority have reminder of the documents required to be submitted must be complete, fully executed, notarized when bid documents in order to render the bid response	ed with the bid. These documents re appropriate as required in the
THE FOLLOWING CHECKED DOCUMENTS MUST	BE SUBMITTED WITH THE BID:
General IFB Forms:	
Bid Form – include all pages 1 through 4. All addenda must be acknowledged, signed, Bid Security Form: Bid Bond or Check (dated, corporate seal
Correct bid number, signed, dated, notarized	
Information Required of Bidder Provide all information, signed	
Bidders Certificate of Compliance Registration Insurance Signed and dated	arding Workers Compensation
Bidders Certificate of Compliance Regard and Professions Code Section 7028.15 Signed, dated, notarized	ling State of California Business
List of Subcontractors (Exhibit D) License Number- address/ name should ma on CSLB website, DIR Registration Nur subcontractor for each portion), Dollar amou	mber, Description of work (one
Status of Past and Present Contracts For Signed, dated	m
Non-Collusion Declaration Form Signed, dated	
Signature on this Bid Document Submission Checkl above are hereby submitted with the bid. I understa submit any of the required documents may deem my	and that failure to complete and/o
Authorized Signature	Print Name and Title
Firm Name	Date



BID FORM

The undersigned hereby proposes to perform all work for which a contract may be awarded and to furnish any and all plant, labor, services, material, tools, equipment, supplies, transportation, utilities, and all other items and facilities necessary therefore as required in the IFB 3-2208, "RESTORATION OF A COMMERCIAL PROPERTY", and to do everything required therein; and further proposes that, if this bid is accepted, will contract in the form and manner stipulated to perform all the work in strict conformity therewith within the time limits set forth therein, and will accept as full payment therefore, the following price:

<u>Description</u>		ımp Sum <u>Amount</u>		
	. \$		_	
A cashier's check/certified check/bid made payable to Orange County designated as the Ov	Transportation	·Authority,	hereinaft	
Dollars (\$	is a guarantee the state of the required of the contract, and the proceeds by's liability to the	hat the und bonds, "Gu and in case of said che e Authority	ersigned waranty" and failure eck shall I for forfeitu	vill nd to be ire

The undersigned hereby represents that:

BID FORM, PAGE 2

- Bidder has thoroughly examined and become familiar with the work required and documents included under this IFB. The bidder understands that the award of the contract, if it is awarded, will be based on the lowest total bid submitted by a responsive and responsible bidder, and further, that the amounts and the total on the Bid Form will be subject to verification by the Authority.
- 2. By investigation at the site of the work and otherwise, it is satisfied as to the nature and location of the work and is fully informed as to all conditions and matters, which can in any way affect the work or the cost thereof.
- 3. Bidder fully understands the scope of the work/specifications and has checked carefully all words and figures inserted in said Invitation For Bids (IFB) and further understands that the Authority will in no way be responsible for any errors or omissions in the preparation of this bid. Bidder further asserts that it is capable of performing quality work to meet Authority's requirements.
- 4. Bidder will execute the Agreement and furnish the required Performance and Payment Bonds, Guaranty and proof of insurance coverage within ten (10) calendar days after notice of acceptance of bid by the Authority; and further, that this bid may not be withdrawn for a period of 120 calendar days after the date set for the opening thereof, unless otherwise required by law. If any bidder shall withdraw its bid within said period, the bidder shall be liable under the provisions of the Bid Security, or the bidder and the surety shall be liable under the Bid Bond, as the case may be.
- 5. Bidder hereby certifies that this bid is genuine and not a sham or collusive or made in the interest or on behalf of any person not herein named, and the undersigned has not directly or indirectly induced or solicited any other bidder to put in a sham bid, or any other person, firm, or corporation to refrain from bidding; the undersigned has not in any manner sought by collusion to secure for himself an advantage over any other bidder.
- In conformance with current statutory requirements of Section 1860, et. seq., of the Labor Code of the State of California, the Bidder shall execute the document included in this IFB entitled "Bidder's Certificate of Compliance Regarding Workers' Compensation Insurance."
- 7. Bidder hereby further certifies that each, and every representations made in this bid are true and correct and made under penalty of perjury.

