

**INVITATION FOR BIDS (IFB) 4-2069
BOOK 1 OF 2**

**PAVEMENT REHABILITATION AT
THE NAVAL WEAPONS STATION
SEAL BEACH**



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

Key IFB Dates

Issue Date:	September 9, 2024
Pre-Bid Conference:	September 17, 2024
Security Clearance Due:	October 2, 2024
Site Walk:	October 3, 2024
Questions/Approved Equal Submittal:	October 7, 2024
Responses to Bidders Due:	October 22, 2024
Bid Submittal Date:	October 31, 2024

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September 9, 2024

**SUBJECT: NOTICE INVITING SEALED BIDS
IFB 4-2069, "PAVEMENT REHABILITATION AT THE NAVAL
WEAPONS STATION SEAL BEACH"**

TO: ALL BIDDERS

FROM: ORANGE COUNTY TRANSPORTATION AUTHORITY

The Orange County Transportation Authority (Authority) invites sealed bids for pavement rehabilitation at the Naval Weapons Station Seal Beach (NWSSB). The purpose of this project is to make repairs to pavement that has deteriorated over time. The pavement condition after the repairs shall provide a smooth driving surface applicable to the mission use of the paved surfaces.

The estimated budget for this project is \$1,111,000.00. Bidders will be required to hold a valid State of California C12 (Earthwork and Paving) license.

Bidders are advised that the NWSSB must issue a security clearance for each person who plans to attend the site walk. Two (2) forms of valid government ID are required to pick up base access badges. This process can take at least ten (10) days to complete, and the attendee must be in possession of the clearance and access pass before they can attend the site walk.

Passes and Badges: Government (Pass & ID office) will issue badges without charge. Each individual shall wear the Government issued badge over the front of the outer clothing. All personnel must be off the site by the end of normal working hours unless special permission is obtained.

Bidders are advised that each individual who plans to attend the site walk is requested to complete and submit, via e-mail to gvalle@octa.net, as early as possible but no later than Thursday, September 12, 2024, at 5:00 PM, the Site Walk Registration Sheet included in this IFB at the end of this notice. These completed registration sheets will be provided to the NWSSB to assist them with issuing clearance and access passes for each individual.

Once awarded the contract, the prime contractor shall provide the proper NWSSB access documents to the NAVFAC Engineering Technician for

each individual that will be accessing the base. The required documents are the SECNAV 5512 and NWSSB Base Access Tracker to be provided by the NAVFAC Engineering Technician. Two (2) forms of valid government ID are required to pick up base access badges.

Access passes to Jobsite and Security Requirements: The Contractors, their employees, including subcontractors, and subcontractor employees, suppliers, and suppliers' employees shall be required to comply with the Installation Security Requirements regarding personnel, vehicle, and equipment security passes and access to the jobsite. Coordinate with the Naval Facilities Engineering Systems Command (NAVFAC) Engineering Technician for specific security and access requirements.

It will be the responsibility of the Contractor to provide employees who comply with these requirements.

Summary of Work

The purpose of this project is to make repairs to existing pavement that has deteriorated at the Naval Weapons Station Seal Beach (NWSSB). The pavement condition after the repairs shall provide a smooth driving surface applicable to the mission use of the paved surfaces. There are two distinct areas of the Project: the pavement repairs to the existing access road named Westminster Street (South of Westminster Boulevard) and the pavement repairs to the four paved areas adjacent to the loading docks at Magazines 824, 825, 826 and 827 (North of Westminster Boulevard).

Westminster Street Pavement Repairs (Base Work)

The existing Westminster Street roadway is a combination of jointed Portland Cement concrete pavement and small areas of asphaltic concrete pavement at locations where old railroad tracks were previously removed. There are also several locations along Westminster Street where railroad track crossings still exist. Those tracks are to be removed, and new roadway sections constructed. Much of the work at Westminster Street consists of resurfacing the existing concrete and asphalt paving by grinding the surface of Westminster Street. There are also certain areas where the existing concrete slabs have settled and jacking of the existing concrete pavement using grout to fill the voids is required. In addition, the existing joints in the concrete paving need to be cleaned and sealed. Other related work is indicated on the Plans and required by the Specifications.

The Bid Form lists separate bid items that make up the work to repair Westminster Street, including both unit price pay items and lump sum pay items.

Pavement Repairs at the Magazines (Optional Bid Items)

There are existing paved areas adjacent to the loading docks of four weapons storage magazines which require repairs. The work consists primarily of pulverizing in place the existing paved areas, adding or removing base material, grading, compaction and asphaltic concrete paving to the grades indicated on the Plans. Other ancillary work is indicated on the Plans. The Bid Form lists four lump sum bid items for the magazine Work, one for each of the four magazines. The Contract Documents indicate that only one magazine may be taken out of service at a time, so the Contractor will not be able to start work on the next magazine until the previously completed magazine is accepted by the NWSSB and can be utilized for its intended purpose. The sequential order of the magazine paving work will be determined by the NWSSB and the Authority prior to the start of work.

Contract Award

Any contract awarded as a result of this IFB, will be awarded to the lowest responsive and responsible bidder. The Authority will determine the lowest bid price as a total of the base work plus all optional bid items, in accordance with the requirements of this IFB.

The Authority has a limited budget for the project. The Authority has the discretion to award the base work plus any optional bid items that fit within the budget. The Authority reserves the right to not award any of the optional bid items.

The contract to be awarded is the Agreement presented in Section VI of this IFB.

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.

Bids must be submitted at or before 11:00 a.m., October 31, 2024.

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: Gustavo Valle, Senior Contracts 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: Gustavo Valle, Senior Contracts 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:

Facility; Equipment, Supplies

Security, Safety & Health
Equipment

Commodity:

Asphalt
Concrete & Cement
Construction Materials
Road / Highway building
materials
Sand & Gravel
Hazardous Waste - Disposal
Equipment

Construction

Safety Equipment

Concrete

Construction (General)

Construction Management
Services

Earthwork / Paving

General Contractor

Traffic Control Devices

Traffic Control Services

Security, Safety and Health
Services

Hazardous Waste Removal &

Disposal Services

Safety Training

An on-site/in-person pre-bid conference will be held on September 17, 2024, at 9:00 a.m. at the Authority's Administrative Office, 550 South Main Street, Orange, CA 92868 in Conference Room 08.

Participation via teleconference will also be available. Prospective bidders may join or call-in using the following credentials:

- [Click here to join the meeting](#)
- OR Call-in Number: +1 916-550-9867
- Conference ID: 750 736 788#

A copy of the pre-bid conference presentation slides and registration sheet(s) will be issued via addendum prior to the date of the pre-bid conference.

The job walk for this project will be held on Thursday, October 3, 2024. Please make sure to get security clearance from the Navy for the in-person site walk as stated in the Notice above. All prospective bidders are strongly encouraged to attend the pre-bid conference and job walk.

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.

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

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

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.

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.



SITE WALK REGISTRATION

IFB No. 4-2069

Date: October 3, 2024

Title: Pavement Rehabilitation at the Naval Weapons Station Seal Beach

1. Company Name: _____

Attendee: _____

Address: _____

City, State Zip: _____

Phone Number: (_____) _____ Registered on CAMM NET? ☐ Yes ☐ No

Prime ☐ Sub ☐

E-Mail Address: _____

2. Company Name: _____

Attendee: _____

Address: _____

City, State Zip: _____

Phone Number: (_____) _____ Registered on CAMM NET? ☐ Yes ☐ No

Prime ☐ Sub ☐

E-Mail Address: _____

3. Company Name: _____

Attendee: _____

Address: _____

City, State Zip: _____

Phone Number: (_____) _____ Registered on CAMM NET? ☐ Yes ☐ No

Prime ☐ Sub ☐

E-Mail Address: _____

SECTION I: INSTRUCTIONS TO BIDDERS

SECTION I. INSTRUCTIONS TO BIDDERS**A. PRE-BID CONFERENCE/SITE VISIT**

An on-site/in-person pre-bid conference will be held on September 17, 2024, at 9:00 a.m. at the Authority's Administrative Office, 550 South Main Street, Orange, CA 92868 in Conference Room 08.

Participation via teleconference will also be available. Prospective bidders may join or call-in using the following credentials:

[Click here to join the meeting](#)

OR Call-in Number: +1 916-550-9867

Conference ID: 750 736 788#

A copy of the pre-bid conference presentation slides and registration sheet(s) will be issued via addendum prior to the date of the pre-bid conference.

The job walk for this project will be held on Thursday, October 3, 2024. Please make sure to get security clearance from the Navy for the in-person site walk as stated in the Notice above. All prospective bidders are strongly encouraged to attend the pre-bid conference and 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:

Gustavo Valle, Senior Contracts Administrator
Contracts Administration and Materials Management Department
600 South Main Street
P.O. Box 14184
Orange, CA 92863-1584
Phone: 714.560. 5670, Fax: 888.404.6282
Email: gvalle@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 October 7, 2024.
- 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.
 - 2. Courier/Overnight: Orange County Transportation Authority, 600 South Main Street, Lobby Receptionist, Orange, California 92868
 - 3. Facsimile: (888) 404-6282.
 - 4. E-Mail: gvalle@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 Gustavo Valle, Senior Contracts 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>
Facility; Equipment, Supplies	Asphalt
	Concrete & Cement
	Construction Materials
	Road / Highway building materials
	Sand & Gravel
Security, Safety & Health Equipment	Hazardous Waste - Disposal Equipment
	Safety Equipment
Construction	Concrete
	Construction (General)
	Construction Management Services
	Earthwork / Paving
	General Contractor
	Traffic Control Devices
	Traffic Control Services
Security, Safety and Health Services	Hazardous Waste Removal & Disposal Services
	Safety Training

Inquiries received after 5:00 p.m. on October 7, 2024, will not be responded to.

F. SUBMISSION OF BIDS

1. Date and Time

Bids must be submitted at or before 11:00 a.m., October 31, 2024.

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 in conference room 102. Participation via teleconference will also be available. Bidders may join or call-in using the following credentials:

- [Join the meeting now](#)
- OR Call-in Number: +1 916-550-9867
- Conference ID: 177 132 716#

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: Gustavo Valle, Senior Contracts 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: Gustavo Valle, Senior Contracts 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 4-2069, "PAVEMENT REHABILITATION AT THE
NAVAL WEAPONS STATION SEAL BEACH"**

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:

1. 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 **\$2,800.00 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. The Authority will determine the lowest bid price using the sum of the subtotal price for base work plus the subtotal price for all optional bid items, in accordance with the requirements of this IFB.

The Authority has a limited budget for the project. The Authority has the discretion to award the base work plus any optional bid items that fit within the budget. The Authority reserves the right to not award any of the optional bid items.

The contract to be awarded is the Agreement presented in Section VI of this IFB.

Please see Notice for security clearance requirements from the Navy after award of the contract.

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 ($\frac{1}{2}$ 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.

J. IRAN CONTRACTING ACT CERTIFICATION

This form requires the Bidder to certify that the Bidder is not engaged in specified investment activities in the energy sector of Iran. (Required if the bid is equal to or greater than \$1,000,000).



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 4-2069, "PAVEMENT REHABILITATION AT THE NAVAL WEAPONS STATION SEAL BEACH"**, 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 Bid Price <u>Base plus Optional Work</u> (Total from Bid Schedule)
	\$ _____

A cashier's check/certified check/bid bond (circle applicable term) properly made payable to Orange County Transportation Authority, hereinafter designated as the Owner, for the sum of

_____ Dollars
 (\$ _____)
 which amount is not less than ten percent (10%) of the total amount of this bid, is attached hereto and is given as a guarantee that the undersigned will execute the Agreement and furnish the required bonds, "Guaranty" and "Certificate of Insurance", if awarded the contract, and in case of failure to do so within the time provided, (a) the proceeds of said check shall be forfeited to the Authority; or (b) surety's liability to the Authority for forfeiture of the face amount of the bond shall be considered as established [circle (a) or (b)].

The undersigned hereby represents that:

BID FORM, PAGE 2

1. 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 4-2069, "PAVEMENT REHABILITATION AT THE NAVAL WEAPONS STATION SEAL BEACH"**, 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.

Dated _____, 202_ Bidder _____

The above bid includes Signature _____

Addenda Nos. _____ Name _____

Title _____

Bidder's Authorized Representative _____

Title _____

Telephone # _____

Fax # _____

Email Address _____

Bidders post office address _____

Corporation organized under the laws of the State of _____

Contractor's License No. _____

Expiration Date of License _____

Surety or sureties _____

(CORPORATE SEAL)

BID FORM, PAGE 5**Contractor's Name:** _____**SCHEDULE OF QUANTITIES and PRICES**

BASE WORK ITEMS					
BID ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	ITEM TOTAL
1	Mobilization (shall not exceed 10% of the TOTAL BID PRICE)	LS	1		
2	Grinding existing concrete (Westminster St)	SQFT	206,250		
3	Grinding new asphalt (Westminster St)	SQFT	21,280		
4	Hot mix asphalt (Type A) (Westminster St)	TON	77		
5	Clean and seal existing joints in concrete (Westminster St)	LF	21,780		
6	Yellow traffic stripe (Westminster St)	LF	180		
7	Remove stripe (Westminster St)	LF	180		
8	Mud jacking (Westminster St)	SQFT	170		
9	Crack Treatment (Westminster St)	LF	22,700		
10	Spall Repair	SQFT	65		

BID FORM, PAGE 6

BID ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	ITEM TOTAL
11	Sawcut (Westminster St)	LF	593		
12	Temporary traffic control (Westminster St)	LS	1		
13	Remove railroad track (Westminster St)	LS	337		
14	Class 2 Aggregate Base (Westminster St.)	CY	98		
15	Imported Backfill (Westminster St.)	CY	51		
SUBTOTAL PRICE FOR BASE WORK ITEMS:					
OPTIONAL ITEMS					
16	Magazine 824	LS	1		
17	Magazine 825	LS	1		
18	Magazine 826	LS	1		
19	Magazine 827	LS	1		
SUBTOTAL PRICE FOR OPTIONAL ITEMS:					
TOTAL BID PRICE (BASE WORK PLUS OPTIONAL ITEMS):					

TOTAL BID PRICE (IN WORDS) _____

The total bid price shall be comprised of the subtotal price for base work items plus the subtotal price for optional items, for the purpose of determining the lowest bid price.

Definitions of column abbreviations:

CY	Cubic Yards
LF	Linear Foot
LS	Lump Sum
SF	Square Foot

BID FORM, PAGE 7

In the case of an error in the mathematical extension of the bid item in the ITEM TOTAL column, or an error in the sum of the individual ITEM TOTAL figures entered by the Bidder on the TOTAL BID PRICE, the figures shall be corrected by the AUTHORITY and that corrected extension and corrected sum shall be the TOTAL BID PRICE for purposes of bid evaluation.

Where there is a discrepancy between UNIT PRICE and the ITEM TOTAL, the UNIT PRICE prevails, except:

- If the UNIT PRICE is illegible, omitted, or the same as the ITEM TOTAL, then ITEM TOTAL prevails, and the UNIT PRICE is the quotient of the ITEM TOTAL and the quantity.
- If a decimal error is apparent in the product of the UNIT PRICE and the quantity, the AUTHORITY will use either UNIT PRICE or ITEM TOTAL based on the closest by percentage to the UNIT PRICE or ITEM TOTAL to the AUTHORITY's project estimate.

If the UNIT PRICE, ITEM TOTAL or lump sum ITEM TOTAL price are illegible or are omitted, the bid may be determined to be nonresponsive.

If the UNIT PRICE for lump sum item is entered and it differs from the ITEM TOTAL, the ITEM TOTAL will prevail.

The AUTHORITY will correct these discrepancies accordingly, and the corrected TOTAL BID PRICE determined by the AUTHORITY shall be final.

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 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 4-2069, "PAVEMENT REHABILITATION AT THE NAVAL WEAPONS STATION SEAL BEACH"**, 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, 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 4-2069, "PAVEMENT REHABILITATION AT THE NAVAL WEAPONS STATION SEAL BEACH"**. 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.: Class _____ Years _____ 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, 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

Bidder hereby certifies that it:

_____ is a certified Disadvantaged Business Enterprise as defined herein.

_____ is not a Disadvantaged Business Enterprise as defined herein.

NOTE: If requested by the Authority, bidder shall furnish a certified financial statement, financial data, or other information and references sufficiently comprehensive to permit an appraisal of its current financial condition.

I hereby certify the above is true and correct to the best of my belief.

Signature

Name

Title

Company Name

Telephone Number

Fax Number

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 work force 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 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 excess of one-half of one percent (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	Type	Dollar Amount
						\$
						\$
						\$
						\$
						\$
						\$
TOTAL VALUE OF SUBCONTRACTED WORK						\$

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:
Project Award Date:	Original Contract Value:
Term of Contract:	
(1) Litigation, claims, settlements, arbitrations, or investigations associated 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 affirming that all of the information provided is true and accurate.

Name

Signature

Title

Date

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: _____

IRAN CONTRACTING ACT CERTIFICATION

(California Public Contract Code Sections 2200, *et seq.*)

The Iran Contracting Act of 2010 (PCC Sections 2200-2208), prohibits bidders who are engaged in investment activities in the energy sector of Iran from bidding on, submitting proposals for, or entering into or renewing contracts with public entities for goods or services of one million dollars (\$1,000,000) or more. At the time of submitting a bid, each bidder must certify that the bidder is not identified on the Department of General Services list of ineligible persons pursuant to PCC Section 2203(b). Each bidder is also required to certify that the bidder is not engaged in investment activities in violation of the Iran Contracting Act of 2010.

A bidder who is engaged in investment activities in the energy sector of Iran is defined as:

3. A person providing goods or services of twenty million dollars (\$20,000,000) or more in the energy sector of Iran, including a person that provides oil or liquefied natural gas tankers, or products used to construct or maintain pipelines used to transport oil or liquefied natural gas, for the energy sector of Iran; or
4. A person that is a financial institution that extends twenty million dollars (\$20,000,000) or more in credit to another person, for 45 days or more, if that person will use the credit to provide goods or services in the energy sector in Iran and is identified on a list created pursuant to PCC Section 2203(b).

A bidder is not required to certify that it is engaged in investment activities in the energy sector of Iran if the bidder is exempt from the certification under PCC Section 2203(c) or (d). If the bidder is exempt from the certification requirement, the bidder will be required to provide documentation demonstrating the exemption.

To comply with the Iran Contracting Act of 2010, the bidder shall complete **one** of the options below. Please note: under PCC Section 2205, false certification of this form may result in civil penalties of \$250,000 or twice the amount of the contract for which false certification was made, termination of the contract, and/or ineligibility to bid on contracts for a period of three years.

Option No. 1: Certification

I, the official named below, certify I am duly authorized to execute this certification on behalf of the vendor/financial institution identified below, and the vendor/financial institution identified below, and any subcontractor who will perform work or labor or render services to the vendor identified below, is not on the current Department of General Services list identifying persons engaged in investment activities in the energy sector of Iran, and is not a financial institution extending twenty million dollars (\$20,000,000) or more in credit to another person/vendor, for 45 days or more, if that other person/vendor will use the credit to provide goods or services in the energy sector in Iran and is identified on the current Department of General Services list identifying persons engaged in investment activities in the energy sector of Iran.

Vendor/Financial Institution: _____

Signature: _____

Name and Title: _____

Date: _____

Option No. 2: Exemption

Pursuant to PCC Section 2203(c) and (d), a public entity may permit a bidder or financial institution engaged in investment activities in Iran, on a case-by-case basis, to be eligible for, or to bid on, submit proposals for, or enter into or renew a contract with a public entity for goods or services of one million dollars (\$1,000,000) or more. If the bidder, financial institution, or any subcontractor who will perform work or labor or render services to the bidder has obtained an exemption from the certification requirement, please complete and sign below and attach the documentation demonstrating the exemption approval.

Vendor/Financial Institution: _____

Signature: _____

Name and Title: _____

Date: _____

Option No. 3: Non-Applicability

Pursuant to PCC Section 2203(b), a bidder or financial institution engaged in investment activities in Iran may not be eligible for, or to bid on, submit proposals for, or enter into or renew a contract with a public entity for goods or services of one million dollars (\$1,000,000) or more. If the contract is not for goods or services of one million dollars (\$1,000,000) or more, please sign below indicating that the contract is not for goods or services of one million dollars (\$1,000,000) or more and thus bidder is not required to certify and does not meet the exemption.

Vendor/Financial Institution: _____

Signature: _____

Name and Title: _____

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 principal, and _____
as surety, are held and firmly bound unto 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 truly to be made, we bind ourselves, jointly and
severally, firmly by these presents.

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 4-2069,**
"PAVEMENT REHABILITATION AT THE NAVAL WEAPONS STATION SEAL
BEACH," 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 the said Contractor shall well and truly do and perform all of the
covenants and obligations of said Agreement on his part to be done and performed at the
times and in the manner specified herein, then this obligation shall be null and void,
otherwise it shall be and remain in full force and effect; and in the event said Contractor
fails to fully perform all requirements in accordance with the terms and conditions of said
Agreement, then surety shall enforce performance by the Contractor or shall pay the
Orange County Transportation Authority for the same in an amount not exceeding the
amount specified in this bond; and, further, if in the event suit is brought upon this bond
then said surety shall pay the Orange County Transportation Authority for reasonable
attorneys' fees to be fixed by the court;

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 there under, nor shall any extensions of time granted
under the provisions of said contract release either the Contractor or the surety, and
notice of such changes or extensions of the contract is hereby waived by the surety.

WITNESS our hands this _____ day of _____, 202_.

(SEAL)

(Contractor)
By _____

Approved:

(Title)

(SEAL)

(Surety)
By _____

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 unto 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 truly to be made, we bind ourselves, jointly and
severally, firmly by these presents.

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 4-2069, "PAVEMENT REHABILITATION AT THE NAVAL WEAPONS STATION SEAL BEACH,"** 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)

By _____

(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-4-2069, "PAVEMENT REHABILITATION AT THE NAVAL WEAPONS STATION SEAL BEACH"**.

- 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

1 **AGREEMENT NO. C-4-2069**

2 **BETWEEN**

3 **ORANGE COUNTY TRANSPORTATION AUTHORITY**

4 **AND**

5 _____
6 **THIS AGREEMENT** is effective this ____ day of _____, 20__ ("Effective
7 Date"), by and between the Orange County Transportation Authority, 550 South Main Street, P.O. Box
8 14184, Orange, CA 92863-1584, a public corporation of the State of California (hereinafter referred to as
9 "AUTHORITY"), and , , , (hereinafter referred to as "CONTRACTOR").

10 **WITNESSETH:**

11 **WHEREAS**, AUTHORITY has determined that it requires pavement rehabilitation at the Naval
12 Weapons Station Seal Beach; and

13 **WHEREAS**, said work cannot be performed by the regular employees of AUTHORITY; and

14 **WHEREAS**, CONTRACTOR has represented that it has the requisite personnel, experience,
15 material, and equipment and is otherwise qualified to perform such services; and

16 **WHEREAS**, CONTRACTOR wishes to perform these services; and

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

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

20 **ARTICLE 1. COMPLETE AGREEMENT**

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

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

1 terms or conditions of this Agreement shall not be construed as a waiver or relinquishment of
2 AUTHORITY's right to such performance by CONTRACTOR or to future performance of such terms or
3 conditions and CONTRACTOR's obligation in respect thereto shall continue in full force and effect.
4 CONTRACTOR shall be responsible for having taken steps reasonably necessary to ascertain the nature
5 and location of the work, and the general and local conditions, which can affect the work or the cost
6 thereof. Any failure by CONTRACTOR to do so will not relieve it from responsibility for successfully
7 performing the work without additional expense to AUTHORITY.

8 C. AUTHORITY assumes no responsibility for any understanding or representations concerning
9 conditions made by any of its officers, employees or agents prior to the execution of this Agreement,
10 unless such understanding or representations by AUTHORITY are expressly stated in this Agreement.

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

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

16 **ARTICLE 2. AUTHORITY DESIGNEE**

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

19 **ARTICLE 3. SCOPE OF WORK**

20 CONTRACTOR shall provide all labor, equipment, materials and facilities necessary for all work
21 related to Pavement Rehabilitation at the Naval Weapons Station Seal Beach at the AUTHORITY's 800
22 Seal Beach Blvd, Seal Beach, California. in strict compliance with all the requirements specified herein
23 and in:

24 Exhibit A, entitled "General Provisions";

25 Addenda No's;

26 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 (117) 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.

1 When AUTHORITY accepts CONTRACTOR's Recovery Schedule, CONTRACTOR shall, within five
2 days after AUTHORITY's acceptance, incorporate and fully include such schedule into the Project
3 Schedule and deliver it to AUTHORITY.

4 C. All costs incurred by CONTRACTOR in preparing, implementing and achieving the Recovery
5 Schedule shall be borne by CONTRACTOR and shall not result in a change to the contract price.

6 D. In the event that CONTRACTOR fails to provide an acceptable Recovery Schedule within 30
7 days of CONTRACTOR's receipt of a notice to do so, CONTRACTOR shall have no right to receive
8 progress payments until CONTRACTOR has prepared and AUTHORITY has approved such Recovery
9 Schedule.

10 **ARTICLE 5. START OF WORK**

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

19 **ARTICLE 6. PAYMENT**

20 A. For CONTRACTOR's full and complete performance of its obligations under this Agreement,
21 and subject to the maximum cumulative payment obligation provision set forth in Article 7, AUTHORITY
22 shall pay CONTRACTOR the firm fixed sum of _____Dollars (\$..00).

23 B. Progress payments and the final payment will be made by AUTHORITY to CONTRACTOR
24 in accordance with the terms as set forth in Exhibit A, "General Provisions," under the "Progress
25 Payments" and "Final Payment and Claims" sections therein. The acceptance by CONTRACTOR of
26 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:

To CONTRACTOR:		To AUTHORITY:	
		Orange County Transportation Authority	
		550 South Main Street	
		P.O. Box 14184	
		Orange, CA 92863-1584	
ATTENTION:		ATTENTION:	Gustavo Valle
Title:		Title:	Senior Contracts Administrator
Phone:		Phone: (714) 560 - 5670	

Email:	Email: gvalle@octa.net
	CC: Steven King, Senior Project Manager
	Phone: (714) 560-5874
	Email: sking@octa.net

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.

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

1 waiver of subrogation, in favor of AUTHORITY, its officers, directors, employees and agents.

2 4. Builders All Risk policy or course of construction including earthquake and flood
3 coverage with minimum limits of \$(*project amount*).

4 5. Employers' Liability with minimum limits of \$1,000,000.

5 B. Prior to commencement of any work hereof, CONTRACTOR shall furnish to AUTHORITY's
6 Contract Administrator broker-issued insurance certificate showing the required insurance coverages and
7 further providing that:

8 1. AUTHORITY, its officers, directors, employees and agents must be named as
9 additional insured on Commercial General Liability and Automobile Liability policy with respect to
10 performance hereunder; and

11 2. The coverage shall be primary and noncontributory as to any other insurance with
12 respect to performance hereunder; and

13 3. Thirty (30) days prior written notice of cancellation or material change be given to
14 AUTHORITY.

15 In addition, CONTRACTOR shall provide insurance policy blanket endorsement.

16 C. "Occurrence," as used herein, means any event or related exposure to conditions, which
17 result in bodily injury or property damage.

18 D. The Certificate of Insurance shall reference Agreement Number C-4-2069 and, the Contract
19 Administrator's Name, Gustavo Valle.

20 E. Upon AUTHORITY's request, certified, true and exact copies of each of the insurance policies
21 shall be provided to AUTHORITY.

22 F. AUTHORITY shall notify CONTRACTOR in writing of any changes in the requirements to
23 insurance required to be provided by CONTRACTOR. Except as set forth in this Article, any additional
24 cost from such change shall be paid by AUTHORITY and any reduction in cost shall reduce the contract
25 price pursuant to a change order.

26 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.

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

1 increase or decrease in the price or time required for performance, CONTRACTOR shall promptly notify
2 AUTHORITY thereof and assert its claim for adjustment within ten (10) calendar days after the change
3 or work suspension is ordered, and an equitable adjustment shall be negotiated. However, nothing in
4 this clause shall excuse CONTRACTOR from proceeding immediately with the Agreement as changed.
5 Changes will be made in accordance with the terms as set forth in Exhibit A, "General Provisions,"
6 paragraph F, Extra Work and Changes, by written Change Order.

7 B. No claims by CONTRACTOR for equitable adjustment hereunder shall be allowed if asserted
8 after final payment under this Agreement.

9 C. Any work done beyond the technical provisions specified in this Agreement, or any extra work
10 done without AUTHORITY's written authority, will be considered unauthorized work and will not be paid
11 for. Upon order of AUTHORITY's Engineer or its designee, unauthorized work shall be remedied,
12 removed or replaced at CONTRACTOR's expense.

13 **ARTICLE 14. MODIFICATION PROPOSALS-PRICE BREAKDOWN**

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

22 **ARTICLE 15. DISPUTES**

23 A. Except as otherwise provided in this Agreement, when a dispute arises between
24 CONTRACTOR and AUTHORITY, the project managers shall meet to resolve the issue. If project
25 managers do not reach a resolution, the dispute will be decided by AUTHORITY's Director of Contracts
26 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 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

1 same to completion, by Agreement or otherwise, and may take possession of and utilize in completing
2 the work such materials, appliances and plant as may be on the site of the work and necessary therefore.
3 Whether or not CONTRACTOR's right to proceed with the work is terminated, it and its sureties shall be
4 liable for any damage to AUTHORITY resulting from its refusal or failure to complete the work within the
5 specified time.

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

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

14 1. The delay in completing the work arises from unforeseeable causes beyond the
15 control and without the fault or negligence of CONTRACTOR, including but not restricted to, acts of God,
16 acts of the public enemy, acts or omissions of AUTHORITY, acts of another CONTRACTOR in the
17 performance of an Agreement with AUTHORITY, fires, floods, epidemics, quarantine restrictions, freight
18 embargoes, unusually severe weather, or delays of subcontractors or suppliers arising from
19 unforeseeable causes beyond the control and without the fault or negligence of both CONTRACTOR and
20 such subcontractors or suppliers; and

21 2. CONTRACTOR, within ten (10) calendar days from the beginning of any such delay,
22 notifies AUTHORITY in writing of the causes of delay. AUTHORITY shall ascertain the facts and the
23 extent of the delay and extend the time for completing the work when, in its judgment, the findings of fact
24 justify such an extension, and its findings of fact shall be final and conclusive on the parties, subject only
25 to appeal as provided in the "Disputes" clause of this Agreement. Any such time extensions will not
26 become effective until approved by AUTHORITY's Engineer in writing. AUTHORITY's Engineer will

1 furnish CONTRACTOR a weekly statement showing the number of calendar days charged to the
2 Agreement for the preceding week, the number of calendar days of time extensions being considered or
3 approved, the number of calendar days originally specified for the completion of this Agreement and the
4 number of calendar days remaining to complete this Agreement, and the extended date for completion
5 thereof.

6 3. Should at any time extensions be included by AUTHORITY's Engineer on the Weekly
7 Statement of Contract Calendar Days, a change order covering the sum total of the time extensions will
8 be issued to CONTRACTOR at periodic intervals during the project.

9 D. If, after notice of termination of CONTRACTOR's right to proceed under the provisions of this
10 clause, it is determined for any reason that CONTRACTOR was not in default under the provisions of this
11 clause, or that the delay was excusable under the provisions of this clause, the rights and obligations of
12 the parties shall be the same as if the notice of termination had been issued pursuant to Article 16, entitled
13 "Termination for Convenience."

14 E. The rights and remedies of AUTHORITY provided in this clause are in addition to any other
15 rights and remedies provided by law or under this Agreement.

16 F. As used in paragraph C.1 of this Article, the term "subcontractors or suppliers," means
17 subcontractors or suppliers at any tier.

18 **ARTICLE 18. INDEMNIFICATION**

19 CONTRACTOR shall indemnify, defend, and hold harmless AUTHORITY, its officers, directors,
20 employees and agents from and against any and all claims (including attorneys' fees and reasonable
21 expenses for litigation or settlement) for any loss, costs, penalties, fines, damages, bodily injuries,
22 including death, damage to or loss of use of property, arising out of, resulting from, or in connection with
23 the performance of CONTRACTOR, its officers, directors, employees, agents, subcontractors or
24 suppliers under the Agreement. Notwithstanding the foregoing, such obligation to defend, hold harmless,
25 and indemnify AUTHORITY, its officers, directors, employees and agents shall not apply to such claims
26 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.

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 subcontractors 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 contractor or subcontractor. 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.

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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.

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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

1 AUTHORITY, except as necessary for the performance of services under this Agreement. All press
2 releases, including graphic display information to be published in newspapers, magazines, etc., are to be
3 handled only by AUTHORITY unless otherwise agreed to by CONTRACTOR and AUTHORITY.

4 **ARTICLE 29. CONVICT LABOR**

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

8 **ARTICLE 30. NOTICE OF LABOR DISPUTE**

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

14 **ARTICLE 31. LIQUIDATED DAMAGES**

15 If CONTRACTOR fails to complete the work within the time specified in Article 4 of this
16 Agreement, or any AUTHORITY authorized extension thereof, the actual damage to AUTHORITY for the
17 delay will be difficult or impossible to determine. Therefore, in lieu of actual damages, CONTRACTOR
18 shall pay to AUTHORITY as fixed, agreed-to liquidated damages for each calendar day of delay the sum
19 of Two Thousand Eight Hundred Dollars (\$2,800.00). Alternatively, AUTHORITY may terminate this
20 Agreement in whole or in part as provided in Article 16 of this Agreement, and in that event,
21 CONTRACTOR shall be liable, in addition to the excess costs provided in Article 16 of this Agreement,
22 for such liquidated damages accruing until such time as AUTHORITY may reasonably obtain delivery or
23 performance of similar supplies or services from a different source. CONTRACTOR shall not be charged
24 with liquidated damages when the delay is determined to be excusable in accordance with Article 45
25 hereunder. AUTHORITY shall ascertain the facts and extent of the delay and shall extend the time for
26 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

1 by CONTRACTOR.

2 C. Should CONTRACTOR fail to remedy any failure, defect or damage described in paragraph
3 A above within a reasonable time after receipt of notice thereof, AUTHORITY shall have the right to
4 replace, repair or otherwise remedy such failure, defect or damage at CONTRACTOR's expense and
5 CONTRACTOR shall be liable for all damages, including, but not limited to, actual or consequential
6 damages and cost of any suit to enforce AUTHORITY's rights hereunder, including reasonable attorney's
7 fees.

8 D. In addition to the other rights and remedies provided by this clause, all subcontractors,
9 manufacturers, and suppliers' warranties, expressed or implied, respecting any work and materials
10 furnished hereunder, shall, at the direction of AUTHORITY, be enforced by CONTRACTOR for the benefit
11 of AUTHORITY. In such case if CONTRACTOR's warranty under paragraph A above has expired, any
12 suit directed by AUTHORITY shall be at the expense of AUTHORITY. CONTRACTOR shall obtain any
13 warranties, which the subcontractors, manufacturers or suppliers would give in normal commercial
14 practice and shall cause all subcontractor or supplier warranties to be extend to AUTHORITY.

15 E. If directed by AUTHORITY, CONTRACTOR shall require any such warranties to be executed
16 in writing to AUTHORITY.

17 F. Notwithstanding any other provision of this clause, unless such a defect is caused by the
18 negligence of CONTRACTOR or its subcontractors or suppliers at any tier, CONTRACTOR shall not be
19 liable for the repair of any defects of material or design furnished by AUTHORITY nor for the repair of any
20 damage which results from any such defect in AUTHORITY furnished material or design.

21 G. The warranty specified herein shall not limit AUTHORITY's rights under the Inspection and
22 Acceptance clause of this Agreement with respect to latent defects, gross mistakes or fraud.

23 H. Defects in design or manufacture of equipment specified by AUTHORITY on a "brand name
24 and model" basis shall not be included in this warranty. CONTRACTOR shall require any subcontractors,
25 manufacturers or suppliers thereof to execute their warranties in writing directly to AUTHORITY.

26 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

1 of AUTHORITY and shall not relieve CONTRACTOR of the responsibility of providing quality control
2 measures to assure that the work strictly complies with requirements of this Agreement. No inspection
3 or test by AUTHORITY or its representative shall be construed as constituting or implying acceptance.
4 Inspection or test shall not relieve CONTRACTOR of responsibility for damage to or loss of the material
5 prior to acceptance, nor in any way affect the continuing rights of AUTHORITY after acceptance of the
6 completed work under the terms of paragraph F of this Article, except as herein above provided.

7 B. CONTRACTOR shall, without charge, replace any material or correct any workmanship found
8 by AUTHORITY not to conform to the requirements of this Agreement, unless in the public interest
9 AUTHORITY consents to accept such material or workmanship with an appropriate adjustment in the
10 price of this Agreement. CONTRACTOR shall promptly segregate and remove rejected material from
11 the premises.

12 C. CONTRACTOR shall furnish promptly, without additional charge, all facilities, labor,
13 equipment and material reasonably needed for performing such safe and convenient inspection and test
14 as may be required by AUTHORITY. All inspections and tests by AUTHORITY shall be performed in
15 such manner as to not unnecessarily delay the work. AUTHORITY reserves the right to charge to
16 CONTRACTOR any additional cost of inspection or test when material or workmanship is not ready at
17 the time specified by CONTRACTOR for inspection or test or when reinspection or retest is necessitated
18 by prior rejection.

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

23 E. Should it be considered necessary or advisable by AUTHORITY at any time before
24 acceptance of the entire work to make an examination of work already completed, by removing or tearing
25 out same, CONTRACTOR shall, on request, promptly furnish all necessary facilities, labor and material.
26 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

1 abandoned and need not be removed.

2 C. CONTRACTOR shall, under regulations prescribed by AUTHORITY, use only established
3 roadways or construct and use such temporary roadways as may be authorized by AUTHORITY. Where
4 materials are transported in the prosecution of work, vehicles shall not be loaded beyond the loading
5 capacity recommended by the manufacturer of the vehicle or prescribed by any federal, state or local law
6 or regulation. When it is necessary to cross curbing or sidewalks, protection against damage shall be
7 provided by CONTRACTOR and any damaged roads, curbing or sidewalks shall be repaired by, or at
8 the expense of, CONTRACTOR.

9 **ARTICLE 43. PROTECTION OF VEGETATION, UTILITIES, IMPROVEMENTS**

10 A. CONTRACTOR shall preserve and protect all existing vegetation such as trees, shrubs and
11 grass on or adjacent to the site of work which is not to be removed and which does not unreasonably
12 interfere with the construction work. Care will be taken in removing trees authorized for removal to avoid
13 damage to vegetation to remain in place. Any limbs or branches of trees broken during such operations
14 or by the careless operation of equipment, or by workmen, shall be trimmed with a clean cut and painted
15 with an approved tree pruning compound as directed by AUTHORITY.

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

22 **ARTICLE 44. CLEANING UP**

23 A. CONTRACTOR shall at all times keep the construction area, including storage areas used by
24 it, free from accumulations of waste material or rubbish, and prior to completion of the work remove any
25 rubbish from AUTHORITY owned premises and all tools, scaffolding, equipment and materials not the
26 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.

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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.

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ARTICLE 48. HEALTH AND SAFETY SPECIFICATIONS

1 CONTRACTOR shall comply with all requirements set forth in Exhibit H, Level 3 Health, Safety
2 and Environmental (HSE) Specifications.

3 **ARTICLE 49. OPTIONS**

4 The AUTHORITY may require the numbered line items, identified in the Schedule of Quantity and
5 Prices as optional items, at the price(s) stated in the Schedule. The AUTHORITY may exercise the
6 optional item(s) by written notice to the CONTRACTOR within the term of the Agreement, if budget
7 permits.

8 **ARTICLE 50. FORCE MAJEURE**

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

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ORANGE COUNTY TRANSPORTATION AUTHORITY

By: _____

Darrell E. Johnson
Chief Executive Officer

By: _____

James M. Donich
General Counsel

By: _____

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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

1. 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:

1. 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 penalty of law for perjury or falsification with specific reference to the California False Claims Act, Government Code Section 12650 et. Seq., the undersigned,

(Name)

(Title)

(Company)

herby certifies that the claim for the additional compensation and time, if any, made herein for the work on this Contract is a true statement of the actual cost incurred and time sough, and is fully documented and supported under the Contract between the parties

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

1. 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 clearing, grubbing, grading and fencing; mobilization and 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:

1. 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.
3. 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% Contractor). 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. Contractor's 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.
3. 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:

- a. 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).

- b. Trainees: Except as provided in 29 CFR 5.15, trainees will not be permitted 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

(Contract 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.

EXHIBIT A

- 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.
 - l. 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 inquiries 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.
3. 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

**PAVEMENT
REHABILITATION AT
THE NAVAL WEAPONS
STATION SEAL BEACH

PROJECT SPECIFICATIONS**

IFB-4-2069

AUGUST 2024

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ORANGE COUNTY TRANSPORTATION AUTHORITY

NMCPAC CWD Unit Seal Beach (USB)

Pavement Rehabilitation at the Naval Weapons Station Seal Beach Project,
in Orange County, California

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- Attachment A - Construction Laydown Yard Form
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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) and submit Traffic Control and Detour plans to OCTA Engineer for approval. A conceptual Traffic Detour plans will be provided as a reference (See Attachment F).

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 the Naval Weapons Station Seal Beach (NWSSB) at Seal Beach, California. The work under this contract consists of pavement rehabilitation work, including but not limited to mobilization, demobilization, roadway excavation, asphalt paving, concrete slab repair, existing railroad tracks removal, and overall work as reflected within the project plans and specifications.
4. There are two distinct areas of the Project: the pavement repairs to the existing access road named Westminster Street (South of Westminster Boulevard) and the pavement repairs to the four paved areas adjacent to the loading docks at Magazines 824, 825, 826 and 827 (North of Westminster Boulevard).

Westminster Street Pavement Repairs

- A. The existing Westminster Street roadway is a combination of jointed Portland Cement concrete pavement and small areas of asphaltic concrete pavement at locations where old railroad tracks were previously removed. There are also several locations along Westminster Street where railroad track crossings still exist. Those tracks are to be removed and new roadway sections constructed. Much of the work at Westminster Street consists of resurfacing the existing concrete and asphalt paving by grinding the surface of Westminster Street. There are also certain areas where the existing concrete slabs have settled and jacking of the existing concrete pavement using grout to fill the voids is required. In addition, the existing joints in the concrete

paving need to be cleaned and sealed. Other related work is indicated on the Plans and required by the Specifications.

- B. The Bid Form lists separate bid items that make up the work to repair Westminster Street, including both unit price pay items and lump sum pay items.

Pavement Repairs at the Magazines

- A. There are existing paved areas adjacent to the loading docks of four weapons storage magazines which require repairs. The work consists primarily of pulverizing in place the existing paved areas, adding or removing base material, grading, compaction and asphaltic concrete paving to the grades indicated on the Plans. Other ancillary work is indicated on the Plans. The Bid Form lists four lump sum bid items for the magazine Work, one for each of the four magazines. The Contract Documents indicate that only one magazine may be taken out of service at a time, so the Contractor will not be able to start work on the next magazine until the previously completed magazine is accepted by the NWSSB and can be utilized for its intended purpose. The sequential order of the magazine paving work will be determined by the NWSSB and the Authority.
- B. Some of the Magazine pavement repair may not be authorized due to funding limitations. Depending on the bids received for the work described by this IFB, the Authority may at its sole discretion delete one or more of the Magazine pavement repair bid items prior to issuance and execution of the Agreement.

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.
- B. The Authority makes the following supplemental project information available:
 - 1. **Attachment G:** Conceptual Traffic Detour Plans
 - 2. **Attachment H:** Westminster Street Site Photos
 - 3. **Attachment I:** Pavement Investigation Report by Labelle Marvin

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 consist of an 8-1/2 hour period between 7:00 am to 3:30 pm Monday through Friday excluding Government holidays. Working hours for Magazine 824-827 are limited to weekends and after regular working hours of weapons handling personnel and require government escort/oversight. See attachment D, Northside Work Restrictions, for working hours. Construction area shall be cordoned off using temporary barriers and chain link fencing unless otherwise noted on Contract Drawings.
- C. Site Conditions:

The project sites are actively used for mission operations on a daily basis. Coordination with Naval Munitions Command (NMC) and Security will be required. Mission operations will take priority over the work of the Contract and the construction project schedule activities will need accommodate the NMC activities and its schedule. It should be anticipated that work will need to be conducted in off hours and on the weekends. To facilitate Contractor and NMC schedule coordination, the Contractor shall provide the proposed construction schedule to OCTA Engineer and Alex Burris of NMC at least 60 days prior to start of work in each work area.

All personnel working onboard Naval Weapons Station Seal Beach north of Westminster Blvd (Magazines 824, 825, 826 and 827) are required to be approved through the 5512 process and have a LEVEL 3 ID badges issued by the Security Pass & ID Office. See Attachment F, Security Guidelines for Contractors.

Escorting is not allowed under any circumstances, including for material and/or equipment deliveries. All delivery drivers must be approved through the same 5512 process.

Prior to any work beginning, a Construction Worker Authorization letter from the Explosive Safety Officer at Naval Weapons Station Seal Beach is required. The letter will include the specific work restrictions for the project and it will explain the requirement for workers to receive a Hazard Control Brief prior to beginning work. OCTA will submit the Construction Worker Authorization letter request to Alex Burris at least 30 days prior to any project mobilization.

Site Approval Requests for construction laydown yards must be submitted at least 30 days prior to start of construction. Contractor shall use the Site Approval Request form in the attachments and send the form to OCTA Engineer. Upon review and concurrence, OCTA shall submit to Alex Burris for final review and approval.

Alex Burris
Community Planning Liaison Officer
Naval Weapons Station Seal Beach
Office: (562) 626-7755
Email: alexander.j.burris.civ@us.navy.mil

PART 2 – PRODUCTS

Not Used

PART 3 – EXECUTION

Not Used

**Pavement Rehabilitation at the Naval Weapons Station Seal
Beach Project
800 Seal Beach Blvd,
Seal Beach, CA 90740**

**IFB 4-2069
EXHIBIT B**

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

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, 2023 Standard Specifications.
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.

Environmental Requirements:

a. Air Quality:

1. PORTABLE GENERATORS - use of any portable equipment with a diesel engine (>50 bhp) during the project must either be registered with the California Air Resources Board (CARB) regulations or be permitted with local air district.
2. California Air Resources Board requires compliance with the 'REGULATION FOR IN-USE OFF-ROAD DIESEL-FUELED FLEETS' for any off road diesel equipment and with the 'LARGE SPARK-IGNITION (LSI) ENGINE FLEET REQUIREMENTS REGULATION' for any off-road non-diesel equipment >25 bhp / ≥19 kW (e.g. forklifts, loaders, backhoes, excavators, sweepers/scrubbers, industrial tow tractors, etc.). All applicable equipment that will be used in this project must be registered in the Diesel Off-Road On-Line Reporting System (DOORS) and the assigned Equipment Identification Number (EIN) red and white EIN label must be properly placed on both sides of the equipment.

3. Requirement: EIN Labels on Equipment.
- b. Hazard Material:
 1. Contractor will be responsible for disposing all unwanted or empty hazardous material containers used during the project in a manner that complies with all federal, state and local regulations, and shall not dispose of any such waste into solid waste containers owned by the US government.
- c. Storm Water:
 1. SPILL RESPONSE - Contractor shall ensure appropriate spill kit equipment is maintained at construction site, and in the event of an accidental spill contact know who to call. Contact the NWSSB Environmental Office for a Spill Notification Flow Chart.
 2. Watch Commander for Seal Beach: (562) 254-0047
 3. Command Duty Officer (CDO): (562) 972-9821.
The Regional Dispatch Center (RDC): (562) 626-7222.
Environmental Office Line: (562) 626-7776.

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.
- 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.

1.06 BEST MANAGEMENT PRACTICES (BMP) – GENERAL CONTRACTOR REQUIREMENTS

- 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.

G. See attachment E, NWSSB Rules and Regulations, Section 6.

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 3:30 pm Monday through Friday unless approved in writing in advance by the Authority and appropriate regulatory agencies.