BID FORM, PAGE 3

- 8. Bidder shall permit the authorized representative of the Authority to inspect and audit all data and records of bidder relating to this bid, and if awarded a contract resulting from this bid, shall permit such inspection and audit of all data and records of bidder related to bidder's performance of such contract.
- 9. Bidder does not employ anyone who is now, or for one (1) year immediately prior to the date of this offer was, a director, officer, member, or employee of the Orange County Transportation Authority. The undersigned has not agreed to pay a fee contingent upon the award of a contract resulting from this bid to anyone who is now, or for one (1) year immediately prior to the date of this bid was, a director, officer, member, or employee of the Orange County Transportation Authority. No member of or delegate to the Congress of the United States shall be admitted to any share of the contract or to any benefit arising therefrom.
- 10. If awarded a contract resulting from this bid, bidder shall not discriminate against any employee or applicant for employment because of race, religion, color, sex, age or national origin. The bidder shall take affirmative action to ensure that applicants are employed, and that employees are treated during their employment, without regard to their race, religion, color, sex, age or national origin. Such actions shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.
- 11. Bid will be in effect for 120 calendar days after the bid closing date.

BID FORM, PAGE 4

Now: In compliance with the **Invitation For Bids (IFB) 3-2208**, "**RESTORATION OF A COMMERCIAL PROPERTY**", the undersigned, with full cognizance thereof, hereby proposes to perform the entire work in strict compliance with all of the said requirements and provisions for the prices set forth herein upon which award of contract is made. The undersigned affirms that the information provided herein is true and accurate and that any misrepresentations are made under penalty of perjury.

_ , 202_	Bidder
	Signature
	Name
	Title
esentative	
SS	
der the laws of	the State of
Э	
	(CORPORATE SEAL)
	esentative ss der the laws of

BID SECURITY FORM BID BOND

KNOW ALL MEN BY THESE PRESENTS:

That, as principal and
Bidder and as Surety, are held and firmly
bound unto the Orange County Transportation Authority, of State of California, hereinafter
referred to as "Authority," in the sum of
Dollars (\$), to be paid to the Authority, its successors, and assigns;
for which payment, well and truly to be made, bind themselves, their heirs, executors,
administrators, successors, and assigns, jointly and severally, firmly by these presents,
this amount being ten percent (10%) of the total amount of the Bid.
THE CONDITION OF THE ODI IOATION IO CHOIL II ARE
THE CONDITION OF THIS OBLIGATION IS SUCH, that if the certain bid of the above
named bounden principal
for at the Orange County
Transportation Authority's as
specifically set forth in documents entitled IFB 3-2208, "RESTORATION OF A
COMMERCIAL PROPERTY", shall not be withdrawn within a period of 120 calendar
days after the date set for the opening of bids, (unless otherwise required by law, and
notwithstanding the award of the contract to another Bidder), and that if said bid is
accepted by the Authority through action of its legally constituted contracting authorities
and if the above bounden
its heirs, executors, administrators, successors and assigns, shall execute a contract for
such construction and deliver the required Performance and Payment Bonds, "Guaranty,"
and proof of insurance coverage within ten (10) calendar days after notification of contract
award from the Authority, then this obligation shall become null and void; otherwise it shall
be and remain in full force and effect.
IN WITNESS WHEREOF, we hereunto set our hands and seals this day of
, 202

NOTE: The standard printed bond form of any bonding company acceptable to the Authority may be used in lieu of the foregoing approved sample bond form provided the security stipulations protecting the Authority are not in any way reduced by use of the security company's printed standard form.