Working hours for Magazine 824-827 are limited to weekends and after regular working hours of weapons handling personnel and require NWSSB escort/oversight. See attachment D, Northside Work Restrictions, for working hours.

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, President's Day, Memorial Day, Juneteenth Day, Independence Day, Labor Day, Columbus Day, Veterans 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/wqo2014_0057_dwq_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 area for use under this Contract is as 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 6' high chain link fence with vertical slats for privacy 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. A conceptual detour plan will be provided to the Contractor as reference (see Attachment G).
 - 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, 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 and military personnel from work-related activities, and do not unnecessarily inconvenience those persons by work activities.
- H. Site Approval Requests for construction laydown yards must be provided at least 30 days prior to mobilization for construction. Use the Site Approval Request form and send the form to OCTA Engineer. Upon review and concurrence, OCTA shall submit to Alex Burris for final review and approval.
- I. 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 required on Section 01 14 43 Environment Resource Protection.

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

**Pavement Rehabilitation at the Naval Weapons Station Seal
Beach Project
800 Seal Beach Blvd,
Seal Beach, CA 90740**

**IFB 4-2069
EXHIBIT B**

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.
- B. 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:
 - 1. 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 ultra-low sulfur diesel, methanol, natural gas, propane or butane.

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 from 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. No complete closure on the entire Westminster Street in one stage.
- D. No closing all Magazines in one stage.
- E. Construction parking shall be configured to minimize traffic interference during the construction period and, therefore, reduce idling of traffic.

- F. Temporary traffic controls are provided, such as a flag person, during all phases of construction to facilitate smooth traffic flow.
- G. To ensure adequate access for emergency vehicles when construction activities would result in temporary lane or roadway closures, the contractor shall consult with the NWSSB and Authority to disclose temporary lane or roadway closures and alternative travel routes. If construction activities require the complete closure of a roadway segment, the Contractor shall coordinate with NWSSB and the Authority 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. Use electric air compressors and similar power tools rather than diesel equipment, where feasible.
3. 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.

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 20 10

MEASUREMENT AND PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes:

1. General requirements for the measurement of quantities.
2. Requirements for developing the Schedule of Values required to facilitate processing payment applications.

B. Related Sections:

1. Section 013300 – Submittal Procedures
2. Section 014600 – Quality Assurance and Quality Control
3. Section 017123 – Field Engineering
4. Section 017700 – Closeout Procedures

1.2 REFERENCES

- A. Section 7 – Measurement and Payment of the SSPWC

1.3 SUBMITTALS

- A. Submittals shall be in accordance with Section 013300, Submittal Procedures, except as modified herein.

1. Preliminary Schedule of Values.
2. Schedule of Values updates.
3. Quantity Verification Sheets.
4. Document evidence of commitment of funds, Contractor certificate, and agreement.
5. Equipment List, Equipment Rate Sheet, and Labor Rate Sheet.
6. Payrolls and other cost data documents for all force account work.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

3.1 MEASUREMENT OF QUANTITIES

- A. Measurement Standards: Work to be paid for at a Contract price per unit of measurement will be measured by the Authority in accordance with United States Standard Measures.
- B. Units of measure to be used to measure the Work of each Section are indicated in the Measurement Article appearing in PART 4 of the Section unless the Work of the Section will not be separately measured for payment.
- C. Measurement by Weight:
 - 1. Items to be paid for by weight, such as reinforcing steel, steel shapes, castings, miscellaneous metal, metal fabrications, and similar items, will be measured by scale weight for the type and quantity of Material actually furnished and installed.
 - 2. Provide certified platform scales, sealed by the authority having jurisdiction, for measuring all Material to be measured and paid for by weight, except that shipped by rail.
 - a. Provide platform scales of sufficient size and capacity to permit the entire vehicle or combination of vehicles to rest on the scale platform while being weighed.
 - b. Combination vehicles may be weighed as separate units, provided they are disconnected while being weighed
 - c. Arrange to have all scales inspected and certified as often as the Authority may deem necessary to ascertain accuracy.
 - d. Pay all costs incurred as a result of regulating, adjusting, testing, inspecting, and certifying scales
 - 3. Have a licensed weighmaster weigh all Materials to be weighed on the scales provided.
 - a. The Authority may be present to witness the weighing and to check and compile the daily record of such scale weights; however, in any case, furnish weight slips and daily summary weigh sheets.
 - b. Furnish a duplicate weight slip or load slip for each vehicle weighed, and deliver the slip to the Authority at the point of delivery of the Material.

4. If the Material is shipped by rail, certified car weights will be accepted, provided that only actual weight of the Material will be paid for and not the minimum car weights used for assessing freight tariff.
 - a. Car weights will not be acceptable for Material to be passed through mixing plants.
5. Weigh the Material to be measured by weight separately for each Bid Item in the Bid Schedule under which it is to be paid.
6. Weigh the empty trucks used to haul Material being paid for by weight on a daily basis, and at such additional times as the Authority may require.
 - a. Provide a plainly legible identification mark on each truck.
 - b. The Authority may require the weight of the Material to be verified by weighing empty and loaded trucks on such other scales as the Authority may designate.

D. Measurement by Volume

1. Items to be paid for by volume will be measured by the cubic dimension listed or indicated on the Bid Schedule.
2. When Material is to be measured and paid for on a volume basis and it is impractical to determine the volume by the specified method of measurement, or for partial payment purposes only when requested by the Contractor in writing and accepted by the Authority in writing, the Material can be measured by one of the following methods:
 - a. Method 1: Volume measurement in place or removed will be by the unit of volume as indicated and as quantified on the Plans or as specified.
 - b. Method 2: The Material will be weighed in accordance with the requirements specified for weight measurement and paid for by weight.
 - 1) Such weights will be converted to volume measurement for payment purposes.
 - 2) Factors for conversion from weight measurement to volume measurement will be determined by the Authority and must be agreed to by the Contractor before such method of measurement of pay quantities will be accepted.

E. Measurement by Area

1. Items to be paid for by area will be measured by the square dimension indicated on the Bid Schedule, Plans, or as specified.
2. Method of square measurement will be as specified.

F. Linear Measurement

1. Items to be paid for by linear measurement will be measured by the linear dimension listed or indicated on the Bid Schedule.
2. Unless otherwise indicated, measure items, components, or work at the centerline of the item in place.

G. Unit Measurement

1. Items to be paid for by unit measurement will be measured by each complete unit supplied and accepted, and the measurement will be for the entire item, unit of work, structure, or combination thereof, as specified and as listed or indicated in the Bid Schedule with pay limits for the item of work shown on the Plans.
2. If the Contractor requests progress payments for partial delivery of items or amounts on the Bid Schedule, such progress payments will be made in accordance with a well-balanced, detailed Schedule of Values, prepared by the Contractor and submitted to the Authority for approval.
 - a. In such a Schedule of Values program, show fixed measurable quantities where possible and unit prices for each applicable item as allocated to the different features of the work.
 - b. Ensure that the summation of extensions of quantities and unit prices and related costs equals the amount of the contract price or sum of pay item totals indicated in the Bid Schedule.

H. Lump-Sum Measurement

1. Items to be paid for by Lump-sum measurement will be for the entire item, unit of work, structure, or combination thereof, as specified and as listed or indicated in the Bid Schedule with pay limits for the item of work shown on the Plans.
2. If the Contractor requests progress payments for lump-sum contracts or lump-sum pay items or amounts on the Bid Schedule, such progress payments will be made in accordance with a well-balanced, detailed Schedule of Values, prepared by the Contractor and submitted to the Authority for approval.
 - a. In such a Schedule of Values program, show fixed measurable quantities where possible and unit prices for each applicable lump-sum item as allocated to the different features of the work and major subdivisions.
 - b. Ensure that the summation of extensions of quantities and unit prices and related costs equals the amount of the lump-sum contract price or lump-sum pay item indicated in the Bid Schedule.

3.2 FIELD MEASUREMENT FOR PAYMENT

- A. Verification: The Authority will verify the computed quantities of work performed and submitted by the Contractor, and of Materials and equipment delivered to the site, for payment purposes.
- B. Measurement:
 - 1. Provide all equipment, workers, and survey crews to measure quantities, and perform all measurements as required in accordance with the provisions for measurement specified herein and in Section 017123, Field Engineering.
 - 2. Notify the Engineer prior to taking all measurements so that they may witness the measurements being taken.
 - 3. Where practical and agreed to by the Engineer, measure all quantities at the close of the pay period.
 - a. Measure Work that will be covered, and that is therefore impractical to measure at the close of the pay period, before it is covered.
 - 4. The Engineer's determination of measurements after reviewing the Contractor's measurements is final.
- C. Unless otherwise specified, calculate all quantities using the dimensions shown on the Plans.
 - 1. Cross sections recorded in the field books in accordance with Section 017123, Field Engineering, may serve as a quantity pay document for appropriate Work items performed.
- D. No allowance will be made for specified tolerances.
- E. Submit Quantity Verification Sheets (QVS) to the Engineer for all items of Work installed for approval and payment.
 - 1. Attach appropriate Plans to the Quantity Verification Sheets showing stationing, locations, and similar information as they relate to the measured quantities.
 - 2. Submit work sheets for quantities calculated from cross sections, Plans, and similar items with the Quantity Verification Sheets.
 - 3. To verify that the Quantity Verification Sheets are correct and that the Work has been installed according to the Plans and Specifications, have a representative of the Contractor sign and the Contractor's Quality Control Manager, required by Section 014400, Quality Assurance and Quality Control, countersign the Quantity Verification Sheets.

3.3 REJECTED, EXCESS, OR WASTED MATERIALS

- A. Rejected, excess, and wasted materials include the following:
 - 1. Material wasted or disposed of in a manner not called for under the Contract.
 - 2. Rejected loads of material, including material rejected after being placed in nonconformance to the provisions of the Contract.
 - 3. Material not unloaded from the transporting vehicle.
 - 4. Material placed outside the lines indicated on the Plans or established by the Authority.
 - 5. Material remaining on hand after completion of the work.
- B. Rejected, excess, and wasted materials will not be paid for.
- C. Do not include rejected, excess, and wasted materials in the final total quantities.
- D. No additional compensation will be permitted for loading, hauling, and disposing of rejected, excess, or wasted material.

3.4 PAYMENT PROCEDURES

- A. Bid Items from the Bid Schedule under which payment for the Work of each Section is to be made are indicated in the Payment Article appearing in the Section unless the Work of the Section will not be paid for separately or is paid using force account procedures.
- B. Where Work shown on the Plans or described in the Specifications is not directly indicated to be included in a specific bid item, include the costs in connection with such Work in the bid price for the appropriate Bid Item.
- C. Schedule of Values
 - 1. The Contractor shall obtain the Authority's acceptance for the use of a Schedule of Values for partial payment. If agreement cannot be reached on a Schedule of Values for a Bid Item, no partial payment shall be provided and the Bid Item will be paid for as units completed and in-place; the Contractor shall incorporate the undivided Bid Items into the Schedule of Values.
 - 2. Develop the Schedule of Values by subdividing the Bid Schedule bid items into measurable and deliverable "Activities," that are included in the Preliminary 90-Day Schedule and subsequent Project Schedules.
 - a. For each bid item number and title include the same quantity, unit price and bid item price from the Bid Schedule and a breakdown of its specific activities. For each activity number provide a description of the activity, quantity of units, unit prices and specific scheduled value for the activity.

- b. Each Schedule of Value item shall be a measurable unit that can have a quantity determined at each cut off date for each payment request period.
- c. Each Schedule of Value item shall be a physical component of the final constructed facility that has value to the Authority should there be a sudden shutdown of the Project.
- d. Each Schedule of Value item shall be a physical component that can be evaluated for compliance with the Contract at the time of progress payment. This will be determined by the overall requirements of the Contract, including quality requirements of Section 014500, Quality Assurance and Quality Control, and the Specification Sections associated with each Bid Item.
- e. Each Schedule of Value item shall possess exclusive characteristics of physical attributes, including location, which will enable it to be specifically assigned a schedule duration with a start and end date that can be used as a schedule activity.
- f. Costs for incremental design and submittal preparation along with procured contract material and equipment amounts shall be assigned to their respective procurement activities and shall be shown with a "one day" resource duration on the last work day of the procurement activity
- g. No cost loading for Schedule of Value payment shall be applied to submittal preparation or review activities.
- h. Costs for installation of the material/equipment, including labor, construction equipment, and temporary materials, shall be assigned to their respective construction/installation activities.
- i. The value of inspection and testing activities shall not be less than 10 percent of the total costs for procurement and construction activities.
- j. Subtotals of cost loaded activities organized by bid item shall subtotal to bid item amounts as shown on the submitted bid form. Do not exceed the quantities, values, or lump sum price in the Bid Schedule when preparing the Schedule of Values.

3. The Schedule of Values will be submitted and reviewed as follows:

- a. The Contractor shall prepare a Preliminary Schedule of Values and submit it to the Engineer at the Pre-Construction Meeting as part of the Preliminary 90-Day Schedule covering the first 90 Days following receipt of the Notice to Proceed.
 - b. Within 10 Days, the Engineer will either accept this Preliminary Schedule of Values to be the cost-loaded activities used in the Preliminary 90-Day Schedule as the basis for progress payments under this Contract for the first 90-Calendar Days, or direct that the Preliminary Schedule of Values be amended and resubmitted.
 4. Update and resubmit the Schedule of Values for acceptance when necessary to reflect changed, deleted, or additional Work.
 5. Any attempt to increase the cost of early activities, i.e., "front loading," will be rejected by the Authority resulting in a complete rejection of the Schedule of Values and Project Schedule until such "front loading" is corrected.
- D. A Monthly Update Report shall be prepared by the Contractor.. The Monthly Update report includes a Project Schedule Update, Schedule of Values and amounts earned as of the progress payment date, , and serves as the Contractor's Payment Request.
1. Submit and review a draft Monthly Update Report with the Authority at the Monthly Schedule Update Meeting. The purpose of the meeting is the joint review and agreement on job progress and schedule of values quantities status as shown in the draft Monthly Update Report.
 - a. Field measurement for payment shall be performed and determined in accordance with Specification Section 012010-3.2. The Contractor shall provide completed Quantity Verification Sheets for review at the meeting.
 - b. The Authority will provide written comments and determinations on progress within 3 working days after the meeting. The Contractor shall incorporate the Authority's determination on progress into the Monthly Update Report.
 - c. The Authority's determination on progress for measurement and payment shall be final. The Contractor shall incorporate the Authority's accepted

progress into the payment request. No payment of quantities or percent complete will be provided beyond that accepted by the Authority.

2. After reviewing job progress status, submit the Monthly Update Report to the Authority within 5 working days after the date of the review with the Authority.
3. Within 7 Days after receipt of the Monthly Update Report, the Authority will either accept or reject it.
 - a. If accepted, progress shown in the monthly update will be the basis for the Contractor's application for payment. The accepted monthly update report shall serve as the Contractor's Payment Request.
 - b. If rejected, update shall be corrected and resubmitted by the Contractor with a corrected Payment Request.
 - c. Should the Contractor request payment in an amount greater than that accepted by the Authority, the Authority will at its sole discretion correct the Contractor's Payment Request to the Authority accepted amount and provide payment on that basis. The Contractor shall reflect any such correction in the next Monthly Update Report.

E. Support payment requests with the following supporting documentation:

1. Documentary evidence of commitment of funds such as firm orders, Contracts, invoices, records of expenditure;
2. A certificate from the Contractor that the items for which payment is requested are acquired solely for the execution of this Contract and are free from all encumbrances;
3. An agreement that the items will be adequately maintained, and will not be removed from the Work Site until all Work is complete;
4. Quantity Verification Sheets in accordance with Section 012010-3.2; and
5. The Monthly Update Report and Payment Request in accordance with Section 013250, Project Schedules and Reports.

F. Until the certified copy of the Engineer's final itemized Punch List of Work to be completed or corrected is received as described in Section 017700, Closeout Procedures, payment commensurate

with the outstanding Work remaining will be withheld.

1. Withheld payments for each incomplete Punch List item will be determined by subtracting progress payments made to date for the item from the Schedule of Values total.
2. A withheld payment may be withheld until the Punch List item is satisfactorily completed and approved by the Engineer.

3.5 ALLOWANCES

- A. Furnish and perform the Work paid for by allowances for the specified sums acceptable to the Authority.
 1. In some cases, Quantity Allowances may have been provided to account for Work the extent of which is unknown at the Bid date.
 - a. Quantity Allowances allow Bidders to bid on the Work covered by the Quantity Allowance on the same basis as their competitors.
 - b. Once the actual extent of the Work is determined, it will be measured and paid for on a unit price basis.
 2. In some cases, Cash Allowances may have been provided to account for Work the extent of which is unknown at the Bid date.
 - a. Cash Allowances allow Bidders to bid on the Work covered by the Cash Allowance on the same basis as their competitors.
 - b. Once the actual extent of the Work is determined, the Contract price will be adjusted to reflect the actual quantity required by using a unit price based on a ratio of the quantity of items the Contractor allotted to the cash allowance divided by the cash allowance.
- B. Allowances include the actual cost to the Contractor of Materials and equipment to be delivered and installed, and do not include additional monies to reimburse the Contractor for any applicable trade discounts.
- C. Do not deduct from the Allowance the costs for unloading, handling, labor, installation, overhead, profit and other expenses contemplated, but include them in the Contract Price.

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. No separate measurement will be made for the Work of this Section.

4.2 PAYMENT

**Naval Weapons Station Pavement Rehabilitation Project
800 Seal Beach Blvd,
Seal Beach, CA 90740**

**Contract No. C-4-2069
EXHIBIT B**

- A. No separate payment will be made for the Work of this Section since its cost is incidental to other payment items.

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.

- b. 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.
 1. 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.
 - l. 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.
 - 2. 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

**Pavement Rehabilitation at the Naval Weapons Station Seal
Beach Project
800 Seal Beach Blvd,
Seal Beach, CA 90740**

**C-4-2069
EXHIBIT B**

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.
1. 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: Provide additional data to support computations:
1. Quantity of product, material, labor, and equipment.
 2. Justification for change in Contract Time, if claimed.
 3. Credit for deletions from Contract, similarly documented.
- C. Overhead and profit added to the direct cost of performing changes in the work shall not exceed 20% and shall constitute full compensation for all overhead costs (including but not limited to general overhead, supervision, office expenses, field office facilities and staff, utilities, and transportation). The 20 percent overhead and profit shall be divided between Contractor and sub-contractor(s),

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.

**Pavement Rehabilitation at the Naval Weapons Station
Seal Beach Project
800 Seal Beach Blvd,
Seal Beach, CA 90740**

**Contract No. C-4-2069
EXHIBIT B**

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:
1. 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.
 2. 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 Bid Form 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 line items that break down the the value for a particular work item on the Bid Form shall be subtotaled to match the price of that Bid Form item.
 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.
 - l. 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:
- a. 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. Locations and use of office, storage, parking and construction areas.
- h. Construction methods and coordination of Work within the provisions of the Contract Documents.
- i. Coordination with the Work of Subcontractors and procedures for sharing access to the Worksite.

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'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 the 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 can utilize Primavera Project Planner, Microsoft Project software, or Excel worksheets to prepare time-scaled bar-chart schedules that are acceptable to 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.
 - 6. Final cleanup.
 - 7. Final Inspection.
 - 8. All activities by Contractor, the Authority, and others, which affect progress or required dates for completion, or both, for each part of the Work.
 - 9. 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. 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. If CPM scheduling software is employed by the Contractor, 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:
 1. Increase construction manpower in such quantities and crafts as shall substantially eliminate the backlog of work and meet the current Contract Completion Date.
 2. 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.
 - 3. 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.
 2. 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 sub-section 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.

2. 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 NOT USED

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:
 - 1. Provide weather- and dust-protection coverings as necessary to contain dust and debris. Protect 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 NWSSB'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

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 SAFETY AND HEALTH ADMINISTRATION

- 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

1.01 SUMMARY

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.

1. 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) 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:
1. 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. Safety Codes: State of California, California Code of Regulations (CCR), Title 8 - Industrial Relations, Chapter 4, Subchapter 7, General Industry Safety Orders.
 - b. Fire and Life Safety Standards: All referenced standards pertaining to fire rated construction and exiting.
 - c. 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.
 - d. Product Listings: Approval documentation, indicating approval of authorities having jurisdiction for use of product with local agency.
- F. Edition Date of References:
 1. 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 cy	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	Gallons per minute
IN or in	Inch or inches
Kip or kip	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	Per square yard
SF or sf	Square foot
SY or sy	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. Dictionary of Architecture and Construction, (Cyril M. Harris, McGraw-Hill Book Company, 1975).
4. Encyclopedia of Associations, 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
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

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	Edition
CBC	California Building Code
CEC	California Electrical Code
CFR	Code of Federal Regulations
CMC	California Mechanical Code
CPA	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
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

1. 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.
3. 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.
6. NWSSB Rules and Regulations (Attachment E)

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 Naval Weapons Station Pavement Rehabilitation 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.
 2. 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 and NWSSB 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.
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 and NWSSB 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 and NWSSB's ability to safely occupy and utilize the Work for its intended purpose.
9. Final Acceptance: Acceptance of the Project by Authority as evidenced by issuance of an Engineer's Certification in accordance with Section 01 77 00.
10. Government and NWSSB: Naval Weapons Station Seal Beach.
11. Project: All the permanent facilities to be constructed by Contractor in accordance with the Contract Documents.
12. Work: All of the administrative, design, engineering, procurement, legal, professional, manufacturing, supply, installation, construction, environmental mitigation and management, supervision, management, testing, verification, labor, materials, equipment, maintenance, documentation and other duties, services and cost reimbursements to be furnished and provided by Contractor as required by the Contract Documents, including all efforts necessary or appropriate to achieve Final Acceptance of the Project and to fulfill the Warranties. In certain cases, depending on the context, the term is also used to mean the product of the Work.

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.

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EXHIBIT B**

END OF SECTION

SECTION 01 43 00

QUALITY ASSURANCE

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes: Administrative and procedural requirements for quality assurance.
 - 1. 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 in-service 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.

2. 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 if and when it chooses. That testing and inspection, if performed, will be in addition to the quality control testing that is the responsibility of the Contractor.
 2. 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.
 3. Contractor shall coordinate and notify the Authority when work is ready for its quality control testing and inspection so that the Authority, at its discretion may also perform quality assurance testing and inspection.
 4. 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.

5. After quality control and assurance testing and inspection, Contractor shall restore the work to the standard required by the contract documents.
6. 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:
 - 1. 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. Designate his/her authorized representative (acceptable to the Authority) who shall oversee work that may be performed at night, after normal working hours, or when the Construction Project Manager is not on site,
4. 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 payroll.

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:**
 1. 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, NWSSB, 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 re-employ 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 OCTA, 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 Authority, or observations by the OCTA, 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.
- I. The OCTA's and Engineer's Acceptance and Rejection of Work: The OCTA and 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 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, NWSSB 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, and to Authority 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 Authority personnel, inspector of record and the Authority's representatives 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 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. Comply with NWSSB Fire & Emergency Contractors Fire Prevention Guide supervision of welding operations, combustion-type temporary heating units, and similar sources of fire ignition.
- E. Barriers, enclosures, and fencing:
 - 1. 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.
- F. Noise Control: Provide methods, means, and facilities to minimize noise produced by construction operations.
- G. 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).

H. Security:

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

I. 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.

J. 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.

K. 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.

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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:

1. 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.

- E. When permission to do so is given in writing by the Authority, the Contractor may store materials on NWSSB's property provided such property is not required for NWSSB's use.
- 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.
3. 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.
5. 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 sample.
14. Descriptive, performance, and reference standard requirements in the specifications establish salient characteristics of products.

C. General Product Selection Requirements:

1. 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.
 - b. 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.
3. 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.
6. 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:

1. 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.
3. 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 - MEASUREMENT AND PAYMENT

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

END OF SECTION

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 NWSSB 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.

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 security clearance and 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

Compensation for mobilization and demobilization tasks is included in the price indicated in the Bid Form for Mobilization and Demobilization, and shall not exceed 10% of the Contract Price. Progress payments for the bid item shall be determined by the OCTA based on the percentage of completion of mobilization and demobilization tasks performed by the Contractor. In addition to the mobilization and demobilization work described in this Section, the pay item shall include the following.

- 1. Submission of an acceptable Base Schedule in accordance with Section 01 32 00, Construction Progress Documentation.
- 2. Submission and acceptance of the Contractor's proposed Construction Project Manager and Superintendent.
- 3. Obtaining Security clearance from the NWSSB for all construction staff, independent testing service personnel, and construction workers that will be required to perform work on the NWSSB property.
- 4. Submission and acceptance of the name and professional history of the land surveying firm designated by the Contractor as its project surveyor.

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Twenty (20%) percent of the value of the Mobilization and Demobilization pay item will not be paid until final completion of the Work of the Project, including the tasks described in SECTION 01 77 00, CLOSEOUT PROCEDURE, and in SECTION 01 78 00, CLOSEOUT SUBMITTALS.

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.
- D. 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.

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- 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:
 - 1. 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.
 - 3. 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 NWSSB 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.

- I. 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.
- I. 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. Repair, patch and touch up marred surfaces to specified finish, to match adjacent surfaces.
4. Water-jet clean paved surfaces; rake clean other surfaces of grounds. Comply with SWPPP BMP measures.
5. 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 NWSSB's property.
6. Maintain cleaning until project is occupied.
7. Final cleaning shall be done to the satisfaction of the Authority.

B. 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.

**Pavement Rehabilitation at the Naval Weapons Station
Seal Beach Project
800 Seal Beach Blvd,
Seal Beach, CA 90740**

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- 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, NWSSB and Contractor shall conduct a walk-through 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 of the Project or designated portion thereof, the Contractor shall complete the following:
1. 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.
 3. Advise the Authority of pending insurance changeover requirements.
 4. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents. Refer to Section 01 78 00, Closeout Submittals for requirements.
 5. Obtain and submit releases permitting the Authority and the NWSSB 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.
 7. 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. Submit test/adjust/balance records.
 9. 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.
 10. Advise the Authority of changeover in utilities.

11. Submit changeover information related to NWSSB's occupancy, use, operation, and maintenance.
 12. Complete final cleaning requirements, including touchup painting. Refer to Section 01 74 23, Cleaning for requirements.
 13. 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 or the NWSSB 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 of the Project or designated portion thereof. 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.
 - 2. 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.
- 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

**Pavement Rehabilitation at the Naval Weapons Station
Seal Beach Project
800 Seal Beach Blvd,
Seal Beach, CA 90740**

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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.

- 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:
 - 1. 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.
 - 2. Submit three paper copies of each Operations and Maintenance Manual. Include a complete operation and maintenance directory. Enclose title 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.
 - a. 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:
 - 1. 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:
 1. 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.
1. 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 three-ring 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.

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 Number	
EQUIPMENT DESCRIPTION		ELECTRICAL OR MECHANICAL 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 REQUIREMENTS AND REFERENCE			

*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	
EQUIPMENT DESCRIPTION		ELECTRICAL OR MECHANICAL DATA	
Name: Pump No. 1 Tag No.: P01-1		Size: 15 hp	
Serial No.: 123456ABC		Model: 140T Frame Serial No. 987654ZY Class F Insulation W/Space Heater	
Vendor: ABC Pump Co.			
Vendor Address:		Type:	
1111 Pump Circle Newport Beach, CA 92663		Mfr.: DEF Motors, Inc.	
Vendor Rep: XYZ Equipment, Inc.		Voltage: 460	Amps: 20
Phone: 714/752-0505		Phase: 3	RPM: 1,800
Maintenance Work to be Done			Frequency*
1. Operate all valves and check such things as a) bearing temperature, b) changes in running sound, c) suction and discharge gauge readings, d) pump discharge rate, and e) general condition of the drive equipment.			D
2. Check packing.			
3. Checking pumping unit for any dust, dirt, or debris.			D
(Continued on attached sheet)			W
OPERATING REQUIREMENTS AND REFERENCE			
For manufacturer's instructions regarding installation, operation, maintenance, and trouble shooting of this equipment, see Volume ____, Section ____.			

*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	
EQUIPMENT DESCRIPTION		ELECTRICAL OR MECHANICAL 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.			A
OPERATING REQUIREMENTS AND REFERENCE			

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

**Pavement Rehabilitation at the Naval Weapons Station
Seal Beach Project
800 Seal Beach Blvd,
Seal Beach, CA 90740**

**Contract No. C-4-2069
EXHIBIT B**

END OF SECTION

SECTION 01 78 36

WARRANTIES, GUARANTEES, AND BONDS

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work Included:

1. 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.
- I. **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.

- I. 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

**Pavement Rehabilitation at the Naval Weapons
Station Seal Beach Project
800 Seal Beach Blvd,
Seal Beach, CA 90740**

**Contract No. C-4-2069
EXHIBIT B**

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, Manufacturer, or Supplier)

By _____

Title _____

State License No. _____ Date _____

(Contractor)

By _____

State License No. _____ Date _____

Local Representative. For maintenance, repair, or replacement service, contact:

Name: _____

Address: _____

Phone Number: _____

**Pavement Rehabilitation at the Naval Weapons
Station Seal Beach Project
800 Seal Beach Blvd,
Seal Beach, CA 90740**

**Contract No. C-4-2069
EXHIBIT B**

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SECTION 03 63 00

CRACK TREATMENT

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes specifications for applying high-molecular-weight methacrylate to partial-depth concrete pavement surface cracks.

1.2 DEFINITIONS

- A. **Partial-depth crack:** Crack that does not extend the full concrete slab depth from one edge of the slab to the opposite or adjacent side of the slab.

1.3 REFERENCES

- A. 2023 edition of Caltrans Standard Specifications.
- B. Attachment H - Westminster Street Site Photos
Photos are representative of the existing concrete slab conditions and its approximate locations only and do not represent the entire limits of Westminster Street.

1.4 SUBMITTALS

General

- A. Submit HMWM samples 20 days before use.
- B. Submit the proposed removal method at least 7 days before sealant removal.

Public Safety and Application Plans

- A. Before starting crack treatment, submit a public safety plan and an application plan for applying HMWM as shop drawings.
- B. The public safety and application plans must identify the materials, equipment, and methods to be used. In the public safety plan, include the SDS for each component of HMWM and details for:
 - 1. Shipping
 - 2. Storage
 - 3. Handling
 - 4. Disposal of residual HMWM and containers

If the project is in an urban area adjacent to a school or residence, the public safety plan must also include an airborne emissions monitoring plan prepared by a CIH certified in comprehensive practice by the American Board of Industrial Hygiene. Submit a copy of the CIH's certification. The CIH must monitor the emissions at a minimum of 4 points including the mixing point, the application point, and the point of nearest public contact.

At work completion, submit a report by the CIH with results of the airborne emissions monitoring plan.

The application plan must include:

1. Crack treatment and coefficient of friction testing schedules
2. Methods and materials including:
 - 2.1. Description of equipment for applying HMWM
 - 2.2. Description of equipment for applying sand
 - 2.3. Gel time range and final cure time for resin

Revise and resubmit rejected plans. With each plan rejection, the Engineer gives revision directions including detailed comments.

1.5 QUALITY ASSURANCE

- A. Use test tiles to evaluate the HMWM cure time. Coat at least one 4-by-4-inch smooth glazed tile for each batch of HMWM. Place the coated tile adjacent to the area being treated. Do not apply sand to the test tiles.
- B. Use the same type of crack treatment equipment for testing and production.

TEST AREA

- A. Before starting crack treatment, treat a test area of at least 500 square feet within the project limits at a location authorized by the Engineer. Use test areas outside the traveled way if available.
- B. Treat the test area under weather and pavement conditions similar to those expected during crack treatment production.
- C. The Engineer evaluates the test area based on the Department's acceptance criteria. Do not begin crack treatment until the Engineer authorizes the test area.

AUTHORITY ACCEPTANCE

The Engineer accepts a treated area if:

1. Corresponding test tiles are dry to the touch
2. Treated surface is tack-free and not oily
3. Sand cover adheres enough to resist hand brushing
4. Excess sand is removed
5. Coefficient of friction is at least 0.30 when tested under California Test 342

PART 2 - PRODUCTS

2.1 MATERIALS

- A. HMWM consists of compatible resin, promoter, and initiator. HMWM resin may be prepromoted by mixing promoter and resin together before filling containers. Identify prepromoted resin on the container label.
- B. Adjust the gel time to compensate for temperature changes throughout the application.
- C. The quality characteristics of HMWM resin must comply with the requirements shown in the following table:

High-Molecular-Weight Methacrylate Quality Characteristics

<u>Quality characteristic</u>	<u>Test method</u>	<u>Requirement</u>
<u>Viscosity^a (max, cP, Brookfield RVT with UL adapter, 50 RPM at 25 °C)</u>	<u>ASTM D2196</u>	<u>25</u>
<u>Specific gravity^a (min, at 25 °C)</u>	<u>ASTM D1475</u>	<u>0.90</u>
<u>Flash point^a (min, °C)</u>	<u>ASTM D3278</u>	<u>82.2</u>
<u>Vapor pressure^a (max, mm Hg, at 25 °C)</u>	<u>ASTM D323</u>	<u>1.0</u>
<u>Tack-free time (max, minutes at 77 °F)</u>	<u>Specimen prepared under California Test 551</u>	<u>400</u>
<u>Volatile content^a (max, %)</u>	<u>ASTM D2369</u>	<u>30</u>
<u>PCC saturated surface-dry bond strength (min, psi, at 24 hours and 77 ± 2 °F)</u>	<u>California Test 551</u>	<u>500</u>

^aPerform the test before adding initiator.

- D. Sand must be commercial quality dry blast sand. At least 95 percent of the sand must pass the no. 8 sieve and at least 95 percent must be retained on the no. 20 sieve when tested under California Test 202.

PART 3 - EXECUTION

3.1 GENERAL

- A. Before applying HMWM, clean the pavement surface by abrasive blasting and blow loose material from visible cracks with high-pressure air. Remove concrete curing seals from the pavement to be treated. The pavement must be dry when blast cleaning is performed. If the pavement surface becomes contaminated before applying the HMWM, clean the pavement surface by abrasive blasting.
- B. Protect existing facilities from HMWM. During pavement treatment, protect pavement joints, working cracks, and surfaces not being treated. Repair or replace existing facilities contaminated with HMWM at your expense.
- C. The equipment applying HMWM must combine the components by either static in-line mixers or by external intersecting spray fans. The pump pressure at the spray bars must not cause atomization. Do not use compressed air to produce the spray. Use a shroud to enclose the spray bar apparatus.
- D. You may apply HMWM manually to prevent overspray onto adjacent traffic. If applying

resin manually, limit the batch quantity of HMWM to 5 gallons.

- E. Apply HMWM at a rate of 90 sq ft/gal. The prepared area must be dry and the surface temperature must be from 50 to 100 degrees F while applying HMWM. Do not apply HMWM if the ambient relative humidity is more than 90 percent.
- F. Flood the treatment area with HMWM to penetrate the pavement and cracks. Apply HMWM within 5 minutes after complete mixing. Mixed HMWM viscosity must not increase. Redistribute excess material with squeegees or brooms within 10 minutes of application. Remove excess material from tined grooves.
- G. Wait at least 20 minutes after applying HMWM before applying sand. Apply sand at a rate of approximately 2 pounds per square yard or until refusal. Remove excess sand by vacuuming or sweeping.
- H. Do not allow traffic on the treated surface until:
 - 1. Treated surface is tack-free and not oily
 - 2. Sand cover adheres enough to resist hand brushing
 - 3. Excess sand is removed
 - 4. Coefficient of friction is at least 0.30 determined under California Test 342

3.2 FIELD QUALITY CONTROL

NOT USED

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. Crack Treatment of existing concrete slabs shall be measured by the lineal foot.

4.2 PAYMENT

- A. The contract price paid for Crack Treatment as paid by lineal foot shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in crack treatment, complete in place, as shown on the plans, as specified in these Specifications, and as directed by the Engineer.
- B. Payment will be made under the following pay items:

<u>Pay Item</u>	<u>Description</u>	<u>Pay Unit</u>
xxx	Crack Treatment	LF

END OF SECTION

SECTION 03 63 50

SPALL REPAIR

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes specifications for repairing spalls in concrete pavement.

1.2 DEFINITIONS

- A. NOT USED

1.3 REFERENCES

- A. 2023 edition of Caltrans Standard Specifications.
- B. Attachment H - Westminster Street Site Photos
Photos are representative of the existing concrete slab conditions and its approximate locations only and do not represent the entire limits of Westminster Street.

1.4 SUBMITTALS

NOT USED

1.5 QUALITY ASSURANCE

- A. The Engineer accepts spall repairs based on authorized saw cut dimensions and visual inspection.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Bonding agent must comply with the requirements for HMWM in section 41-3.02 except the tack-free time requirements do not apply and the HMWM must not contain wax.
- B. Caulk must be at least 50 percent silicone, designated as a concrete sealant, and comply with ASTM C834.
- C. Form board must be single-wall, double-face corrugated cardboard or paperboard covered with a bond breaker on each face. For existing joints or cracks less than 45 mils wide, use paperboard.

PART 3 - EXECUTION

3.1 GENERAL

- A. Prepare spall repair areas by removing concrete and cleaning the underlying surface. Repair spalls using polyester concrete with a HMWM bonding agent.
- B. After completing spall repairs do not allow traffic on the repairs for at least 2 hours after the time of final setting under ASTM C403/403M.

3.2 REMOVE PAVEMENT

- A. The Engineer determines the rectangular limits of unsound concrete pavement. Before removing pavement, mark the saw cut lines and spall repair area on the pavement surface.
- B. Do not remove pavement until the Engineer verbally authorizes the saw cut area. Use a power-driven saw with a diamond blade.
- C. Remove pavement as shown and:
 - 1. From the center of the repair area towards the saw cut
 - 2. To the full saw cut depth
 - 3. At least 2 inches beyond the saw cut edge to produce a rough angled surface
- D. Produce a rough surface by chipping or other removal methods that do not damage the pavement remaining in-place. Completely remove any saw overcuts. Pneumatic hammers used for concrete removal must weigh 15 pounds or less.
- E. If you damage concrete pavement outside the removal area, enlarge the area to remove the damaged pavement.
- F. If dowel bars are exposed during removal, remove concrete from the exposed surface and cover with duct tape.

3.3 CLEANING

- A. Clean the exposed faces of the concrete by:
 - 1. Sand or water blasting. Water blasting equipment must be capable of producing a blast pressure from 3,000 to 6,000 psi.
 - 2. Blowing the exposed concrete area with compressed air free of moisture and oil to remove debris. Air compressors must deliver air at a minimum of 120 cfm and develop 90 psi of nozzle pressure.

3.4 COMPRESSION RELIEF AT JOINTS AND CRACKS

- A. Provide compression relief at joints and cracks by using a form board or saw cutting.

3.5 FORM BOARD INSTALLATION

- A. Before placing concrete, place the form board to match the existing joint or crack alignment and width. Extend the form board at least 3 inches beyond each end of the repair and at least 1 inch deeper than the repair.
- B. After placing concrete, remove the form board before sealing joints or cracks.

3.6 SAW CUT METHOD

- A. After cleaning, seal exposed joints or cracks with caulk at the bottom and sides of the repair area. Any surface receiving caulk must be clean and dry. Place caulk a minimum of 1/2 inch beyond the edges of the repair area into the existing joint or crack.
- B. Saw cut the polyester concrete to the full depth along the existing joint or crack alignment within 2 hours from time of final setting. Use a power-driven saw with a diamond blade.

3.7 FIELD QUALITY CONTROL

NOT USED

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. Spall Repair of existing concrete slabs shall be measured by the square footage area.

4.2 PAYMENT

- A. The contract price paid for Spall Repair as paid by square footage area shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in spall repair, complete in place, as shown on the plans, as specified in these Specifications, and as directed by the Engineer.
- B. Payment will be made under the following pay items:

<u>Pay Item</u>	<u>Description</u>	<u>Pay Unit</u>
xxx	Spall Repair	SQFT

END OF SECTION

SECTION 03 64 00

GRINDING CONCRETE

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes specifications for grinding concrete roadway surfaces.

1.2 REFERENCES

- A. 2023 edition of Caltrans Standard Specifications
- B. Attachment H - Westminster Street Site Photos
Photos are representative of the existing concrete slab conditions and its approximate locations only and do not represent the entire limits of Westminster Street.

1.3 QUALITY ASSURANCE

- A. Test for pavement smoothness under sections 36 and 40 of Caltrans Standard Specifications except:
 - 1. At the midpoint of a joint or crack, test smoothness with a straightedge.
 - 2. Straightedge and inertial profiler requirements do not apply to areas abnormally depressed from subsidence or other localized causes. End smoothness testing 15 feet before and resume 15 feet after these areas.
- B. After grinding, the existing pavement must comply with specifications for smoothness and coefficient of friction in section 40 except:
 - 1. At the midpoint of a joint or crack, both sides must have uniform texture.
 - 2. Cross-slope must be uniform and have positive drainage across the traveled way and shoulder.
- C. The Authority accepts pavement for smoothness and coefficient of friction under section 40-1.01D of Caltrans Standard Specifications.

PART 2 - PRODUCTS

2.1 MATERIALS

NOT USED

PART 3 - EXECUTION

3.1 GENERAL

Grind surfaces in the longitudinal direction of the traveled way and grind the full lane width. Begin and end grinding at lines perpendicular to the roadway centerline.

Grinding must result in a parallel corduroy texture with grooves from 0.08 to 0.12 inch wide and from 55 to 60 grooves per foot of width. Grooves must be from 0.06 to 0.08 inch from the top of the ridge to the bottom of the groove.

Grinding equipment must have diamond cutting blades mounted on a self-propelled machine designed for grinding and texturing concrete pavements.

At joints or cracks, both sides must have a uniform texture.

3.2 PAVEMENT

- A. Grind existing concrete pavement that is adjacent to an individual slab replacement. Grind the replaced individual slab and all the existing slabs immediately surrounding it. Grind after the individual slab is replaced.
- B. Grind existing concrete pavement that is adjacent to new lanes of concrete pavement before paving.
- C. As an alternative to grinding existing concrete pavement, you may replace the existing pavement. The new concrete pavement must be the same thickness as the removed pavement. Replace existing pavement between longitudinal joints or pavement edges and transverse joints. Do not remove portions of slabs.
- D. Replacement of existing concrete pavement must comply with specifications for individual slab replacement in section 41-9 of Caltrans Standard Specifications .

3.3 FIELD QUALITY CONTROL

NOT USED

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. Grinding of existing concrete slabs shall be measured by the square footage area.

4.2 PAYMENT

- A. The contract price paid for grinding concrete as paid by the square footage area shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in grinding of existing concrete slabs, complete in place, as shown on the plans, as specified in these Specifications, and as directed by the Engineer.
- B. Payment will be made under the following pay items:

<u>Pay Item</u>	<u>Description</u>	<u>Pay Unit</u>
xxx	Grinding Concrete	SQFT

END OF SECTION

SECTION 03 65 00

SUBSEALING AND JACKING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes
 - 1. Requirements for subsealing and jacking using grout to fill voids under existing concrete pavement.
 - 2. Subsealing and jacking includes:
 - A. Drilling holes through existing concrete pavement
 - B. Injecting grout
 - C. Cleaning
 - D. Filling the drilled holes with mortar or concrete
 - 3. Jacking includes raising pavement to grade using injected grout.

1.2 REFERENCES

- A. Section 41-2 of 2023 edition of Caltrans Standard Specifications
- B. Attachment H - Westminster Street Site Photos
Photos are representative of the existing concrete slab conditions and its approximate locations only and do not represent the entire limits of Westminster Street.
- C. ASTM Standard Test Methods include C266,

1.3 SUBMITALS

- A. Submit shipping invoices with packaged or bulk fly ash and cement.
- B. Before grouting activities begin, submit a proposal for the materials to be used. Include authorized laboratory test data for the grout indicating:
 - 1) Time of initial setting under ASTM C266
 - 2) Compressive strength results at 1, 3, and 7 days for 10, 12, and 14-second grout efflux times
- C. To request a substitution of grout materials, submit a proposal that includes test data.

1.4 QUALITY ASSURANCE

- A. Test grout compressive strength under California Test 551, Part 1 at 7-days with 12 seconds efflux time. Follow the procedures for moist cure. The 7-day compressive strength must be at least 750 psi.
- B. For Department acceptance, the final pavement elevation must be within 0.01

foot of the required grade.

PART 2 - PRODUCTS

2.2 MATERIALS

- A. Grout must consist of Type II portland cement or Type IL cement, fly ash, and water. Use from 2.4 to 2.7 parts fly ash to 1 part portland cement or portland limestone cement by weight. Use enough water to produce the following grout efflux times determined under California Test 541, Part D:
 - 1. From 10 to 16 seconds for subsealing
 - 2. From 10 to 26 seconds for jacking
- B. Cement for grout must comply with the specifications for Type II portland cement or Type IL cement in section 90-1.02B(2).
- C. Fly ash must comply with AASHTO M 295, Class C or Class F. Fly ash sources must be on the Authorized Material List for cementitious materials for use in concrete.
- D. You may use chemical admixtures and calcium chloride. Chemical admixtures must comply with section 90-1.02E(2) of the Caltrans Standard Specifications. Calcium chloride must comply with ASTM D98.
- E. Mortar must be a prepackaged fast-setting mortar that complies with ASTM C928.

PART 3 - EXECUTION

3.1 GENERAL

Drill holes in the pavement, inject grout, plug the holes, and finish the holes with mortar.

Drill holes through the pavement and underlying base to a depth from 15 to 18 inches below the pavement surface. The hole diameter must match the fitting for the grout injecting equipment.

3.2 INJECTING GROUT GENERAL

- A. Inject grout within 2 days of drilling holes.
- B. Immediately before injecting grout, clean the drilled holes with water at a minimum pressure of 40 psi. The cleaning device must have at least 4 jets that direct water horizontally at the slab-base interface.
- C. Do not inject grout whenever the atmospheric or subgrade temperature is below 40 degrees F or during inclement weather. If water is present in the holes, obtain authorization before injecting grout.

- D. Do not inject grout until at least 2 consecutive slabs requiring subsealing are drilled ahead of the grouting activities.
- E. The grout plant must have a positive displacement cement injection pump and a high-speed colloidal mixer capable of operating from 800 to 2,000 rpm. The injection pump must sustain 150 psi if pumping grout with a 12-second efflux time. A pressure gauge must be located immediately adjacent to the grout hose supply valve and positioned for easy monitoring.
- F. If using bulk dry cement and fly ash, weigh each item before mixing them. If the materials are packaged, each container must weigh the same.
- G. Introduce water to the mixer through a meter or scale.
- H. Inject grout under pressure until the voids under the pavement slab are filled. The injection nozzle must not leak. Do not inject grout if the nozzle is below the bottom of the slab. Inject grout 1 hole at a time.
- I. Stop injecting grout in a hole if either of the following occurs:
 - i. Grout does not flow under a sustained pump gauge pressure of 150 psi after 7 seconds and there is no indication the slab is moving
 - ii. Injected grout rises to the surface at a joint or crack or flows into an adjacent hole

Dispose of unused grout within 1 hour of mixing.

3.3 SUBSEALING

- A. If a slab raises more than 1/16 inch due to grout injection during subsealing work, stop injecting grout in that hole.

3.4 JACKING

- A. The positive displacement pump used for grout injection for jacking work must be able to provide a sustained gauge pressure of 200 psi. Gauge pressures may be from 200 to 600 psi for brief periods to start slab movement.
- B. You may add additional water to initiate pressure injection of grout. Do not reduce the grout efflux time below 10 seconds.
- C. Raise the slabs uniformly. Use string lines to monitor the pavement movement.

Do not move adjacent slabs not shown to be jacked. If you move adjacent slabs, correct the grade within the tolerances for final pavement elevation.

3.5 FINISHING

- A. Immediately after removing the injection nozzle, plug the hole with a round, tapered wooden plug. Do not remove plugs until adjacent holes are injected

- with grout and no grout surfaces through the previously injected holes.
- B. After grouting, remove grout from drilled holes to at least 4 inches below the pavement surface. Clean the holes and fill with mortar. Finish filled holes flush with the pavement surface.