BID SECURITY FORM CHECK TO ACCOMPANY BID

(NOTE: The following form shall be used in case check accompanies bid)

Accompanying this bid is a Certified or Cashiers check (circle the appropriate one) payable to the order of Orange County Transportation Authority, hereinafter referred to as "Authority" for
dollars (\$), this amount being ten percent (10%) of the total
amount of the Bid submitted in response to IFB 3-2208, "RESTORATION OF A
COMMERCIAL PROPERTY". The proceeds of this check shall become the property of
Authority provided this bid shall be accepted by Authority through action of its legally
constituted contracting authorities and the undersigned shall fail to execute a contract
and furnish the required Guaranty Form, Performance and Payment Bonds and proof of
insurance coverage within ten (10) calendar days after date of notification of contract award from the Authority. The proceeds of this check shall also become the property of
the Authority if the undersigned bidder withdraws the bid within the period of 120 days
after the date set for the opening thereof, unless otherwise required by law, and
notwithstanding the award of the contract to another bidder. Otherwise, the check shall
be returned to the undersigned.
Diddom
Bidder:
Signature:
Date:

NOTE: If the bidder desires to use a bond instead of check, the Bid Bond form shall be executed and the sum of this bond shall be ten percent [10%] of the total amount of the bid.

INFORMATION REQUIRED OF BIDDER

The bidder is required to supply the following information. Additional sheets may be attached if necessary.

1.	. Name of Bidder:		
	. Business Address:		
3.	. Telephone () Fa	ax ()	_E-Mail:
4.	. Type of Firm - Individual, Partnership or	Corporation:	
5.	. Corporation organized under the laws of	f state of:	
6.	. Contractor's License No.: Cl	ass	Years of Experience:
7.	. Expiration Date of License:		
	. Is your firm a certified small business in		
9.	. List the names and addresses of all owner	ers of the firm or nam	es and titles of all officers
	of the corporation:		

INFORMATION REQUIRED OF BIDDER, PAGE 2

10. Please list the following: a) All prior and current license numbers that the current owner(s) or officers possess or have possessed in the last five years and the current status of those license; b) any prior company names that the owner(s) had in operation during the previous five years.

Current Officers or Owners Name	Prior Company Names (During the last 5 years)	Prior and Current License Numbers	Status of License

Note: If additional space is required to detail the information requested, please attach another page. All information requested must be included. Failure to identify all of the information may result in your bid being found non-responsive and your bid being rejected.

11. List all construction projects (public and private) for which Bidder has provided general contractor services for the past three years:

Contract Type (Public or Private)	Project Description	Dates of Service	Total Cost	Name and Address of Owner	Contact Name and Phone Number

Note: If additional space is required to detail the information requested, please attach another page. All information requested must be included. Failure to identify all of the information, may result in your bid being found non-responsive and your bid being rejected.

- 12. List the name, address and phone number of Superintendent for this project:
- 13. List all construction projects (public and private) for which Superintendent has provided services as a Superintendent for the past three years.

Contract Type (Public or Private)	Project Description	Dates of Service	Total Cost	Name and Address of Owner	Contact Name and Phone Number

Bidde	er hereby ce	ertifies that it:				
		is a certified Disa	dvantage	ed Busines	ss Enterprise as d	efined herein.
		is not a Disadvar	ıtaged Bı	usiness En	terprise as define	d herein.
finan	cial data, or	sted by the Author other information s current financial	and refe	erences su		
I here	eby certify th	ne above is true ai	nd correc	t to the be	st of my belief.	
	Cianotura					
	Signature			·		
	Name					
	Title					
	Company	Name				
	Telephone	e Number		· · · · · · · · · · · · · · · · · · ·		
	Fax Numb	 ber				

Email Address

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246)

- 1. The Bidders' attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.
- 2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate <u>work force</u> in each trade on all construction work in the covered area, are as follows:

Timetable Goals for Minority Participation for Each Trade (11.9)

Goals for Female Participation in Each Trade (6.9)

These goals are applicable to all the Contractor's construction work (whether or not it is federal or federally assisted) performed in the covered area.