3.6 TOLERANCES

- A. The final pavement elevation must be within 0.01 foot of the required grade. If the final pavement elevation is from 0.01 to 0.10 foot higher than the required grade, grind the noncompliant pavement surface under section 42 of Caltrans Standard Specifications to within 0.01 foot of the required grade.
- B. If the final pavement elevation is higher than 0.10 foot from the required grade, remove and replace the noncompliant pavement under section 41-9 of Caltrans Standard Specifications.

3.7 FIELD QUALITY CONTROL

- A. Testing shall be performed by an approved Independent Testing Laboratory retained by the Contractor that is approved by OCTA Engineer.
- B. During construction, the appropriate level of inspections and tests shall be performed by a independent third-party testing firm (retained by the Contractor) to confirm soil and subsurface conditions within the site. Contractor is to coordinate with Authority and NWSSB to ensure soil is tested when subsealing and jacking begins.

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. Subsealing and jacking of existing concrete slabs shall be measured by the square footage area.

4.2 PAYMENT

- A. The contract price paid for subsealing and jacking as paid by the square footage area shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in subsealing and jacking of existing concrete slabs, complete in place, as shown on the plans, as specified in these Specifications, and as directed by the Engineer.
- B. Payment will be made under the following pay items:

<u>Pav Item</u>	<u>Description</u>	<u>Pav Unit</u>
xxx	Subsealing and Jacking	SQFT

END OF SECTION

SECTION 03 66 00

JOINT SEALS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes specifications for sealing concrete pavement joints or replacing concrete pavement joint seals. Pavement joints include isolation joints.

1.2 REFERENCES

- A. Section 41-5 of 2023 edition of Caltrans Standard Specifications
- B. Attachment H - Westminster Street Site Photos
Photos are representative of the existing concrete slab conditions and its approximate locations only and do not represent the entire limits of Westminster Street.

1.3 SUBMITALS

- A. At least 15 days before delivery to the job site, submit a certificate of compliance, SDS, manufacturer's recommendations, and instructions for storage and installation of:
 - 1. Liquid joint sealant.
 - 2. Backer rods. Include the manufacturer data sheet verifying compatibility with the liquid joint sealant.
 - 3. Preformed compression joint seal. Include the manufacturer data sheet used to verify the seal for the joint dimensions shown.
 - 4. Lubricant adhesive.
- B. Upon delivery of asphalt rubber joint sealant to the job site, submit a certified test report for each lot based on testing performed within 1 year.
- C. Submit a work plan for removing pavement and joint materials. Allow 10 days for review. Include descriptions of the equipment and methods for removal of existing pavement and joint material.

1.4 QUALITY ASSURANCE

- A. Before sealing joints, arrange for a representative from the manufacturer to provide training on cleaning and preparing the joint and installing the liquid joint sealant or preformed compression joint seal. Do not seal joints until your personnel and the

Department's personnel have been trained.

- B. The Engineer accepts joint seals based on constructed dimensions and visual inspection of completed seals for voids.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Joint seal materials must be either silicone joint sealant, asphalt rubber joint sealant, or preformed compression joint seal.
- B. Silicone or asphalt rubber joint sealant must not bond or react with the backer rod.

2.2 SILICONE JOINT SEALANT

- A. Silicone joint sealant must be on the Authorized Material List for silicone joint sealant.

2.3 ASPHALT RUBBER JOINT SEALANT

- A. Asphalt rubber joint sealant must:
 - 1. Be asphalt binder mixed with not less than 10 percent ground rubber by weight. Ground rubber must be vulcanized or a combination of vulcanized and devulcanized materials that pass a no. 8 sieve.
 - 2. Comply with ASTM D6690 for Type II.
 - 3. Be capable of melting at a temperature below 400 degrees F and applied to cracks and joints.
 - 4. Be delivered in containers complying with ASTM D6690.

2.4 BACKER RODS

- A. Backer rods must:
 - a. Comply with ASTM D5249:
 - i. Type 1 for asphalt rubber joint sealant
 - ii. Type 1 or Type 3 for silicone joint sealant
 - b. Be expanded, closed-cell polyethylene foam
 - c. Have a diameter at least 25 percent greater than the saw cut joint width

2.5 PREFORMED COMPRESSION JOINT SEALS

- A. Preformed compression joint seals must:
 - 1. Comply with ASTM D2628
 - 2. Have 5 or 6 cells, except seals 1/2-inch wide or less may have 4 cells
- B. Lubricant adhesive used to install seals must comply with ASTM D2835.

PART 3 - EXECUTION

3.1 GENERAL

- A. If joint seals are shown for new concrete pavement, seal new concrete pavement joints at least 7 days after the concrete pavement is placed.
- B. Before sealing joints, complete pavement repairs and grinding and grooving.
- C. Remove existing pavement and joint material by sawing, rectangular plowing, cutting, or manual labor. Saw cut the reservoir as shown before cleaning the joint. Use a power-driven saw with a diamond blade.

3.2 JOINT CLEANING

- A. Clean the joint after removing existing pavement and before installing joint seal material.
- B. Cleaning must be completed no more than 4 hours before installing backer rods, liquid joint seal, or preformed compression seals using the following sequence:
 - 1. Removing debris
 - 2. Drying
 - 3. Sandblasting
 - 4. Air blasting
 - 5. Vacuuming
- C. Clean in 1 direction to minimize contamination of surrounding areas.

3.3 REMOVING DEBRIS

Remove debris including dust, dirt, and visible traces of old sealant from the joint after sawing, plowing, cutting, or manual removal. Do not use chemical solvents to wash the joint.

3.4 DRYING

After removing debris, allow the reservoir surfaces to dry or remove moisture and dampness at the joint with compressed air that may be moderately hot.

3.5 SANDBLASTING

After the joint is dry, sandblast the reservoir to remove remaining residue using a 1/4-inch diameter nozzle and 90 psi minimum pressure. Do not sandblast straight into the reservoir. Angle the sandblasting nozzle between 1 to 2 inches from the concrete and make at least 1 pass to clean each reservoir face.

3.6 AIR BLASTING

After sandblasting, air blast the reservoir to remove sand, dirt, and dust 1 hour before sealing the joint. Use compressed air free of oil and moisture delivered at a minimum rate

of 120 cfm and 90 psi nozzle pressure.

3.7 VACUUMING

After air blasting, use a vacuum sweeper to remove debris and contaminants from the pavement surfaces surrounding the joint.

3.8 INSTALLING LIQUID JOINT SEALANT

Before installing liquid joint sealant, the pavement and reservoir surfaces must be dry and the ambient air temperature must be at least 40 degrees F and above the dew point. Before installing asphalt rubber joint sealant, the pavement surface temperature must be at least 50 degrees F.

Where backer rods are shown, place the rods before installing liquid joint sealant. Place backer rods under the manufacturer's instructions unless otherwise specified. The reservoir surface must be free of residue or film. Do not puncture the backer rod.

Immediately after placing the backer rod, install liquid joint sealant under the manufacturer's instructions unless otherwise specified. Before installing, demonstrate that fresh liquid sealant is ejected from the nozzle free of cooled or cured material.

Pump liquid joint sealant through a nozzle sized for the width of the reservoir so that liquid joint sealant is placed directly onto the backer rod. The installer must draw the nozzle towards their body and extrude liquid joint sealant evenly. Liquid joint sealant must maintain continuous contact with the reservoir walls during extrusion.

Within 10 minutes of placing liquid joint sealant, recess it to the depth shown before a skin begins to form.

After each joint is sealed, remove excess liquid joint sealant on the pavement surface. Do not allow traffic over the sealed joints until the liquid joint sealant is set, tack free, and firm enough to prevent embedment of roadway debris.

3.9 INSTALLING PREFORMED COMPRESSION JOINT SEALS

Install preformed compression joint seals as shown and under the manufacturer's instructions. Use lubricant adhesive.

Install longitudinal seals before transverse seals. Longitudinal seals must be continuous except splicing is allowed at intersections with transverse seals. Transverse seals must be continuous for the entire transverse length of concrete pavement except splices are allowed for widening and staged construction. With a sharp instrument, cut across the longitudinal seal at the intersection with transverse construction joints. If the longitudinal seal does not relax enough to properly install the transverse seal, trim the longitudinal seal to form a tight seal between the 2 joints.

Any authorized splicing must comply with the manufacturer's instructions.

Use a machine specifically designed for preformed compression joint seal installation.
The machine must install the seal:

1. To the specified depth
2. To make continuous contact with the joint walls
3. Without cutting, nicking, or twisting the seal
4. Without stretching the seal more than 4 percent

Cut preformed compression joint seal material to the exact length of the pavement joint to be sealed. The Engineer measures this length. After you install the preformed compression joint seal, the Engineer measures the excess length of material at the joint end. The Engineer divides the excess length by the measured cut length to determine the stretch percentage.

Seals must be compressed from 30 to 50 percent of the joint width when complete in place.

3.10 FIELD QUALITY CONTROL

- A. Testing shall be performed by an approved Independent Testing Laboratory retained by the Contractor that is approved by OCTA.

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. Joint Sealing of existing concrete slabs shall be measured by the lineal foot.

4.2 PAYMENT

- A. The contract price paid for Joint Sealing as paid by lineal foot shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in joint sealing, complete in place, as shown on the plans, as specified in these Specifications, and as directed by the Engineer.
- B. Payment will be made under the following pay items:

<u>Pay Item</u>	<u>Description</u>	<u>Pay Unit</u>
xxx	Joint Seals	LF

END OF SECTION

SECTION 31 00 00

EARTHWORK

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes

1. Requirements for earthwork, including structure and roadway excavation, placement of backfill, trench excavation and backfill, subgrade preparation, and grading of roadways.

1.2 REFERENCES

- A. Refer to Section 01 41 00 – Regulatory Requirements.
- B. 2018 edition of Standard Specifications for Public Works Construction (SSPWC)
 1. Section 300, "Earthwork"
- C. 2012 edition of Standard Plans for Public Works Construction
- D. ASTM Standard Test Methods include D1556, D1557, D2487, D2488, D3740, D6938.

1.3 DEFINITIONS

- A. Degree of Compaction: A percentage of the maximum dry density obtained by the test procedure presented in ASTM D 1557, Method C.
- B. Satisfactory Materials: Any material classified by ASTM D 2487 as GW, GP, SW, SP, GM, and SM, or combinations thereof. The maximum stone size shall be 3 inches.
- C. Unsatisfactory Materials: Materials that do not comply with the requirements for satisfactory materials. Unsatisfactory materials include those materials containing organic matter, soft spongy earth, roots and other organic matter of similar nature, trash, debris, stones larger than 3 inches, and materials classified in ASTM D 2487 as PR, OH, OL, CH, CL, MH, and ML. Unsatisfactory material also includes refuse and other material.
- D. Roadway Prism: Earthwork excavation with limits defined in accordance with Caltrans Standard Plan A62A.

1.4 SUBMITALS

- A. Submit the following for approval in accordance with Section 01 33 00 - Submittal Procedures:

1. Copies of test reports for material properties and compaction as required in these Specifications.

1.5 QUALITY ASSURANCE

- A. Inspection and Independent Testing Agency retained for inspection and testing specified herein shall meet the requirements of ASTM D 3740.
- B. Provide quality control in accordance with the requirements of Section 01 4 00, Quality Assurance and Quality Control, except as modified herein.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Imported fill shall consist of well-graded sand, gravel, crushed gravel, crushed stone or crushed slag composed of hard, tough and durable particles. The maximum allowable aggregate size shall be one inch. Gradation shall be determined in accordance with ASTM C 136 or D 422, as applicable.
- B. Imported fill materials shall be naturally occurring free of wood, trash, construction debris, and organic, contaminated, or deleterious material. Fill materials shall, unless explicitly noted otherwise herein or as approved by the Engineer, meet the following requirements:
 1. Imported fill material should not be received from industrial sites or sites undergoing an environmental clean-up.
 2. Obtain documentation that the fill source is appropriate for the use as intended. If fill material analytical information is unavailable, ensure that the fill material was analyzed through a California Department of Health Services (DHS)-certified laboratory for appropriate contaminants based on the location of the source area. The documentation should consist of detailed information on previous land use from where the fill was obtained and results of any laboratory and physical testing performed. The report containing this information shall be signed by a California Licensed or Registered Professional (i.e., registered geologist or professional engineer).
 3. Soil with concentrations of TPH-g carbon chain length C4 to C12, TPH-d carbon chain length C13-C22 above 100 milligrams per kilogram (mg/kg) and heavy end petroleum hydrocarbons with a carbon chain length of C23 to C32 above 1,000 mg/kg is unacceptable fill. This criteria is based on the RWQCB Interim Guidelines dated May 1996 as the maximum soil screening levels for drinking water aquifers using values for groundwater less than 20 feet.
 4. Imported fill suitable for project use should not exceed the background concentration levels for heavy metals listed in the California EPA publication titled "Background Levels of Trace Elements in Southern

California", May 1996.

5. Except for chemicals defined in Sections 2.1.B3 and 2.1B4, above, imported fill with detectable concentrations of analytes outlined in this Section that is above the practical quantitation limit is unacceptable fill.
6. Imported fill shall comply with the requirements of the California Environmental Protection Agency-Department of Toxic Substances Control (DTSC) Information Advisory Clean Imported Fill Material Dated October 2001.

PART 3 - EXECUTION

3.1 GENERAL

- A. Comply with Section 300, "Earthwork," of the SSPWC for excavation and backfill, except as noted below.
- B. Comply with Section 306, "Open Trench Conduit Construction," of the SSPWC for trench excavation and backfill.
- C. Comply with Section 01 57 13 – Temporary Erosion and Sedimentation Control for temporary and permanent erosion control features.
- D. Remove or abandon in place unclaimed, abandoned utilities as shown on the Plans.
- E. Protect exposed graded areas from wind and water erosion until stabilization is achieved.

3.2 EXCAVATION (GENERAL)

- A. Excavate material encountered within the limits of the work, to the lines, grades, and elevations as shown on the Plans and as specified herein.
- B. General construction excavation shall not exceed 1 vertical to 1 horizontal slope. If this cannot be accomplished, provide temporary shoring, sheeting, and bracing as necessary to retain excavation, maintain banks securely, withstand water pressure, and prevent cave-ins.
- C. Perform excavation and placement of fill in a manner and sequence that will provide proper drainage at all times.
- D. Surfaces shall be level, or sloped if required, clean, and clear of loose soil. Maintain in good condition until overlying materials are placed.
- E. When backfill is placed, remove sheeting and bracing in stages so that the walls are supported by the shoring or newly placed backfill.

3.3 BACKFILL (GENERAL)

- A. Place backfill in layers not to exceed 8 inches of loose material and compact each layer to at least 95 percent laboratory maximum dry density, in such a manner as to prevent wedging action or eccentric loading.
- B. Backfill excavations when installations have been completed, inspected, and approved. Ensure the following conditions are satisfied prior to proceeding with backfill operations:
 - 1. Concrete shall have attained sufficient strength to withstand pressure of earth and compacting operation.
 - 2. Excavations shall be free of forms, debris, and other foreign materials.
- C. Do not place structure backfill until the structure footings or other portions of the structure or facility to be backfilled have been inspected and approved for backfilling by the Engineer.
- D. Do not deposit backfill material against the back of concrete abutments, concrete retaining walls, or the outside walls of cast-in-place concrete box culverts until the concrete has developed a compressive strength of not less than 2500 psi.

3.4 TRENCH BEDDING AND BACKFILL

- A. Backfill and compaction shall be in accordance with Section 306-3, "Trench Excavation," of the SSPWC.

3.5 GRADING

- A. Grading shall conform to the Plans and the tolerances specified herein.
 - 1. Transport satisfactory excavated materials to and place in fill or embankment within the limits of the work.
 - 2. Excavate unsatisfactory materials encountered within the limits of the Work and replace with satisfactory materials.
 - 3. Remove unsatisfactory or unsuitable materials to designated waste areas on-site or dispose of, as directed by the Engineer.
 - 4. Immediately backfill behind curbs and along edges of the sidewalk upon completion of those items.
 - 5. After compaction to 80 percent of maximum density is achieved, in accordance with Section 312313 – Subgrade Preparation, finished surfaces should be cleared of stones and all debris and be true to grade and cross section.
- B. Finish the surface of all excavations, embankments, and subgrades to a smooth and compact surface in accordance with the lines, grades, and cross sections or elevations shown on the Plans. Finish grade to within 1/2-inch of the

grades and elevations shown on the Plans. Finish ditches in a manner that will result in effective drainage.

- C. Preparation of Subgrade: Shape subgrade to line, grade, and cross section, and compact as specified. Shaping subgrade shall include plowing, disking, scarifying existing subgrade, and moistening or aerating required to obtain specified compaction. Remove soft or otherwise unsatisfactory material and replace with satisfactory excavated material or other approved material as directed by the Engineer. Bring low areas resulting from removal of unsatisfactory material up to required grade with satisfactory materials, shape entire subgrade to line, grade, and cross section, and compact as specified. After rolling, the surface of the subgrade shall not show deviation greater than 1/2-inch when tested with a 10-foot straightedge applied both parallel and at right angles to the centerline of the area.
- D. Protection and Maintenance of Subgrade:
 - 1. Maintain ditches and drains along subgrade at all times to as required to effectively drain the subgrade. The finished subgrade shall not be disturbed by traffic or other operations and shall be protected and maintained by the Contractor in a satisfactory condition until subbase, base, or pavement is placed. Do not store or stockpile materials on the finished subgrade.
 - 2. Obtain Engineer's inspection and approval of subgrade prior to laying subbase, base, or pavement. Place no subbase, base, or pavement on a muddy, or spongy, subgrade.
- E. Slopes:
 - 1. Finish excavated slopes in conformance with lines and grades shown on the Plans.
 - 2. Excavate slopes so that the average plane of completed slopes conforms to the slopes indicated on the Plans, and no point on the completed slopes varies from the designated plane by more than 3 inches measured at right angles to the slope.

3.6 COMPACTION

- A. Do not compact fill or backfill until it has attained the required moisture content. Add an accurately determined and measured amount of water to the materials or surfaces that are too dry. Dry material containing an excess of moisture by manipulation, aeration, drainage, or other means before being compacted.
- B. When subgrade has been prepared and has reached required grade, proof-roll surfaces to determine if soft or yielding spots exist in the material using a 50-ton pneumatic-tired roller or similar approved equipment. If wet or spongy areas are revealed, notify the Engineer so that corrective measures may be determined. Remove soft spots and refill until they meet the required

compaction. Proof-roll areas which support paving, utility structures, or other structures in the presence of the Engineer and obtain the Engineer's approval before further earthwork operations are performed.

- C. In addition to proof-rolling, perform field density tests as specified under "Field Quality Control" specified herein.
- D. Use power-operated or power-driven hand operated equipment wherever possible to compact to requirements specified herein. Do not operate mobile equipment closer to foundation than a horizontal distance equal to the height of backfill above bottom of wall. Accomplish compaction by sheepsfoot rollers, pneumatic-tired rollers, steel-wheeled rollers, vibrator compactors, or other approved equipment well suited to the type of material being compacted.
- E. If the degree of compaction is unsatisfactory, make necessary adjustments until the Specifications are met. Remove material placed over layers not satisfactorily compacted and re-compact the unsatisfactory areas.
- F. Unless otherwise noted, relative compaction of fill materials composing each layer of fill shall not be less than 95 percent as determined by ASTM D 1556.

3.7 FIELD QUALITY CONTROL

- A. Testing shall be performed by an approved Independent Testing Laboratory retained by the Contractor that is approved by OCTA.
- B. Unless otherwise noted, perform field in-place density tests in accordance with ASTM D D6938 Nuclear Density Test.
- C. At the time of compacting, backfill material and the surface on which it is to be placed shall be within plus or minus 2 percent optimum moisture content and meet specified compaction requirements.
- D. During construction, the appropriate level of inspections and tests shall be performed by a independent third-party testing firm (retained by the Contractor) to confirm soil and subsurface conditions within the site. Contractor is to coordinate with Authority and NWSSB to ensure soil is tested when digging begins.
- E. Testing Frequency

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. No separate measurement will be made for the Work described in this Section.

4.2 PAYMENT

- A. No separate payment will be made for the Work of this Section since its cost is incidental to other payment items.

**Naval Weapons Station Pavement Rehabilitation Project
800 Seal Beach Blvd,
Seal Beach, CA 90740**

**Contract No. C-4-2069
EXHIBIT B**

END OF SECTION

SECTION 31 11 00

CLEARING AND GRUBBING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes

1. Requirements for clearing and grubbing. Perform site clearing in advance of grading operations.

1.2 REFERENCES

- A. Refer to Section 014100 – Regulatory Requirements.
- B. 2018 edition of Standard Specifications for Public Works Construction (SSPWC)
1. Section 300-1, "Clearing and Grubbing"

1.3 SUBMITTALS

- A. Submit the following for approval in accordance with Section 01 33 00 - Submittal Procedures:
1. Site Clearing Plan: Indicate methods to be employed, equipment, procedures, and disposal sites.
 2. Copies of manifests showing delivery of disposed materials in accordance with permit conditions within 24 hours from time of delivery.

PART 2 - PRODUCTS

- A. Provide temporary or permanent materials as required for the proper execution of the Work of this Section.

PART 3 - EXECUTION

3.1 GENERAL

- A. Clearing and grubbing shall conform to Section 300-1, "Clearing and Grubbing," of the SSPWC.
- B. Clear, grub, prune, remove, and dispose of materials, including bushes, brush, , logs, roots, signs, rubbish, refuse, trash and debris as shown on the Plans, specified herein, and as required to perform the Work of the Contract.
- C. Provide barricades, coverings, or other types of protection necessary to
- Clearing and Grubbing

prevent damage to existing improvements indicated to remain in place. Protect improvements on adjacent properties as well as those on City property. Restore existing improvements damaged by the Work to original condition.

- D. Upon completion of site clearing work, City property and adjacent areas shall be neat, clean, and in condition to receive subsequent work.

3.2 EXISTING STRUCTURES AND PROPERTY

- A. Obtain permission from the Engineer prior to removing fencing, signs, posts, catch basin frames and grates, and manhole frames and covers not indicated on the Plans for removal.

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. Clearing and grubbing will be measured by lump sum.

4.2 PAYMENT

- A. The contract lump sum price paid for clearing and grubbing shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in clearing and grubbing, complete in place, as shown on the plans, as specified in these specifications, and as directed by the Engineer.
- B. Payment will be made under the following pay items:

<u>Pay Item</u>	<u>Description</u>	<u>Pay Unit</u>
XXX	Clearing and Grubbing	LS

END OF SECTION

SECTION 31 11 00

SUBGRADE PREPARATION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Requirements for preparation of natural or excavated areas prior to the placement of sub-base material, base material, pavement, or other structures.
 - a. Included are stripping and disposal of all unsuitable material.

B. Related Sections:

1. Section 013300 – Submittal Procedures

1.2 REFERENCES

A. American Association of State Highway and Transportation Officials [AASHTO]

1. AASHTO T 99 Moisture-Density Relations of Soils Using a 2.5-kg (5.5-lb) Rammer and a 305-mm (12-in.) Drop
2. AASHTO T 191 Density of Soil In-Place by the Sand-Cone Method

B. American Society for Testing and Materials [ASTM]

1. ASTM D 2922 Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth)
2. ASTM D 3017 Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth)

C. Refer to Section 014100 – Regulatory Requirements

D. 2018 edition of Standard Specifications for Public Works Construction (SSPWC)

1. Section 301-1, "Subgrade Preparation"

1.3 DEFINITIONS

- A. Unsuitable Material: Material that contains organic matter, soft spongy earth, or other matter of similar nature that compaction to the specified density is unobtainable.

1.4 SUBMITTALS

- A. Submit the following information in accordance with the requirements of Section 013300 - Submittal Procedures, except as modified herein.

1. Test results for dry density testing.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

3.1 PREPARATION

- A. With the exception of areas where compacted fills have been constructed in areas where new construction is required, bring the moisture content to that required for compaction by the addition of water, by the addition and blending of dry, suitable material, or by the drying of existing material.
- B. If it is evident that the subgrade is pumping at any time prior to paving, the Engineer may require proof rolling with a pneumatic-tire roller or other approved equipment at no additional cost to the Authority in order to identify the limits of the unacceptable area.

3.2 RELATIVE COMPACTION

- A. First scarify and loosen the subgrade to a depth of 8 inches, or as stated in the overexcavation requirements included in the Contract drawings.
- B. When fill material is required, a layer of approximately 3 inches of the fill material may be spread and compacted with the subgrade material to provide a better bond.
- C. Construct the cut and fill areas to achieve a uniform soil structure having at least the following minimum dry relative density when tested in accordance with AASHTO T 99 Method A and AASHTO T 191, or ASTM D 2922 and ASTM D 3017 as shown in Table 312313-1.

Table 312313-1. Minimum Dry Relative Density

Location	Minimum Dry Relative Density
All streets	95 percent
Curbs, gutters, and sidewalks	90 percent

1. Adjust the percent of density in accordance with the rock correction procedures for maximum density determination, to compensate for the rock content larger than that which will pass a Number 4 sieve.
2. Submit test results to the Engineer for approval.
3. Subgrade shall be compacted to 95% Minimum Dry Relative Density under all full- depth asphalt pavement sections.

Testing Frequency

3.3 SUBGRADE TOLERANCES

- A. Subgrade upon which pavement, sidewalk, curb and gutter, driveways, or other structures are to be directly placed may not vary more than 1/4 inch from the specified grade and cross-section.
- B. Subgrade upon which sub-base or base material is to be placed may not vary more than 3/4 inch from the specified grade and cross-section.
- C. Variations within these specified tolerances must be compensating so that the average grade and cross-section specified are met.

3.4 GRADING AREAS NOT TO BE PAVED

- A. Grade areas where grade only is called for on the Plans to meet the tolerances for the subgrade where sub-base or base material is to be placed.
- B. Construct the surface to a straight grade from the finished pavement elevations shown on the Plans to the elevation of the existing ground at the extremities of the area to be graded.

3.5 PROTECTION OF EXISTING FACILITIES

- A. Exercise extreme caution to prevent damaging other structures including existing improvements not shown on plans and notify the Engineer immediately if encountered during construction.

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. No separate measurement will be made for the Work described in this Section.

4.2 PAYMENT

- A. No separate payment will be made for the Work of this Section since its cost is incidental to other payment items.

**Naval Weapons Station Pavement Rehabilitation Project
800 Seal Beach Blvd,
Seal Beach, CA 90740**

**Contract No. C-4-2069
EXHIBIT B**

END OF SECTION

SECTION 31 23 17

ROADWAY EXCAVATION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Requirements for excavation involved in the grading and construction of roadways.
 - a. Excluded are structure excavation and trench excavation as indicated below, and any other excavation separately designated within the Specifications or on the Plans.

B. Related Sections:

1. Section 310000 - Earthwork

1.2 REFERENCES

- A. Section 014100 – Regulatory Requirements
- B. 2018 edition of Standard Specifications for Public Works Construction (SSPWC)
- C. Caltrans 2023 Standard Plan

1.3 DEFINITIONS

- A. Unsuitable Material is defined, as material that contains organic matter, soft spongy earth, or other matter of similar nature that compaction to the specified density is unobtainable.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

3.1 UNSUITABLE MATERIAL

- A. Do not use Unsuitable Material for fill, subgrade, shoulders, or other uses.
- B. Excavate Unsuitable Material from the site or otherwise dispose of it as directed by the Engineer.

3.2 OVERSHOOTING AND OVEREXCAVATING

- A. Backfill and compact all unauthorized excavated areas to the original ground

elevation of authorized section at no additional cost to the Agency.

- B. Exercise care to prevent excavating below the grade for the bottom of ditches.
 - 1. Fill and compact areas excavated below the proper grade with suitable material at no additional cost to the Agency.
- C. In areas to receive fill, any existing remaining vegetation on existing ground should be stripped and loose, soft, dry, wet, or otherwise unsuitable materials should be removed from the site prior to fill placement.

3.3 SLIDES AND SLIPOUTS

- A. Excavate, to designated lines or slopes, material that is outside planned roadway, or ditch slopes that in the opinion of the Engineer is unstable and constitutes potential slides; material that has come into the roadway, or ditch; and material that has slipped out of new or old embankments.
 - 1. Excavation may be either by benching or in a manner as directed by the Engineer.
 - 2. Use the excavated material in the construction of embankments or dispose of it as directed by the Engineer.

3.4 SLOPES

- A. Finish excavated slopes in conformance with lines and grades shown on the Plans.
 - 1. Remove all excavated debris and loose material.
 - 2. Excavate slopes so that the average plane of completed slopes conforms to the slopes indicated on the Plans, and no point on the completed slopes varies from the designated plane by more than 6 inches measured at right angles to the slope except where excavation is in rock.
 - a. In rock excavation areas, no point may vary more than 2 feet from the designated plane of the slope.
 - b. In no case may any portion of the slope encroach on the roadbed.
 - 3. Round the tops of excavated slopes and the ends of excavations as shown on the Plans.
- B. Finish embankment slopes in conformance with the lines and grades shown on the Plans.
 - 1. Construct embankment slopes so that the average plane of completed slopes conforms to the slopes indicated on the Plans, and no point on the completed slopes varies from the designated plane by more than 6 inches measured at right angles to the slope.
 - 2. Material resulting from excavating ditches or channels may be used to

construct roadway embankments, dikes, or for other purposes, or it may be disposed of as directed by the Engineer.

3.5 SURPLUS EXCAVATED MATERIAL

- A. Unless otherwise shown on the Plans, specified in the Specifications, or approved by the Engineer, the Authority and the NWSSB, do not dispose of surplus excavated material within the NWSSB property.
 - 1. Make all arrangements for the disposal of surplus excavated material at off-site locations approved by the Engineer.
 - 2. Submit the written consent of the owner of the property on which such material will be disposed to the Engineer upon request.
- B. Any quantity of surplus excavated material shown on the Plans or specified in the Specifications is approximate only.
 - 1. Verify that sufficient material is available for the completion of the embankments before disposing of any indicated surplus material inside or outside the right-of- way.
 - 2. Any shortage of material caused by premature disposal of surplus material by the Contractor must be replaced at no additional cost to the Agency.

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. Roadway Excavation will be measured by the cubic yard.

4.2 PAYMENT

- A. The contract price paid per cubic yard for roadway excavation shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in excavation, complete in place, as shown on the Plans, as specified in these Specifications, and as directed by the Engineer.
- B. No separate payment will be made for roadway backfill since its cost is incidental to other payment items.

<u>Pay Item</u>	<u>Description</u>	<u>Pay Unit</u>
XXX	Roadway Excavation	CY

**Naval Weapons Station Pavement Rehabilitation Project
800 Seal Beach Blvd,
Seal Beach, CA 90740**

**Contract No. C-4-2069
EXHIBIT B**

END OF SECTION

COLD MILLING ASPHALT PAVING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes
 - 1. Requirements for milling existing asphalt pavement.

1.2 REFERENCES

- A. Section 014100 – Regulatory Requirements
- B. Section 015710 – Temporary Air Pollution Control
- C. Section 013520 – Hazardous and Contaminated Substance Health and Safety Plan
- D. Section 036400 – Grinding Concrete
- E. 2018 edition of Standard Specifications for Public Works Construction (SSPWC)

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

3.1 GENERAL

- A. Cold milling of asphalt pavement shall conform to Section 404 “Cold Milling” of the SSPWC.

PART 4 -

4.1 CONSTRUCTION

- A. Method
 - 1. Hot Planing Methods are prohibited.
 - 2. Milling depth is 1/4 inch
 - 3. When milling is specified, the existing asphaltic concrete will be removed in accordance with the details shown on the Plans with equipment specifically designed to remove such material by means of grinding or chipping to a controlled line and grade. The equipment used will be capable of removing the existing asphaltic concrete to within one-half tolerance of the specified 1/4 inch of milling depth. The removal will be accomplished in a manner which does not destroy the integrity of the asphaltic concrete pavement that remains and which

does not result in a contamination of the milled asphaltic concrete with the underlying base material. The milled material will be removed and disposed of.

4. The Contractor will take appropriate steps to maintain drainage areas where the pavement surface has temporarily been removed.
5. Pavement striping that has been removed by the milling operation will be replaced with temporary pavement marking as required in order to provide proper guidance of traffic.

PART 5 – EXECUTION

3.01 FIELD QUALITY CONTROL/QUALITY ASSURANCE

- A. Give minimum of 48-hour advance notice of each inspection to the Authority when ready for 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 6 – MEASUREMENT AND PAYMENT

5.1 MEASUREMENT

- A. Asphalt Concrete (AC) Cold Milling shall be measured by the square footage area.

5.2 PAYMENT

- A. The contract price paid for cold milling of asphalt as paid by the square footage area shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in milling of asphalt, complete in place, as shown on the plans, as specified in these Specifications, and as directed by the Engineer.

**Pavement Rehabilitation at the Naval Weapons Station
Seal Beach Project
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Seal Beach, CA 90740**

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EXHIBIT B**

B. Payment will be made under the following pay items:

<u>Pay Item</u>	<u>Description</u>	<u>Pay Unit</u>
xxx	AC Cold Milling	SQFT

END OF SECTION

SECTION 32 11 23

AGGREGATE BASE COURSES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes requirements for furnishing, placing, and compacting aggregate for aggregate base course as indicated.

1.2 RELATED DOCUMENTS

- A. General:
 - 1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections apply to this Section.
- B. Related Sections:
 - 1. Section 01 33 00, Submittal Procedures.

1.3 REFERENCED STANDARDS

- A. General:
 - 1. The following documents form part of the Specifications to the extent stated. Bring conflicts between Specifications, Drawings, and the referenced documents to the attention of OCTA, in writing, for resolution before taking any related action. Where differences exist between codes and standards, the most stringent shall apply.
 - 2. If the year of the adoption or latest revision is omitted from the designation, it shall mean the specification, manual or test designation in effect the date the Notice to Proceed with the Work is given.
- B. ASTM International (ASTM):
 - 1. ASTM D1241, Specification for Materials for Soil-Aggregate Subbase, Base, and Surface Courses.
 - 2. ASTM D1557, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³ (2,700 kN-m/m³)).
 - 3. ASTM D6913/D6913M, Standard Test Methods for Particle-Size Distribution (Gradation) of Soils Using Sieve Analysis.

4. ASTM D6938, Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth).
- C. State of California, Department of Transportation (Caltrans), Standard Specifications, latest edition Note that references to section numbers herein are aligned with the 2018 edition of Caltrans Standard Specifications. Contractor must use the corresponding sections in the latest edition when preparing Final Design.
 1. Caltrans Standard Specifications, Division IV, Section 26, Aggregate Bases.

1.4 SUBMITTALS

- A. General:
 1. Submittals shall be made in accordance with Section 01 33 00, Submittal Procedures and as specified herein.
 2. Shaft submittals shall be coordinated with all relevant submittals identified in this Section, assembled and submitted as a single, comprehensive submittal.
 3. Where calculations are required to be submitted, they shall be signed and sealed by the Contractor's Engineer.
 4. Calculations shall clearly identify all parameters used, state all assumptions made in the calculation, and identify all sources of information.
 5. All shop drawings shall be legible with dimensions accurately shown and clearly marked in English.
- B. Product Data: Submit source, gradation, R-value, sand equivalent, and durability for the proposed base course material.
- C. Test Reports: Submit plant and field test reports as specified in Article 2.2 and 3.4 herein.

1.5 CLASSIFICATION

- A. Aggregate bases are designated as Class 2 or Class 3. The class of aggregate base must be as indicated in the Drawings.

1.6 QUALITY ASSURANCE

- A. Qualifications:
 1. Contractor's Engineer: Professional Civil Engineer in the state of California.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Aggregate Base Material:
 - 1. Aggregates for the two classes of aggregate bases must conform to the requirements described in the materials section of the Caltrans Standard Specifications, Division IV, Section 26, Article 1.02, Materials.
 - 2. Aggregate for the two classes of aggregate bases at the time the base material is deposited on the prepared subgrade or subbase must be free from vegetable matter and other deleterious substances and must conform with ASTM D1241.

2.2 SOURCE QUALITY CONTROL

- A. Contractor must perform sampling and tests of the aggregate base material in accordance with ASTM D6913/D6913M and the tests required in the Caltrans Standard Specification, Division IV, Section 26 to determine compliance with the requirements herein. Contractor must submit test results reports to OCTA for acceptance prior to material delivery to the site.
- B. Aggregate grading or sand equivalent tests must represent no more than 500 cubic yards of base course material or one day's production, whichever is less.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Aggregate base course must be applied over the prepared subgrade or subbase and compacted in accordance with the Caltrans Standard Specifications, Division IV, Section 26.
- B. Aggregate base course must have a minimum uniform thickness, after compaction, of dimensions indicated in the Drawings. Where it is not indicated in the Drawings, the compacted thickness must be 6 inches for parking stalls and 8 inches for roads, driveways, and parking area aisles.
- C. All compaction expressed in percentages in this section refers to the maximum dry density as determined by ASTM D1557.
- D. Spreading of material:
 - 1. Spreading of aggregate base material must be OCTA-accepted methods and must conform to the requirements as described in the Caltrans Standard Specifications, Division IV, Section 26.

E. Examination

1. Contractor must call for an inspection by OCTA and obtain their written acceptance of the prepared subgrade or subbase before placing the aggregate base course.
2. The subgrade or subbase that will receive the aggregate base course, immediately prior to spreading, must conform to the compaction and elevation tolerances indicated in the Final Design for the material and must be free of standing water and loose or extraneous material. If not indicated in Final Design compact to a minimum of 95% relative compaction.

3.2 FIELD QUALITY CONTROL

- A. Contractor must perform field tests in accordance with ASTM D6938 to determine compliance with specified requirements for density and compaction of aggregate base material, and to determine moisture-content compliance of the installed base course.
- B. Testing frequency must be no less than one test for every 2,000 square feet of base course material, per layer or lift. Test results must be reported to OCTA for acceptance.

3.3 INSPECTION, MAINTENANCE, AND REPAIR

- A. Damage shall be immediately reported to OCTA, and repaired immediately at the Contractor's expense, in accordance with approved repair procedures.

3.4 COMPACTING

Compaction of aggregate base material must be tested by OCTA-accepted methods and must conform to the requirements as described in the Caltrans Standard Specifications, Division IV, Section 26.

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

A. Crushed Aggregate Base will be measured by the cubic yard.

4.2 PAYMENT

A. The contract price paid per cubic yard for aggregate base course shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in aggregate base course, complete in place, as shown on the plans, as specified in these Specifications, and as directed by the Engineer.

B. Payment will be made under the following pay items:

<u>Pay Item</u>	<u>Description</u>	<u>Pay Unit</u>
XXX	Crushed Aggregate Base	CY

END OF SECTION

SECTION 32 12 16

ASPHALT PAVING

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes requirements for providing and placing Hot Mix Asphalt (HMA) including HMA Dike on a prepared base in accordance with the lines, grades, pavement section thicknesses, and typical cross-sections as shown on the Drawings.

1.2 RELATED DOCUMENTS

- A. General:
 - 1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections apply to this Section.
- B. Related Sections:
 - 1. Section 01 33 00, Submittal Procedures
 - 2. Section 32 11 23, Aggregate Base Courses

1.3 REFERENCED STANDARDS

- A. General:
 - 1. The following documents form part of the Specifications to the extent stated. Bring conflicts between Specifications, Drawings, and the referenced documents to the attention of OCTA, in writing, for resolution before taking any related action. Where differences exist between codes and standards, the most stringent shall apply.
 - 2. If the year of the adoption or latest revision is omitted from the designation, it shall mean the specification, manual or test designation in effect the date the Notice to Proceed with the Work is given.
- B. State of California, Department of Transportation (Caltrans): Note that references to section numbers herein are aligned with the 2018 edition of Caltrans Standard Specifications. Contractor must use the corresponding sections in the latest edition.
 - 1. Caltrans Standard Specifications, Division V, Section 37, Bituminous Seals.
 - 2. Caltrans Standard Specifications, Division V, Section 39, Asphalt Concrete.
 - 3. Caltrans Standard Specifications, Division XI, Section 92, Asphalt Binders.

4. Caltrans Standard Specifications, Division XI, Section 94, Asphaltic Emulsions.
5. Caltrans Standard Specifications, Division XI, Section 96, Geosynthetics.
6. Caltrans Standard Test Methods, California Test 202, Method of Tests for Sieve Analysis of Fine and Coarse Aggregates.
7. Caltrans Standard Test Methods, California Test 375, Determining the In-Place Density and Relative Compaction of Hot Mix Asphalt Pavement Using Nuclear Gages.
8. Caltrans Standard Test Methods, California Test 379, Method of Determining Asphalt Content of Bituminous Mixtures by Use of the Nuclear Gage.
9. Caltrans Standard Test Methods, California Test 382, Method of Test for Determination of Binder Content of Hot Mix Asphalt by the Ignition Method.
10. HMA Dike (Type A) per Caltrans Standard Plan A87B

1.4 SYSTEM DESCRIPTION

- A. Regulatory Requirements:
1. Asphaltic products and solvents must comply with the latest regulations of the South Coast Air Quality Management District regarding regulations governing permissible content of volatile organic compounds.

1.5 SUBMITTALS

- A. General:
1. Submittals shall be made in accordance with Section 01 33 00, Submittal Procedures and as specified herein.
 2. Where calculations are required to be submitted, they shall be signed and sealed by the Contractor's Engineer.
 3. Calculations shall clearly identify all parameters used, state all assumptions made in the calculation, and identify all sources of information.
 4. All shop drawings shall be legible with dimensions accurately shown and clearly marked in English.
- B. Mix Design: Submit the proposed mix design for each asphaltic concrete mixture and seal coat that will be used in the Work, covering the specific materials that will be used in the mixes. Include test data in support of each proposed mix design.
- C. Quality Control Submittals:
1. Record Keeping: Submit sampling and testing results and inspection records within 24 hours of asphaltic concrete placement.

1.6 QUALITY ASSURANCE

- A. Work must comply with the construction requirements listed in the Caltrans Standard Specifications, Division V, Section 39, Article 2.01C and must not be performed under the following conditions:
 - 1. Ambient, base or pavement temperatures below 50 degrees Fahrenheit.
 - 2. Over-saturated base and subbase material. The base and subbase must be wheel-rolled by a loaded water truck to determine any yielding. If deflection is observed, do not perform paving until the grade is stable and unyielding and conforms to compaction requirements.
- B. Minimum Qualifications:
 - 1. Contractor's Engineer: Professional Civil Engineer licensed in the state of California.

1.7 PROTECTION

- A. Protect concrete pavements and walks, curbs and bases, and other improvements adjacent to the operations with suitable materials. Contractor is responsible for any damage caused by Contractor's employees or equipment and must make necessary repairs. Buildings and other surfaces must be covered with paper or other protection, where required. All damage caused by Contractor's operations must be repaired or replaced as required.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Base Course Material: Provide Class 2 aggregate base mineral aggregate as specified in Section 32 11 23, Aggregate Base Courses.
- B. Tack Coat: Provide a diluted SS-1 or SS-1h emulsion in conformance with the Caltrans Standard Specifications, Division XI, Section 94.
- C. Asphalt Paving Materials:
 - 1. Hot Mix Asphalt: Provide Type A hot mix asphalt, with the gradation of the combined aggregate conforming to 1/2-inch maximum size as indicated in the Drawings, and as specified in the Caltrans Standard Specifications, Division V, Section 39.
 - 2. Asphalt Binder: Provide performance-grade asphalt binder in accordance with the Caltrans Standard Specifications, Division XI, Section 92.
 - 3. Mixing Facilities: Asphalt concrete surfacing material must be furnished from a OCTA-accepted commercial asphalt central mixing plant.

- D. Bituminous Seals: Provide bituminous seals as shown in the Drawings, in conformance with the Caltrans Standard Specifications, Division V, Section 37.
- E. Mix Design:
 - 1. The design of asphaltic concrete mixes must be provided by Contractor, and must be obtained from a qualified independent testing laboratory or agency, properly equipped to design asphaltic concrete mixes. Contractor is responsible for the costs of obtaining mix designs.
 - 2. The design of asphaltic concrete mixes, including aggregate quality and gradation, must conform with the quality requirements of the Caltrans Standard Specifications, Division V, Section 39.

2.2 SOURCE QUALITY CONTROL

- A. Contractor must perform sampling and tests of materials in accordance with the following requirements:
 - 1. Aggregate Grading: The combined aggregate, before adding the asphalt binder (paving asphalt), must conform with the operating range requirements specified in the Caltrans Standard Specifications, Division V, Section 39 for the type of aggregate specified herein. Conformance with grading requirements must be determined by California Test 202.
 - 2. Frequency of Tests: Minimum testing frequency must be one test for every 500 tons, or fraction thereof, for each graded aggregate placed each Day.
 - 3. Asphalt Content: Asphalt content must be within plus or minus 0.50 percent of the mix design content. Conformance with asphalt content requirements must be determined by California Test 382 or 379 from samples taken from the mat behind the paving machine. Minimum testing frequency must be one test for every 500 tons, or fraction thereof, for each asphaltic paving mix placed each day.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Placing of Base Course:
 - 1. Contractor must call for an inspection by OCTA and obtain written acceptance of the subgrade before proceeding with the base course.
 - 2. The base course must be placed over the finished subgrade with compacted thickness in accordance with Section 32 11 23, Aggregate Base Courses.
 - 3. After the base course has been completed, Contractor must request an inspection by OCTA and obtain their written acceptance before proceeding with application of the asphalt-wearing surface.

B. Placing Asphalt Concrete including HMA Dike:

1. Areas that will be paved must be covered with a layer of hot asphalt concrete surfacing no less than the thickness indicated in the Drawings after compaction. Where not indicated in the Drawings, compacted thickness must be a minimum of 4 inches.
2. Paving asphaltic concrete must be delivered, laid, rolled, and finished in accordance with the Caltrans Standard Specifications, Division V, Section 39.
3. Before placing asphalt concrete on an untreated base, a liquid asphalt prime coat must be applied to the base course in the areas that will be surfaced in accordance with the Caltrans Standard Specifications, Division V, Section 39. The prime coat must be applied at the rate of 0.25 gallons per square yard.
4. Before placing asphalt concrete, a tack coat (paint binder) must be applied to all vertical surfaces against which asphalt concrete surfacing will be placed. Tack coat (paint binder) must be applied in accordance with the Caltrans Standard Specifications, Division IX, Section 39, Article 4 at a rate of 0.02 to 0.10 gallons per square yard.
5. Where cold joints are indicated in the Drawings, or as necessary, cut back the placed and compacted cold asphalt a minimum of 3 inches with a concrete or masonry power saw, so that a vertical face of compacted full thickness material is exposed. Treat this surface with a tack coat before proceeding with the placement of a new asphaltic concrete surface.
6. Finish paving must conform to finish elevations within plus or minus 0.01 feet and must be level to within plus or minus 1/4 inch in 10 feet when measured with a 10-foot straightedge in any direction.
7. Joints must be heated if laid more than 3 hours previously.
8. Initial compaction rolling must occur when the mix cools below 250 degrees Fahrenheit.
9. Provide and roll a 1/4-inch lip above adjoining Portland cement concrete surfaces.

C. Bituminous Seal

1. Apply bituminous seal over finished paving surfaces in conformance with the Caltrans Standard Specifications, Division V, Section 37.

3.2 FIELD QUALITY CONTROL

- A. Contractor must control the quality of the Work and must provide adequate testing to ensure compliance with the requirements in this section.
- B. After completion of paving Work, all pavement must be flooded with water, and any resulting ponds must be ringed with chalk. Such hollows must be corrected by adding asphalt paving materials and re-rolling until all pavement is completely level and free from hollows and high spots.

- C. Contractor must perform in-place density and compaction tests of the completed pavement in accordance with California Test 375 to determine compliance with the requirements herein. Relative compaction must be 92 to 96 percent. Test the density core for each 250 tons of hot mix asphalt. The maximum area size must be 500 tons with a minimum of three tests per location, and one test for each 50 tons after. Each pavement area must be an independent lot. Compaction must be taken as the average for a pavement area. If compaction does not comply with the above requirements, Contractor may use hot mix asphalt and take a payment deduction as shown in the table for reduced payment factors as shown in the Caltrans Standard Specifications, Division V, Section 39, Article-2.01A(4)(i)(ii).
- D. Hot mix asphalt arriving at the Jobsite below 260 degrees Fahrenheit shall be rejected.

3.3 INSPECTION, MAINTENANCE, AND REPAIR

- A. Damage shall be immediately reported to OCTA, and repaired immediately at the Contractor's expense, in accordance with approved repair procedures.
- B. Pavement Maintenance:
 - 1. Upon completion of final rolling, traffic is not be permitted on the finished pavement for at least six hours, and until the asphalt concrete has cooled sufficiently to withstand traffic without being deformed.
 - 2. Finished pavement must be maintained in finished clean condition until the Work is accepted by OCTA and NWSSB.
- C. Repair of Asphalt Pavement:
 - 1. Pavement repair must be as follows:
 - a. Sawcut vertical edges of pavement in rectangular shapes at least 1 foot beyond the damaged material.
 - b. Provide base material per the Drawings and the requirements of this section.
 - c. Apply tack coat to the vertical faces of adjoining asphalt and concrete.
 - d. Paving lifts must be a single lift if the depth is less than 3.5 inches. If the depth is 4 or more inches, place asphalt in lifts of 3 inches maximum, with a minimum of 2 inches for the top lift. Paving and compaction must comply with the requirements of this section. Heat cold joints of adjacent existing pavement if placed over 3 hours before placing them on new asphalt.
- D. Grinding of Asphalt Pavement:
 - 1. Do not use a heating device to soften the pavement.
 - 2. The grinding machine must be:
 - a. Equipped with a cutter head width that matches the grinding width unless a wider cutter head is authorized.

- b. Equipped with automatic controls for the longitudinal grade and transverse slope of the cutter head and:
 - 1) If a ski device is used, it must be at least 30 feet long, rigid, and a 1-piece unit. The entire length must be used in activating the sensor.
 - 2) If referencing from existing pavement, the grinding machine must be controlled by a self-contained grade reference system. The system must be used at or near the centerline of the roadway. On the adjacent pass with the grinding machine, a joint-matching shoe may be used.
 - c. Equipped to effectively control dust generated by the grinding operation.
 - d. Operated such that no fumes or smoke is produced. Replace broken, missing, or worn machine teeth.
3. If you do not complete placing the hot mix asphalt surfacing before opening the area to traffic, you must:
- a. Construct a temporary hot mix asphalt taper to the level of the existing pavement.
 - b. Place hot mix asphalt during the next work shift.
 - c. Submit a corrective action plan that shows you will complete grinding and placement of hot mix asphalt in the same work shift. Do not restart grinding activities until the corrective action plan is authorized.

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. Asphalt concrete shall be measured by the ton.
- B. HMA Dike (Type A) shall be measured by lineal foot.

4.2 PAYMENT

- A. The contract price paid per ton for asphalt concrete shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in furnishing and placing asphalt concrete, complete in place, as shown on the plans, as specified in these specifications, and as directed by the Engineer.
- B. The contract price paid for placing HMA Dike (Type A) shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in furnishing and placing HMA Dike (Type A), complete in place, as shown on the plans, as specified in these specifications, and as directed by the Engineer.
- C. Payment will be made under the following pay items:

<u>Pav Item</u>	<u>Description</u>	<u>Pav Unit</u>
------------------------	---------------------------	------------------------

**Pavement Rehabilitation at the Naval Weapons Station
Seal Beach Project
800 Seal Beach Blvd,
Seal Beach, CA 90740**

**Contract C-4-2069
EXHIBIT B**

XXX	Asphalt Concrete Pavement	TON
XXX	HMA Dike (Type A)	LF

END OF SECTION

SECTION 32 12 18
FULL DEPTH RECYCLING

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes requirements for pulverizing existing asphalt concrete pavement and underlying material as shown on the Drawings.

1.2 DEFINITIONS

- A. Lot: 2,000 sq yd of full depth recycling—no stabilizer.

1.3 RELATED DOCUMENTS

- A. General:
 - 1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections apply to this Section.
- B. Related Sections:
 - 1. Section 01 33 00, Submittal Procedures
 - 2. Section 32 11 23, Aggregate Base Courses
 - 3. Section 32 12 16, Asphalt Paving

1.4 SUBMITTAL

- A. At least 10 days before starting full depth recycling—no stabilizer activities submit the QC plan.
- B. The QC plan must include a pulverizing and paving plan outlining the sequence of work, including the maximum production rate for full depth recycling—no stabilizer activities.
- C. Submit the test results for the quality characteristics within the times after sampling shown in the following table:

Quality characteristic	Maximum reporting time allowance
Gradation	24 hours
Depth of cut	
In-place wet density	
Relative compaction	

1.5 QUALITY CONTROL AND ASSURANCE

- A. Meet with the Engineer 1 week before starting full depth recycling—no stabilizer activities to review the QC plan.
- B. Perform sampling and testing for each test strip and production work at the specified frequency for the quality characteristics shown in the following table:

Full Depth Recycling - No Stabilizer Quality Characteristic Sampling Locations and Testing Frequencies

Quality characteristic	Test method	Minimum sampling and testing frequency	Sampling location
Gradation	California Test 202	Test strip and 1 per lot	Loose mix after pulverizing and mixing
Depth of cut	--	300 feet	Both sides of recycling machine along cut length
In-place wet density	California Test 231	The same locations as relative compaction tests	--
Relative compaction	California Test 231	One per test strip and 10 random locations per lot	Compacted mix

- C. Allow 24 hours for authorization of the test strip.
- D. The Department accepts full depth recycling—no stabilizer based on:
 1. Visual inspection including:
 - i. Segregation, tearing, and scarring of the finished surface
 - ii. Variance of more than 0.05 foot measured from the lower edge of a 12-foot straightedge
 - iii. Uniform surface texture throughout the work limits
 - iv. Repaired areas
 2. Compliance with the following table:

Full Depth Recycling—No Stabilizer Requirements for Acceptance

Quality characteristic	Test method	Requirement
Relative compaction (min, %)	California Test 231	95
Thickness (ft)	Field measurement	Not more than 0.05 ft less than the thickness shown

PART 2 - PRODUCTS

- A. The quality characteristics of full depth recycling—no stabilizer must comply with the requirements shown in the following table:

Full Depth Recycling—No Stabilizer Quality Characteristic Requirements		
Quality characteristic	Test method	Requirement
Gradation (% passing) Sieve Size: 2" 1-1/2"	California Test 202	100 90–100
Depth of cut(ft)	--	Not more than 0.05 ft less than the thickness shown
In-place wet density (lb/cu ft)	California Test 231	Report only
Relative compaction (min, %)	California Test 231	95

- B. If supplementary aggregate is specified, supplementary aggregate must comply with the specifications for Class 2 aggregate base in section 26.

PART 3 - EXECUTION

- A. Pulverizing equipment must:
1. Be a self-propelled recycling machine
 2. Pulverize the existing pavement and underlying material to the required size
 3. Mix the pulverized pavement, underlying material, and water into a homogeneous and uniform mixture
 4. Be equipped with automatic depth controls capable of maintaining the cutting depth to within 0.05 foot of the depth shown
 5. Have a minimum 8-foot-wide cutter that can remove the existing pavement to the specified depths
- B. Compacting equipment must be a sheepfoot roller, a vibratory steel-tired roller, and a pneumatic-tired roller. All compacting equipment must be self-propelled and reversible. The frequency of amplitude of vibrating rollers must be adjustable and exceed a static force of 15 tons in vibratory mode.
- C. The finished surface must be free from segregation, tearing, and scarring, and have a uniform surface texture throughout the work limits.
- D. Maintain the full depth recycling—no stabilizer surface free of ruts, bumps, indentations, raveling, and segregation. Repair damaged full depth recycling—no stabilizer with minor HMA.

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. Full Depth Recycling of existing asphalt concrete pavement and underlying material shall be measured by cubic yard.

4.2 PAYMENT

- A. The contract price paid per cubic yard for full depth recycling shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in furnishing and pulverizing asphalt concrete and underlying material, complete in place, as shown on the plans, as specified in these specifications, and as directed by the Engineer.

- B. Payment will be made under the following pay items:

<u>Pay Item</u>	<u>Description</u>	<u>Pay Unit</u>
XXX	Full Depth Recycling	CY

END OF SECTION

SECTION 32 17 24

PAVEMENT STRIPES AND MARKINGS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes:

1. Requirements for removal and installation of traffic stripes

1.2 DEFINITIONS

A. NOT USED

1.3 REFERENCES

- A. Section 01 33 00, Submittal Procedures
- B. Standard Specifications for Public Works Constructions (SSPWC)
- C. State of California, Department of Transportation (Caltrans), Standard Specifications, latest edition.

1.4 SUBMITTALS

A. General:

- a. Submittals shall be made in accordance with Section 01 33 00, Submittal Procedures and as specified herein.

B. Product Data: Submit manufacture's product data for materials.

1.5 QUALITY ASSURANCE

A. Not used

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Thermoplastic traffic stripe and pavement markings shall be in accordance with Section 84-2, "Traffic Stripes and Pavement Markings," of the Caltrans Standard Specifications.
 - a. Thermoplastic material shall be free of lead and chromium, and shall conform to the requirements in Caltrans Specification PTH-02ALKYD.
 - b. Retroreflectivity of the thermoplastic traffic stripes and pavement markings

shall conform to the requirements in ASTM D 6359-99. White thermoplastic traffic stripes and pavement markings shall have a minimum initial retroreflectivity of 250 mcd m⁻² lx⁻¹. Yellow thermoplastic traffic stripes and pavement markings shall have a minimum initial retroreflectivity of 150 mcd m⁻² lx⁻¹.

- c. Thermoplastic traffic stripes and pavement markings shall be free of runs, bubbles, craters, drag marks, stretch marks, and debris.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Provide temporary striping and markings as required by Authority, to accommodate traffic demand for interim construction staging conditions to resemble existing pavement striping.
- B. Thermoplastic traffic stripes shall be applied at the minimum thickness and application rate as specified below. The minimum application rate is based on a solid stripe of six (6) inches in width.

Minimum Stripe Thickness (inch)	Minimum Application Rate (lb/ft)
0.079	0.27

3.2 FIELD QUALITY CONTROL

NOT USED

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. Removal of existing traffic stripe shall be measured by the lineal foot.
- B. Installation of new yellow traffic stripe shall be measured by lineal foot.

4.2 PAYMENT

- A. The contract price paid for removal of existing traffic stripe as paid by lineal foot shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in removal of existing traffic stripe, complete in place, as shown on the plans, as specified in these Specifications, and as directed by the Engineer.

**Pavement Rehabilitation at the Naval Weapons Station
Seal Beach Project
800 Seal Beach Blvd,
Seal Beach, CA 90740**

**Contract No. C-4-2069
EXHIBIT B**

- B. The contract price paid for installing new 6" yellow traffic stripe as paid by lineal foot shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in installing new 6" yellow traffic stripe, complete in place, as shown on the plans, as specified in these Specifications, and as directed by the Engineer.
- C. Payment will be made under the following pay items:

<u>Pay Item</u>	<u>Description</u>	<u>Pay Unit</u>
xxx	Remove Stripe (Westminster St)	LF
xxx	Yellow Traffic Stripe (Westminster St)	LF

END OF SECTION

REQUEST FOR SITE APPROVAL



CONSTRUCTION LAYDOWN YARD

1. PROJECT DESCRIPTION *(Provide a very brief description of the project.)*

2. REQUESTED DURATION:
START _____ END _____

3. REQUESTED LOCATION(S):

A. Laydown Yard approximate size (ex. 100ft x 100ft):
B. Laydown Yard Fenced: ☐
C. Laydown Yard fence to include screening material: ☐
Note: Fence Screening required at all locations near the Installation perimeter
D. Laydown Yard Site Map Attached: ☐

4. MATERIALS TO BE STORED (General list provided by Contractor or estimated by DM):

5. EQUIPMENT TO BE STORED (General list provided by Contractor or estimated by DM):

6. CONTRACTORS TRAILER (Estimated by DM or Confirmed by Contractor): ☐

7. UTILITY HOOKUPS ☐

8. SITE APPROVAL NEEDED BY:

9. REQUESTED BY:

10. APPROVED BY:

8000
Ser N351/009
14 Jul 21

MEMORANDUM

From: Explosives Safety Program Manager, Commander Navy Region Southwest
To: Public Works Officer, Naval Weapons Station Seal Beach CA

Subj: CONSTRUCTION WORKER AUTHORIZATION FOR ROAD REPAIRS AND
RAILROAD TRACK REMOVAL

Ref: (a) NAVSEA OP 5 Volume 1, Seventh Revision
(b) Naval Weapons Station Seal Beach Construction Worker Authorization Request dtd
23 Jun 21

1. In accordance with reference (a) approval authority for Construction Worker Authorization requests, reference (b) is returned approved.
2. The project, is to repair roads and remove railroad tracks within K-18 intraline distance of explosives operating buildings and magazines. In accordance with reference (b) drawings, construction workers will be required to work within explosives safety quantity distance (ESQD) arcs for a majority of the potential exposed sites.
3. Safety mitigations required include:
 - a. All contractors must receive a Hazard Control Brief initially, and before the start of work when there are any changes related to explosives storage or operational status. Brief will include associated hazards with operations permitted within the arcs, emergency response requirements, notifications, and security protocols.
 - b. Concurrent operations are not permitted. Construction work and ordnance handling operations will be scheduled to ensure the highest level of personnel protection. Detailed coordination must occur with Navy Munitions Command Seal Beach, the Project Manager, and the contractors to ensure compliance with this approval.
 - c. All military and civilian personnel working in or around the ordnance facilities will be informed of construction work being performed, to ensure safety of personnel, equipment, access controls, and situational awareness.
 - d. Occupants of construction trailers near the job sites must be directly involved with the project construction. Administrative personnel are not permitted in job site trailers and must be located outside inhabited building distance arcs.
 - e. All hot work requirements of reference (a) must be adhered to.
 - f. Work is limited to the scope approved, any additions or modifications not previously approved by higher authority for this project may require additional reviews and approvals. Changes must be communicated to the local Explosives Safety Officer.
 - g. All Federal, State, Department of Defense, Department of Navy, and local requirements must be complied with.

5. My point of contact is David Jenkins Explosives Safety Officer, who can be reached at david.l.jenkins1@navy.mil or at 562-626-7009.

L. R. MORALES



Fire & Emergency Services Contractors Fire Prevention Guide

These guidelines and rules apply to all contractors performing work on Government properties and shall comply with all National Fire Protection Association (NFPA) standards and Navy instructions. Before any hot work is performed, a Hazardous Operation Permit shall be obtained from the fire department.

Reporting of ALL Fires & Other Emergencies:

- Any fire, no matter how small, will be reported to the responsible fire department immediately by dialing 9-1-1.
- The reporting party shall state the installation and address of where the emergency is located at. Remain on the line until the dispatcher indicates to hang up.
- The prime contractor shall insure that all workers are briefed as to the locations of telephones, fire alarm pull stations, and the use of cell phones to report emergencies.

Hot Work Requests: To include; welding, cutting, torch brazing, soldering, grinding, cutting, other spark, heat guns, heat or flame producing operations. If unsure request clarification from the installation Fire Inspector.

- Hot-work permits are issued **Monday – Thursday 0700 -1400 and Friday 0700-1300 only**, except for emergency work.
- **Where a Permit Authorizing Individual (PAI) Program is established within the installation Public Works Department, the PAI will be contacted to request a hotwork permit.**
- Where PAI is not available, requests for hot work permits shall be through the Region Dispatch non-emergency line: **619-524-6999**. Contractors shall not go directly the fire stations to request a permit.
- When required, contractors shall have adequate type and number of fire rated type fire blankets/drapes. Non-rated shielding material shall not be used.
- Adequate numbers and types of portable fire extinguishers shall be provided by the contractor. Contractors shall not use government extinguishers for primary hot work.

Open Burning: Open burning is strictly prohibited except with prior approval by the Installation Fire Department.

Confined Space/Gas Free Certifications

- Where welding or cutting is being performed in a confined space, a confined space entry and gas-free certificate is required, before the Fire Prevention Office will issue a written permit.
- Contractors must contact the Regional Dispatch Center non-emergency line at 619-524-6999 before entering any confined space providing location of entry and upon completion of work within confined space each day.

Tar Pots/Kettles & Torch Down Roof Process:

- A torch down or heat gun, tar pots and kettles roof processes requires a Hazardous Operation Permit issued by the Installation Fire Department.
- Two approved 4-A: 40-B: C fire extinguishers shall be provided and maintained within 25 ft of the operating kettle. The pots or kettles shall not be closer than 10 feet from exits or means of egress. Fuel shall be maintained at proper distances from burners per NFPA Code.

Fire Hydrants/Hose:

- Fire hydrants shall not be used without prior approval by NAVFAC Utilities.

Fire Protection Suppression & Detection Systems:

- THE CONTRACTOR SHALL NOT WORK ON OR CHANGE THE OPERATING STATUS OF A PROTECTION/DETECTION SYSTEM WITHOUT WRITTEN APPROVAL FROM THE INSTALLATION FIRE INSPECTOR AND DESIGNATED NAVFAC CONTRACT REPRESENTATIVE.

Utilities Shutdown: The contractor shall pre-notify the fire department, fire prevention and NAVFAC of any utility shutdown that might affect a fire protection/detection system or the ability of the fire department to protect life or property. This shall include domestic or high pressure water, electrical, gas, or telephone, etc.

Portable Heaters and Lighting:

- All temporary heat will be provided by portable electric heaters that have been approved by UL and be equipped with a tip-over switch.
- Maintain 3ft clearance from combustible materials. Shall be unplugged at the end of each workday. Shall not be used in areas where flammable vapors are present.

Special Conditions or Other Comments: All contractors and subcontractors shall comply with the Fire Prevention and Protection Program. Prime contractors shall ensure that subcontractors and all persons working under them are advised and conform to the requirements of this document.

PLEASE RETURN THE ATTACHED ACKNOWLEDGEMENT RECEIPT TO THE FIRE PREVENTION OFFICE WITHIN FIVE (5) BUSINESS DAYS OF THE PRE-CONSTRUCTION MEETING

CONTRACTORS ACKNOWLEDGEMENT RECEIPT

I understand the guidelines and rules that apply to all contractors performing work on government properties. I shall comply with all NFPA and Navy Instructions, and the direction of the Fire Prevention Office.

CONTRACT NUMBER:

PROJECT DESCRIPTION:

INSTALLATION/ADDRESS:

BEGIN DATE:

COMPLETION DATE:

REMARKS

GOVERNMENT POC:

PHONE:

COMPANY NAME:

PHONE:

CONTRACTOR NAME (PRINT):

CONTRACTOR'S SIGNATURE

DATE SIGNED:

For Fire Department Use Only:

Fire Inspector Name: _____ Date Received: _____

Fire Prevention will maintain on file until project has been completed and accepted by government

NAVAL WEAPONS STATION SEAL BEACH – NORTHSIDE WORK RESTRICTIONS

Working Hours.

- Work will not be conducted during normal Naval Weapons Station Seal Beach working hours.
- Work shall take place on days and times that do not conflict with the operations of Building 907, 915 or Building 923.
- Full Day work must be coordinated prior to scheduling. Working hours should be requested for Saturday, Sunday and Monday 0700 – 1530.

Coordination for all work will be confirmed at the Pre-Construction Conference. Typically, Saturday, Sunday and Monday are open however, if there is a facility operation that must occur, it will take priority over the project work.

After hours work (1700 to 0600 the following day) needs to be approved prior to scheduling. Contractor needs to provide justification for after-hours work to include reason work cannot be completed during the project work days.

Government Escort for work inside Buildings 907 915 & 923.

Work must be conducted with an authorized government escort present at all times. At a minimum there must be two (2) Naval Munitions Command (NMC) personnel on location (key draw/key custodian) during the work being performed. Contractor is responsible to follow the approved schedule, coordinate access with government representative, contact three (3) weeks in advance and daily as project progresses. Schedule any interior work that needs to be done on Mondays only.

Government Escort for outdoor work at Buildings 907 915 & 923.

A Government Escort is not needed for outdoor work but access to the buildings will require coordination with Security to have the building perimeter gates opened/secured for the start/end of the outdoor work. Contractor is responsible to follow the approved schedule, coordinate access with government representative, contact three (3) weeks in advance and daily as project progresses.

Work Process Restrictions.

1. No work will be performed at Building 907, 915 or 923 within K-18 distances while explosives handling operations are being conducted at Building 923 or Building 907.
2. No gas powered equipment shall be utilized in Building 907.
3. Hot Work permit if required shall be secured from Base Fire Department and Explosive Safety department.
4. Ordnance shall be at least 30' from any construction work (Navy personnel responsible for any required ordnance moves, contractor shall not move ordnance).
5. Non Flammable barrier curtains shall be placed between hot work and any remaining ordnance.

Hazard Control Brief.

All Contractor's construction personnel shall be required to receive Hazard Control Briefs. Hazard Control Briefs are an explosive safety requirement for all personnel entering missile production areas, regardless of whether explosive operations are being performed. A detailed hazard control brief is provided to all employees annually. A hazard control brief shall be provided to all contractor's construction personnel prior to their point of arrival and annually thereafter.

Personnel receiving hazard control briefs are required to sign that they have been made aware of the hazards associated with the area they will be in. Signatures for hazard control briefs are retained locally as an auditable record as per the requirements.

The Hazard Control Brief must be completed by all Contractor's construction personnel for work at Buildings 907, 915 & 923 or anywhere on the Northside.

Note: The following list is a summary only, the Hazard Control Brief will be performed by Naval Munitions Command Explosive safety personnel on site prior to construction start.

1. Missiles and missile components are class A explosive devices.
2. Safety is the first consideration for all ammunition and explosives handling.
3. This facility has a zero tolerance for alcohol and illegal drugs. Visitors using, have possession of, or under the influence of alcohol or illegal drugs will be immediately removed from the explosives area and dealt with according to established command policy and instructions.
4. Flagrant disregard of safety precautions, reckless behavior, or other behavior indicating incompetence or unreliability shall be cause for the immediate removal from the explosives area and be dealt with according to established command policy and instructions.
5. Physical contact with explosive devices is only authorized for personnel qualified and certified by NWS Seal Beach. No signed qual/cert = no contact.
6. Many of the hazards are inherent to the nature of the work and components involved, i.e. explosive materials, banding material, paints, degreasers, solvents and cleaners, material handling equipment, etc. These hazards exist during the performance of certain operations or certain combinations of operations to create temporary hazardous situations. Carelessness, non-compliance with procedures, lack of alertness, disorganization, haste, ignorance, and overconfidence in the performance of duties are the most common causes of accidents. Proper instruction and supervision will reduce these problems to a minimum. Individual awareness of surroundings is the first line of defense.
7. Removed from the container and in the production process of break down or build up missiles must be ordnance grounded.
8. You will see grounding reels hanging from the ceiling or walls and extending to the missiles. These can be a choking or tripping hazard.
9. The presence of ordnance grounds also indicates missile sensitivity to static electricity. Care should be taken to prevent static build up and discharge.
10. PPE (Personal Protective Equipment) are items such as goggles, hard hats, face shields, leather gloves, steel-toe shoes and are required for use by personnel during certain operations. In the rare case that visitors would be required to use PPE to watch an operation, it will be provided to you with instructions for use by your escort.
- 11. No spark producing devices are allowed within 30' of any stored ordnance. Non Flammable**

barrier curtains shall be placed between hot work and any remaining ordnance.

12. Smoking is permitted in designated smoking areas only.
13. There will be NO RADIO, CELL PHONE TRANSMISSION, WI-FI, BLUETOOTH, FITNESS TRACKERS OR SMART WATCHES inside missile production buildings. The missiles are sensitive to signal transmission and electromagnetics.
14. Any transmitting device must be cleared through the Explosive Safety Department prior to use.
15. Absolutely no camera phones allowed. Cameras and camera cell phones require a station permit to be onboard Naval Weapons Station Seal Beach. However, that permit does not authorize use of the camera in missile production areas.
16. Video and audio recording devices are not allowed.
17. No eating or drinking is allowed on the production floors at any time.
18. Tools and equipment are to be operated by authorized personnel only.
19. Do not allow any injury – no matter how slight – to remain unattended. Notify your escort and seek proper medical attention.

Badging and Vehicle Passes.

All personnel working onboard Naval Weapons Station Seal Beach north of Westminster Avenue are required to be approved through the 5512 process and have a LEVEL 3 ID badges issued by the Security Pass & ID Office.

Escorting is not allowed under any circumstances, including for material and/or equipment deliveries. All delivery drivers must be approved through the same 5512 process.

1. Level 3 Access Badge.

Applications can be obtained from the Pass & ID Office at the Main Gate. Badges can be issued for extended periods for contractors with DBIDs Credentials.

All persons must:

- a. Have a valid purpose to enter and be appropriately sponsored by a Government representative;
- b. Be identity-proofed;
- c. Have background vetted; and
- d. Possess a valid access credential.

All non-CAC eligible Contractor and Vendor companies must request access eligibility from the Government representative assigned.

The contractor/vendor is responsible for ensuring that all personnel (including sub-contractors)

requesting access submit SECNAV Form 5512/1 to their contracting representative at least fourteen (14) days prior to the required access date. A full Social Security Number is required.

The Government representative will verify that the forms are correctly completed and send the forms via encrypted email to the Pass and ID Distribution list for processing at least seven (7) days prior to the desired credential issuance date.

- a. The Government representative will inform Pass and ID of the Access privileges required to include start date, days and times that the contractor may enter the installation, areas of the installation where the work is to be performed, and the expiration date for the pass or credential.

The Defense Biometric Identification System (DBIDS)

The DBIDS identity management and perimeter installation access control solution is specifically designed to manage recurring vendors, contractors, suppliers, and other service providers who do not meet the requirement for CAC issuance. It uses the following concept of operations:

- a. The DBIDS credential is issued and base access is granted once the participant has met all identity proofing, vetting, and fitness determination requirements.
- b. Authorized government representatives perform government vetting, identity verification and issuance of access credentials or passes.
- c. There is no charge for this service.
- d. Contractor personnel shall return DBIDS access credentials or passes to the issuing office when the contract is completed, or when a contractor employee no longer requires access to the installation.
- e. Ensure issued access credentials are retrieved and returned to the issuing office when the relationship that served as justification changes, or is terminated.
- f. Report a lost or stolen access credential to the local security department and ID card issuance office.
- g. Any misuse of an ID card or authorized badge including repeated loss or failure to carry while on a Navy installation may result in retrieval of the card/badge, revocation of privileges, or administrative or criminal action. All ID cards and badges remain the property of the U.S. Government. Fraudulent use or misuse of cards, credentials or badges may result in confiscation by government officials.

NWS Seal Beach Rules and Regulations

06.15.2020

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1. Site Approval

Site approval for HERO and HERF is required for all work in the explosives handling areas. These approvals take approximately 6 to 8 months for NOSSA approval. Plans and schedules for work in the explosives handling areas should be submitted as early in the project as possible and time should be allotted in the contract for approval delays. Confirm with FEAD personnel for the applicability or status of Explosives Site approvals.

2. Underground Utilities and Digging Permits

The NWS Seal Beach Dig Permit shall be filled out with a drawing or sketch attached showing locations of the proposed excavations or drillings. FEAD personnel will review the drawings and provide information of existing known utilities on the returned FEAD signed permit. Following FEAD signing the Contractor shall take the permit to the PW Shop Superintendent for his review, comments and signature. Locations of underground utilities shown on drawings are approximate. Therefore the Contractor shall obtain the services of an underground utility locating (scanning) company to determine the exact locations and identify any other potential underground obstructions that may not be show on contract drawings. The Contractor shall hand excavate within 3 feet of either side of existing underground utilities and be responsible for any damage to existing utilities.

3. Environmental Compliance Assessment Training and Tracking System

The Superintendent, QC Manager and Alternate QC Manager shall complete "Environmental Compliance Assessment Training and Tracking System" (ECATTS) Training prior to starting work under this contract. The specific module (training class) in ECATTS required to be taken is the "Environmental Requirements for Contractors: NAVWPNSTASB". Other training modules in ECATTS that apply to this project are encouraged but not required. If personnel changes occur for any of these positions after starting work, replacement personnel shall complete ECATTS training within 14 days of assignment to the project. Submit an ECATTS certificate of completion for personnel who have completed the required "Environmental Compliance Assessment Training and Tracking System (ECATTS)" training. This training is web-based and can be accessed from any computer with Internet access using the following instructions:

Register for NAVFAC Environmental Compliance Assessment Training and Tracking System, by logging on to <http://navfac.ecatts.com/> . Obtain the password for registration from the Contracting Officer.

This training has been structured to allow contractor personnel to receive credit under this contract and also to carry forward credit to future contracts. ECATTS is available for use by all contractor and subcontractor personnel associated with this project. These other personnel are encouraged (but not required) to take the training and may do so at their discretion.

4. Conformance with the Environmental Management System

The Contractor shall perform work under this contract consistent with the policy and objectives identified in the installation's Environmental Management System (EMS). The Contractor shall perform work in a manner that conforms to objectives and targets, environmental programs and operational controls identified by the EMS. The Contractor will provide monitoring and measurement

information as necessary to address environmental performance relative to environmental, energy, and transportation management goals. In the event an EMS nonconformance or environmental noncompliance associated with the contracted services, tasks, or actions occurs, the Contractor shall take corrective and/or preventative actions. In addition, the Contractor shall ensure that its employees are aware of their roles and responsibilities under the EMS and how these EMS roles and responsibilities affect work performed under the contract.

The Contractor is responsible for ensuring that their employees receive applicable environmental and occupational health and safety training, and keep up to date on regulatory required specific training for the type of work to be conducted onsite. All on-site Contractor personnel, and their subcontractor personnel, performing tasks that have the potential to cause a significant environmental impact shall be competent on the basis of appropriate education, training or experience. Upon contract award, the Contracting Officer's Representative will notify the installation's EMS coordinator to arrange EMS training. The installation's EMS coordinator shall identify training needs associated with environmental aspects and the EMS coordinator shall identify training needs associated with environmental aspects and the EMS, and arrange training or take other action to meet these needs. The Contractor shall provide training documentation to the contracting Officer. The installations EMS coordinator shall retain associated records.

5. Asbestos

Notice to the South Coast Air Quality Management District (SCAQMD), in accordance with Rule 1403 for Asbestos Emissions, must be provided no later than 10 days before abatement of asbestos containing material for an area greater than 100 square feet is completed. A copy of the notice must be provided to the NWS Seal Beach Environmental Programs and Services Office (EPSO) for review prior to notifying SCAQMD.

6. Storm Water Best Management Practices – Minimum required BMP's

It is the duty of the contractor to implement sufficient best management practices to prevent pollutants and hazardous materials from coming in contact with rain or from leaving the construction site. Pollution prevention measures must be implemented to keep all construction materials and potential pollutants on site. Potential pollutants include: soil, gravel, dust, oil and grease, construction materials and hazardous materials. Minimum best management practices include material delivery/storage, erosion/sediment control, concrete waste management, stockpile management, and hazardous waste management.

General best management practices include:

- a) Keeping construction materials, including stockpiles, covered when not in use;
- b) Putting trash in trash bins with lids;
- c) Staging hazardous materials under cover and off the ground to prevent contact with rain;
- d) Allowing sufficient time before a storm for paint, asphalt, concrete or other materials to cure to prevent uncured material from leaving the site; and spill prevention.
- e) Storm drain catch basins in the construction area shall be covered so that sediment and debris do not enter the catch basins during construction.
- f) Sediment and debris from the worksite shall be swept up and properly disposed, so that they will not be tracked off site and enter a storm drain or receiving water.
- g) If metal cutting, grinding, or welding is part of the project (such as concrete reinforcing bars or metal fencing), measures shall be put in place to prevent those pollutants from entering the water

- or storm drain systems. Also, at a minimum, metal slag/residues/shavings must be swept up and properly disposed of at the end of each workday.
- h) Drip pans shall be placed under equipment to catch leaks. These drip pans shall be cleaned periodically. During rain events these drip pans shall be moved so that the storm water runoff doesn't become contaminated from their contents.
 - i) Wash water and residue from concrete and/or masonry work shall not be discharged into the storm drain or sanitary sewer systems. Wash water shall be contained in a concrete washout area and allowed to evaporate with the remaining solids disposed of as solid waste. With written approval from the installation's environmental staff, smaller projects may have the option to discharge wash water onto a pervious soil surface and allowed to infiltrate into the soil. Any remaining residue shall be disposed of as solid waste.
 - j) The project shall avoid the use of galvanized materials, or add an additional coating to the material to reduce the potential for zinc leaching into storm water runoff. Examples of items that may contain galvanized materials include fencing, flagpoles, corrugated roofing used in lean-to sheds, and sacrificial anodes.
 - k) If BMPs currently in place are found to be ineffective in controlling storm water pollution, they shall be amended as soon as possible to correct the problem.

This is a list of minimum BMPs that should be implemented. Additional BMPs may be required depending on the specific project. It is highly recommended that construction project manager/s work with base environmental representatives to ensure the project meets both environmental compliance and project timelines.

Even if rain is not forecasted best management practices must be in place at all times.

Materials cannot be dumped down the storm drain or any channels. Hosing off areas is not permitted unless specific best management practices are in place to prevent pollution from going off-site. Hosing off equipment is not permitted at all, unless the rinsate is captured and disposed of properly. It is the contractor's responsibility to ensure that any subcontractors are properly trained regarding storm water best management.

DBB: Insert in UFGS Section 01 57 23, Part 1, para. "Erosion and Sediment Controls"

DB: Insert in UFGS Section 01 57 19.00 20, Part 3, para. "Erosion and Sediment Control Measures"

DBsp: Insert in Part 2A, para. 21 "Environmental Controls and Protection"

BOA: Insert in Part 2A, para. 20 "Environmental Controls and Protection"

7. Solid Waste Management Records

Records shall be maintained to document the quantity of waste generated; the quantity of waste diverted through sale, reuse, or recycling; and the quantity of waste disposed. Report tons diverted, tons landfill, cost for each, and the monthly diversion rate utilizing the Monthly C & D Debris Monthly Diversion Summary Report (see attached blank form and example). Submit the report with the invoicing package. The Contracting Officer or his representative shall forward the Monthly Report to the Sustainable Solid Waste Program. The records shall be made available to the Contracting Officer during construction, and a copy of the records shall upon completion of the construction.

8. Solid Waste Management

Government Policy is to apply sound environmental principles in the design construction and use of facilities. As part of the implementation of that policy, the Contractor shall: (1) practice efficient solid waste management when sizing, cutting, and installing product and materials and (2) use all reasonable means to divert construction and demolition waste from landfills and to facilitate their recycling or reuse.

For projects exceeding a cost of \$100,000 and will generate greater than 1 ton of construction/demolition debris (both criteria must be satisfied), a Solid Waste Management Plan is required to be submitted and approved a minimum of 15 days prior to initiating any site preparation work and should be approved prior to the Pre-Construction Meeting. The Solid Waste Management Plan should include the following:

- a. Name of individuals on the Contractor's staff responsible for waste prevention and management.
- b. Actions that will be taken to reduce solid waste generation, including recycling, reuse, and diversion. (See 20 Priorities for Final Disposition of Solid Waste and Reusable Items.)
- c. Description of the specific approaches to be used in recycling/reuse of the various materials generated including the areas and equipment to be used for processing, sorting, and temporary storage of wastes.
- d. Characterization, including estimated types and quantities of waste to be generated. Indicate the quantities of those material to be diverted from potential landfill disposal.
- e. Indicate the target diversion percentage rate (minimum of 50% of the total generated).
- f. Name of the landfill to be used and the estimated costs for use, assuming that there would be no salvage or recycling on the project.
- g. Identification of local and regional reuse programs, including non-profit organizations such as schools, local housing agencies, and organizations that accept used materials such as materials exchange networks and Habitat for Humanity.
- h. List of specific waste materials that will be salvaged for resale, salvaged and reused, or recycle. Recycling facilities that will be used shall be identified.
- i. Identification of materials that cannot be recycled/reused with an explanation or justification.
- j. Anticipated net cost savings determined by subtracting Contractor program management costs and the cost of disposal from the revenue generated by sale of the materials and the landfill cost avoidance.

9. Priorities for Final Disposition of Solid Waste and Reusable Items

Except as otherwise specified in other sections of the specifications, disposal shall be in accordance with the following:

- a. Reuse

First consideration will be given to reuse of the item in its original form in the following order:

(1) On-Station: The Contracting Officer will notify the Contractor if the materials will be reused on-Station. Materials will remain on site at the direction of the Contracting Officer for further use.

(2) Reuse by the Contractor. Method of reuse must be approved by the Contracting Officer.

b. Recycle

Solid wastes that are not suitable for reuse, but have value as being recyclable shall be recycled whenever economically feasible. Recyclable items include but are not limited to concrete, asphalt, clean fill, dirt, cardboard packaging, and scrap metal. The Contractor is responsible to properly recycle materials removed off Government property.

c. Scrap Metal

All scrap metal generated from the project and that is not defined as Hazardous Waste (e.g., containing asbestos or containing chipping, peeling, or flaking lead-based paint or other heavy metals, such as barium, nickel, chromium, or zinc) shall be turned in to the installation Recycling Facility. To coordinate container needs, the Contractor shall contact the Recycling Program Manager via the Contracting Officer.

Unusable appliances, as defined in CA Assembly Bill 2277, include but are not limited to washers, dryers, refrigerators, freezers, water & space heaters, furnaces, boilers, air-conditioners, transformers, dehumidifiers, and trash compactors shall be turned in to the Station Recycling Facility following removal of hazardous materials. The Recycling Program Manager's Contractor shall transfer the units to a Certified Appliance Recycler (CAR) after removal of the hazardous materials, including but not limited to mercury switches or temperature control devices, oil from compressors, transformers, switches and capacitors without PCBs and ODS per CA Assembly Bill 2277.

d. Off-Station Disposal

Items with no practical use or economic benefit shall be disposed at a landfill permitted to accept the waste. For concrete and asphalt, this option may only be used with prior approval by the Contracting Officer.

10. Releases/Spills of Oil and Hazardous Substances

Exercise due diligence to prevent, contain, and respond to spills of hazardous material, hazardous substances, hazardous waste, sewage, regulated gas, petroleum, lubrication oil, and other substances regulated by environmental law. Maintain spill cleanup equipment and materials at the work site. In the event of a spill, take prompt, effective action to stop, contain, curtail, or otherwise limit the amount, duration, and severity of the spill/release. In the event of any releases of oil and hazardous substances, chemicals, or gases; immediately notify the Base Security Dispatch, by calling 562-626-7229, or Activity Fire Department, the activity's Command Duty Officer, and the Contracting Officer.

If the contractor's response is inadequate, the Navy may respond. If this should occur, the contractor will be required to reimburse the government for spill response assistance and analysis.

The Contractor is responsible for verbal and written notifications as required by the federal 40 CFR 355, State, local regulations and Navy Instructions. Spill response will be in accordance with 40 CFR 300 and applicable State and local regulations. Contain and clean up these spills without cost to the Government. If Government assistance is requested or required, the Contractor will reimburse the Government for such assistance. Provide copies of the written notification and documentation that a verbal notification was made within 20 days.

Maintain spill cleanup equipment and materials at the work site. Clean up all hazardous and non-hazardous (WHM) waste spills. The Contractor shall reimburse the government for all material, equipment, and clothing generated during any spill cleanup. The Contractor shall reimburse the government for all costs incurred including sample analysis materials, equipment, and labor if the government must initiate its own spill cleanup procedures, for Contractor responsible spills, when:

- a. The Contractor has not begun spill cleanup procedure within one hour of spill discovery/occurrence, or
- b. If, in the government's judgment, the Contractor's spill cleanup is not adequately abating life threatening situation and/or is a threat to any body of water or environmentally sensitive area.

11. Hazardous Waste Management

a. Hazardous Generation

Handle generated hazardous waste in accordance with [40 CFR 262](#) and [22 CCR 66262](#).

b. Hazardous Waste Storage

Store hazardous waste in containers in accordance with [49 CFR 178](#). Identify hazardous waste in accordance with [40 CFR 261](#), [40 CFR 262](#), [22 CCR 66261](#), and [22 CCR 66262](#). Identify hazardous waste generated within the confines of the station by the station's EPA generator identification number.

c. PCB's (Transformers/Switches/Capacitors)

Take samples and test for PCB's then drain oil from equipment via vacuum pump and store on base until PCB test results come back. Dispose of oils in accordance with hazardous waste guidelines. If equipment is PCB contaminated, dispose of in accordance with hazardous waste guidelines. DO NOT get rid of equipment if not contaminated by PCB's, which can be given to recycling. Deliver recyclable equipment to Bldg 246 designated lay down area per guidance of the contracting officer.

d. Hazardous Waste Disposal

Manifests and applicable land disposal restriction forms shall be submitted to the environmental office (Code N45W, 562-626-6070) for approval and "owners signature" prior to any hazardous waste or non-friable asbestos waste leaving the Navy's property. The contractor will provide accurate shipment pound weight annotated under block number 15 of the California Uniform Hazardous Waste Manifest, DTSC 8022A (7/92), under Special Handling Instructions and

Additional Information on the return disposal facility signature page. The Contractor shall also provide the environmental office the cost of disposal of the hazardous waste items listed on the manifest(s).

12. Refrigerant Recovery

Installation/modifications of HVAC units shall be in accordance with South Coast Air Quality Management District (SCAQMD) Rule 1415 which requires, in part, that "no person shall install, service, modify, or dispose of any refrigeration system, or perform any related repairs or modifications that may cause release of Class I or Class II refrigerants unless that person meets and provides all of the following requirements:..."

If any refrigeration or chiller equipment is modified, removed, replaced or installed then provide documentation to identify,

- a. Status of equipment and location
- b. Type of refrigerant and quantity
- c. What is happening to refrigerant [added, evacuated/refill, evacuated/reused (where), evacuated/replaced (wasted)]
- d. Who is working with refrigerant [require POC]
- e. Certification of the technician (require specific documentation before completing task to be provided to Environmental)
- f. That evacuation equipment is EPA certified (require specific documentation before completing task to be provided to Environmental)

13. Solvents

If any solvents are used in accomplishment of the work being performed then the SCAQMD Rule 1171 for Solvent Cleaning Operations applies. Submit MSDS for solvents to EPSO for VOC content review.

14. Disposal

Disposal - Debris, rubbish, hazardous waste and unusable material resulting from the work under this contract shall be disposed of by the Contractor at their expense, off Government property. Hazardous wastes must be disposed of in accordance with the Resource Conservation and Recovery Act and its associated state and local regulations.

The contractor shall utilize a certified disposal company for each site and provide the use of dumpsters for the disposal of materials. The contractors certified disposal company and dumpster is to be used for general trash removal off Government property.

15. GIS DATA

The contractor is responsible to provide GIS data for utilities, structures or any installation that will require geographic changes of utility and base maps unless otherwise directed by the specifications of the project.

GIS Data Collection Standards

- a. All features/infrastructure located through field investigation or emplaced during construction shall be surveyed and mapped using the appropriate survey equipment and methodologies to generate GIS Data at a sub-foot level of horizontal and a sub meter level of vertical spatial accuracy as applicable. Some Facility, infrastructure and Natural Resources data may have accuracy levels of a lesser value if deemed appropriate by the contract manager and GIS Coordinator as required.
- b. The geospatial projection of the data shall be NAD83, State Plane Zone 6, U.S. Foot.
- c. All attributes shall be populated with the correct data to properly identify and map the feature in a GIS Mapping system. Feature attribute data collection will be discussed and agreed upon during the Pre-construction/Pre-survey meetings.
- d. GIS Deliverables will either be in a 1) SDSFIE 2.6 compliant Geodatabase with features in the correct Feature Datasets and in the correct Feature Classes or 2) A GIS Shapefile(s) with applicable attribute information as further directed by the scope or in Pre-construction meetings.
- e. A digital image, georeferenced, will be taken of each underground feature after installation, prior to being covered, and associated to the GIS spatial data that was collected via a link in the Geodatabase or in an accompanying table. Above ground features shall also be captured using the above process after construction is completed. The appropriate number of photos for field surveys shall be collected to give a good interpretation of existing field conditions and will be discussed in the Pre-survey meetings.
- f. All survey control data gathered, set or found during execution of the work will be submitted in one of the above mentioned formats including scanned copies of the surveyor's notes in a pdf format if applicable.
- g. All GIS data collected is the property of the U.S. Government and data sharing restrictions apply.

16. Installation Access

No employee or representative of the Contractor will be admitted to the station without satisfactory proof of either United States citizenship, or registered legal immigration status. Primary contractors are required to ensure that their employees accessing this installation are U.S. citizens, or documented, legally registered residents of the U.S., and are in possession of a valid Alien Registration Receipt Card (Form AF-3A or Form I-151 A.K.A. GREEN CARD), and that all sub-contractors and their employees also meet this requirement.

For a full description of security requirements see the SECURITY GUIDELINES FOR CONTRACTORS memorandum.

17. Working Hours

Regular working hours shall consist of an 8-1/2 hour period between 7 am and 3:30 pm Monday through Friday, excluding Government holidays.

18. Working Hours In Explosives Handling Areas

Work hours in these areas are limited to weekends and after regular working hours of weapons handling personnel and require government escort/oversight. Buildings in these areas are generally numbered in the 300, 400 500, 600, 800 and 900 series.

19. Cameras

Photographs of any type are prohibited in many areas of the installation. Personnel requiring photographs in the performance of their duties must obtain permission of the Security Director and be issued a camera pass before photographs may be taken. Should a camera pass be required contact the Contracting Officer to obtain a camera pass instruction and request, read the instruction and fill out the request and return it to the Contracting Officer for submission to security.

20. Voluntary Protection Program (VPP)

The "Naval Weapons Station Seal Beach Security & Safety Brief", in both English and Spanish, shall appear in any health and safety plan submitted for all projects taking place at Seal Beach Naval Weapons Station.

21. Road Closures

Contractor shall give the Contracting Officer a minimum of **25 calendar-days** notice before interrupting any roadways. Plans showing rerouting of traffic, duration of closure and plating requirements if needed shall be provided at the time of requesting for approval consideration.

22. Utility Outages

Contractor shall give the Contracting Officer a minimum of **25 calendar-days** notice before interrupting any utilities.

23. High Voltage Electrical System Outages

The Base does not have the capability to provide power outages to the high voltage system. Contractor personnel must accomplish high voltage outages with coordination of the base facilities engineering and shop.

24. High Voltage Work

Government will provide electrical utility information and assist in locating shutoff fuses but the Government will not perform any other high voltage work for the Contractor. The Contractor is responsible to perform all high voltage work, including but not limited to:

- a. Disconnecting high voltage fuses at pole;
- b. Disconnecting high voltage on ground;
- c. Making connections to their trailer;
- d. Providing temporary transformer (for Contractor's trailer or for construction);
- e. Reconnecting fuses.

Contractor shall hire certified high voltage subcontractor for any high voltage work. Contractor shall submit his outage and reconnection plan (to include placement of temporary generators, if required) for Government approval before any electrical work is done. If outage required by contract creates an outage to other buildings, contractor shall be responsible, if directed by contract drawings and

specifications, to perform all work required to install Government furnished portable generators to those affected buildings (with exception that Government will place generators at desired locations for the outage).

[EIC or FSCM to determine during design which buildings would be affected by outages and specify the number/location of generators to be connected in the contract specs]

25. Weight Handling Operations

All weight handling operations shall comply with latest edition of (NAVFAC P-307) Management of Weight Handling Equipment and US Army Corp of Engineers (EM-385-1-1), Safety and Health Requirements Manual.