The Contractor's compliance with the Executive Order and the regulations in 41 C.F.R. Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 C.F.R. 60-4.3 (a), and its efforts to meet the goals established for the geographical area where the contract resulting from this solicitation is to be performed. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from contractor to contractor or from project to project for the sole purpose of meeting the contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 C.F.R. Part 60-4. Compliance with the goals will be measured against the total work hours performed.

- 3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within ten (10) working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor; employer identification number; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the contract is to be performed.
- 4. As used in this Notice, and in the contract resulting from this solicitation, the "covered area" includes the County of Orange, California.

BIDDER'S CERTIFICATE OF COMPLIANCE REGARDING WORKERS' COMPENSATION INSURANCE

In conformance with current statutory requirements of Section 1860, et. seq., of the Labor Code of the State of California, the undersigned confirms the following certification:

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

Bidder/Contractor: _	
Signature:	
Name and Title:	
Date:	

BIDDER'S CERTIFICATE OF COMPLIANCE REGARDING STATE OF CALIFORNIA BUSINESS AND PROFESSIONS CODE SECTION 7028.15

Contractor License Number:
Expiration Date of Contractor's License:
Each, every and all of the representations made by Bidder in the attached bid are true and correct.
Name of Bidder/Contractor:
Signed:
Title:
Subscribed to and sworn before me, a Notary Public in and for the State of California, on, 202
Notary Public
My commission expires on:
, 202
(NOTARY SEAL

LIST OF SUBCONTRACTORS (EXHIBIT D)

List only the subcontractors, which will perform work or labor or render services to the bidder in <u>excess of one-half of one percent</u> (1/2 of 1%) of the bidder's total bid amount. Do not list alternative subcontractors for the same work. (Use additional sheets if necessary.)

Name & Address Under Which Subcontractor is Licensed	License Number	DIR Registration No.	Specific Description of Work to be Rendered	Small Business Y/N	Туре	Dollar Amount
						\$
						\$
						\$
						\$
						\$
						\$
TOTAL VALUE OF SUBCONTRACTED WORK						\$

STATUS OF PAST AND PRESENT CONTRACTS FORM

On the form provided below, Offeror/Bidder shall list the status of past and present contracts where the firm has either provided services as a prime vendor or a subcontractor during the past five (5) years in which the contract has been the subject of or may be involved in litigation with the contracting authority. This includes, but is not limited to, claims, settlement agreements, arbitrations, administrative proceedings, and investigations arising out of the contract.

A separate form must be completed for each contract. Offeror/Bidder shall provide an accurate contact name and telephone number for each contract and indicate the term of the contract and the original contract value. Offeror/Bidder shall also provide a brief summary and the current status of the litigation, claims, settlement agreements, arbitrations, administrative proceedings, or investigations. If the contract was terminated, list the reason for termination.

Offeror/Bidder shall have an ongoing obligation to update the Authority with any changes to the identified contracts and any new litigation, claims, settlement agreements, arbitrations, administrative proceedings, or investigations that arise subsequent to the submission of the bid. Each form must be signed by an officer of the Offeror/Bidder confirming that the information provided is true and accurate.

Project city/agency/other:	
Contact Name:	Phone:
Project Award Date:	Original Contract Value:
Term of Contract:	
(1) Litigation, claims, settlements, arbitr	ations, or investigations associated with contract:
(2) Summary and Status of contract:	
(3) Summary and Status of action identifi	ed in (1):
(4) Reason for termination, if applicable:	
By signing this Form entitled "Status of Painformation provided is true and accurate.	ast and Present Contracts," I am affirming that all of the
Name	Signature
Title	Date

Revised. 03/16/2018

Non-Collusion Affidavit

To the Orange County Transportation Authority

In accordance with Title 23 United States Code Section 112 and Public Contract Code 7106 the bidder declares that the bid is not made in the interest of, or on the 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, 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 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.

Name of Bidder:_		
Signature:		
Date:		