26. Use of Weight Handling Equipment (WHE)

- a. Prior to the contractor bringing on board and using WHE, the contractor shall give the Contracting Officer a minimum of **7 calendar-day** notice and shall submit the following documents for review:
 - (1) Crane
 - i. Crane Certificate of Compliance
 - ii. Crane Annual and Quadrennial Certifications
 - iii. Crane Operator License
 - iv. Copy of riggers and signal persons qualified by a third party evaluator or the employers in house qualified evaluator
 - v. Contractor Crane Compliance Review Form
 - vi. Contractor Rigging Gear Oversight Guidelines
 - vii. Contractor Crane Operation Checklist
 - viii. Critical/Complex Lift Plan Form (if applicable)
 - (2) Multi-Purpose Machine
 - i. Certificate of Compliance
 - ii. Contractor Multi-Purpose Machine Reference
- b. The WHE must be inspected and approved by the Government Representative prior to performing any lifts. An Operating Permit will be issued upon completion.
- c. The WHE shall meet as a minimum, the requirements of OSHA using the guidance of 29 CFR 1910.180, 29 CFR 1926, and Army Corps of Engineer's Publication EM 385-1-1, Safety and Health Requirements Manual. If longshoring is involved, include 29 CFR 1918.
- d. A copy of the Crane Certificate of Compliance and operating permit shall be posted in the crane's cab.
- e. The crane operator shall have their license on their person while performing crane operations.
- f. Provide any other pertinent documentation.
- g. The contractor may be subject to spot checks of crane operations by the Government Representative.

- h. Accident Reporting - Contractor to notify the contracting officer as soon as practical, but not later than four hours, after any weight handling equipment (WHE) accident. Secure the accident site and protect evidence until released by the contracting officer. Conduct an investigation to establish the root cause(s) of any WHE accident, near miss, or unplanned occurrence. Crane operations shall not proceed until the cause is determined and corrective actions have been implemented to the satisfaction of the contracting officer.
Provide the contracting officer a report for an accident or near miss within 30 days.

27. Operation of man lifts and aerial work platforms

In order to ensure that appropriate measures are in place for the safe and effective operation of man lifts and aerial work platforms, prime contractor shall review the attached Contractor Safety Compliance Form with their subcontractors and submit it to Contracting Officer for approval. No man lift or aerial work platform work can be performed on site until Contracting Officer has approved safety compliance form.

28. Smoking regulation

No smoking is permitted in any vehicle or building on the Naval Weapon Station. No smoking is permitted north of Westminster Ave., east of Kitts Highway or south of Pacific Coast Highway, except in designated smoking areas. Inquire with building supervisor."

29. Ordnance

In the event the Contractor suspects they have excavated, exposed or may be in the vicinity of an object they suspect is ordnance or any object that may threaten their safety, they shall immediately cease operation and contact the Contracting Officer, who shall contact an explosive safety specialist to investigate.

30. Ordnance Hazardous Control Brief

(Only for projects associated with Ordnance Buildings or in Ordnance Areas.)

The attached roster shall be filled out and those listed shall be in attendance for a briefing to be presented by Ordnance Safety Personnel. Contact Explosive Safety at (562-626-7009/7096/7611) to arrange for the briefing.

31. Cell Phone Use

All motor vehicle operators on NRSW installations and operators of government-owned, leased or rented vehicles on or off installation will comply with the following:

- a. Driver use of a hand-held cellular phone in a moving vehicle, except for official fire and emergency response or law enforcement or security purposes, is hereby prohibited.
- b. The prohibition against using hand-held cellular phones does not include hands-free cellular phone devices. Hands-free devices include console/dash-mounted or otherwise secured cellular phones with integrated features such as voice activation, speed dial, speakerphone, or other similar technology for sending and receiving calls.

- c. Driver use of any portable, personal listening device worn inside, around or covering the driver's ear, while operating a motor vehicle, except for fire and emergency response or law enforcement security purposes, is prohibited. Listening devices include, but are not limited to wired or wireless earphones and headphones for CD/MP3 players, and Bluetooth or similar technology, but do not include hearing aids or devices designed and required for hearing enhancement.

32. Ionizing Radiation Equipment

Per EM385 paragraph 06.E, prior to using of any Ionizing Radiation Equipment on station, notify the Contracting Officer in writing as to the nature of the material or device, a description of intended use, the location of use and storage, and all transportation and disposal requirements. This notification to be provided a minimum of 2 weeks prior to intended use.



DEPARTMENT OF THE NAVY
NAVAL WEAPONS STATION SEAL BEACH
SECURITY DEPARTMENT
800 SEAL BEACH BOULEVARD BLDG 10

IN REPLY REFER TO
N34

MEMORANDUM

From: Security Officer, Naval Weapons Station Seal Beach
To: All Contractor Personnel

Subj: SECURITY GUIDELINES FOR CONTRACTORS

Ref: (a) DoD-M 5200.08 VOLUME 3
(b) CNIC 5530.2
(c) NAVWPNSTASBINST 5560.3

Encl: (1) SECNAV 5512/1 Department of the Navy Local Population ID Card/Base Access
Pass Registration
(2) FORM I-9 – List of Acceptable Documents

1. GENERAL INFORMATION

A system of personnel and vehicle movement control is a basic security requirement at all Department of Navy (DoN) installations. Ensure that Contractor personnel employed on the installation become familiar with and obey base regulations, including safety, fire, traffic, and security regulations. Keep within the limits of the work and avenues of ingress and egress. To minimize traffic congestion, delivery of materials shall be outside of peak traffic hours (0630 to 0830 and 1530 to 1700) unless otherwise approved by the Contracting Officer. Wear hard hats in designated areas. Do not enter any restricted areas unless required to do so and until cleared for such entry. The Contractor's equipment shall be conspicuously marked for identification. While you are aboard this installation, the following security requirements apply, unless the Installation Force Protection Director (IFPD) grants specific exceptions.

2. VERIFICATION

Per references (a) and (b), no employee or representative of the Contractor will be admitted to the station without satisfactory proof of either United States citizenship, or registered legal immigration status. Primary contractors are required to ensure that their employees accessing this installation are U.S. citizens, or documented, legally registered residents of the U.S., and are in possession of a valid Alien Registration Receipt Card (Form AF-3A or Form I-151 A.K.A. GREEN CARD), and that all sub-contractors and their employees also meet this requirement.

a. Per reference (b), all personnel requesting access to this installation shall submit a Department of the Navy Local Population ID Card/Base Access Pass Registration Form (SECNAV Form 5512/1) (Enclosure (1)) in person at the Visitor Control Center (VCC)/Pass

Subj: SECURITY GUIDELINES FOR CONTRACTORS

and ID Office (Bldg. 200) during normal working hours, Monday through Friday, from 0700 - 1500. The purpose of the form and visit to the VCC is to validate fitness for access and to validate the identity of the requestor. All applicants shall provide original documents from the list of acceptable identification found in Form I-9 (Enclosure (2)). Disclosure is voluntary; however, failure to provide requested information will result in denial of access. Once the SECNAV Form 5512/1 is submitted, it takes seven to ten business days to process the request for base access. The VCC will send an email to the requestor's sponsor to inform them that the requestor was found either favorable or unfavorable; if the requestor is found unfavorable, they will have to submit a waiver request form to the command for base access.

b. Per references (a) and (b), all unescorted persons must:

- (1) A valid purpose to enter.
- (2) Be appropriately sponsored.
- (3) Be identity proofed.
- (4) Have background vetted and determined favorable.
- (5) Possess a valid access credential.

c. The following sources will be queried to vet the claimed identity and determine access:

(1) The National Crime Information Center (NCIC) Database, the National Law Enforcement Telecommunications System (NLETS); Interstate Identification Index (III).

(2) The Regional Dispatch Center (RDC) utilizes the Fitness Determination Standards listed below based upon queries of authoritative Law Enforcement Databases:

- (a) Wanted Persons (Outstanding Warrants)
- (b) Sexual Crimes (Regardless of time or Disposition) Prostitution, Lewd Acts, Indecent Exposure (PC 647 (b), PC 647 (a), and PC 314 within California)
- (c) Unlawful Weapons Possession (PC 12020-12025 within California)
- (d) Subjects identified in the Foreign Fugitive File
- (e) Subjects identified in the Immigration Violator File (Deported Felons – Absconders)
- (f) Subjects Registered in the National Sex Offender Registry
- (g) Subjects identified within the Known or Appropriately Suspected Terrorist File

Subj: SECURITY GUIDELINES FOR CONTRACTORS

(KST)

(h) Subjects with Felony convictions or Rape, Child Molestation, Trafficking in Humans, Espionage, Sabotage, Treason, or Terrorism

3. Other Felony Convictions

Other than the disqualifiers listed above, any felony conviction within the past 10 years is grounds for denying installation access.

a. Arrests for a disqualifying event without disposition (conviction, dismissal, not guilty or acquittal) more than 10 years old are not grounds for denying access.

(1) The Terrorist Screening Database.

(2) The Sex Offender Registry.

(3) The Consolidated Law Enforcement Operations Center (CLEOC) Database or its successor system.

(4) Debarment listing.

(5) Defense Biometric Identification System (DBIDS).

(6) Other authoritative databases as prescribed by Navy Region Southwest (NRSW) N34.

b. Until the installation receives a favorable adjudication following the background check, personnel shall not be authorized unescorted access to the installation. Background checks are valid for 365 days. The G2 database will reflect records 365 days old or newer and all records associated with waivers (approved or disapproved). The SECNAV Form 5512/1 is the sole means to initiate background checks on all visitors and/or contractors/vendors. SECNAV 5512/1 forms may NOT be used for multiple background checks. Each time an NCIC check is conducted, the contractor must complete a new SECNAV 5512/1 form. Allow seven to ten working days for the process to be completed.

c. Personally Identifiable Information (PII) collected and utilized will be safeguarded to prevent any unauthorized use, disclosure, and/or loss.

The responsibility of notifying employees of these requirements, including the employees of subcontractors, rests with the primary contractor.

3. DEFENSE BIOMETRIC IDENTIFICATION SYSTEM (DBIDS)

DBIDS is a DoD-owned and operated system developed by the Defense Manpower Data Center (DMDC) as a force protection program to manage personnel and installation access at DoD

Subj: SECURITY GUIDELINES FOR CONTRACTORS

facilities. It is a networked client/server database system designed to easily verify the access authorization of personnel entering military installations.

- a. All vendor/contractor personnel must have a valid DBIDS credential or pass

4. BADGES

Badges shall be conspicuously displayed on outer garments above the waist so that they are visible at all times. An exception to this requirement is allowed for workers who are actually engaged in operations that may subject the badge to damage. In such cases, the worker must keep the badge safely under control (either in clothing, vehicle, building, container, etc.,) but the worker is able to present the badge to Security personnel on request without undue delay.

- a. If an employee loses their badge, it must be reported immediately to the Pass & ID Office and to the Security Department Watch Commander. A voluntary statement must be given regarding the circumstances surrounding the loss before a replacement badge is issued

- b. At NAVWPNSTA Seal Beach, the following methods have been established to recover Command security badges/passess, which have expired or become invalid

- (1) Expired, invalid, mutilated, or found badges/passess are to be turned in at the Pass and ID Office or at the Main Gate Guardhouse.

- (2) For contractor personnel, the contractor must provide whatever assistance necessary to recover badges/passess issued to contractor/subcontractor personnel upon completion of work, or as otherwise necessary

5. VEHICLE PASSES

Per reference (c), all vehicles entering this installation must be either permanently registered, or must be issued a temporary vehicle pass by the Pass and ID office (Bldg. 200). When registering a vehicle, the owner/operator shall bring with them the following. A valid driver's license of the class required specific to the vehicle, current vehicle registration, and proof of current automobile insurance. All such documentation must demonstrate strict compliance with both state and federal requirements

- a. All personnel driving a POV are required to carry a valid driver's license, vehicle registration, and proof of insurance. Enforcement of these requirements shall be accomplished through Random Antiterrorism Measures (RAM) and Selective Traffic Enforcement Programs (STEP) as authorized by the Commanding Officer

- b. Implied Consent. Per references (b) and (c), any person granted the privilege of operating a motor vehicle on Naval Weapons Station (NWS) Seal Beach, Defense Fuel Support Point San Pedro, and Long Beach Pier 12, shall be deemed to have given his/her consent to a chemical test of his/her blood, breath or urine for the purpose of determining the alcohol/drug content of their

Subj: SECURITY GUIDELINES FOR CONTRACTORS

blood. Additionally, any person who, when advised of the provisions of implied consent, refuse to submit to a chemical test will be cited for such refusal and their base driving privileges removed immediately

6. ACCESS LIST

Prior to construction, the contractor or designated superintendent must designate a DBIDS Company Administrator (DCA). The DCA will submit a list of all personnel working on the job to the Government Sponsor. After review, the list will be sent via encrypted email to the SEAL-CNIC-PASS&ID distribution list. This list must include the employee's full name, Social Security Number, and Date of Birth, as well as the length of the contract, and the working hours that employees are expected to be on the installation. A Mass Data Upload Spreadsheet is available for this purpose. It is the responsibility of the DCA to submit the list and completed SECNAV 5512/1 forms to the Government Sponsor for processing. A full Social Security Number is required on the SECNAV Form 5512/1. Forms missing required information will be returned for correction

7. SEARCH/INSPECTIONS

Personnel entering, exiting, or transiting Navy installations are subject to administrative inspection according to procedures authorized by the Commanding Officer. Administrative inspections are necessary to protect the property of the Navy from theft, loss, damage, or destruction, and to prevent and detect the introduction of prohibited materials. Federal Law provides for the prosecution of individuals who introduce or attempt to introduce prohibited materials onto a Federal Installation. Personnel/Vehicles discovered transporting contraband as defined are subject to immediate impoundment, confiscation of articles, and Federal and/or State prosecution

8. CONTRABAND

For the purposes of this memorandum, possession of contraband constitutes the possession of anything which is unauthorized or prohibited by government regulations and instructions, or which is in violation of state and federal laws or statutes. Accordingly, mere possession of contraband constitutes a violation of government directives and/or constitutes an unlawful situation. Examples of contraband include:

- a. Firearms & ammunition of any type.
- b. Explosives of any type to include fireworks.
- c. Any type of device that launches or shoots a projectile (i.e., crossbow, bow, slingshot, blowgun, paintball gun, BB gun, pellet gun, spear gun, etc.).
- d. Several types of edged weapons, such as double-edged knives, switchblades, stilettos, throwing knives, swords, sabers, spears, etc.

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- e. Num-chucks, throwing stars, etc.
- f. Illegal drugs and drug paraphernalia.
- g. Other items as defined above.

9. SPEED LIMITS

The speed limit aboard this installation is 25 MPH UNLESS OTHERWISE POSTED. The Vehicle Code of the State of California is strictly enforced aboard this station, as are additional specific vehicle postings particular to this station. Violations of vehicle laws or regulations may additionally result in expulsion of the violator from the station without benefit of adjudication.

10. PLAYING OF COLORS/BUGLE CALLS

It is a military tradition carried out on U.S. bases throughout the world. The raising and lowering of the American flag and the playing of Colors and other bugle calls. In fact, morning and evening Colors and other bugle calls are so meaningful any military members outside stop what they are doing, face the flag, snap to attention and salute. It is also required that any civilian on Naval Weapons Station Seal Beach pay the same respects. For civilians in their personal own vehicles (POV), they are required to stop the vehicle until the Colors or the bugle call has ended. If outside, civilians are required to stop what they doing, safely, and face either the flag or if no flag face the music and place their hand over their heart. Military members not in uniform and Veterans in their POV, they are required to stop the vehicle until the Colors or the bugle call has ended. If outside, Military members not in uniform and Veterans are required to stop what they doing, safely, and face either the close flag or if no flag face the music and at least stand at attention, they may surrender a salute if they prefer

11. TOBACCO

Tobacco use on board NWS Seal Beach and its Detachments is only authorized in designated tobacco use areas. This refers to all forms of tobacco products and its uses. This includes regular smoking methods, smokeless tobacco and Electronic Nicotine Delivery Systems (ENDS). The use of any forms ENDS (e.g. Electronic Cigarette, Electronic Pipe, and Electronic Cigar) is governed by this policy as these are considered tobacco products. NWS Seal Beach Policy is NO tobacco use in any vehicle while on the installation or its detachments. Matches, cigarette lighters, ENDS, other similar flame, heating, or spark-producing devices are not permitted in the explosive areas. ENDS or any components are not to be stored overnight in a government facility or government owned vehicle. ENDS are not to be charged or plugged in to any electrical outlet or other power source in a government facility, GOV, or common areas. When not in active use, ENDS are to be turned off, secured, and transported or carried in an enclosed pouch, case or other durable, sealed, closed container. It is the responsibility of the primary contractor to ensure that his/her employees, sub-contractors, and sub-contractor employees strictly comply with this restriction.

Subj: SECURITY GUIDELINES FOR CONTRACTORS

12. CAMERA(S)

Photographing/recording of your project is authorized, unless demand unsafe by another office (i.e., Explosives Safety Office or Federal Fire Department). However, you are only allowed to take picture(s)/video(s) of the project you are working on. If it is suspected that you are taking non-project related pictures, your camera(s) is subject to review and deletion of any picture(s)/video(s) deemed not related to your project.

13. BUILDING ACCESS/TRESPASS

Temporary contract personnel will not be permitted in security-regulated buildings/areas (restricted areas), unless escorted by a cleared Government Representative, or by a designated employee of the benefiting Department. Should the issuance of keys be required, they will be issued only to Government personnel, or to a representative of the benefiting Department. Contractor employees found in areas of the installation where they are not required to be during the normal course of work/transit could be charged with trespassing.

14. HOURS OF WORK

All personnel must be off the installation by the end of normal working hours (0700-1800), unless special permission is obtained from the Government Representative, and appropriate escorts are initiated; this includes weekends. All arrangements for "after hours" work must be coordinated and approved by the Security Department. Requests for special access must be directed to the Government Sponsor.

15. UNUSUAL REQUESTS

Any circumstances, which may require deviations from, established security requirements and procedures, must be directed to the Government Representative for coordination with the Security Director. Unless there are valid reasons for refusing such extraordinary requests, the Security Department's policy is to assist the contractor in performing work or service required by the Command.

16. FORCE PROTECTION CONDITIONS

As the result of terrorist intelligence or actual terrorist attacks, the installation may implement various antiterrorism measures. These measures may result in minor inconveniences to a full closure of the installation, requiring contractors to secure their tools and worksites and vacate the installation. The latter of these two scenarios would require either direct threat intelligence or a catastrophic event.


17. EMERGENCY CONTACT INFORMATION

Subj: SECURITY GUIDELINES FOR CONTRACTORS

In case of a Fire or Medical emergency, dial 911. 911 calls from a STATION PHONE, go directly to the Regional Dispatch Center. 911 calls from off-base or mobile telephones will go to local law enforcement agencies. For security emergencies, dial (562) 626-7222 or (562) 626-7229, or from a station phone, dial 911, or dial 873-7222 or 873-7229. To contact the Base Security Dispatch for non-emergency matters from a mobile or off-base telephone, dial (562) 626-7600. The Watch Commander may be reached at (562) 254- 0047.

18. PENALTY

Federal law provides for penalties for failure to strictly comply with this requirement. In addition to penalties levied by federal and state law, failure of contractors and their sub-contractors to comply with the restrictions published above may result in a permanent expulsion from the installation without benefit of adjudication.


S. L. STEPHENSON
Security Officer USN

CUI (when filled in)

OMB 0703-0081 05/31/2024

DEPARTMENT OF THE NAVY LOCAL POPULATION ID CARD/BASE ACCESS PASS REGISTRATION

PRIVACY ACT STATEMENT:

AUTHORITY: 10 U.S.C. 113, Secretary of Defense; DoD Directive 1000.25, DoD Personnel Identity Protection (PIP) Program; DoD Instruction 5200.08, Security of DoD Installations and Resources and the DoD Physical Security Review Board (PSRB); DoD 5200.08-R, Physical Security Program; DoD Directive 5200.27, Acquisition of Information Concerning Persons and Organizations not Affiliated with the Department of Defense (Exception to policy memos); Directive-Type Memorandum (DTM) 09-012, Interim Policy Guidance for DoD Physical Access Control; DTM 14-005, DoD Identity Management Capability Enterprise Services Application (IMESA) Access to FBI National Crime Information Center (NCIC) Files; and E.O. 9397 (85N), as amended; OPNAVINST 5530.14E, Navy Physical Security and Law Enforcement Program; Marine Corps Order P5530.14, Marine Corps Physical Security Program Manual; 80RNNM5512-2 Badge and Access Control System Records and OMD 16, Identity Management Engine for Security and Analysts (IMESA); <http://dpcid.defense.gov/Privacy/SORNIndex>

PURPOSE(S): To control physical access to Department of Defense (DoD), Department of the Navy (DON) or U.S. Marine Corps installations/units controlled information, installations, facilities, or areas over which DoD, DON, or U.S. Marine Corps has security responsibilities by identifying or verifying an individual through the use of biometric databases and associated data processing/information services for designated populations for purposes of protecting U.S./Coalition/allied government/national security areas of responsibility and information; to issue badges, replace lost badges, and retrieve passes upon separation; to maintain visitor statistics; collect information to adjudicate access to facility; and track the entry/exit times of personnel.

ROUTINE USE(S): To designated contractors, Federal agencies, and foreign governments for the purpose of granting Navy officials access to their facility.

DISCLOSURE: Providing registration information is voluntary. Failure to provide requested information may result in denial of access to benefits, privileges, and DoD installations, facilities and buildings.

IDENTITY PROOFING AND APPLICANT INFORMATION

1. LAST NAME:		2. FIRST NAME:		3. MIDDLE NAME:		4. NAME SUFFIX: Jr. Sr. I II III IV	
5. RACE (Check one or more): <input type="checkbox"/> AMERICAN INDIAN or ALASKA NATIVE <input type="checkbox"/> ASIAN <input type="checkbox"/> BLACK or AFRICAN AMERICAN <input type="checkbox"/> HISPANIC OR LATINO <input type="checkbox"/> NATIVE HAWAIIAN OR OTHER PACIFIC ISLANDER <input type="checkbox"/> WHITE							
6. GENDER (Check one): <input type="checkbox"/> MALE <input type="checkbox"/> FEMALE		7. DATE OF BIRTH:		8. CITY OF BIRTH:		9. STATE OF BIRTH:	
						10. BIRTH COUNTRY:	
11. US CITIZEN (Check): <input type="checkbox"/> YES <input type="checkbox"/> NO		12. DUAL CITIZENSHIP: <input type="checkbox"/> YES <input type="checkbox"/> NO CITIZENSHIP IF OTHER THAN US (Country):					

U.S. Citizen Minimum Documentation Required:

By Birth - Social Security No and/or State ID/Drivers License.

Naturalized - Certification Number, Petition Number, Date, Place and Court, United States passport number, Social Security No and/or State ID/Drivers License.

Derived - Parent's certification number, Social Security No and/or State ID/Drivers License.

Alien Minimum Documentation Required:

Registration Number, Expiration date, Date of entry, Port of entry.

13. IDENTITY SOURCE DOCUMENTS PRESENTED:	14. DOCUMENT NUMBER:	15. ISSUED BY STATE/COURT:	16. ISSUED BY COUNTRY:	17. ISSUED:	18. EXPIRES:
<input type="checkbox"/> Social Security No.			United States		
<input type="checkbox"/> State ID/Drivers License			United States		
<input type="checkbox"/> Passport No.					
<input type="checkbox"/> Certification Number and Petition Number					
<input type="checkbox"/> Derived - Parent's Certification Number:			United States		
<input type="checkbox"/> Alien Registration No.			United States		

Date of Entry:

Port of Entry:

OTHER APPROVED IDENTITY SOURCE DOCUMENTS:

<input type="checkbox"/>					
<input type="checkbox"/>					

19. WEIGHT (Pounds):	20. HEIGHT (Inches):	21. HAIR COLOR (Check one): <input type="checkbox"/> Blond <input type="checkbox"/> Brown <input type="checkbox"/> Black <input type="checkbox"/> Gray <input type="checkbox"/> Red <input type="checkbox"/> White <input type="checkbox"/> Silver <input type="checkbox"/> Auburn <input type="checkbox"/> Bald				22. EYE COLOR (Check one): <input type="checkbox"/> Brown <input type="checkbox"/> Green <input type="checkbox"/> Blue <input type="checkbox"/> Hazel <input type="checkbox"/> Black <input type="checkbox"/> Gray <input type="checkbox"/> Violet <input type="checkbox"/> Unknown			
23. HOME ADDRESS (Include city, state, zip code):						HOME PHONE (Include Area Code):			
24. BASE SPONSOR'S NAME:						SPONSOR PHONE (Include Area Code):			

CUI (when filled in)

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EMPLOYMENT ACTIVITY INFORMATION			
25. EMPLOYER NAME AND ADDRESS (Include city/state/zip code):		EMPLOYER PHONE (Include Area Code):	
26. SUPERVISOR NAME AND ADDRESS (Include city/state/zip code):		SUPERVISOR PHONE (Include Area Code):	
27. Check the applicable box for WORK HOURS box or check the OTHER box and enter the work hours, then check the applicable box for WORK DAYS:			
WORK HOURS: 0600-1800 0800-1700 OTHER		WORK DAYS: SN M T W TH F ST	
PRIOR FELONY CONVICTIONS			
28. Have you ever been convicted of a Felony? YES NO _____ Initial			
REQUIREMENT TO RETURN LOCAL POPULATION ID CARD			
29. I understand that I am required to return my Local Population Identification Card to the Base Pass Office when it expires or if my employment is terminated for any reason. _____ (Initials)			
AUTHORIZATION AND RELEASE AND CERTIFICATION			
30. I hereby authorize the DOD/DON and other authorized Federal agencies to obtain any information required from the Federal government and/or state agencies, including but not limited to, the Federal Bureau of Investigation (FBI), the Defense Security Service (DSS), the U.S. Department of Homeland Security (DHS).			
I have been notified of DON right to perform minimal vetting and fitness determination as a condition of access to DON installation/facilities. I understand that I may request a record identifier, the source of the record and that I may obtain records from the State Law Enforcement Office as may be available to me under the law. I also understand that this information will be treated as privileged and confidential information.			
I release any individual, including records custodians, any component of the U.S. Government or the individual State Criminal History Repository supplying information, from all liability for damages that may result on account of compliance, or any attempts to comply with this authorization. This release is binding, now and in the future, on my heirs, assigns, associates, and personal representative(s) of any nature. Copies of this authorization that show my signature are as valid as the original release signed by me.			
FALSE STATEMENTS ARE PUNISHABLE BY LAW AND COULD RESULT IN FINES AND/OR IMPRISONMENT UP TO FIVE YEARS.			
BEFORE SIGNING THIS FORM, REVIEW IT CAREFULLY TO MAKE SURE YOU HAVE ANSWERED ALL QUESTIONS FULLY AND CORRECTLY.			
I DECLARE UNDER PENALTY OF PERJURY THAT THE STATEMENTS MADE BY ME ON THIS FORM ARE TRUE, COMPLETE AND CORRECT.			
DATE _____		SIGNATURE _____	
FINAL DETERMINATION ON YOUR ACCESS: The Base Commanding Officer has final authority for determination on granting physical access to DON controlled installations/facilities under his/her jurisdiction.			
BELOW COMPLETED BY BASE REGISTRAR PERSON CONDUCTING IDENTITY PROOFING and NCIC CHECK			
31. INFORMATION VERIFIED BY:	32. ENTERED IN C/S SYSTEM BY:	33. PASS ISSUE DATE:	34. PASS EXPIRATION DATE:
35. NCIC CHECK PERFORMED BY:	36. RESULTS OF NCIC CHECK: NO RECORDS RECORD IDENTIFIER RECORD NUMBER: _____		37. RESULTS OF LOCAL RECORDS CHECK: NO RECORDS RECORD IDENTIFIER RECORD NUMBER: _____
Office of Under Secretary of Defense Directive-Type Memorandum (DTM) 09-012, "Interim Policy Guidance for DoD Physical Access Control," December 8, 2009. DTM 09-012 requires that DoD installation government representatives query the National Crime Information Center (NCIC) and Terrorist Screening Database to vet the claimed identity and to determine the fitness of non-federal government and non-DoD-issued card holders (i.e. visitors) who are requesting unescorted access to a DoD installation. The minimum criteria to determine the fitness of a visitor is: 1) not on a terrorist watch list; 2) not on a DoD installation debarment list; and 3) not on a FBI National Criminal Information Center (NCIC) felony wants and warrants list. Additionally, SECNAV Memo, Policy for Sex Offender Tracking and Assignment and Access Restrictions within the Department of the Navy, of 7 Oct 08 and OPNAVINST 1752.3 established the Navy's policy on sex offenders, requiring Region Commanders (REGCOMs) and Installation Commanding Officers (COs) to prohibit sex offender access to DoN facilities and Navy owned, leased or PPV housing. This form describes the authority and purpose to collect and share the required information; and identifies the applicant/visitor and sponsor; and authorizes the DoD to perform the minimum vetting and fitness determination criteria. A favorable response on the vetting and fitness determination is required to receive access to DOD-controlled installation/facilities.			

SECNAV 5512/1 (MAY 2021)

CUI (when filled in)

Controlled by: DoM
CUI Category: FRODOV
LIC: FRODOV
POC: Rodney Rasmussen, rodney.rasmussen@navy.mil, 202-433-4281

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Enclosure (1)

CUI (when filled in)

OMB 0703-0061 05/31/2024

Instruction for completing the Local Population Access Registration Form

INSTRUCTIONS: Please complete all information in black ink (printed) or by typing. By voluntarily providing your Personal Information, you agree to the following terms and restrictions:
RESTRICTIONS: Local Population Identification Card/Base Access Pass may only be used by person to whom they are issued and for the specific business/purpose issued. Applicants are reminded that soliciting (i.e., door-to-door sales) is prohibited on the base, and that such activity is grounds for cancellation of the Pass. Additionally, such action may result in debarment from the base and legal action. The Base Commanding Officer has discretion over specifying the period of validity for any Local Population ID Cards/Base Access Passes that are issued under his/her jurisdiction.
 Review the Privacy At Statement that is printed at the top of the form

<p>Block 1: Enter the Last Name. Block 2: Enter the First Name. Block 3: Enter the Middle Name. Block 4: If applicable, check the box for Name Suffix. Block 5: Check the applicable box for Race. Block 6: Check the applicable box for Gender. Block 7: Enter Date of Birth. Block 8: Enter City of Birth. Block 9: Enter State of Birth. Block 10: Enter Country of Birth. Block 11: Check the applicable box for US Citizenship. Block 12: If not a US Citizen, enter the name of the Country of Citizenship. Block 13: Two forms of identity source documents from the list of acceptable documents listed below must be presented to the base registrar with this completed form. Check the box for the type of Documents that will be presented for identity proofing. If the document type is not listed, use the two rows under Other Approved Identity Source Documents to enter the type of document(s) that you will present. Block 14: Enter the Document Number located on the Identity Proofing Source document that was checked in Block 13. Block 15: Enter the State that issued the Identity Source Document. Block 16: Enter the Country that issued the Identity Source Document.</p>	<p>Block 17: Enter the Date that the Identity Source Document was issued. Block 18: Enter the Date that the Identity Source Document will expire. Block 19: Enter Weight in pounds. Block 20: Enter Height in inches. Block 21: Check the applicable box for Hair Color. Block 22: Check the applicable box for Eye Color. Block 23: Enter Home Address including City, State, Zip Code, and Home Telephone Number. Block 24: Enter Name of Registrar's Base Sponsor and Base Sponsor's Telephone Number. Block 25: Enter Employer Name and address including City, State, Zip Code, and Employer's Telephone Number. Block 26: Enter Supervisor's Name including City, State, Zip Code, and Supervisor's Telephone Number. Block 27: Check the applicable box for Work Hours box or check the OTHER box and enter the work hours, then check applicable boxes for Work Days. Block 28: Check the applicable answer if you have been convicted of Felony and enter initials. Block 29: Check the applicable box for felony conviction. Block 30: Enter initials to accept terms for returning Local Population Identification Card. Block 31: Sign and date the form to attest that the foregoing information is true and complete to best of your knowledge.</p>
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LIST OF ACCEPTABLE DOCUMENTS - All documents must not be expired.
 Must present one selection from List A or a combination of one selection from List B and one selection from List C.

List A - Documents that Establish Identity and Employment Authorization	OR	List B - Documents that Establish Identity	AND	List C - Documents that Establish Employment Authorization
<p>1. U.S. Passport or U.S. Passport Card 2. Permanent Resident Card or Alien Registration Receipt Card (Form I-551). 3. Foreign passport that contains a temporary I-551 stamp or temporary I-551 printed notation on a machine-readable immigrant visa. 4. Employment Authorization Document that contains a photograph (Form I-766). 5. For a nonimmigrant alien authorized to work for a specific employer because of his or her status: a. Foreign Passport; and b. Form I-94 or Form I-94A that has the following: (1) The same name as the passport; and (2) An endorsement of the alien's nonimmigrant status as long as that period of endorsement has not yet expired and the proposed employment is not in conflict with and restrictions or limitations identified on form. 6. Passport from the Federal States of Micronesia (FSM) or the Republic of the Marshall Islands (RMI) with Form I-94 or Form I-94A indicating nonimmigrant admission under the Compact of Free Association Between the United States and FSM or RMI.</p>		<p>1. Driver's license or ID card issued by a State or outlying possession of the United States provided it contains a photograph or information such as name, date of birth, gender, height, eye color, and address. 2. ID card issued by federal, state or local government agencies or entities, provided it contains a photograph or information such as name, date of birth, gender, height, eye color, and address. 3. School ID card with a photograph 4. Voter's registration card. 5. U.S. Military card or draft record. 6. Military dependent's ID card. 7. U.S. Coast Guard Merchant Mariner Card. 8. Native American tribal document. 9. Driver's license issued by a Canadian government authority. For persons under age 18 who are unable to present a document listed above: 10. School record or report card. 11. Clinic, doctor, or hospital record. 12. Day-care or nursery school record.</p>		<p>1. A Social Security Account Number card, unless the card includes one of the following restrictions: (1) NOT VALID FOR EMPLOYMENT (2) VALID FOR WORK ONLY WITH INB AUTHORIZATION. (3) VALID FOR WORK ONLY WITH DHS AUTHORIZATION. 2. Certification of Birth Abroad issued by the Department of State (Form F8-545). 3. Certification of Birth issued by the Department of State (Form DB-1360). 4. Original or certified copy of birth certificate issued by a State, county, municipal authority or territory of the United States bearing an official seal. 5. Native American tribal document. 6. U.S. Citizen ID Card (Form I-197). 7. Identification Card for Use of Resident Citizen in the United States (Form I-179). 8. Employment authorization document issued by the Department of Homeland Security.</p>

The remainder of the form will be completed by the Base Registrar Person conducting Identity Proofing process and NCIC check.

AGENCY DISCLOSURE STATEMENT:

The public reporting burden for this collection of information, OMB 0703-0061, is estimated to average ten (10) minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services, Executive Services, at whs.mo-alex.esd.mbx.dd-dod-information-collections@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

PLEASE DO NOT RETURN RESPONSE TO THE ABOVE ADDRESS.
 Responses should be sent to the Base Registrar.

SECNAV 5512/1 (MAY 2021)

CUI (when filled in)

Controlled by: DOD
 OUI Category: PRIVACY
 UDC: FPD001
 POC: Rodney Rasmussen, rodney.rasmussen@navy.mil, 202-433-4281

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Enclosure (1)

LISTS OF ACCEPTABLE DOCUMENTS

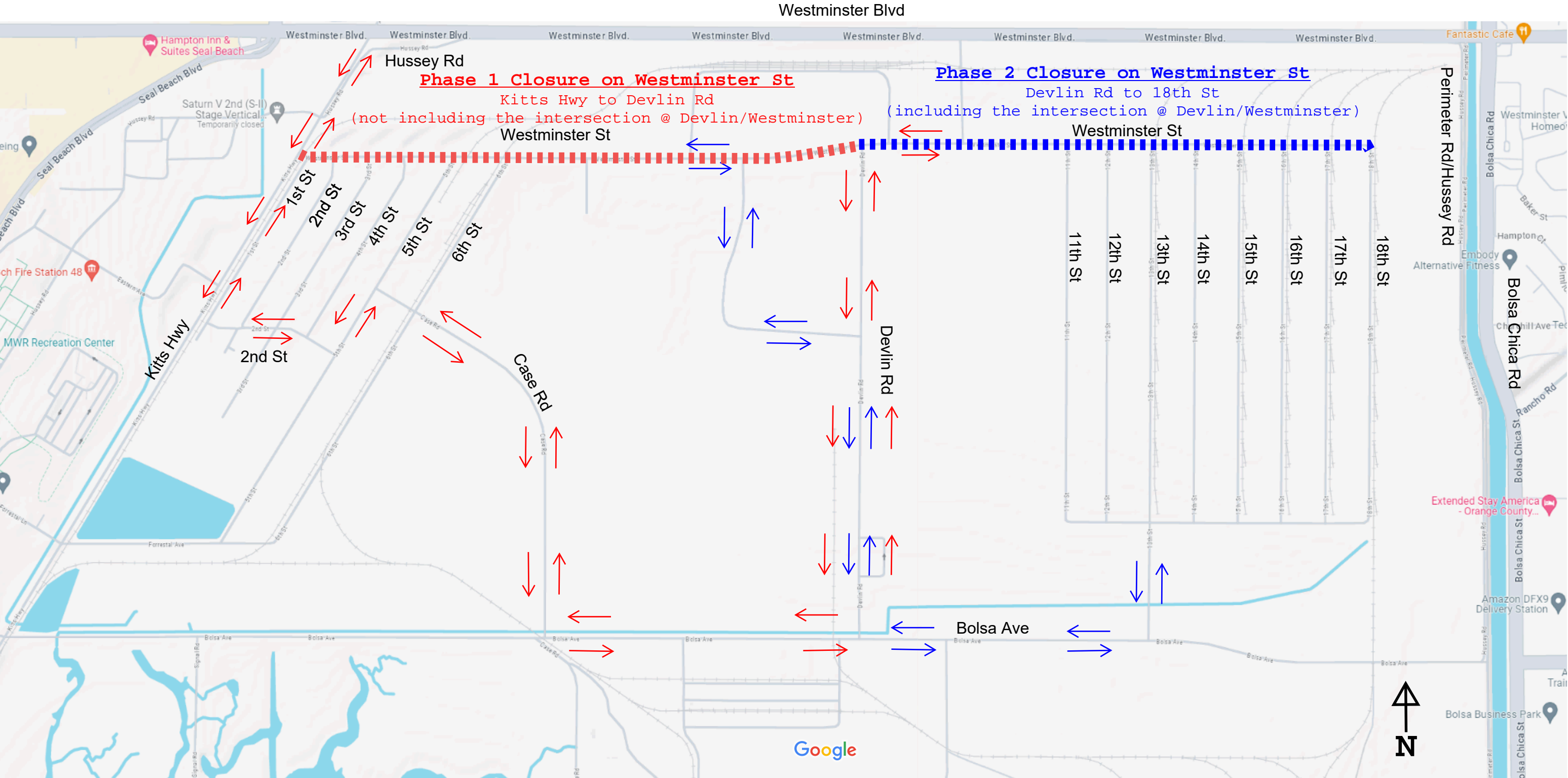
All documents must be UNEXPIRED

Employees may present one selection from List A
or a combination of one selection from List B and one selection from List C.

LIST A	OR	LIST B	AND	LIST C
Documents that Establish Both Identity and Employment Authorization		Documents that Establish Identity		Documents that Establish Employment Authorization
1. U.S. Passport or U.S. Passport Card		1. Driver's license or ID card issued by a State or outlying possession of the United States provided it contains a photograph or information such as name, date of birth, gender, height, eye color, and address		1. A Social Security Account Number card, unless the card includes one of the following restrictions: (1) NOT VALID FOR EMPLOYMENT (2) VALID FOR WORK ONLY WITH INS AUTHORIZATION (3) VALID FOR WORK ONLY WITH DHS AUTHORIZATION
2. Permanent Resident Card or Alien Registration Receipt Card (Form I-551)		2. ID card issued by federal, state or local government agencies or entities, provided it contains a photograph or information such as name, date of birth, gender, height, eye color, and address		2. Certification of report of birth issued by the Department of State (Forms DS-1350, FS-545, FS-240)
3. Foreign passport that contains a temporary I-551 stamp or temporary I-551 printed notation on a machine-readable immigrant visa		3. School ID card with a photograph		3. Original or certified copy of birth certificate issued by a State, county, municipal authority, or territory of the United States bearing an official seal
4. Employment Authorization Document that contains a photograph (Form I-766)		4. Voter's registration card		4. Native American tribal document
5. For a nonimmigrant alien authorized to work for a specific employer because of his or her status: a. Foreign passport; and b. Form I-94 or Form I-94A that has the following: (1) The same name as the passport; and (2) An endorsement of the alien's nonimmigrant status as long as that period of endorsement has not yet expired and the proposed employment is not in conflict with any restrictions or limitations identified on the form.		5. U.S. Military card or draft record		5. U.S. Citizen ID Card (Form I-197)
		6. Military dependent's ID card		6. Identification Card for Use of Resident Citizen in the United States (Form I-179)
		7. U.S. Coast Guard Merchant Mariner Card		7. Employment authorization document issued by the Department of Homeland Security
		8. Native American tribal document		
		9. Driver's license issued by a Canadian government authority		
6. Passport from the Federated States of Micronesia (FSM) or the Republic of the Marshall Islands (RMI) with Form I-94 or Form I-94A indicating nonimmigrant admission under the Compact of Free Association Between the United States and the FSM or RMI		For persons under age 18 who are unable to present a document listed above:		
		10. School record or report card		
		11. Clinic, doctor, or hospital record		
		12. Day-care or nursery school record		



Naval Weapon Station Seal Beach

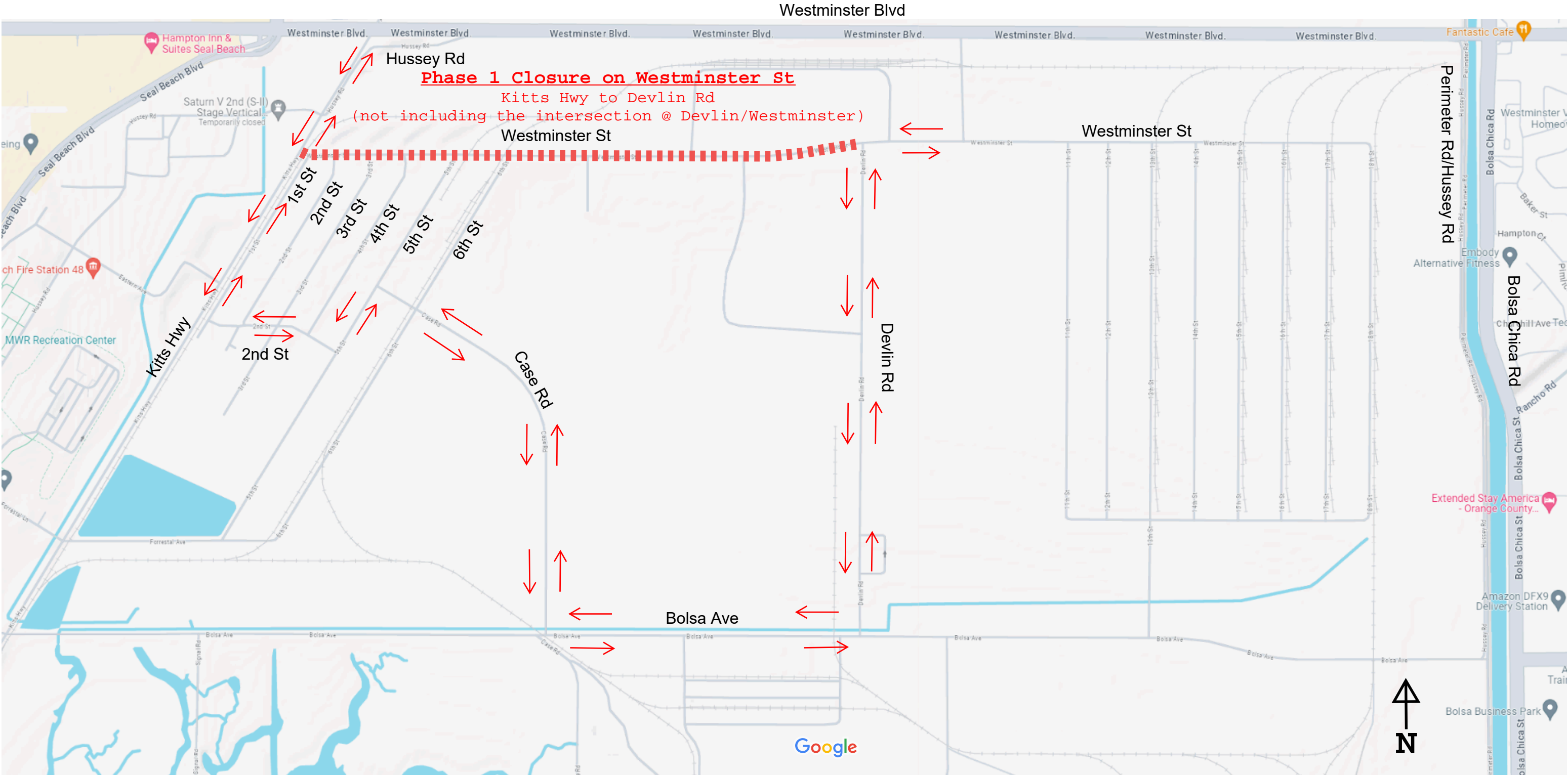


Westminister St Detour

- Map data ©2024 500 ft
- Phase 1 Detour route
 - Phase 2 Detour route

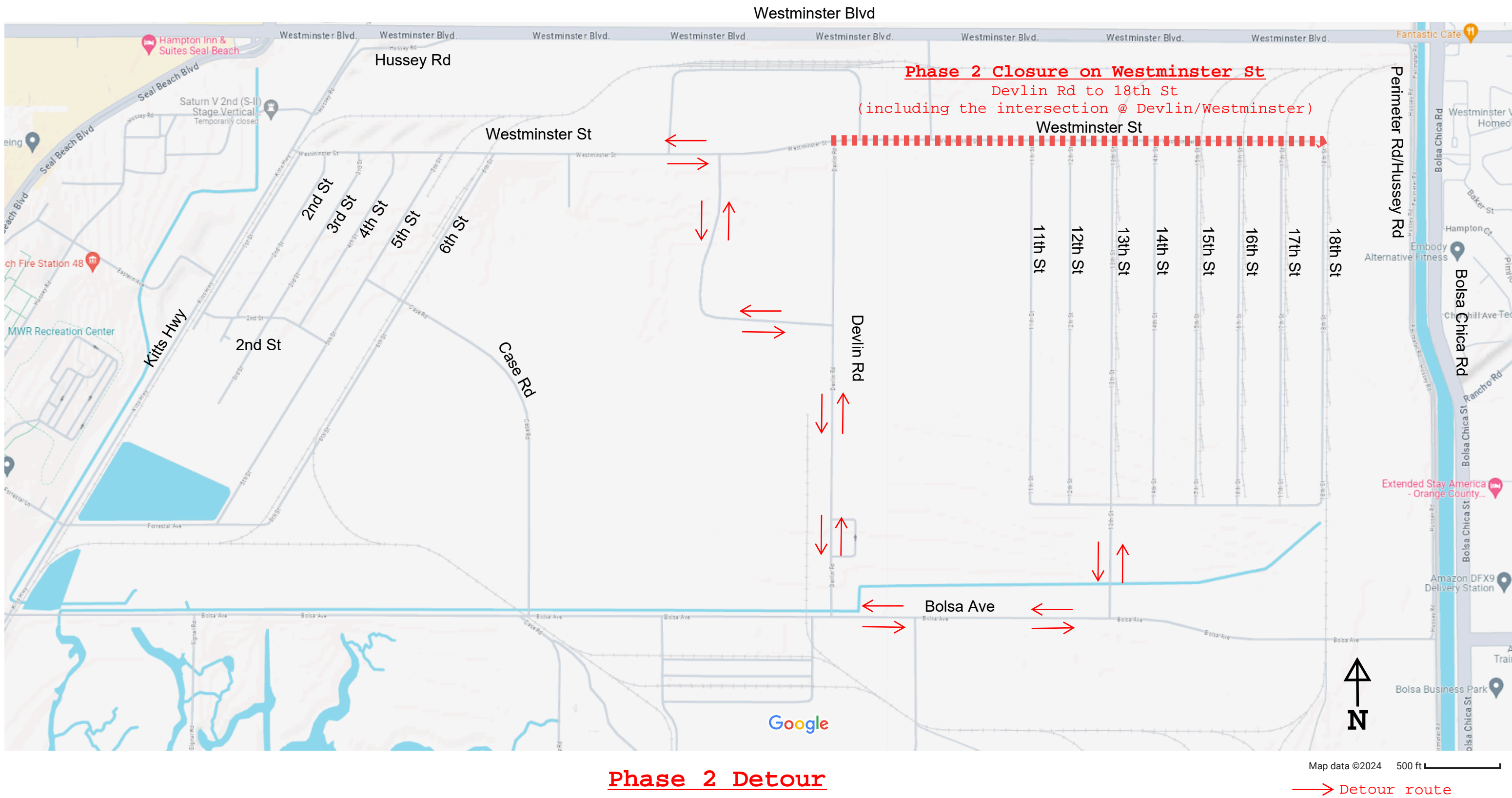


Naval Weapon Station Seal Beach

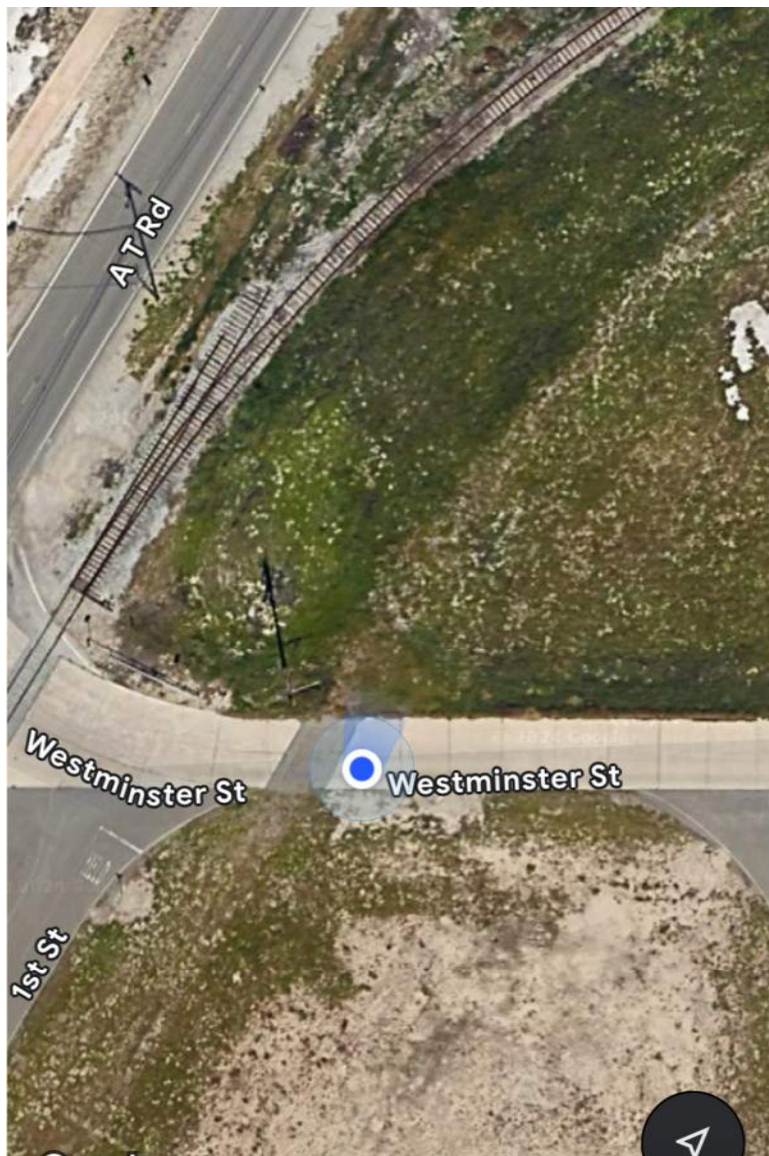


Phase 1 Detour

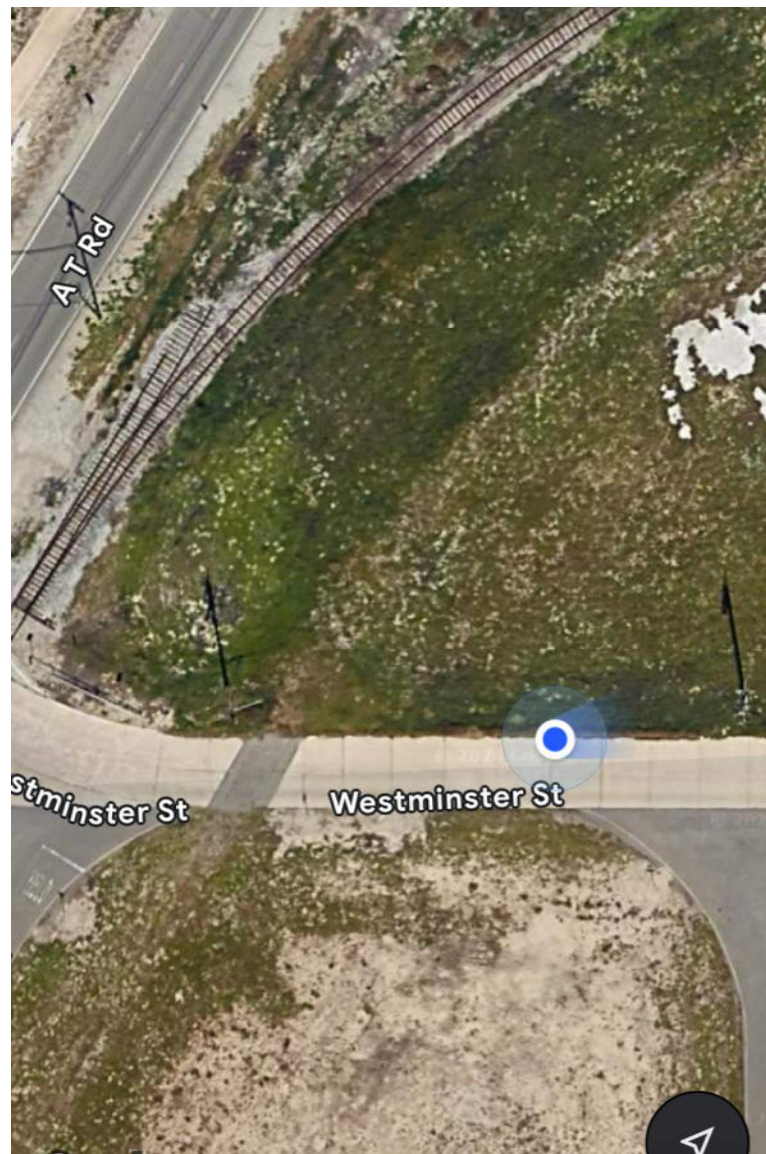
Map data ©2024 500 ft
→ Detour route



ATTACHMENT H: SITE PHOTOS



Location 1: Westminster St and 1st St



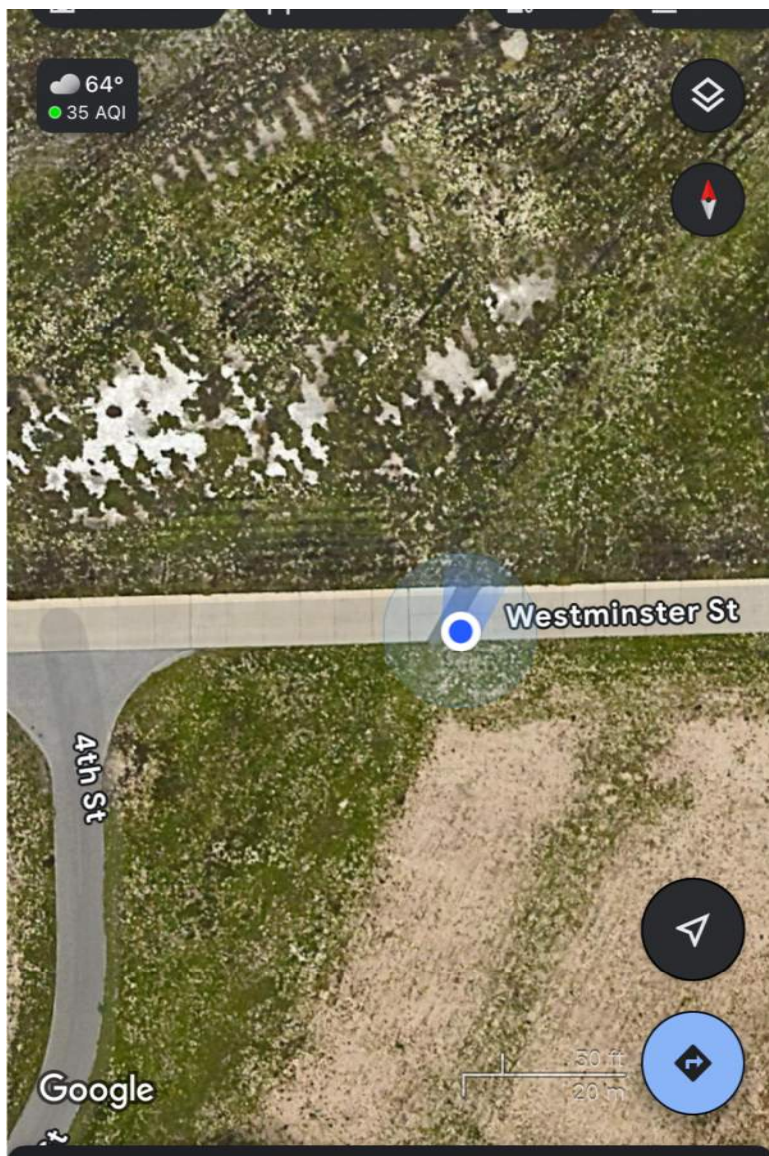
Location 2: Westminster St and 2nd St



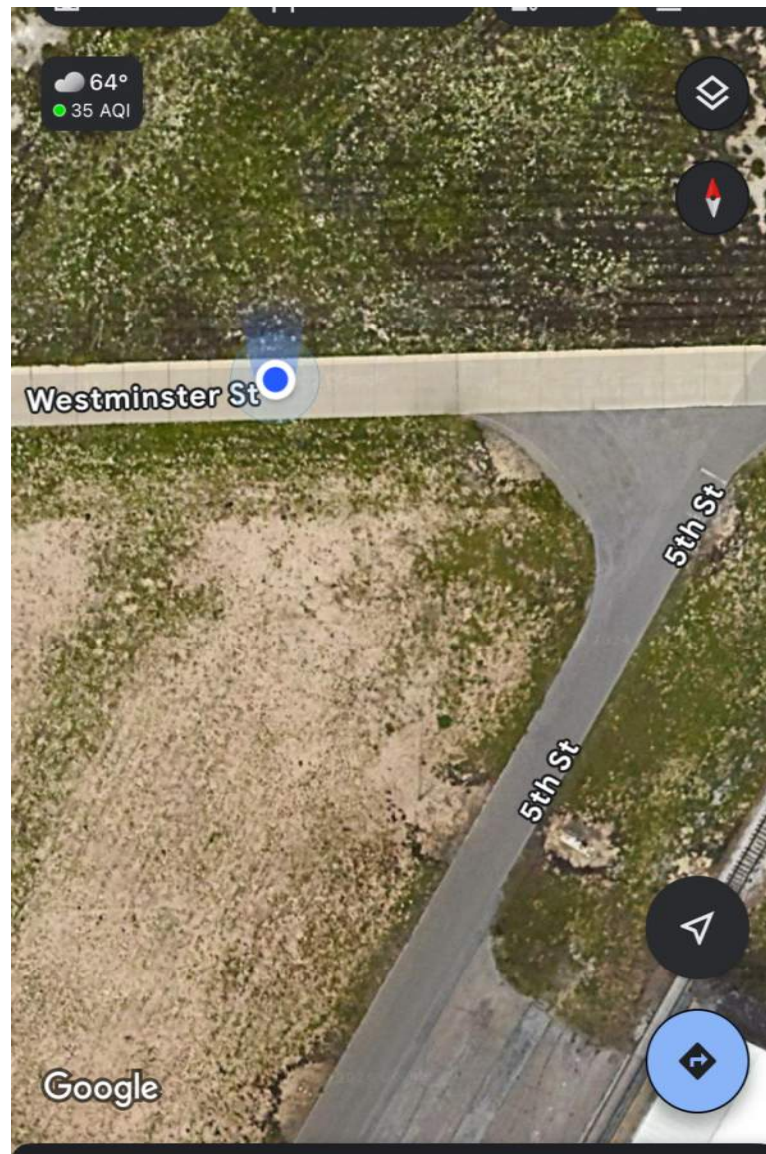
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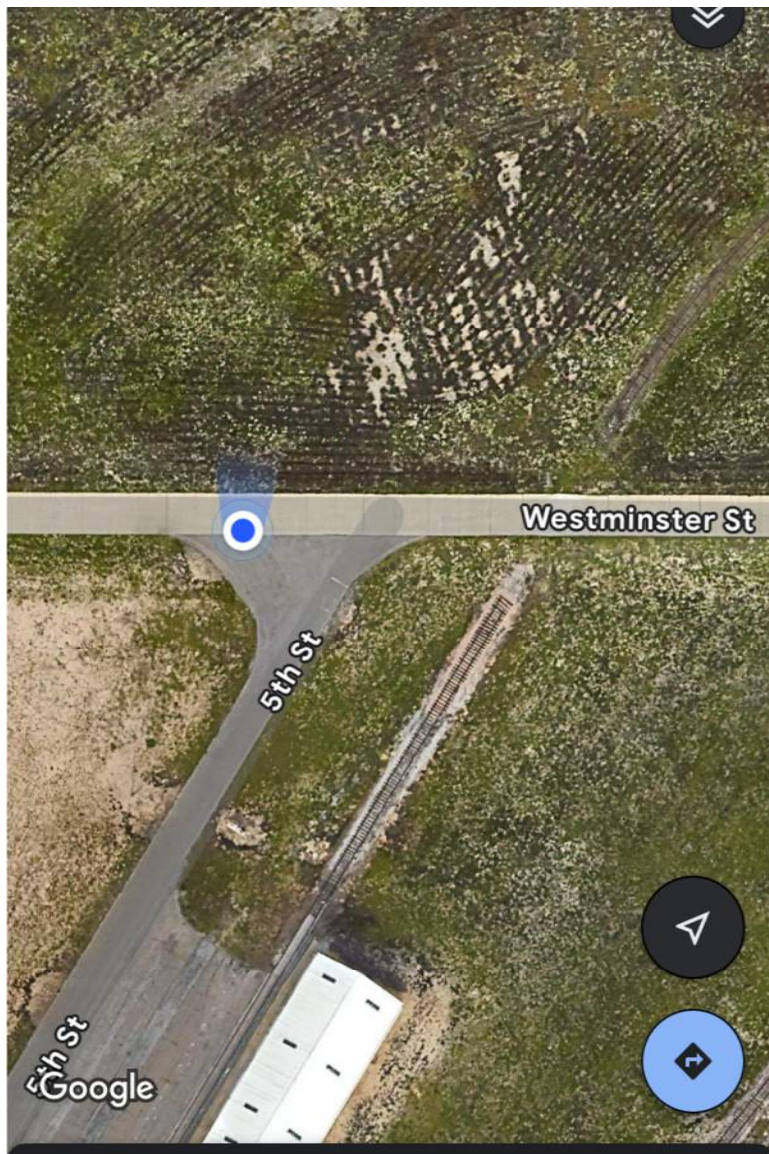
Location 3: Westminster St and 4th St



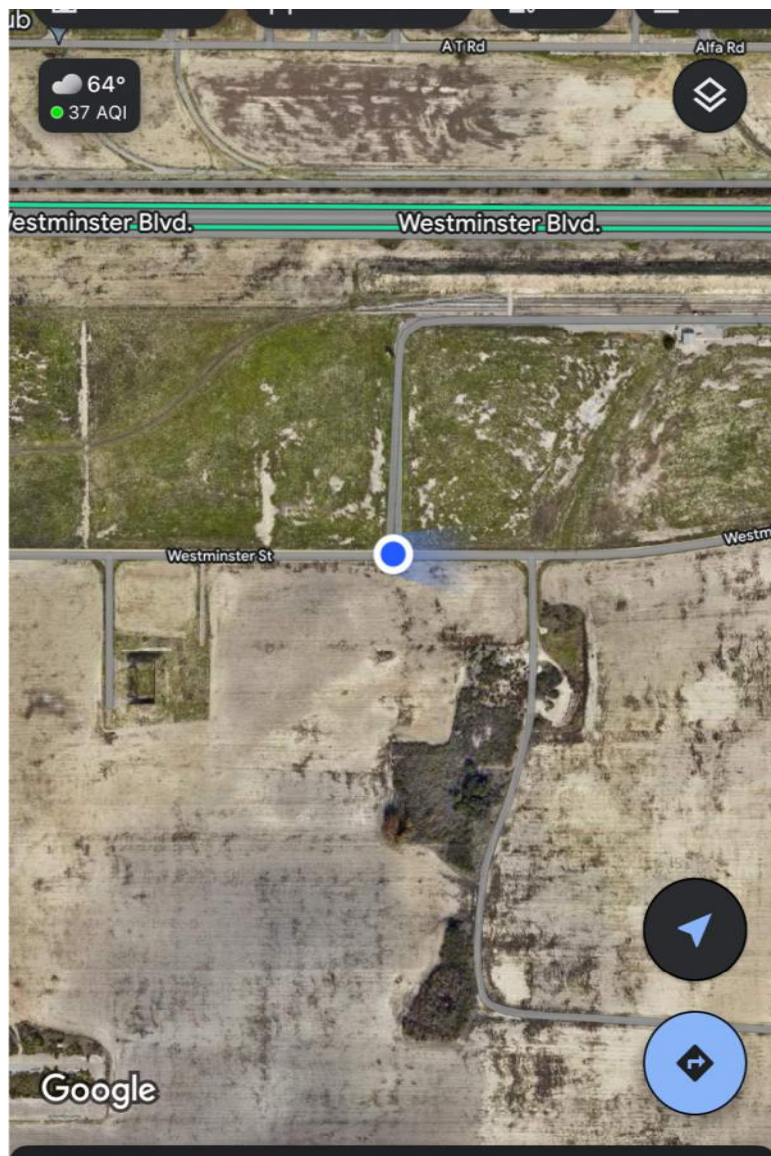
Location 3: Westminister St and 4th St



Location 4: Westminster St and 5th St



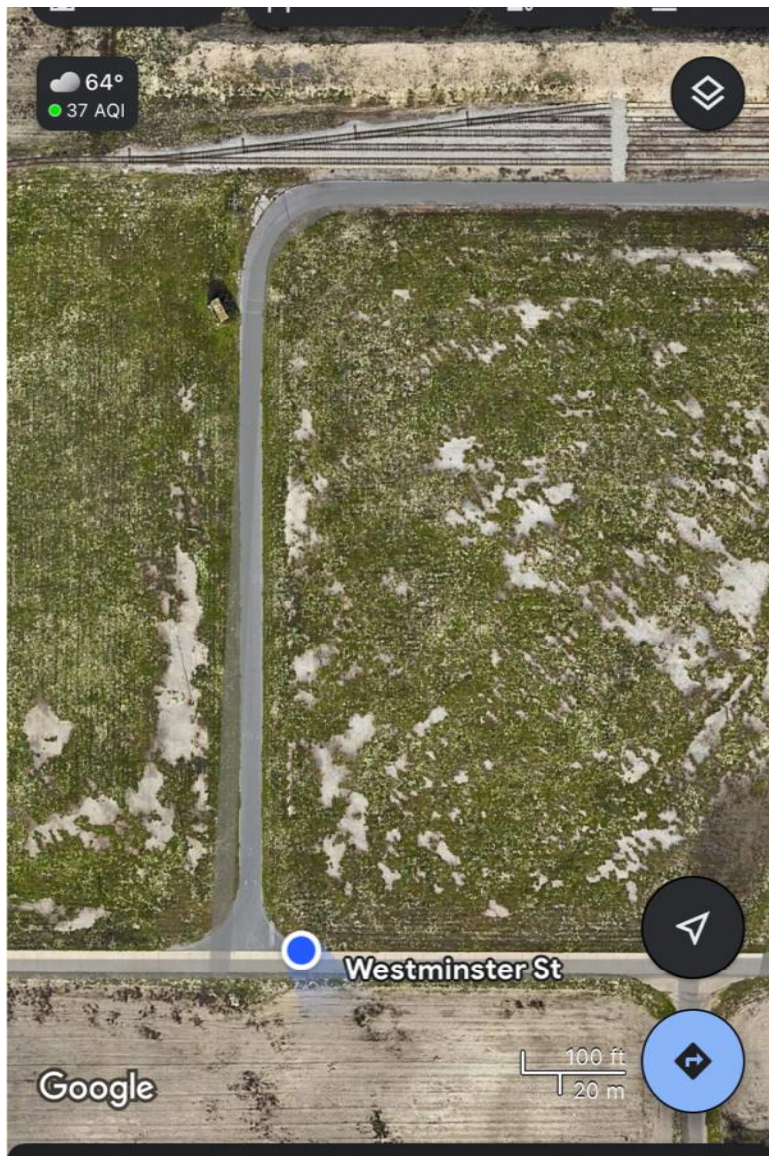
Location 5: Westminster St and 5th St



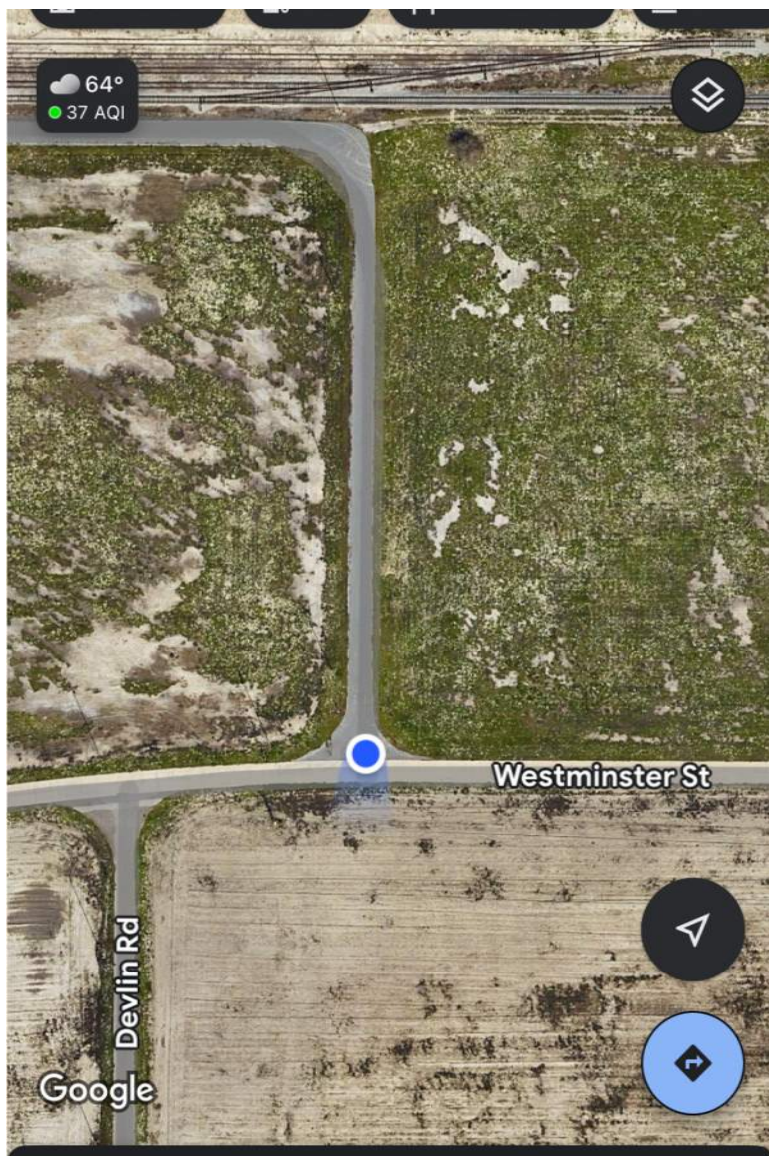
Location 6: Westminister St



Location 6: Westminster St



Location 7: Westminster St



Location 8: Westminster St (East of Devlin Rd)

2022 STRUCTURAL PAVEMENT INVESTIGATION REPORT

For

Naval Weapons Station Pavement Rehabilitation Project

Within the
City of Seal Beach, California

LMI Project No. 47586

Date: August 18, 2022

Client:
Mott MacDonald
500 South Main Street, Suite 530
Orange, CA 92868

Reviewed By:



STEVEN R. MARVIN
RCE 30659



Professional Pavement Engineering
2700 South Grand Avenue, Santa Ana, CA
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APPENDIX

A	PAVEMENT CORE DATA AND GROUND PENETRATING RADAR PLANS
B	IMPROVEMENT RECOMMENDATION PLANS
C	R-VALUE DETERMINATIONS (CA 301)
D	DEFLECTION ANALYSIS TABLES AND SOILS MODULUS TABLES
E	IN FIELD DEFLECTION TESTING DATA
F	GLOSSARY OF TERMS

1.0 Introduction

Improvement of various roadways, parking lots and loading dock service pavement areas within the US Naval Weapons Station, Seal Beach, California is currently being planned. The specific improvement needs and development of alternative rehabilitation strategies have been determined based on the investigation herein. The two roadways, four loading dock service areas and parking lots investigated include

2. Westminster Street - Kitts Highway to 18th Street

4. Magazine Buildings - Bldg.'s #824 - #827

The engineering study is not intended to validate or invalidate general recommendations developed as part of the agency's pavement management practices and/or others. The study is intended to develop a better and more thorough understanding of the conditions along the three roadway segments and provide the design team and the NWS an opportunity to develop rational, cost-effective roadway improvement strategies.

The specific requirements along the roadways include addressing the surface layer deterioration, the impacts of previous use of pavement reinforcing fabric(s), current grade improvements and the overall structural conditions along the roadway segment must be fully explored to insure selection of an effective rehabilitation strategy. Given the need for designing future improvements to join with the existing roadway structure, combined with modifications and questions relative to the probable structural conditions of the existing roadway, LaBelle Marvin Inc was retained to perform a comprehensive investigation of the roadway structural conditions. The focus of this structural evaluation includes the existing travel lanes.

Project Understanding

LaBelle Marvin, Inc. has been retained by Orange County Transportation Agency, C/O Mott Macdonald, to provide necessary pavement engineering services in the form of testing, analysis

and rehabilitation design for verification of the probable improvement strategies in conjunction with developing, where feasible, cost-effective design alternatives for pavement resurfacing and rehabilitation, as conditions dictate.

[REDACTED]

Westminster Street is also an east/west roadway traversing the northly portion of the NWS. The roadway is constructed of Portland Cement Concrete. The present pavement jointing and cracking are contributing to an irregular ride, inconsistent with on-base transport of goods and materials. The roadway generally includes two travel lanes, one in the easterly and one in the westerly direction. Various railroad lines intercept both Westminster Street and Bolsa Avenue.

[REDACTED]

The Loading Dock service pavements west of Magazine Buildings Numbers 824, 825, 826 and 827 include extensive areas of transverse, longitudinal and widespread alligator cracking. Surface gradients are irregular, with the northerly ends of the pavement areas inclusive of slopes at times deemed excessive to rapid loading of ordinance. The pavement areas have been the subject of repeated patching and repairs, including limited area replacement associated with removal of railroad spurs. The dock heights abutting the pavement areas are irregular, however a variable

or even reduced dock height does not materially impact loading or unloading operations based on current equipment use.

2.0 Scope of Services

The detailed tasks performed to complete the report are as follows:

- Traffic Use Estimates/TI review/Forklift Impact Estimates
- Visual Evaluation and Ride Quality Analysis of Current Conditions
- In-Place Strength Testing and Soil Modulus Analysis by Falling Weight Deflectometer along Westminster Street [REDACTED]
- As-Built Verification by Pavement Coring and Bulk Sampling
- Pavement thickness verification along travel lanes using Ground Penetrating Radar
- Soil Condition Testing (I.E. Soil Strength Testing and In Situ Moisture Contents)
- Development of Structural Replacement Sections
- Development of Design Rehabilitation Alternatives

The investigation performed utilized a range of data gathering techniques to ascertain the present structural conditions of all through travel lanes and developed design improvements.

Verification of the appropriate method of rehabilitation utilized the following tasks including close interval in-place strength testing by deflection testing (CTM 356) to define the impact of previous traffic use, the environmental effects such as varying climate changes, seasonal rainfall, subsurface moisture changes and extended drought periods on the current roadway. Pavement core sampling defined the existing section thicknesses and documents subgrade soil conditions and soil strength testing (CTM 301 and CTM 226).

The specific 'hard' data is compared to visual examination of the roadway with current and future traffic use providing a basis for development of improvement requirements to meet long-term City performance expectations. Ultimately selection of an appropriate course of corrective action and/or rehabilitation must consider each of these objective issues, and combine these impacts with subjective values perceived by the public such as appearance, duration, and actual apparent work performed.

Final selected method of rehabilitation may be based on a combination of alternative methods of roadway improvement provided within this report to address the specific conditions identified

during this investigation. These alternative recommendations may be compared to specific topographic data being developed by others, and/or information not available at the time of this investigation which may include planned underground construction, roadway widening, modification of frontage improvements to meet ADA requirements, median modifications, etc.

The design team may also compare the various recommendations with City policies and practices, budget and risk tolerance, etc. to develop the final improvement strategy for the roadway.

3.0 Traffic Use Estimates

The Traffic Index includes future traffic estimates and is a critical component of the analysis, providing a basis for developing probable future load associated impacts on the roadway. Traffic Indices are typically developed through evaluation of current traffic patterns, truck use and estimates of future growth within the selected design period. The loading dock area pavements adjacent to the Magazines also include the impact of forklift use.

Pavement design, both new and for rehabilitation is based on comparing estimated or measured pavement strength information with future traffic use. The specific design requirements are then developed to support specific loads, such as minimum criteria for fire trucks and trash trucks, combined with estimates of the numbers and weights of general truck use over time. Since the number of loads over time is a critical element in designing pavement section thicknesses or reinforcing requirements, particular attention is required to ensure reasonable accuracy.

The pavements investigated include traffic consisting of automobile trips, waste collection services, and occasional emergency vehicles, combined with specific trucks and forklifts providing munitions and supplies to ships docked within the Seal Beach NWS. The Traffic Index (TI) utilized to evaluate current structural capacity and develop alternative rehabilitation recommendations was estimated by LMI during this investigation. The most probable future use Traffic Index is equivalent to 7.0 along the two roadways, between 7.0 and 8.0 in the loading dock magazine areas [REDACTED].



Where review of traffic studies indicates actual truck weights or both current and future use differ from the traffic projections represented by the Traffic Indices used, revision of these findings may be necessary.

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5.0 WESTMINSTER STREET

5.1 Site Review

Westminster Street is a two-lane roadway constructed primarily of Portland Cement Concrete. The concrete jointing is regularly spaced and perpendicular to the direction of travel. Pavement movement over time, including slab curl have impacted the joint elevations, resulting in an irregular ride.

The roadway is intersected by six current railroad crossings and eight previous railroad crossings. Areas of prior railroad crossings have been rebuilt joining the adjacent roadway segments.

5.2 Ride Quality Analysis

Ride qualities are impacted by the transverse joints which are exhibiting significant slab curl, railroad crossings and patches associated with prior railroad crossing removals. The ride qualities are generally unacceptable, particularly given the sensitivity of loads transported within the Naval Weapons Station.

The challenge associated with slab curl is developing a long-term solution. Primary solutions to limit slab curl include increasing the slab thickness, increasing the thickness at joints, moderating

subgrade moisture, changes in the actual PCC mixture including control of add water/slump, modification of the mix cement content, change in aggregate size, etc. None of these methods are available for an existing slab exhibiting slab curl. Complicating the issue is changes in thermal and moisture gradients associated with day to night, quick temperature changes associated with the onset of fog conditions, changes in water table elevations, etc.

Common moderation techniques to slab curl of an existing pavement include pavement grinding or placement of an asphalt concrete or Portland cement concrete overlay. Each of these methods provide temporary relief. The current most popular method includes surface grinding. It should be noted, while effective at the time of grinding, seasonable changes combined with the effectively thinner pavement slab will result in future changes and a reduction in the pavement smoothness.

5.3 In-Place Strength Testing

Structural analysis based on in-place strength testing provides a significantly more accurate picture of current pavement performance and future support capabilities. Pavement strength (FWD) testing was performed in accordance with California Test Method CTM 356 to determine current load carrying capacity of the roadway and ultimately develop rehabilitation resurfacing potential.

The Falling Weight Deflectometer technology evaluation includes determination of existing strengths at greater than 55 locations performed at 100' intervals within the right wheel paths of the existing thru travel lanes. The structural measurements indicate varying structural reinforcement requirements, provides development of subgrade modulus values, and also aids in defining the limits of reconstruction, where necessary.

A significant number of the in-place strength tests focused on the transverse joints, measuring the slab response to loading at the point of loading and on adjacent slabs. The differential movement across the joints provides a measure of potential support loss at joints and the possible need for under slab modification.

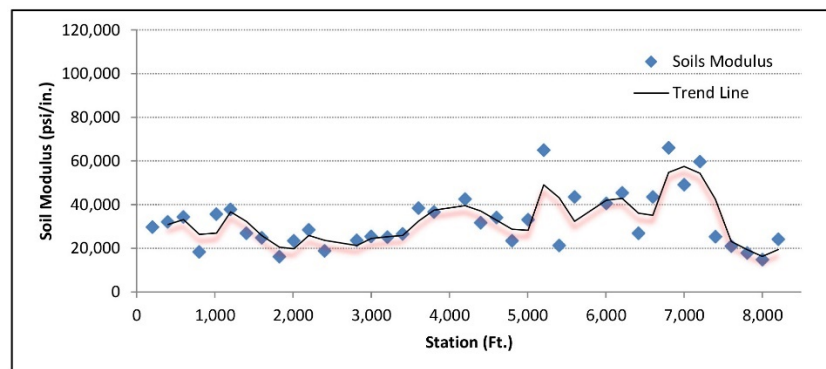
Based on measured strengths both mid slab and across the various transverse joints, no structural reinforcement of the roadway is required. Improvement of the ride qualities may therefore focus on pavement smoothness with limited risks relative to load carrying capacity. There appear to be opportunities for reducing the roadway crown and related cross slope. Various resurfacing options have been developed and are found within the Recommendations section of this report.

5.4 Soils Modulus

Pavement design and performance is a function of traffic use, subgrade strengths, layer qualities and thicknesses, and environmental impacts. The pavement analysis performed utilizes several methodologies for determining the most probable current and projected subgrade strengths. Conventional procedures utilize laboratory predicted conditions and corresponding strengths, commonly referred to as the R-value.

Given the in-place measured strength information generated during this study, subgrade strengths may be estimated based on in-situ subgrade moisture conditions combined with laboratory strengths over a range of moistures, and through use of back calculated support characteristics utilizing in-place strength data, layer thicknesses and traffic use estimates.

The determined subgrade modulus values are utilized to define soil type changes, highlight probable section thickness changes (i.e., changes from existing hot mix asphalt pavement over aggregate base to areas of full depth pavement) and evaluate risks associated with the variable types and conditions of subgrade soils which will likely be encountered where the subgrade is exposed. A typical example provided below for reference.



Based on the in-place strength measurements subgrade modulus values range from ~5,000 to 20,000 lbs. per cubic inch. Review of the apparent 80th to 85th percentile modulus would suggest use of a subgrade strength equivalent to 10,000 modulus value is reasonable for the roadway subgrade soils. The typical or general mean modulus of 10,000 per cubic inch equates to an R-value of 15, consistent with the predicted laboratory R-value strengths.

5.5 Field Core Sampling

Pavement core sampling was performed at 3 specific and distinct locations distributed along the length of the project limits. The pavement core samples provide inspection and verification of historical surfacing and resurfacing of the roadway, and documentation of prior use of pavement reinforcing fabrics to address or moderate pavement reflection cracking, etc.

Access through the Portland cement concrete pavements was provided through 6" diameter core holes, cut through the surface utilizing portable coring equipment. The operations provide access to underlying aggregate base layer, if present, and subgrade soils. Sampled subgrade soils are used to determine prevailing subgrade moistures, reflecting probable impacts of seasonal rainfall, extended drought periods, and/or subsurface water sources such as landscape irrigation and/or regional water migration or drainage, and R-value strength testing, a basis for design of new replacement sections.

Prior to field core sampling, proposed test sites were identified and marked in the field. Where selected locations coincided with marked buried utilities, core sites were relocated. Work was coordinated with the NWS to reduce traffic impacts.

The existing pavement along Westminster is a consistent 7" slab thickness.

WESTMINSTER STREET - (4) PAVEMENT SAMPLING AND TESTING SUMMARY (AS-BUILTS)			
	Number of Sample Locations	Typical As-Built Results	
		Min. (Inches)	Max. (Inches)
Portland Cement Concrete (PCC)	4	7"	7 3/4"
Aggregate Base (Encountered)	2 out of the 4	(none) 2"	5"

Note: 2 locations - No Aggregate Base

SUBGRADE	Number of Soil Types Sampled	In-Situ Moisture Contents	
		Min. (%)	Max. (%)
Clay	4 locations	17.8%	25.2%

Detailed core thickness information, test locations, subgrade soil identification and in-situ moisture conditions are provided within the Coring Location Plan and Sample Log, Appendix C. Subgrade R-Value strength data is provided in Appendix E.

5.6 Bulk Sampling and Component Analysis

The investigation is augmented with specific laboratory testing of the underlying subgrade soil strengths and moisture conditions obtained during field boring operations. The pavement analysis performed utilizes several methodologies for determining the most probable current and projected subgrade strengths. Conventional procedures utilize laboratory predicted conditions and corresponding strengths, commonly referred to as the R-value.

Bulk samples of the underlying subgrade soils beneath the roadway section, maximum 4' depth, were obtained at each of the field core locations. Bulk soil samples combined with field thickness measurements provide a basis for analyzing the cause or causes of conditions encountered during the investigation. Laboratory testing included in-situ subgrade moisture (ASTM D 2216 / CTM 226) determination and R-Value strength determination (ASTM D 2844 / CTM 301). R-Value Strength testing (resistance to deformation under loading) of the sampled Greyish Brown Clay is provided in Table 1.0.

SOIL STRENGTH TESTING RESULTS (CTM 301)			
EQUILIBRIUM R-VALUE	Number of Tests	SUBGRADE R-Value	Equilibrium Moisture
Sand	1	64 Exudation	10.3%
Clayey Sand	1	43 Exudation	10.2%

Table 1.0

Component analysis utilizing the measured structural section thicknesses is performed at both laboratory equilibrium conditions and corresponding to actual in-place field moistures determined during this investigation for each subject roadway segment. Comparison of replacement section thickness requirements with current thicknesses provides an initial basis for development of probable structural deficiencies.

Where all pavement layers are considered new, and undamaged, the section deficiencies are nominal. Site preparation, i.e., pavement milling, and corresponding increases in replacement of the milled materials will both address section deficiencies and moderate future reflective cracking.

5.7 Structural Replacement Sections

Replacement section alternatives are designed using methods outlined in the Flexible Pavement Structural Section Design Guide for California Cities and Counties, Third Edition, and the Caltrans Highway Design Manual 2020 Edition.

Replacement sections are developed based on the subgrade R-Value strength of 12 to 40 or greater determined during laboratory testing combined with the estimated Traffic Index of 7.0. Replacement section alternatives are provided in Table 2.0 below.

Structural Replacement Section Alts.			
DESIGN R-VALUE: 9 TRAFFIC INDEX: 7.0			
	OPTION A	OPTION B	OPTION C
	AC / AB	AC / AB	FULL DEPTH AC SECTION
Asphalt Concrete (HMA)	4"	5"	10 1/2"
Class 2 Aggregate Base	14 1/2"	12 1/2"	---
AC Compaction Requirement	95% Min.	95% Min.	95% Min.
AB Compaction Requirement	95% Min.	95% Min.	N/A
Subgrade Compaction Requirement (Upper 1.0')	95% Min.	95% Min.	95% Min.

Tables 2.0

5.8 Reflective Crack Analysis and Mitigation

Pavement conditions include regularly spaced longitudinal and transverse joints in the existing PCC pavement surface. Absent resurfacing of the roadway, the existing joints will remain visible. Crack mitigation will be limited to crack filling and crack sealing to moderate moisture differentials contributing to the current slab curl condition.

5.9 Engineering Analysis and Conclusions

The current roadway is structurally sound for current and projected future use. Improvement design may therefore focus on practical measures to improve ride qualities.

Conclusions

The primary deficiency of Westminster Street is the obvious joint details and associated slab curl. Slab curl may be an initial issue depending upon the construction techniques, materials used and pavement curing procedures. The present condition is however exacerbated by long term slab curl associated with temperature and moisture differentials between the top of the slab and the underlying subgrade soils. Daily and seasonal changes in temperature combined with differential moisture movement results in changing slab surface conditions over time.

The slab curl phenomena therefor may result in raised joints at certain times of the day or year, changes in mid slab elevations at other times, and limited times of the day or year where the

irregular ride qualities are tempered. Given the most effective methods of limiting slab curl are associated with the original construction, lesser methods of improvement are presently available.

Moderating the moisture differential should be combined with pavement grinding to yield a relatively smooth surface over time. The pavement curl should be moderated through this procedure; however, it is likely over time some noticeable changes in ride qualities may result. Use of pavement grinding may however be considered as a reasonable improvement method given the structural integrity of the pavement. The pavement grinding may require repeating again within the next 20 years depending upon the effectiveness of the work performed. The grinding process may then be repeated at acceptable intervals until such time as measured pavement strengths decrease to an unacceptable level, or some percentage of the roadway begins to exhibit additional slab cracking, separate from the existing longitudinal and transverse joints.

5.10 Design Rehabilitation Improvement Recommendations

Pavement Grinding/Sealing

- Clean and fill/seal all joints and cracks in the PCC pavement surface. The joint sealant should be installed to a level below the present roadway finish elevations.
- Pavement surface grind the entire roadway

Track Removal and Pavement Replacement

- Remove tracks, ties and ballast to a minimum of 17 ½" below finish surface
- Construct 12 ½" thick aggregate base layer
- Construct minimum 5" thick asphalt concrete pavement

6.0 BUILDINGS/MAGAZINES 824, 825, 826 AND 827

6.1 Site Review

The current pavement surfaces adjacent to the various Magazine Loading docks include extensive alligator cracking, surface irregularities and variable pavement slopes. Certain areas have been replaced in conjunction with removal of the railroad spurs serving the Magazines.

6.2 Ride Quality Analysis

The current operations include transfer of materials to and from trucks stationed in the pavement areas using forklifts. The current condition is impacting the operations associated with transfer of ordinance from or to the various magazines. The irregular surface impacts the efficiency of the loading operations.

6.3 Field Core Sampling

Pavement core sampling was performed at 6 specific and distinct locations distributed throughout the four Magazine Building Pavement Areas. The pavement core samples provide verification of the extensive thickness data obtained through GPR methodologies, provides inspection and verification of historical surfacing and resurfacing of the roadway, and documentation of prior use of pavement reinforcing fabrics to address or moderate pavement reflection cracking.

Access through the asphalt pavements was provided through 6" diameter core holes, cut through the surface utilizing portable coring equipment. The operations provide access to underlying aggregate base layer, if present, and subgrade soils. Sampled subgrade soils are used to determine prevailing subgrade moistures, reflecting probable impacts of seasonal rainfall, extended drought periods, and/or subsurface water sources such as landscape irrigation and/or regional water migration or drainage, and R-value strength testing, a basis for design of new replacement sections.

Prior to field core sampling, proposed test sites were identified and marked in the field. Where selected locations coincided with marked buried utilities, core sites were relocated. Work was coordinated with the NWS to reduce traffic impacts.

As-built information obtained through measurements during the core sampling and GPR testing reveals a marked and distinct difference in construction history and pavement thicknesses along the length of the roadway. The existing pavement section is typically 2" to 3" thick based on GPR data. GPR information in the prior railroad spur replacement areas is typically between 4" and 5" thick. Isolated locations, likely previous patching areas are greater than 5" thick.

Pavement core data provides similar information with asphalt concrete thicknesses typically between 1 ¾" and 3" thick. The asphalt concrete is underlain by a 3 ¾" to 6 ½" aggregate base layer. Aggregate base was encountered at all core locations.

MAGAZINE BLDG 824-827. - (6) PAVEMENT SAMPLING AND TESTING SUMMARY (AS-BUILTS)			
	Number of Sample Locations	Typical As-Built Results	
		Min. (Inches)	Max. (Inches)
Asphalt Concrete Pavement	6	1 ¾"	4 1/4"
Aggregate Base (Encountered)	6	3 ¾"	6 1/2"

Note: The presence of Fabric was encountered during this investigation

SUBGRADE	Number of Soil Types Sampled	In-Situ Moisture Contents	
		Min. (%)	Max. (%)
Clayey Sand	3 locations	11.1%	12.3%
Silty Sand	3 locations	7.4%	12.5%

Detailed core thickness information, test locations, subgrade soil identification and in-situ moisture conditions are provided within the Coring Location Plan and Sample Log, Appendix C. Subgrade R-Value strength data is provided in Appendix E.

6.4 Bulk Sampling and Component Analysis

The investigation is augmented with specific laboratory testing of the underlying subgrade soil strengths and moisture conditions obtained during field boring operations. The pavement analysis performed utilizes several methodologies for determining the most probable current and

projected subgrade strengths. Conventional procedures utilize laboratory predicted conditions and corresponding strengths, commonly referred to as the R-value.

Bulk samples of the underlying subgrade soils beneath the roadway section, maximum 4' depth, were obtained at each of the field core locations. Bulk soil samples combined with field thickness measurements provide a basis for analyzing the cause or causes of conditions encountered during the investigation. Laboratory testing included in-situ subgrade moisture (ASTM D 2216 / CTM 226) determination and R-Value strength determination (ASTM D 2844 / CTM 301). R-Value Strength testing (resistance to deformation under loading) of the sampled Brown Clayey Sand and Brown Silty Sand is provided in Table 1.0.

SOIL STRENGTH TESTING RESULTS (CTM 301)			
EQUILIBRIUM R-VALUE	Number of Tests	SUBGRADE R-Value	Equilibrium Moisture
Silty Sand	1	34 Expansion	12.5%
Clayey Sand	1	38 Exudation	11.5%

Table 1.0

Component analysis utilizing the measured structural section thicknesses is performed at both laboratory equilibrium conditions and corresponding to actual in-place field moistures determined during this investigation for each subject roadway segment. Comparison of replacement section thickness requirements with current thicknesses provides an initial basis for development of probable structural deficiencies.

Due to the unknowns relative to specific Magazine operations, a range of potential uses has been developed. Comparative use and corresponding section requirements have been developed based on a minimum 6" thick aggregate base section. Review of the present conditions suggests a typical 6" thick aggregate base may be produced through in place pulverization and combining the pulverized asphalt concrete with the underlying existing aggregate base section.

Trucks Loaded/Unloaded (20-yr Period)	Section Concrete Thickness
• 1 per week	4" AC over 6" pulverized base
• 5 per week	5" AC over 6" pulverized base
• 10 per week	6" AC over 6" pulverized base
• 20 per week	7" AC over 6" pulverized base

Where all pavement layers are considered new, and undamaged, the section deficiencies range from 1" to 4" thick asphalt concrete overlay to meet section requirements. A general review suggests the pavement fatigue is significant, reducing the structural capabilities of the measured layers. Compensating for the visible wear and tear, the typical overlay required along the roadway based on thickness alone is in the range for 2" to 6" thick. Combining these thicknesses with site preparation, i.e., pavement pulverization, and corresponding increases in replacement of the milled materials will both address section deficiencies.

6.5 Structural Replacement Sections

Replacement section alternatives are designed using methods outlined in the Flexible Pavement Structural Section Design Guide for California Cities and Counties, Third Edition, and the Caltrans Highway Design Manual Current Edition.

Replacement sections are developed based on the subgrade R-Value strength of 34 or greater determined during laboratory testing combined with the truck loading and forklift use equivalent to Traffic Indices of 7.0, 7.5 and 8.0. Replacement section alternatives are provided in Table 2.0 below.

Structural Replacement Section Alts.				Structural Replacement Section Alts.			
DESIGN R-VALUE: 34 TRAFFIC INDEX: 7.0				DESIGN R-VALUE: 34 TRAFFIC INDEX: 7.5			
	OPTION A	OPTION B	OPTION C		OPTION A	OPTION B	OPTION C
	AC / AB	AC / AB	FULL DEPTH AC SECTION		AC / AB	AC / AB	FULL DEPTH AC SECTION
Asphalt Concrete (HMA)	4"	5"	8 1/2"	Asphalt Concrete (HMA)	4 1/2"	5"	9"
Class 2 Aggregate Base	8 1/2"	6 1/2"	---	Class 2 Aggregate Base	9"	8"	---
AC Compaction Requirement	95% Min.	95% Min.	95% Min.	AC Compaction Requirement	95% Min.	95% Min.	95% Min.
AB Compaction Requirement	95% Min.	95% Min.	N/A	AB Compaction Requirement	95% Min.	95% Min.	N/A
Subgrade Compaction Requirement (Upper 1.0')	95% Min.	95% Min.	95% Min.	Subgrade Compaction Requirement (Upper 1.0')	95% Min.	95% Min.	95% Min.

Structural Replacement Section Alts.			
DESIGN R-VALUE: 34 TRAFFIC INDEX: 8.0			
	OPTION A	OPTION B	OPTION C
	AC / AB	AC / AB	FULL DEPTH AC SECTION
Asphalt Concrete (HMA)	5"	6"	9 1/2"
Class 2 Aggregate Base	9"	8"	---
AC Compaction Requirement	95% Min.	95% Min.	95% Min.
AB Compaction Requirement	95% Min.	95% Min.	N/A
Subgrade Compaction Requirement (Upper 1.0')	95% Min.	95% Min.	95% Min.

Tables 2.0

6.6 Reflective Crack Analysis and Mitigation

Pavement distress adjacent to the four Magazine Loading Docks includes extensive alligator cracking and areas of potholes or areas absent pavement. The combined thickness of asphalt concrete leveling course and wearing surface to meet loading requirements will exceed 4" thick and likely be in the range for 4" to 6" thick. The thick asphalt concrete layer will effectively moderate future reflective cracking.

6.7 Engineering Analysis and Conclusions

The current cracking patterns, GPR information and pavement core data highlight the history of the various Magazine loading dock pavement areas. The variable surface grades and pavement thicknesses, combined with the impacts on forklift use on irregular surfaces and slopes lends to a combination of full pavement pulverization combed with placement of a new pavement layer. Based on the existing section thicknesses, the combined layer of pulverized asphalt concrete and aggregate base could be regraded to moderate existing cross slopes, thereby enhancing loading operational logistics. Utilizing the core data, the pulverized layer should generally be in excess of 7" thick. The site may therefore be regraded, cutting as much as 1" to 1 1/2" from the high points and adding the excess materials to the low points at each site. The completed surface may then be finished through placement of an asphalt concrete surface corresponding to the actual anticipated use over time.

6.8 Design Rehabilitation Improvement Recommendations

OPTION 1 | Pavement Pulverization and New Pavement Construction

- Design Finish Elevations above present to moderate site undulations and slopes. The specific finish elevations will be a function of the final design operations frequency selected and corresponding asphalt concrete pavement section thickness. Interim grades prior to placement of asphalt concrete pavement may be up to 2" below present elevations to aid in moderating high points and filling low or depressed areas.
 - 1 Operation Per Week
 - Pulverize existing pavement to 6" depth, mixing pulverized asphalt concrete with existing aggregate base
 - Regrade and compact pulverized materials to interim finish elevations
 - Construct 4" thick asphalt concrete pavement over pulverized base materials
 - 5 Operations Per Week
 - Pulverize existing pavement to 6" depth, mixing pulverized asphalt concrete with existing aggregate base
 - Regrade and compact pulverized materials to interim finish elevations
 - Construct 5" thick asphalt concrete pavement over pulverized base materials
 - 10 Operations Per Week
 - Pulverize existing pavement to 6" depth, mixing pulverized asphalt concrete with existing aggregate base
 - Regrade and compact pulverized materials to interim finish elevations
 - Construct 6" thick asphalt concrete pavement over pulverized base materials
 - 20 Operations Per Week
 - Pulverize existing pavement to 6" depth, mixing pulverized asphalt concrete with existing aggregate base

- Regrade and compact pulverized materials to interim finish elevations
- Construct 7" thick asphalt concrete pavement over pulverized base materials

OPTION 2 | Asphalt Concrete Overlay

- Design Finish Elevations above present to moderate site undulations and slopes. The specific finish elevations will be a function of the final design operations frequency selected and corresponding asphalt concrete pavement section thickness.
 - 1 Operation Per Week
 - Place minimum 1 ½" thick asphalt concrete level course to retain broken pavement and correct minor surface irregularities
 - Construct 3" thick asphalt concrete pavement over the asphalt concrete level course
 - 5 Operations Per Week
 - Place minimum 1 ½" thick asphalt concrete level course to retain broken pavement and correct minor surface irregularities
 - Construct 4" thick asphalt concrete pavement over the asphalt concrete level course
 - 10 Operations Per Week
 - Place minimum 1 ½" thick asphalt concrete level course to retain broken pavement and correct minor surface irregularities
 - Construct 5" thick asphalt concrete pavement over the asphalt concrete level course
 - 20 Operations Per Week
 - Place minimum 1 ½" thick asphalt concrete level course to retain broken pavement and correct minor surface irregularities
 - Construct 6" thick asphalt concrete pavement over the asphalt concrete level course



[REDACTED]

[REDACTED]

[REDACTED]

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8.0 Subgrade Conditions

Soft or wet subgrade conditions are anticipated along the various roadways and paved areas investigated. Where wet grade is encountered during reconstruction or new construction as a result of unforeseen conditions, changes in conditions with upcoming winter weather cycle, etc., additional time should be provided within the construction schedule to permit drying, processing, and re-compaction of the subgrade prior to placement of the structural section. Where time constraints do not permit suitable drying, or where perimeter conditions include uncontrollable water sources, additional measures may be necessary.

8.01 Conventional Section Procedure

The exposed subgrade should be inspected during excavation and prior to placement of aggregate base. Where conditions are not firm and unyielding, use of a Geotextile should

be considered. The excavation should be extended to provide for construction of a minimum 12" thick aggregate base section or aggregate base section consistent with the design replacement section, whichever is greater. Where subgrade conditions prohibit accurate grading, the subgrade should be excavated an additional 4" for a total of 16" or the design aggregate base section plus 4", whichever is greater.

Geotextile should then be placed over the prepared grade. The type of Geotextile and width of overlap will be a function of conditions encountered at the time of construction. Aggregate base should then be end dumped and spread in minimum 12" lifts. No equipment should be permitted to operate on the exposed fabric or on top of the aggregate base where the thickness is less than 12". Where rut depths exceed 4", a qualified pavement engineer should be contacted to review conditions and provide specific recommendations.

8.02 Full Depth Asphalt Concrete Procedure

The exposed subgrade should be inspected during excavation. Where conditions are not firm and unyielding the exposed subgrade should be over excavated equivalent to the approximate depth of rutting left by trucks and equipment during excavation, to a 4" maximum additional depth. Where rut depths exceed 4", a qualified pavement engineer should be contacted to review conditions and provide specific recommendations.

A single 6" to 8" thick (Type B PG 70-10) asphalt concrete layer should be end dumped and spread with suitable equipment. The asphalt concrete shall then be lightly rolled for grade control purposes only. Relative compaction requirement should be waived for the initial pavement layer.

The completed layer should be permitted to cool for a minimum of 15 hours prior to placement of subsequent layers. No trucks should be permitted to operate on the exposed subgrade or on the asphalt concrete layer until a suitable cooling period has expired.

All subsequent layers should be placed in accordance with requirements of the SSPWC for grade control, layer thickness and compaction.

9.0 Material Recommendations

9.1 Aggregate Base

Aggregate base sections may utilize Crushed Aggregate Base (CAB) or Crushed Miscellaneous Base (CMB) complying with applicable sections of the Standard Specifications for Public Works Construction, latest edition.

9.2 Asphalt Concrete – New Construction / Asphalt Concrete Base Course

Asphalt concrete shall be Type B PG 64-10 or Type III B2 PG 64-10 complying with Section 203-6 ASPHALT CONCRETE of the Standard Specifications for Public Works Construction, latest edition.

9.3 Materials – Asphalt Concrete Leveling Course and Wearing Surface

≥ 2" Thick AC Level Course/Wearing Surface

Asphalt concrete for leveling course layers generally in excess of 2" thick shall be Type B PG 64-10 or Type B3 PG 64-10 complying with Section 203-6 ASPHALT CONCRETE of the Standard Specifications for Public Works Construction, latest edition.

<2" Thick AC Level Course

Asphalt concrete for leveling course layers generally less than 2" thick shall be Type C2 PG 64-10 or Type III C3 PG 64-10 complying with Section 203-6 ASPHALT CONCRETE of the Standard Specifications for Public Works Construction, latest edition.

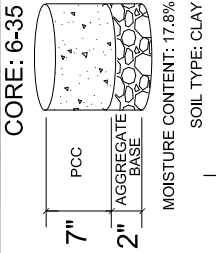
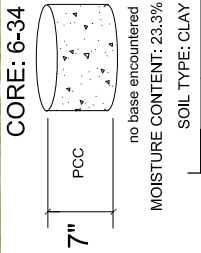
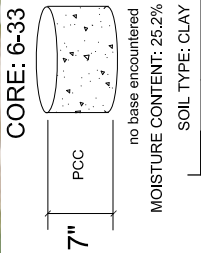
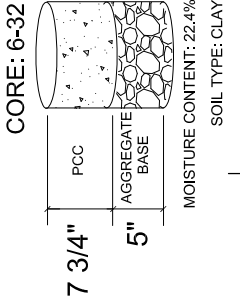
9.4 Materials – Asphalt Rubber Hot Mix

Asphalt Rubber Hot Mix (ARHM) shall be Type ARHM-GG-C complying with Section 203-

APPENDIX A

PAVEMENT CORE DATA AND GROUND PENETRATING RADAR PLANS

WESTMINSTER STREET



PROPOSED CORE SAMPLE LOCATIONS
6" DIAMETER SIZE AT 42" MAX. DEPTH.



IFB 4-2069
Attachment I

R-VALUE (SUBGRADE) STRENGTH TEST			
#6-33	9	CLAY	EXPANSION

NO.		DATE	APP.	DATE
6				
5				
4				
3				
2				
1				
REVISIONS				

PLANS PREPARED BY:

LABELLE MARVIN, INC.
PAVEMENT TECHNOLOGY SPECIALISTS
2700 S. GRAND AVENUE SANTA ANA, CA 92705
PH (714) 946-2468
labellemarvin.com

MOTT MACDONALD
500 SOUTH MAIN STREET, SUITE 530
ORANGE, CA 92668

PROJECT TITLE
PAVEMENT INVESTIGATION AND REPORT

LOCATION:
SEAL BEACH NAVAL WEAPONS STATION
SEAL BEACH, CA

PLAN TITLE

**WESTMINSTER STREET
PROPOSED PAVEMENT CORE PLAN**

SHEET No. **1** OF **1**

DATE: 9.13.21
SCALE: 1" = 200'
DRAWN BY: G. MARVIN

LMI PROJECT NUMBER
47586

MAGAZINES #824, #825, #826, #827



R-VALUE (SUBGRADE) STRENGTH TEST			
#6-42	34	SILTY SAND	EXPANSION
#6-44	38	CLAYEY SAND	EXUDATION

LEGEND

GPR AC THICKNESS

Less - 2.0"

2.00"-3.00"

3.00"-4.00"

4.00"-5.00"

5.00"-6.00"

Greater Than 6.00"

LEGEND

PROPOSED CORE SAMPLE LOCATIONS

6" DIAMETER SIZE AT 42" MAX. DEPTH.

GPR DATA
GPR THICKNESS DATA GATHERED IN THE FIELD IS MEASURED THREE TIMES PER LINEAR FOOT. THICKNESS INFORMATION SHOWN HEREON INDICATED THE BOTTOM OF THE ASPHALT CONCRETE LAYER.

GPR NOTES
GPR DATE: JUNE, 2022
GPR DATA HAS BEEN COLLECTED BY A NON-CONTACT "HORN TYPE ANTENNA" 18" ABOVE THE PAVEMENT SURFACE. HIGH RESOLUTION SCANNING WAS PERFORMED TO A MAXIMUM DEPTH OF 22". THE SCAN WIDTH IS 4" WIDE TAKEN WITHIN EACH RIGHT WHEEL TRACK OF THE TRAVEL LANE. THE DATA SHOWN HEREON HAS BEEN EXTRAPOLATED TO 8" WIDE AND COLOR CODED FOR VISUAL INTERPRETATION OF PAVEMENT THICKNESS. GPR DATA IS THEN CROSS-CHECKED/VERIFIED BY PAVEMENT CORING.

APPENDIX B

IMPROVEMENT RECOMMENDATION PLANS



ALTERNATIVE/OPTION 1

PAVEMENT PULVERIZATION AND NEW PAVEMENT CONSTRUCTION

Design Finish Elevations above present to moderate site undulations and slopes. The specific finish elevations will be a function of the final design operations frequency selected and corresponding asphalt concrete pavement section thickness. Interim grades prior to placement of asphalt concrete pavement may be up to 2” below present elevations to aid in moderating high points and filling low or depressed areas.

(1) Operation Per Week

1. Pulverize existing pavement to 6” depth, mixing pulverized asphalt concrete with existing aggregate base

2. Regrade and compact pulverized materials to interim finish elevations

3. Construct 4” thick asphalt concrete pavement over pulverized base materials

(5) Operations Per Week

1. Pulverize existing pavement to 6” depth, mixing pulverized asphalt concrete with existing aggregate base

2. Regrade and compact pulverized materials to interim finish elevations

3. Construct 5” thick asphalt concrete pavement over pulverized base materials

(10) Operations Per Week

1. Pulverize existing pavement to 6” depth, mixing pulverized asphalt concrete with existing aggregate base

2. Regrade and compact pulverized materials to interim finish elevations

3. Construct 6”” thick asphalt concrete pavement over pulverized base materials

(20) Operations Per Week

1. Pulverize existing pavement to 6” depth, mixing pulverized asphalt concrete with existing aggregate base

2. Regrade and compact pulverized materials to interim finish elevations

3. Construct 7” thick asphalt concrete pavement over pulverized base materials

ALTERNATIVE/OPTION 2

ASPHALT CONCRETE OVERLAY

Design Finish Elevations above present to moderate site undulations and slopes. The specific finish elevations will be a function of the final design operations frequency selected and corresponding asphalt concrete pavement section thickness.

(1) Operation Per Week

1. Place minimum 1 ½” thick asphalt concrete level course to retain broken pavement and correct minor surface irregularities
2. Construct 3” thick asphalt concrete pavement over the asphalt concrete level course

(5) Operations Per Week

1. Place minimum 1 ½” thick asphalt concrete level course to retain broken pavement and correct minor surface irregularities
2. Construct 4” thick asphalt concrete pavement over the asphalt concrete level course

(10) Operations Per Week

1. Place minimum 1 ½” thick asphalt concrete level course to retain broken pavement and correct minor surface irregularities
2. Construct 5” thick asphalt concrete pavement over the asphalt concrete level course

(20) Operations Per Week

1. Place minimum 1 ½” thick asphalt concrete level course to retain broken pavement and correct minor surface irregularities
2. Construct 6” thick asphalt concrete pavement over the asphalt concrete level course

NO.	DATE	REVISIONS	APP.	DATE
6				
5				
4				
3				
2				
1				

PLANS PREPARED BY:		C/O
LABELLE MARVIN, INC. PAVEMENT TECHNOLOGY SPECIALISTS 2700 S. GRAND AVENUE SANTA ANA, CA 92705 PH (714) 945-3488 labellemarvin.com		
MOTT MACDONALD 500 SOUTH MAIN STREET, SUITE 530 ORANGE, CA 92668		

PROJECT TITLE	PAVEMENT INVESTIGATION AND REPORT
LOCATION:	SEAL BEACH NAVAL WEAPONS STATION SEAL BEACH, CA

PLAN TITLE	MAGAZINES #824, #825, #826, #827
REHABILITATION ALTERNATIVE(S) PLAN	

SHEET No.	1 OF 1
DATE:	9.13.21
SCALE:	1" = 100'
DRAWN BY:	G. MARVIN



WESTMINSTER STREET



ALTERNATIVE/OPTION 1
PAVEMENT SMOOTHNESS GRINDING

- Clean and fill/seal all joints and cracks in the PCC pavement surface.
The joint sealant should be installed to a level below the present roadway finish elevations.
- Pavement surface grind the entire roadway

NO.	REVISIONS			APP.	DATE
6					
5					
4					
3					
2					
1					

PLANS PREPARED BY:

LABELLE MARVIN, INC.

PAVEMENT TECHNOLOGY SPECIALISTS

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C/O

MOTT MACDONALD
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PROJECT TITLE

PAVEMENT INVESTIGATION AND REPORT

LOCATION:

SEAL BEACH NAVAL WEAPONS STATION
SEAL BEACH, CA

PLAN TITLE

WESTMINSTER STREET
REHABILITATION ALTERNATIVE(S) PLAN

SHEET No.

1 OF 1

DATE: 9.13.21

SCALE: 1" = 100'

DRAWN BY: G. MARVIN

LMI PROJECT NUMBER

98574

APPENDIX C

R-VALUE DETERMINATIONS (CA 301)



R - VALUE DATA SHEET

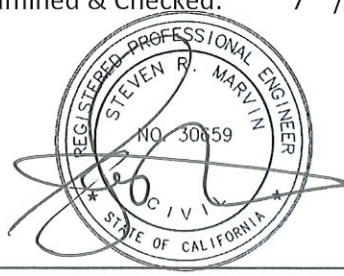
PROJECT No. 47586
DATE: 7/5/2022

BORING NO. Subgrade 6-33
Westminster Street
Naval Weapons Station, Seal Beach

SAMPLE DESCRIPTION: Greyish Brown Clay

R-VALUE TESTING DATA CA TEST 301			
	SPECIMEN ID		
	a	b	c
Mold ID Number	4	5	6
Water added, grams	38	-21	0
Initial Test Water, %	23.0	16.3	18.7
Compact Gage Pressure, psi	40	210	120
Exudation Pressure, psi	213	500	369
Height Sample, Inches	2.63	2.39	2.47
Gross Weight Mold, grams	3034	2961	3003
Tare Weight Mold, grams	1954	1941	1952
Sample Wet Weight, grams	1080	1020	1051
Expansion, Inches x 10exp-4	38	156	98
Stability 2,000 lbs (160psi)	68 / 147	35 / 83	43 / 102
Turns Displacement	3.85	3.48	3.78
R-Value Uncorrected	5	40	27
R-Value Corrected	5	37	27
Dry Density, pcf	101.2	111.1	108.6

DESIGN CALCULATION DATA			
Traffic Index	Given:	6.5	6.5
G.E. by Stability		1.58	1.05
G. E. by Expansion		1.27	5.20
			3.27

Equilibrium R-Value		9 by EXPANSION	Examined & Checked: 7 /5/ 22
REMARKS:	Gf = 1.25 0.0% Retained on the 3/4" Sieve.		 Steven R. Marvin, RCE 30659

The data above is based upon processing and testing samples as received from the field. Test procedures in accordance with latest revisions to Department of Transportation, State of California, Materials & Research Test Method No. 301.



R-VALUE GRAPHICAL PRESENTATION

PROJECT NO.

47586

DATE:

7 / 5 / 2022

BORING NO.

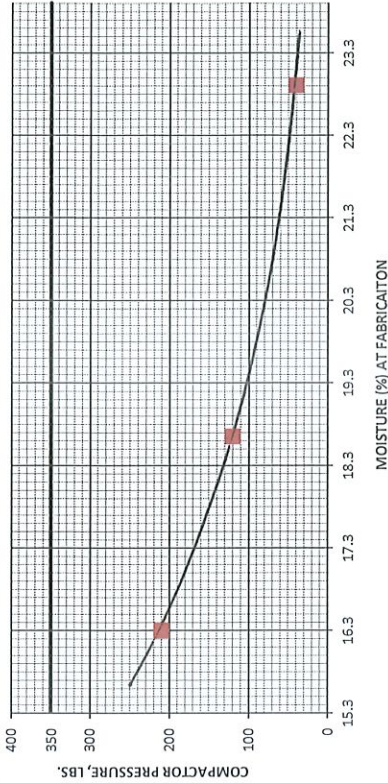
Subgrade 6-33

REMARKS:

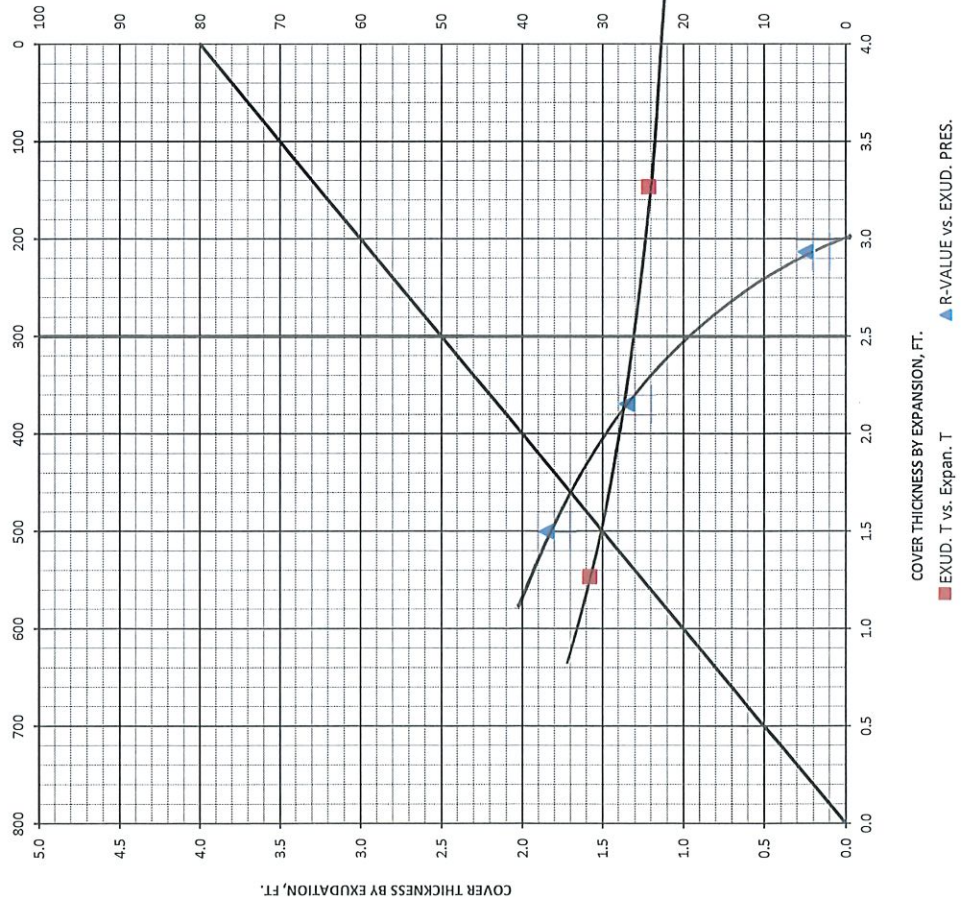
Westminster Street

Naval Weapons Station, Seal Beach

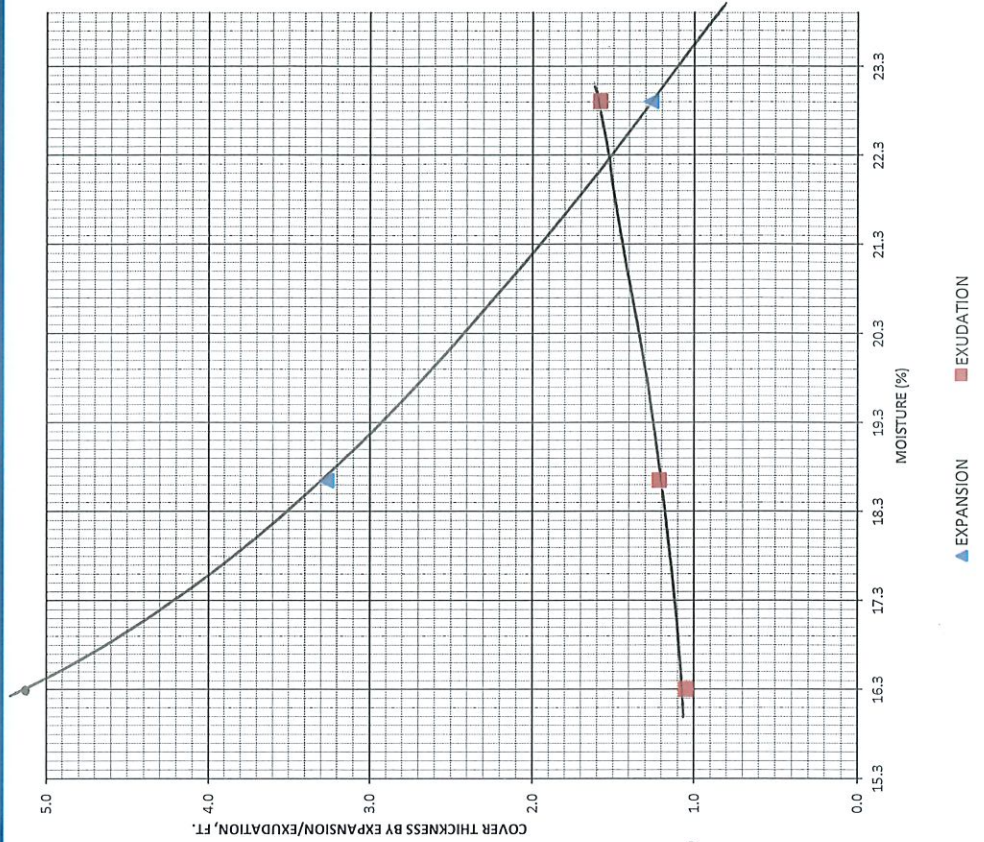
COMPACTOR PRESSURE vs MOISTURE %



COVER THICKNESS BY EXUDATION vs COVER THICKNESS BY EXPANSION



COVER THICKNESS vs MOISTURE %





R - VALUE DATA SHEET

PROJECT No. 47586
DATE: 7/5/2022

BORING NO. Subgrade 6-42
Building 825
Naval Weapons Station, Seal Beach

SAMPLE DESCRIPTION: Brown Silty Sand

R-VALUE TESTING DATA CA TEST 301			
	SPECIMEN ID		
	a	b	c
Mold ID Number	4	5	6
Water added, grams	70	45	30
Initial Test Water, %	14.1	11.7	10.2
Compact Gage Pressure, psi	40	100	270
Exudation Pressure, psi	180	297	604
Height Sample, Inches	2.64	2.53	2.44
Gross Weight Mold, grams	3113	3076	3072
Tare Weight Mold, grams	1954	1941	1952
Sample Wet Weight, grams	1159	1135	1120
Expansion, Inches x 10exp-4	0	38	73
Stability 2,000 lbs (160psi)	56 / 130	31 / 69	23 / 46
Turns Displacement	4.48	4.43	3.88
R-Value Uncorrected	11	43	61
R-Value Corrected	12	43	60
Dry Density, pcf	116.5	121.7	126.2

DESIGN CALCULATION DATA			
Traffic Index	Given:	5.0	5.0
G.E. by Stability		1.13	0.73
G. E. by Expansion		0.00	1.27
			2.43

Equilibrium R-Value		34 by EXPANSION	Examined & Checked: 7 /5/ 22
REMARKS:	<div><div></div><div>Gf = 1.25</div><div>0.0% Retained on the</div><div>3/4" Sieve.</div><div></div></div>		
			<div><div><div>REGISTERED PROFESSIONAL ENGINEER</div><div>STEVEN R. MARVIN</div><div>NO. 30659</div><div>CIVIL</div><div>STATE OF CALIFORNIA</div></div><div>Steven R. Marvin, RCE 30659</div></div>

The data above is based upon processing and testing samples as received from the field. Test procedures in accordance with latest revisions to Department of Transportation, State of California, Materials & Research Test Method No. 301.



R-VALUE GRAPHICAL PRESENTATION

PROJECT NO.

47586

DATE:

7 /5/ 2022

BORING NO.

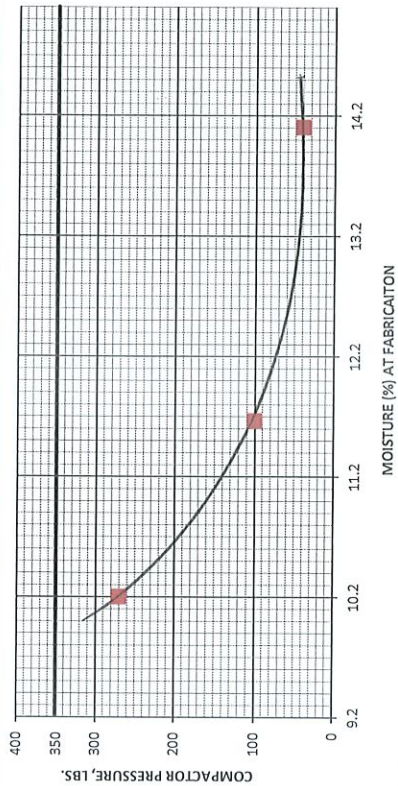
Subgrade 6-42

Building 825

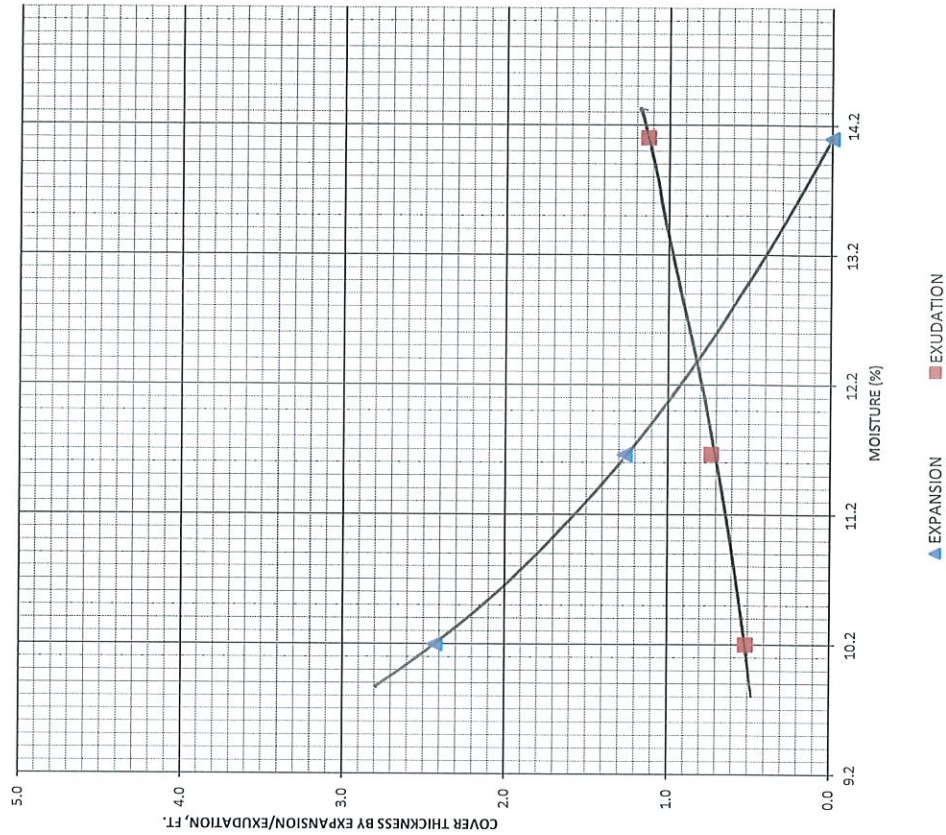
Naval Weapons Station, Seal Beach

REMARKS:

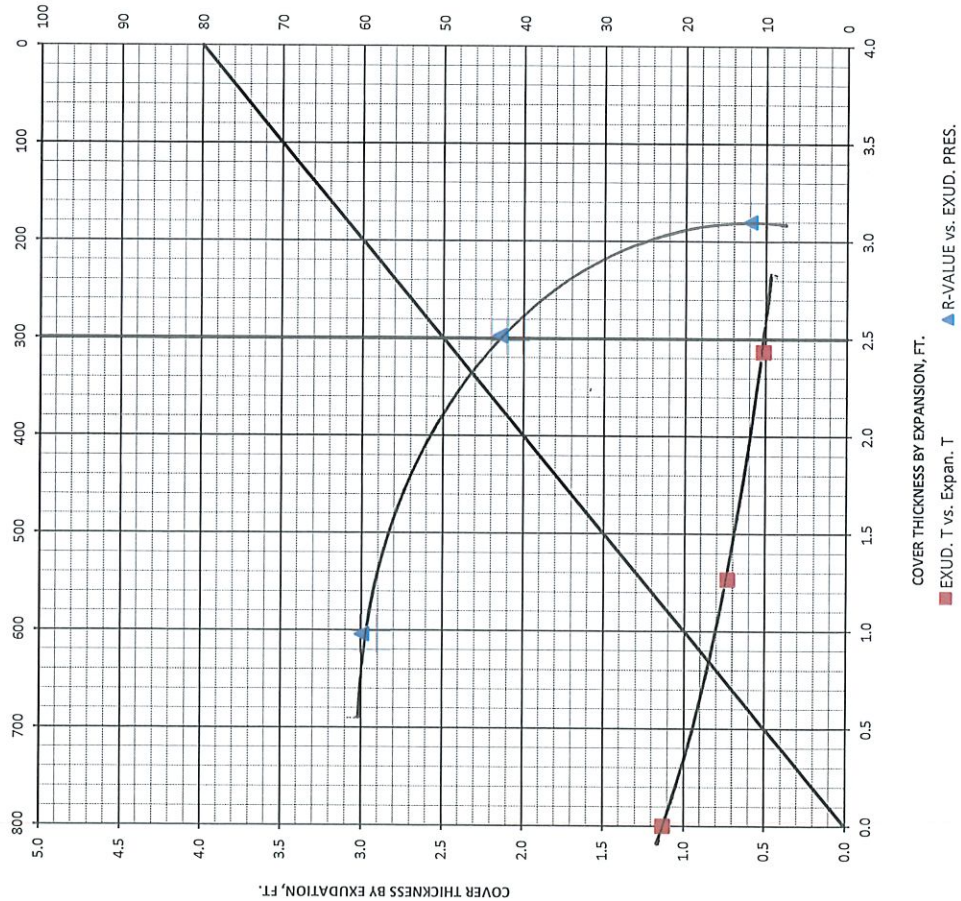
COMPACTOR PRESSURE vs MOISTURE %



COVER THICKNESS vs MOISTURE %



COVER THICKNESS BY EXUDATION vs COVER THICKNESS BY EXPANSION





R - VALUE DATA SHEET

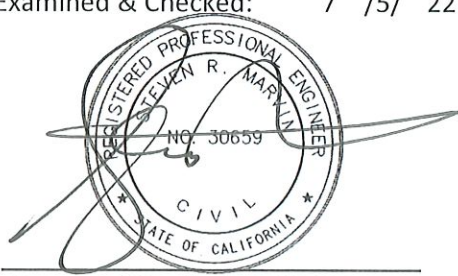
PROJECT No. 47586
DATE: 7/5/2022

BORING NO. Subgrade 6-44
Building 827
Naval Weapons Station, Seal Beach

SAMPLE DESCRIPTION: Brown Clayey Sand

R-VALUE TESTING DATA CA TEST 301			
	SPECIMEN ID		
	a	b	c
Mold ID Number	1	2	3
Water added, grams	66	41	26
Initial Test Water, %	13.5	11.1	9.6
Compact Gage Pressure, psi	40	90	190
Exudation Pressure, psi	133	322	599
Height Sample, Inches	2.63	2.50	2.41
Gross Weight Mold, grams	3114	3085	3079
Tare Weight Mold, grams	1950	1943	1954
Sample Wet Weight, grams	1164	1142	1125
Expansion, Inches x 10exp-4	0	13	37
Stability 2,000 lbs (160psi)	68 / 145	33 / 73	23 / 51
Turns Displacement	4.57	4.22	3.58
R-Value Uncorrected	5	41	60
R-Value Corrected	5	41	58
Dry Density, pcf	118.1	124.6	129.0

DESIGN CALCULATION DATA			
Traffic Index	Given:	5.0	5.0
G.E. by Stability		1.22	0.76
G. E. by Expansion		0.00	0.43

Equilibrium R-Value		38 by EXUDATION	Examined & Checked: 7 /5/ 22
REMARKS:	Gf = <u>1.25</u> 0.0% Retained on the <u>3/4" Sieve.</u>		 Steven R. Marvin, RCE 30659

The data above is based upon processing and testing samples as received from the field. Test procedures in accordance with latest revisions to Department of Transportation, State of California, Materials & Research Test Method No. 301.



R-VALUE GRAPHICAL PRESENTATION

PROJECT NO.

47586

DATE:

7 / 5 / 2022

REMARKS:

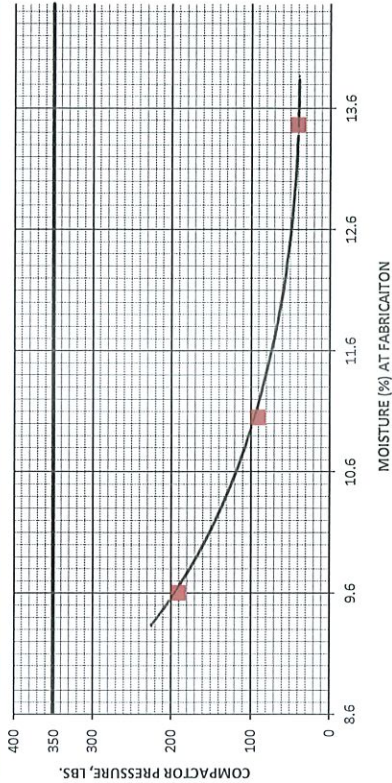
BORING NO.

Subgrade 6-44

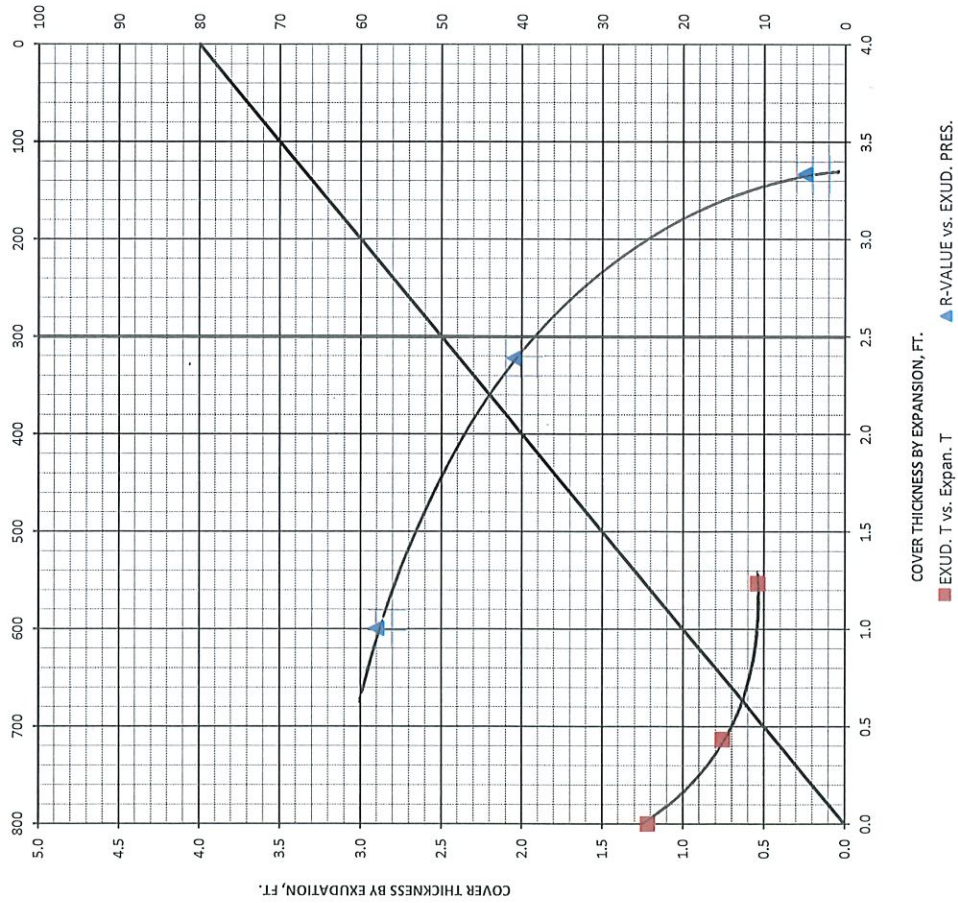
Building 827

Naval Weapons Station, Seal Beach

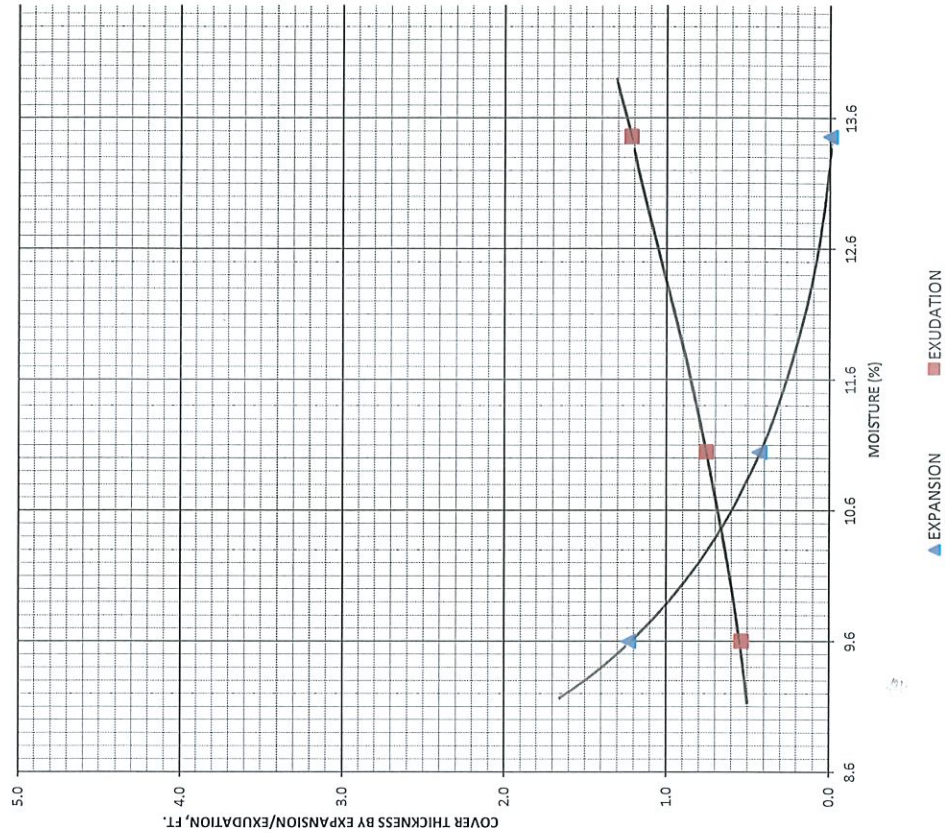
COMPACTOR PRESSURE vs MOISTURE %



COVER THICKNESS BY EXUDATION vs COVER THICKNESS BY EXPANSION



COVER THICKNESS vs MOISTURE %



APPENDIX D

DEFLECTION STRUCTURAL ANALYSIS AND SOILS MODULUS TABLES



Structural Analysis Summary Table

Test

Location: Seal Beach

Date: 2006-06-27 00:02:20

Client:

Project #: 47586

Westminster Street

Location: Seal Beach

Kitts Highway to 18th Street

Date: 2006-06-27 00:02:20

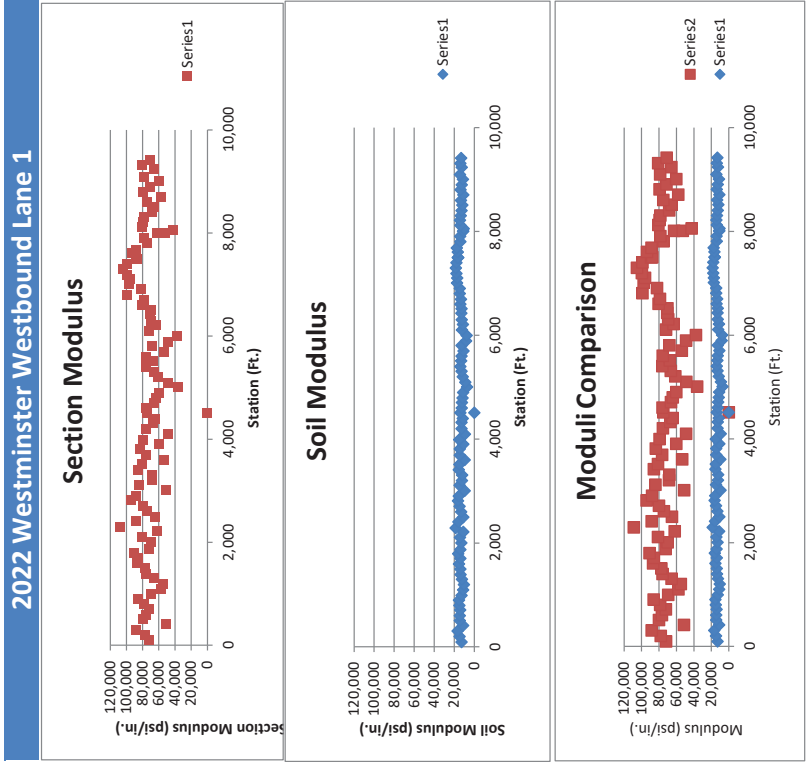
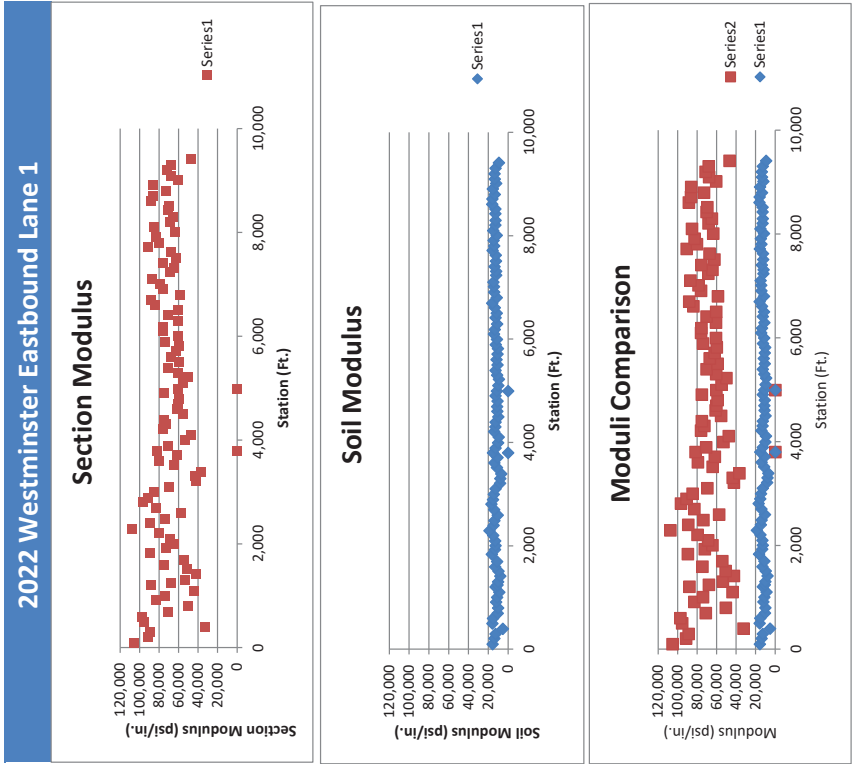
Project: 47586

Begin Westminster Street Eastbound Lane 1

Limits	FWD _{80th}	TD _{80th}	'T'(1)	T.I.	TDallow	% Red.	GE	AC	NSL
00+00 to 06+18	8.63	10.36	0.55	6.5	19	0	0.00	0.00	20
				7.0	17	0	0.00	0.00	20
				7.5	15	0	0.00	0.00	20
06+18 to 18+04	15.91	19.09	0.55	6.5	19	0	0.00	0.00	18
				7.0	17	11	0.04	0.02	9
				7.5	15	21	0.12	0.06	5
18+04 to 25+94	11.89	14.26	0.55	6.5	19	0	0.00	0.00	20
				7.0	17	0	0.00	0.00	20
				7.5	15	0	0.00	0.00	20
25+94 to 31+02	10.38	12.46	0.55	6.5	19	0	0.00	0.00	20
				7.0	17	0	0.00	0.00	20
				7.5	15	0	0.00	0.00	20
31+02 to 33+91	20.55	24.66	0.55	6.5	19	23	0.15	0.08	4
				7.0	17	31	0.26	0.14	2
				7.5	15	39	0.40	0.21	1
33+91 to 94+96	13.07	15.69	0.55	6.5	19	0	0.00	0.00	20
				7.0	17	0	0.00	0.00	20
				7.5	15	4	0.01	0.01	17

Begin Testing Westminster Street Westbound Lane 1

Limits	FWD _{80th}	TD _{80th}	'T'(1)	T.I.	TDallow	% Red.	GE	AC	NSL
00+00 to 58+03	12.77	15.32	0.55	6.5	19	0	0.00	0.00	20
				7.0	17	0	0.00	0.00	20
				7.5	15	2	0.01	0.00	20
58+03 to 59+98	20.61	24.73	0.55	6.5	19	23	0.15	0.08	4
				7.0	17	31	0.26	0.14	2
				7.5	15	39	0.40	0.21	1
59+98 to 95+25	12.01	14.42	0.55	6.5	19	0	0.00	0.00	20
				7.0	17	0	0.00	0.00	20
				7.5	15	0	0.00	0.00	20



APPENDIX E

IN-FIELD DEFLECTION TESTING DATA



Westminster Street		
Location: Seal Beach	Kitts Highway to 18th Street	Date: 2006-06-27 00:02:20 Project: 47586

Begin Westminster Street Eastbound Lane 1

00+00 Begin Westminster Street Eastbound Lane 1
Notes: Begin Testing Westminster Street; Begin Westminster Street Eastbound Lane 1; CL of Kitts Highway
Pvt Temp: 0° F
GPS: 0.00000° Lat, 0.00000° Lon
Limit ☐ NIS ☐

00+13 Begin Westminster Street Eastbound Lane 1
Notes: Begin PCC
Pvt Temp: 0° F
GPS: 0.00000° Lat, 0.00000° Lon
Limit ☐ NIS ☐

00+42 Begin Westminster Street Eastbound Lane 1
Notes: CL of RR Tracks
Pvt Temp: 0° F
GPS: 0.00000° Lat, 0.00000° Lon
Limit ☐ NIS ☐

00+98 (test 1) Begin Westminster Street Eastbound Lane 1
Notes: Lateral Cracks, Longitudinal Cracks
Pvt Temp: 74° F
Avg FWD1: 7.43667
GPS: 33.75654° Lat, -118.07670° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.79	7.42	7.25	6.97	6.63	6.14	5.36	4.6	3.87	7.03	7.37
8.77	7.44	7.25	7.02	6.63	6.18	5.38	4.56	3.87	7.04	7.35
8.84	7.45	7.27	7.04	6.69	6.24	5.41	4.57	3.89	7.08	7.38

02+06 (test 2) Begin Westminster Street Eastbound Lane 1
Notes:
Pvt Temp: 73.2° F
Avg FWD1: 8.40333
GPS: 33.75654° Lat, -118.07634° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.57	8.33	8.11	7.78	7.35	6.88	5.73	4.75	3.94	7.93	8.27
8.64	8.43	8.17	7.88	7.44	6.91	5.8	4.8	3.96	7.98	8.34
8.69	8.45	8.16	7.88	7.45	6.96	5.8	4.84	3.98	8.02	8.35

02+95 Begin Westminster Street Eastbound Lane 1
Notes: CL of 2nd Street
Pvt Temp: 0° F

9.11	11.42	11.02	10.69	10.17	9.59	8.41	7.45	6.51	11.19	11.41
9.13	11.44	10.98	10.66	10.13	9.56	8.42	7.52	6.49	11.17	11.46

07+98 (test 8) Begin Westminster Street Eastbound Lane 1
Notes: On Joint
Pvt Temp: 74.7° F
Avg FWD1: 15.19
GPS: 33.75653° Lat, -118.07439° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.64	15.26	13.47	12.43	11.01	9.67	7.45	5.65	3.89	17.57	17.14
8.64	15.16	13.4	12.34	10.93	9.58	7.4	5.64	3.86	17.43	17.01
8.69	15.15	13.36	12.36	11.01	9.57	7.46	5.69	3.91	17.46	17.01

09+12 (test 9) Begin Westminster Street Eastbound Lane 1
Notes:
Pvt Temp: 75.4° F
Avg FWD1: 9.7
GPS: 33.75652° Lat, -118.07402° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.04	9.68	9.4	9.16	8.75	8.26	7.26	6.37	5.53	9.24	9.6
9.04	9.7	9.46	9.2	8.79	8.34	7.24	6.43	5.56	9.31	9.65
9.01	9.72	9.44	9.18	8.79	8.33	7.25	6.39	5.53	9.31	9.65

09+35 Begin Westminster Street Eastbound Lane 1
Notes: CL of 4th Street
Pvt Temp: 0° F
GPS: 33.75652° Lat, -118.07402° Lon
Limit ☐ NIS ☐

10+02 (test 10) Begin Westminster Street Eastbound Lane 1
Notes:
Pvt Temp: 73.2° F
Avg FWD1: 10.92
GPS: 33.75652° Lat, -118.07373° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.08	10.93	10.58	10.22	9.73	9.15	8.05	7.24	6.75	10.48	10.87
9.13	10.92	10.57	10.25	9.75	9.15	7.96	7.25	6.75	10.52	10.86
9.08	10.91	10.57	10.21	9.72	9.13	7.99	7.24	6.71	10.51	10.86

11+02 (test 11) Begin Westminster Street Eastbound Lane 1
Notes:
Pvt Temp: 74.7° F
Avg FWD1: 18.22
GPS: 33.75652° Lat, -118.07306° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.96	18.23	15.83	14.62	12.82	11.15	8.42	6.35	4.67	21.76	20.71
8.96	18.21	15.84	14.59	12.79	11.1	8.39	6.33	4.66	21.69	20.69
8.96	18.22	15.84	14.59	12.79	11.09	8.4	6.34	4.64	21.69	20.68

12+05 (test 12) Begin Westminster Street Eastbound Lane 1
Notes:
Pvt Temp: 74.7° F
Avg FWD1: 9.19667
GPS: 33.75652° Lat, -118.07306° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.11	9.22	8.97	8.69	8.32	7.96	7.06	6.44	5.88	8.81	9.13
9.06	9.15	8.94	8.66	8.29	7.91	7.01	6.37	5.85	8.78	9.08
9.13	9.22	9	8.73	8.38	7.95	7.08	6.41	5.85	8.81	9.15



02+95 (test 3) Begin Westminster Street Eastbound Lane 1
Notes: Lateral Cracks, Longitudinal Cracks
Pvt Temp: 74.7° F
Avg FWD1: 8.70333
GPS: 33.75653° Lat, -118.07605° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.64	8.69	8.53	8.27	7.9	7.51	6.79	6.09	5.52	8.22	8.59
8.67	8.66	8.49	8.23	7.9	7.53	6.78	6.05	5.51	8.19	8.54
8.74	8.76	8.56	8.3	7.98	7.54	6.87	6.07	5.55	8.25	8.6

03+95 (test 4) Begin Westminster Street Eastbound Lane 1
Notes: On Joint
Pvt Temp: 72.1° F
Avg FWD1: 21.95
GPS: 33.75653° Lat, -118.07572° Lon
Limit ☐ NIS ☒

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
7.93	21.8	20.25	19.26	17.96	16.53	14.31	12.17	10.7	23.98	23.77
8.01	21.91	20.35	19.33	18.05	16.56	14.37	12.22	10.7	24	23.74
8.13	22.14	20.54	19.54	18.25	16.49	14.48	12.43	10.77	24.32	24.13

04+97 (test 5) Begin Westminster Street Eastbound Lane 1
Notes: Lateral Cracks, Longitudinal Cracks
Pvt Temp: 73.2° F
Avg FWD1: 8.20667
GPS: 33.75653° Lat, -118.07538° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.77	8.18	7.66	7.27	6.75	6.14	5.05	4.13	3.28	8.05	8.44
8.79	8.21	7.71	7.32	6.76	6.15	5.07	4.15	3.28	8.1	8.42
8.86	8.23	7.73	7.34	6.79	6.13	5.07	4.14	3.34	8.16	8.46

05+97 (test 6) Begin Westminster Street Eastbound Lane 1
Notes:
Pvt Temp: 74.3° F
Avg FWD1: 8.39333
GPS: 33.75653° Lat, -118.07505° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.21	8.39	8.04	7.72	7.25	6.73	5.61	4.78	4.15	7.81	8.2
9.18	8.41	8.05	7.74	7.27	6.73	5.61	4.78	4.14	7.85	8.22
9.11	8.38	8.03	7.71	7.23	6.73	5.58	4.78	4.13	7.81	8.2

06+18 Begin Westminster Street Eastbound Lane 1
Notes: CL of 3rd Street
Pvt Temp: 0° F
GPS: 33.75653° Lat, -118.07505° Lon
Limit ☒ NIS ☐

06+95 (test 7) Begin Westminster Street Eastbound Lane 1
Notes:
Pvt Temp: 74.3° F
Avg FWD1: 11.4267
GPS: 33.75653° Lat, -118.07473° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.18	11.42	11.02	10.72	10.16	9.6	8.44	7.45	6.52	11.19	11.45

12+42 (test 13) Begin Westminster Street Eastbound Lane 1
Notes: On Joint
Pvt Temp: 74.7° F
Avg FWD1: 11.7533
GPS: 33.75652° Lat, -118.07294° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.99	11.76	11.03	10.56	9.93	9.29	8.03	7.03	6.16	12.31	12.37
8.99	11.72	10.98	10.52	9.89	9.28	8	7	6.13	12.31	12.32
8.96	11.78	11	10.55	9.92	9.28	8.01	7.05	6.17	12.33	12.33

13+03 (test 14) Begin Westminster Street Eastbound Lane 1
Notes: On Joint
Pvt Temp: 77.6° F
Avg FWD1: 13.9533
GPS: 33.75652° Lat, -118.07274° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.4	13.01	12.91	11.87	10.56	9.21	7.05	5.39	4.17	16.69	16.73
8.4	14.27	12.89	11.86	10.54	9.25	7.03	5.38	4.18	16.66	16.7
8.45	14.58	12.9	11.9	10.55	9.19	7.06	5.35	4.18	16.66	16.68

13+76 Begin Westminster Street Eastbound Lane 1
Notes: CL of 5th Street
Pvt Temp: 0° F
GPS: 33.75652° Lat, -118.07274° Lon
Limit ☐ NIS ☐

14+12 (test 15) Begin Westminster Street Eastbound Lane 1
Notes: On Joint
Pvt Temp: 74.7° F
Avg FWD1: 18.1133
GPS: 33.75652° Lat, -118.07238° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.62	18.02	16.09	15.03	13.58	12.14	9.48	7.38	5.64	20.2	19.89
8.67	18.08	16.16	15.09	13.6	12.23	9.48	7.38	5.62	20.27	19.92
8.67	18.24	16.31	15.23	13.73	12.24	9.68	7.44	5.76	20.44	20.09

15+08 (test 16) Begin Westminster Street Eastbound Lane 1
Notes: On Joint
Pvt Temp: 75.1° F
Avg FWD1: 15.5267
GPS: 33.75651° Lat, -118.07206° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.84	15.51	13.75	12.76	11.39	10.1	7.83	5.95	4.12	17.44	17.17
8.84	15.51	13.74	12.73	11.36	10.12	7.84	5.92	4.12	17.43	17.13
8.91	15.56	13.81	12.82	11.43	10.14	7.83	5.95	4.16	17.56	17.23

15+91 (test 17) Begin Westminster Street Eastbound Lane 1
Notes: On Joint
Pvt Temp: 76.2° F
Avg FWD1: 10.5
GPS: 33.75651° Lat, -118.07179° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.77	10.48	9.56	9.02	8.25	7.49	6.06	4.89	3.94	11.23	11.24
8.89	10.54	9.62	9.06	8.27	7.5	6.05	4.98	3.98	11.22	11.24
8.77	10.48	9.56	9.03	8.25	7.47	6.03	4.91	3.96	11.18	11.21

7/6/22, 10:59 AM										LaBelle - Marvin: FWD Reports									
16+94 (test 18)										Begin Westminster Street Eastbound Lane 1									
Notes: On Joint										Pvt Temp: 76.2° F									
Avg FWD1: 14.84										GPS: 33.75651° Lat, -118.07146° Lon									
										Limit <input type="checkbox"/> NIS <input type="checkbox"/>									
Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10									
9.11	14.87	12.93	11.91	10.44	9.17	6.74	4.93	3.71	15.96	16.7									
9.08	14.81	12.85	11.88	10.43	9.16	6.76	4.97	3.71	15.85	16.68									
8.96	14.84	12.9	11.88	10.44	9.17	6.75	4.95	3.71	15.85	16.72									

18+04										Begin Westminster Street Eastbound Lane 1									
Notes: CL of RR Tracks										Pvt Temp: 0° F									
										GPS: 33.75651° Lat, -118.07146° Lon									
										Limit <input checked="" type="checkbox"/> NIS <input type="checkbox"/>									

18+34 (test 19)										Begin Westminster Street Eastbound Lane 1									
Notes: On Joint										Pvt Temp: 78.7° F									
Avg FWD1: 9.11667										GPS: 33.75651° Lat, -118.07100° Lon									
										Limit <input type="checkbox"/> NIS <input type="checkbox"/>									
Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10									
9.18	9.16	8.22	7.69	6.97	6.31	4.97	3.94	2.94	10.03	9.92									
9.21	9.12	8.18	7.67	6.91	6.23	4.94	3.92	2.93	9.98	9.86									
9.13	9.07	8.14	7.66	6.9	6.21	4.91	3.9	2.92	9.98	9.83									

18+55										Begin Westminster Street Eastbound Lane 1									
Notes: CL of 6th Street										Pvt Temp: 0° F									
										GPS: 33.75651° Lat, -118.07100° Lon									
										Limit <input type="checkbox"/> NIS <input type="checkbox"/>									

19+28 (test 20)										Begin Westminster Street Eastbound Lane 1									
Notes: On Joint										Pvt Temp: 76.9° F									
Avg FWD1: 10.8167										GPS: 33.75651° Lat, -118.07070° Lon									
										Limit <input type="checkbox"/> NIS <input type="checkbox"/>									
Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10									
8.77	10.87	9.77	9.14	8.24	7.38	5.92	4.74	3.7	11.88	11.78									
8.77	10.77	9.68	9.05	8.16	7.35	5.9	4.75	3.68	11.77	11.65									
8.84	10.81	9.73	9.12	8.24	7.36	5.9	4.74	3.72	11.8	11.69									

20+03 (test 21)										Begin Westminster Street Eastbound Lane 1									
Notes: On Joint										Pvt Temp: 77.3° F									
Avg FWD1: 12.14										GPS: 33.75651° Lat, -118.07045° Lon									
										Limit <input type="checkbox"/> NIS <input type="checkbox"/>									
Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10									
8.77	12.14	10.69	9.91	8.8	7.75	5.95	4.71	3.73	13.71	13.41									
8.77	12.15	10.7	9.93	8.82	7.77	5.96	4.72	3.75	13.7	13.41									
8.79	12.13	10.67	9.92	8.8	7.72	5.98	4.71	3.75	13.64	13.37									

20+96 (test 22)										Begin Westminster Street Eastbound Lane 1									
Notes: On Joint										Pvt Temp: 76.9° F									
Avg FWD1: 11.68										GPS: 33.75651° Lat, -118.07015° Lon									
										Limit <input type="checkbox"/> NIS <input type="checkbox"/>									

7/6/22, 10:59 AM										LaBelle - Marvin: FWD Reports									
Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10									
9.13	11.75	10.48	9.84	8.2	7.88	6.11	4.82	3.74	12.89	12.7									
8.96	11.68	10.41	9.81	8.62	7.87	6.09	4.77	3.7	12.83	12.64									
8.99	11.61	10.39	9.75	8.64	7.83	6.06	4.74	3.66	12.77	12.58									

22+02 (test 23)										Begin Westminster Street Eastbound Lane 1									
Notes: On Joint										Pvt Temp: 76.9° F									
Avg FWD1: 9.81										GPS: 33.75651° Lat, -118.06981° Lon									
										Limit <input type="checkbox"/> NIS <input type="checkbox"/>									
Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10									
8.77	9.81	8.74	8.16	7.32	6.5	4.97	3.99	3.1	10.61	10.62									
8.72	9.8	8.73	8.15	7.33	6.47	5.05	3.99	3.13	10.58	10.63									
8.84	9.82	8.75	8.17	7.34	6.49	5.01	4	3.11	10.63	10.63									

22+92 (test 24)										Begin Westminster Street Eastbound Lane 1									
Notes: On Joint										Pvt Temp: 77.6° F									
Avg FWD1: 7.43333										GPS: 33.75651° Lat, -118.06952° Lon									
										Limit <input type="checkbox"/> NIS <input type="checkbox"/>									
Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10									
8.96	7.43	6.85	6.45	5.93	5.34	4.31	3.32	2.83	7.61	7.72									
8.94	7.43	6.82	6.43	5.88	5.32	4.3	3.05	2.82	7.58	7.69									
9.04	7.44	6.81	6.44	5.89	5.32	4.31	3.52	2.83	7.61	7.68									

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LaBelle - Marvin: FWD Reports

Notes: On Joint

Avg FWD1: 11.07

Pvt Temp: 80.9° F

GPS: 33.75649° Lat, -118.06428° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.82	11.05	10	9.41	8.53	7.7	6.14	4.93	3.88	12.13	11.94
8.77	11.06	9.99	9.42	8.56	7.72	6.15	4.96	3.87	12.13	11.93
8.82	11.1	10.03	9.46	8.55	7.75	6.17	4.96	3.88	12.16	11.93

39+93 (test 41)

Notes: On Joint

Avg FWD1: 14.9367

Begin Westminster Street Eastbound Lane 1

Pvt Temp: 79.5° F

GPS: 33.75649° Lat, -118.06394° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.86	15.02	13.27	12.36	11.02	9.92	7.87	6.39	4.9	17.06	16.6
8.96	14.92	13.21	12.29	11.01	9.86	7.85	6.37	4.87	16.98	16.52
8.89	14.87	13.16	12.25	10.97	9.85	7.85	6.39	4.84	16.91	16.48

41+05 (test 42)

Notes: On Joint

Avg FWD1: 16.3633

Begin Westminster Street Eastbound Lane 1

Pvt Temp: 79.5° F

GPS: 33.75649° Lat, -118.06358° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.74	16.27	14.16	13.16	11.61	10.17	7.8	5.97	4.31	17.57	18.35
8.77	16.38	14.25	13.17	11.61	10.22	7.81	5.94	4.32	17.7	18.39
8.77	16.44	14.3	13.22	11.65	10.25	7.84	6.01	4.33	17.83	18.46

42+11 (test 43)

Notes: On Joint

Avg FWD1: 10.25

Begin Westminster Street Eastbound Lane 1

Pvt Temp: 79.1° F

GPS: 33.75651° Lat, -118.06323° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.77	10.3	9.3	8.73	7.89	7.03	5.44	4.2	3.16	10.91	11
8.72	10.2	9.23	8.65	7.82	7.03	5.42	4.17	3.15	10.79	10.88
8.82	10.25	9.28	8.7	7.86	6.99	5.45	4.22	3.18	10.83	10.93

43+02 (test 44)

Notes: On Joint

Avg FWD1: 10.98

Begin Westminster Street Eastbound Lane 1

Pvt Temp: 80.2° F

GPS: 33.75653° Lat, -118.06294° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.04	11.02	10.09	9.49	8.57	7.73	6.26	5.07	4.08	11.72	11.57
8.94	10.94	10	9.43	8.52	7.69	6.16	5.03	4.06	11.63	11.47
8.91	10.98	10.01	9.48	8.55	7.71	6.21	5.07	4.07	11.66	11.51

43+92 (test 45)

Notes: On Joint

Avg FWD1: 10.6067

Begin Westminster Street Eastbound Lane 1

Pvt Temp: 79.8° F

GPS: 33.75656° Lat, -118.06264° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.99	10.62	9.83	9.36	8.62	7.96	6.48	5.26	4.13	11.22	11.1
8.99	10.61	9.79	9.36	8.59	7.87	6.46	5.24	4.11	11.17	11.09
8.91	10.59	9.79	9.33	8.58	7.88	6.46	5.22	4.11	11.15	11.05

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LaBelle - Marvin: FWD Reports

44+97 (test 46)

Notes: On Joint

Avg FWD1: 13.9133

Begin Westminster Street Eastbound Lane 1

Pvt Temp: 79.8° F

GPS: 33.75660° Lat, -118.06230° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.64	13.92	12.51	11.8	10.67	9.65	7.87	6.53	5.37	15.13	14.92
8.62	13.84	12.48	11.75	10.6	9.6	7.82	6.51	5.38	15.1	14.87
8.77	13.98	12.59	11.82	10.74	9.67	7.89	6.54	5.37	15.24	14.99

46+03 (test 47)

Notes: On Joint

Avg FWD1: 12.5233

Begin Westminster Street Eastbound Lane 1

Pvt Temp: 80.2° F

GPS: 33.75666° Lat, -118.06196° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.6	12.58	11.39	10.74	9.7	8.81	7.19	5.87	4.7	13.51	13.47
8.55	12.49	11.33	10.67	9.69	8.75	7.11	5.83	4.65	13.42	13.38
8.67	12.5	11.31	10.7	9.71	8.8	7.11	5.87	4.72	13.42	13.37

46+94 (test 48)

Notes: On Joint

Avg FWD1: 12.9267

Begin Westminster Street Eastbound Lane 1

Pvt Temp: 80.2° F

GPS: 33.75671° Lat, -118.06167° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.79	12.96	11.77	11	9.94	8.92	7.04	5.54	4.26	14.07	13.89
8.79	12.91	11.75	11	9.93	8.88	7	5.51	4.26	14.01	13.84
8.74	12.91	11.74	10.97	9.91	8.88	7.02	5.52	4.22	13.97	13.82

48+00 (test 49)

Notes: On Joint

Avg FWD1: 13.24

Begin Westminster Street Eastbound Lane 1

Pvt Temp: 79.8° F

GPS: 33.75676° Lat, -118.06133° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.84	13.23	12.04	11.31	10.19	9.24	7.41	5.95	4.7	14.26	14.05
8.82	13.23	12.05	11.31	10.2	9.28	7.39	5.94	4.67	14.29	14.03
8.77	13.26	12.07	11.34	10.23	9.26	7.42	5.96	4.71	14.3	14.05

49+04 (test 50)

Notes: On Joint

Avg FWD1: 10.5933

Begin Westminster Street Eastbound Lane 1

Pvt Temp: 79.5° F

GPS: 33.75679° Lat, -118.06099° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.99	10.65	9.84	9.36	8.61	7.89	6.51	5.51	4.62	11.07	11.01
8.91	10.5	9.71	9.25	8.53	7.79	6.48	5.45	4.53	10.91	10.85
8.99	10.63	9.78	9.32	8.59	7.88	6.57	5.49	4.57	10.98	10.91

49+94 (test 51)

Notes: On Joint CL of Devlin Road

Avg FWD1: 12.9733

Begin Westminster Street Eastbound Lane 1

Pvt Temp: 79.5° F

GPS: 33.75682° Lat, -118.06069° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.72	13.02	11.71	10.94	9.85	8.8	6.85	5.38	4.13	14.25	14.06
8.82	12.93	11.6	10.85	9.76	8.75	6.82	5.31	4.07	14.19	13.95
8.84	12.97	11.65	10.9	9.8	8.77	6.88	5.37	4.09	14.24	13.97

www.labellemarvin.com/fwd/fwdlive/report.php

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51+00 (test 52)

Notes: On Joint

Avg FWD1: 14.2033

Begin Westminster Street Eastbound Lane 1

Pvt Temp: 80.6° F

GPS: 33.75684° Lat, -118.06035° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.84	14.24	12.84	12.1	10.93	9.83	7.87	6.31	4.95	15.67	15.34
8.74	14.13	12.77	12.01	10.83	9.75	7.81	6.24	4.9	15.57	15.19
8.79	14.24	12.86	12.08	10.94	9.83	7.84	6.3	4.95	15.69	15.31

52+23 (test 53)

Notes: On Joint

Avg FWD1: 15.4167

Begin Westminster Street Eastbound Lane 1

Pvt Temp: 78.7° F

GPS: 33.75685° Lat, -118.05995° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.72	15.43	13.87	13.01	11.71	10.5	8.24	6.56	5.17	16.09	16.19
8.67	15.42	13.87	13	11.72	10.52	8.23	6.54	5.17	16.08	16.21
8.67	15.4	13.83	13	11.71	10.47	8.22	6.5	5.16	16.06	16.17

52+29

Notes: CL of Westminster Drive

Begin Westminster Street Eastbound Lane 1

Pvt Temp: 0° F

GPS: 33.75685° Lat, -118.05995° Lon

Limit ☐ NIS ☐

53+01 (test 54)

Notes: On Joint

Avg FWD1: 12.79

Begin Westminster Street Eastbound Lane 1

Pvt Temp: 78.7° F

GPS: 33.75685° Lat, -118.05970° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.67	12.79	11.51	10.78	9.69	8.7	6.98	5.54	4.48	14.09	13.9
8.74	12.83	11.55	10.81	9.78	8.72	7.01	5.62	4.49	14.1	13.93
8.67	12.75	11.46	10.78	9.74	8.72	6.99	5.61	4.46	14.04	13.88

53+93 (test 55)

Notes: On Joint

Avg FWD1: 11.5067

Begin Westminster Street Eastbound Lane 1

Pvt Temp: 79.5° F

GPS: 33.75685° Lat, -118.05940° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.16	11.55	10.51	9.88	8.9	7.99	6.39	5.12	4.07	12.38	12.26
9.13	11.55	10.47	9.83	8.88	7.99	6.38	5.14	4.06	12.36	12.21
9.04	11.42	10.38	9.76	8.82	7.88	6.3	5.05	4.04	12.24	12.09

54+99 (test 56)

Notes: On Joint

Avg FWD1: 13.15

Begin Westminster Street Eastbound Lane 1

Pvt Temp: 79.8° F

GPS: 33.75685° Lat, -118.05906° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.64	13.1	11.87	11.13	10.1	9.12	7.32	5.97	4.81	14.33	14.08
8.84	13.25	11.98	11.24	10.19	9.2	7.39	6.03	4.84	14.47	14.2
8.77	13.1	11.86	11.13	10.09	9.1	7.33	6	4.79	14.34	14.06

56+03 (test 57)

Begin Westminster Street Eastbound Lane 1

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Notes: On Joint

Avg FWD1: 11.7

Pvt Temp: 79.8° F

GPS: 33.75685° Lat, -118.05871° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.86	11.76	10.84	10.29	9.39	8.55	6.82	5.57	4.48	12.21	12.15
8.79	11.68	10.81	10.23	9.33	8.48	6.8	5.57	4.47	12.09	12.06
8.84	11.66	10.76	10.21	9.33	8.51	6.79	5.53	4.43	12.09	12.07

57+08 (test 58)

Notes: On Joint

Avg FWD1: 12.4733

Begin Westminster Street Eastbound Lane 1

Pvt Temp: 79.1° F

GPS: 33.75685° Lat, -118.05837° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.64	12.42	11.43	10.87	9.96	9.04	7.48	6.16	4.87	13.28	13.22
8.69	12.52	11.53	10.92	10.01	9.11	7.51	6.15	4.94	13.35	13.26
8.84	12.48	11.46	10.85	9.96	9.08	7.44	6.19	4.87	13.33	13.26

58+15 (test 59)

Notes: On Joint

Avg FWD1: 12.97

Begin Westminster Street Eastbound Lane 1

Pvt Temp: 80.6° F

GPS: 33.75685° Lat, -118.05802° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.74	13.02	11.98	11.33	10.33	9.44	7.73	6.38	5.12	13.91	13.77
8.77	12.94	11.91	11.27	10.25	9.39	7.73	6.31	5.09	13.85	13.68
8.74	12.95	11.91	11.29	10.27	9.36	7.7	6.32	5.11	13.83	13.68

58+91 (test 60)

Notes: On Joint

Avg FWD1: 10.7733

Begin Westminster Street Eastbound Lane 1

Pvt Temp: 80.9° F

GPS: 33.75685° Lat, -118.05778° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.99	10.79	9.97	9.48	8.69	7.93	6.64	5.62	4.67	11.29	11.2
8.99	10.79	9.99	9.46	8.66	7.93	6.63	5.58	4.66	11.3	11.19
8.94	10.74	9.93	9.41	8.63	7.89	6.6	5.55	4.64	11.22	11.12

59+96 (test 61)

Notes: On Joint

Avg FWD1: 12.2067

Begin Westminster Street Eastbound Lane 1

Pvt Temp: 80.6° F

GPS: 33.75685° Lat, -118.05744° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7
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Begin Westminster Street Eastbound Lane 1											
Pvt Temp: 79.8° F											
GPS: 33.75684° Lat, -118.05682° Lon											
Limit <input type="checkbox"/> NIS <input type="checkbox"/>											
Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10	
8.72	10.34	9.34	8.8	8.04	7.27	5.88	4.84	3.95	11.09	11	
8.74	10.31	9.34	8.8	8.01	7.2	5.86	4.83	3.93	11.04	10.97	
8.84	10.28	9.28	8.77	8.01	7.27	5.85	4.82	3.93	11.02	10.93	

62+91 (test 64)											
Notes: On Joint											
Avg FWD1: 12.75											
Begin Westminster Street Eastbound Lane 1											
Pvt Temp: 81.3° F											
GPS: 33.75684° Lat, -118.05647° Lon											
Limit <input type="checkbox"/> NIS <input type="checkbox"/>											
Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10	
8.64	12.73	11.53	10.82	9.76	8.79	6.92	5.53	4.36	13.94	13.74	
8.72	12.73	11.51	10.81	9.76	8.78	6.91	5.5	4.31	13.92	13.67	
8.74	12.79	11.62	10.9	9.85	8.85	6.97	5.57	4.37	14.01	13.78	

64+11 (test 65)											
Notes: On Joint											
Avg FWD1: 11.1233											
Begin Westminster Street Eastbound Lane 1											
Pvt Temp: 81.3° F											
GPS: 33.75684° Lat, -118.05608° Lon											
Limit <input type="checkbox"/> NIS <input type="checkbox"/>											
Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10	
8.84	11.2	10.22	9.61	8.71	7.85	6.14	4.84	3.71	12.11	11.93	
8.72	11.08	10.09	9.49	8.62	7.78	6.08	4.79	3.66	11.96	11.8	
8.84	11.09	10.13	9.51	8.64	7.79	6.1	4.81	3.65	11.99	11.83	

65+00 (test 66)											
Notes: On Joint											
Avg FWD1: 12.71											
Begin Westminster Street Eastbound Lane 1											
Pvt Temp: 81.7° F											
GPS: 33.75684° Lat, -118.05578° Lon											
Limit <input type="checkbox"/> NIS <input type="checkbox"/>											
Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10	
8.62	12.74	11.4	10.63	9.52	8.47	6.54	5.09	3.78	14.01	13.92	
8.62	12.69	11.38	10.59	9.47	8.42	6.5	5.05	3.76	14.04	13.84	
8.67	12.7	11.35	10.57	9.49	8.41	6.5	5.06	3.75	13.98	13.81	

66+05 (test 67)											
Notes: On Joint											
Avg FWD1: 9.56667											
Begin Westminster Street Eastbound Lane 1											
Pvt Temp: 81.3° F											
GPS: 33.75684° Lat, -118.05544° Lon											
Limit <input type="checkbox"/> NIS <input type="checkbox"/>											
Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10	
9.04	9.57	9.05	8.67	8.09	7.55	6.08	4.99	3.9	9.68	9.74	
8.96	9.53	8.99	8.58	8.02	7.5	6.11	4.89	3.87	9.62	9.67	
9.04	9.6	9.09	8.69	8.1	7.57	6.06	5	3.94	9.71	9.72	

66+96 (test 68)											
Notes: On Joint											
Avg FWD1: 8.89333											
Begin Westminster Street Eastbound Lane 1											
Pvt Temp: 80.6° F											
GPS: 33.75684° Lat, -118.05514° Lon											
Limit <input type="checkbox"/> NIS <input type="checkbox"/>											
Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10	
8.77	8.92	8.09	7.62	6.88	6.18	4.79	3.8	2.95	9.16	9.32	
8.82	8.86	8.08	7.58	6.88	6.17	4.8	3.8	2.96	9.15	9.29	
8.82	8.9	8.07	7.63	6.91	6.22	4.87	3.82	2.93	9.18	9.29	

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Begin Westminster Street Eastbound Lane 1											
Pvt Temp: 82° F											
GPS: 33.75683° Lat, -118.05479° Lon											
Limit <input type="checkbox"/> NIS <input type="checkbox"/>											
Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10	
8.55	12.92	11.5	10.69	9.49	8.34	6.31	4.77	3.55	15.07	14.6	
8.57	12.95	11.51	10.64	9.46	8.37	6.3	4.78	3.55	15.03	14.55	
8.62	13.09	11.58	10.74	9.56	8.4	6.32	4.79	3.56	15.14	14.64	

68+11											
Notes: CL of 11th Street											
Begin Westminster Street Eastbound Lane 1											
Pvt Temp: 0° F											
GPS: 33.75683° Lat, -118.05479° Lon											
Limit <input type="checkbox"/> NIS <input type="checkbox"/>											

69+06 (test 70)											
Notes: On Joint											
Avg FWD1: 10.1667											
Begin Westminster Street Eastbound Lane 1											
Pvt Temp: 81.3° F											
GPS: 33.75683° Lat, -118.05445° Lon											
Limit <input type="checkbox"/> NIS <input type="checkbox"/>											
Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10	
8.67	10.18	9.18	8.61	7.71	6.86	5.37	4.19	3.11	10.92	10.95	
8.74	10.17	9.14	8.57	7.73	6.88	5.37	4.2	3.09	10.91	10.93	
8.69	10.15	9.15	8.57	7.71	6.87	5.38	4.15	3.11	10.91	10.91	

70+13 (test 71)											
Notes: On Joint											
Avg FWD1: 9.83											
Begin Westminster Street Eastbound Lane 1											
Pvt Temp: 81.3° F											
GPS: 33.75683° Lat, -118.05410° Lon											
Limit <input type="checkbox"/> NIS <input type="checkbox"/>											
Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10	

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LaBelle - Marvin: FWD Reports

Notes: On Joint

Avg FWD1: 11.3133

Pvt Temp: 81.7° F

GPS: 33.75682° Lat, -118.05020° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.67	11.37	10.19	9.5	8.54	7.57	5.85	4.55	3.64	12.36	12.24
8.62	11.28	10.1	9.43	8.45	7.52	5.81	4.52	3.66	12.22	12.09
8.77	11.29	10.12	9.44	8.45	7.58	5.82	4.55	3.7	12.26	12.12

82+95 (test 84)

Notes: On Joint

Avg FWD1: 11.8933

Begin Westminster Street Eastbound Lane 1

Pvt Temp: 83.5° F

GPS: 33.75682° Lat, -118.04990° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.67	11.89	10.59	9.82	8.72	7.69	5.87	4.46	3.25	13.25	13.01
8.69	11.86	10.55	9.81	8.7	7.71	5.78	4.45	3.25	13.2	12.97
8.74	11.93	10.6	9.83	8.73	7.72	5.82	4.44	3.29	13.25	12.99

83+35

Notes: CL of 15th Street

Begin Westminster Street Eastbound Lane 1

Pvt Temp: 0° F

GPS: 33.75682° Lat, -118.04990° Lon

Limit ☐ NIS ☐

83+75

Notes: CL of RR Tracks

Begin Westminster Street Eastbound Lane 1

Pvt Temp: 0° F

GPS: 33.75682° Lat, -118.04990° Lon

Limit ☐ NIS ☐

84+25 (test 85)

Notes: On Joint

Avg FWD1: 11.1667

Begin Westminster Street Eastbound Lane 1

Pvt Temp: 84.6° F

GPS: 33.75682° Lat, -118.04948° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.89	11.18	10.13	9.5	8.61	7.76	6.08	4.8	3.63	12.16	12.01
8.84	11.16	10.11	9.48	8.58	7.75	6.01	4.78	3.62	12.14	11.99
8.82	11.16	10.09	9.48	8.59	7.74	6.07	4.77	3.63	12.13	11.98

85+15 (test 86)

Notes: On Joint

Avg FWD1: 11.2267

Begin Westminster Street Eastbound Lane 1

Pvt Temp: 81.7° F

GPS: 33.75682° Lat, -118.04918° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.74	11.27	10.2	9.57	8.57	7.67	5.85	4.55	3.38	12.05	11.99
8.72	11.17	10.13	9.49	8.53	7.61	5.85	4.46	3.34	11.95	11.87
8.86	11.24	10.19	9.55	8.58	7.67	5.87	4.51	3.39	12.05	11.97

86+07 (test 87)

Notes: On Joint

Avg FWD1: 8.86

Begin Westminster Street Eastbound Lane 1

Pvt Temp: 85.7° F

GPS: 33.75682° Lat, -118.04888° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
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87+12 (test 88)

Notes: On Joint

Avg FWD1: 9.11667

Begin Westminster Street Eastbound Lane 1

Pvt Temp: 82° F

GPS: 33.75682° Lat, -118.04854° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.79	9.1	8.28	7.74	7	6.27	4.83	3.82	2.98	9.54	9.32
8.91	9.14	8.26	7.77	7.03	6.3	4.86	3.82	2.98	9.58	9.58
8.84	9.11	8.28	7.78	7.01	6.29	4.91	3.86	3	9.6	9.56

87+23

Notes: CL of 16th Street

Begin Westminster Street Eastbound Lane 1

Pvt Temp: 0° F

GPS: 33.75682° Lat, -118.04854° Lon

Limit ☐ NIS ☐

87+64

Notes: CL of RR Tracks

Begin Westminster Street Eastbound Lane 1

Pvt Temp: 0° F

GPS: 33.75682° Lat, -118.04854° Lon

Limit ☐ NIS ☐

87+98 (test 89)

Notes: On Joint

Avg FWD1: 10.6733

Begin Westminster Street Eastbound Lane 1

Pvt Temp: 82° F

GPS: 33.75682° Lat, -118.04826° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.82	10.62	9.61	9.06	8.14	7.26	5.55	4.3	3.19	11.36	11.29
8.79	10.66	9.67	9.06	8.16	7.23	5.58	4.3	3.21	11.39	11.3
8.69	10.74	9.73	9.1	8.19	7.29	5.61	4.3	3.2	11.48	11.34

89+06 (test 90)

Notes: On Joint

Avg FWD1: 9.2

Begin Westminster Street Eastbound Lane 1

Pvt Temp: 80.9° F

GPS: 33.75682° Lat, -118.04791° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.89	9.16	8.35	7.86	7.13	6.41	5.13	4.1	3.21	9.85	9.78
8.96	9.25	8.43	7.9	7.17	6.47	5.18	4.12	3.23	9.87	9.8
8.89	9.19	8.36	7.87	7.14	6.41	5.12	4.09	3.24	9.85	9.78

90+11 (test 91)

Notes: On Joint

Avg FWD1: 12.5933

Begin Westminster Street Eastbound Lane 1

Pvt Temp: 81.7° F

GPS: 33.75681° Lat, -118.04756° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.57	12.58	11.21	10.34	9.14	8.03	5.8	4.14	2.79	13.81	13.64
8.55	12.59	11.19	10.31	9.11	7.99	5.75	4.09	2.83	13.8	13.62
8.62	12.61	11.21	10.35	9.14	8.03	5.79	4.15	2.84	13.84	13.63

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90+94 (test 92)

Notes: On Joint

Avg FWD1: 11.4267

Begin Westminster Street Eastbound Lane 1

Pvt Temp: 82.4° F

GPS: 33.75681° Lat, -118.04729° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.69	11.42	10.15	9.36	8.26	7.26	5.32	3.84	2.74	12.33	12.19
8.69	11.39	10.1	9.33	8.29	7.27	5.31	3.85	2.77	12.32	12.14
8.77	11.47	10.16	9.38	8.31	7.29	5.36	3.85	2.8	12.35	12.22

91+11

Notes: CL of 17th Street

Begin Westminster Street Eastbound Lane 1

Pvt Temp: 0° F

GPS: 33.75681° Lat, -118.04729° Lon

Limit ☐ NIS ☐

91+52

Notes: CL of RR Tracks

Begin Westminster Street Eastbound Lane 1

Pvt Temp: 0° F

GPS: 33.75681° Lat, -118.04729° Lon

Limit ☐ NIS ☐

91+99 (test 93)

Notes: On Joint

Avg FWD1: 10.76

Begin Westminster Street Eastbound Lane 1

Pvt Temp: 83.1° F

GPS: 33.75681° Lat, -118.04695° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.67	10.74	9.68	9.01	8.07	7.13	5.38	4.12	3.14	11.63	11.55
8.6	10.7	9.64	8.98	8.03	7.09	5.37	4.07	3.09	11.57	11.45
8.67	10.84	9.74	9.08	8.13	7.16	5.4	4.13	3.12	11.72	11.61

93+05 (test 94)

Notes: On Joint

Avg FWD1: 11.4967

Begin Westminster Street Eastbound Lane 1

Pvt Temp: 83.1° F

GPS: 33.75681° Lat, -118.04660° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.74	11.45	10.39	9.7	8.73	7.75	5.91	4.41	3.28	12.46	12.31
8.86	11.55	10.47	9.8	8.8	7.84	5.95	4.43	3.3	12.55	12.39
8.82	11.49	10.43	9.73	8.77	7.84	5.94	4.43	3.33	12.5	12.34

94+11 (test 95)

Notes: On Joint

Avg FWD1: 16.88

Begin Westminster Street Eastbound Lane 1

Pvt Temp: 82° F

GPS: 33.75681° Lat, -118.04625° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.94	16.88	14.53	13.49	12.06	10.72	8.08	5.61	4.44	13.46	14.66
8.89	16.81	14.47	13.42	11.97	10.67	8.1	6.19	4.41	13.44	14.64
8.86	16.95	14.49	13.48	11.98	10.69	8.08	6.05	4.41	13.5	14.7

94+96

Notes: CL of 18th Street

Begin Westminster Street Eastbound Lane 1

Pvt Temp: 0° F

GPS: 33.75681° Lat, -118.04625° Lon

Limit ☐ NIS ☐

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LaBelle - Marvin: FWD Reports

Begin Testing Westminster Street Westbound Lane 1

00+00

Notes: Begin Testing Westminster Street Westbound Lane 1; CL of 18th Street

Begin Testing Westminster Street Westbound Lane 1

Pvt Temp: 0° F

GPS: 33.75681° Lat, -118.04625° Lon

Limit ☐ NIS ☐

00+93 (test 96)

Notes: On Joint

Avg FWD1: 10.8033

Begin Testing Westminster Street Westbound Lane 1

Pvt Temp: 82.4° F

GPS: 33.75683° Lat, -118.04628° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.74	10.85	9.98	9.42	8.59	7.78	6.22	4.88	3.92	11.51	11.47
8.72	10.75	9.84	9.33	8.48	7.69	6.19	4.89	3.88	11.43	11.37
8.72	10.81	9.91	9.35	8.53	7.69	6.24	4.94	3.87	11.5	11.44

01+99 (test 97)

Notes: On Joint

Avg FWD1: 9.98

Begin Testing Westminster Street Westbound Lane 1

Pvt Temp: 84.2° F

GPS: 33.75683° Lat, -118.04662° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.72	9.97	8.99	8.39	7.58	6.77	5.17	4.02	3.04	10.78	10.68
8.72	10.02	9.04	8.44	7.62	6.79	5.15	4.01	3.08	10.79	10.73
8.74	9.95	9	8.41	7.56	6.74	5.15	3.99	3.03	10.76	10.66

03+04 (test 98)

Notes: On Joint

Avg FWD1: 8.77667

Begin Testing Westminster Street Westbound Lane 1

Pvt Temp: 84.2° F

GPS: 33.75683° Lat, -118.04697° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.74	8.82	8	7.48	6.71	5.92	4.5	3.39	2.6	9.31	9.32
8.69	8.74	7.93	7.41	6.66	5.89	4.5	3.39	2.59	9.18	9.21
8.69	8.77	7.99	7.46	6.7	5.92	4.53	3.41	2.62	9.2	9.21

03+51

Notes: CL of RR Tracks

Begin Testing Westminster Street Westbound Lane 1

Pvt Temp: 0° F

GPS: 33.75683° Lat, -118.04697° Lon

Limit ☐ NIS ☐

03+95

Notes: CL of 17th Street

Begin Testing Westminster Street Westbound Lane 1

Pvt Temp: 0° F

GPS: 33.75683° Lat, -118.04697° Lon

Limit ☐ NIS ☐

04+10 (test 99)

Begin Testing Westminster Street Westbound Lane 1

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LaBelle - Marvin: FWD Reports

Notes: On Joint

Avg FWD1: 14.66

GPS: 33.75683° Lat, -118.04731° Lon

Pvt Temp: 86.1° F

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.45	14.63	12.66	11.59	10.13	8.75	6.34	4.61	3.36	15.51	16.67
8.45	14.65	12.65	11.56	10.09	8.76	6.4	4.53	3.32	15.47	16.7
8.5	14.7	12.72	11.64	10.16	8.79	6.39	4.6	3.32	15.62	16.68

05+07 (test 100)

Notes: On Joint

Avg FWD1: 9.9

Begin Testing Westminster Street Westbound Lane 1

Pvt Temp: 86.8° F

GPS: 33.75683° Lat, -118.04763° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.84	9.88	9.01	8.53	7.73	6.95	5.38	4.28	3.29	10.22	10.3
8.94	9.93	9.06	8.55	7.75	6.97	5.39	4.31	3.31	10.27	10.33
8.89	9.89	9.06	8.58	7.78	6.96	5.42	4.28	3.3	10.28	10.33

05+99 (test 101)

Notes: On Joint

Avg FWD1: 10.29

Begin Testing Westminster Street Westbound Lane 1

Pvt Temp: 87.9° F

GPS: 33.75683° Lat, -118.04792° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.82	10.25	9.25	8.65	7.78	6.92	5.33	4.13	3.08	10.93	10.89
8.86	10.28	9.25	8.65	7.81	6.94	5.36	4.06	3.09	10.99	10.9
8.86	10.34	9.32	8.69	7.83	6.97	5.37	4.11	3.1	11.02	10.97

07+10 (test 102)

Notes: On Joint

Avg FWD1: 10.81

Begin Testing Westminster Street Westbound Lane 1

Pvt Temp: 89.7° F

GPS: 33.75683° Lat, -118.04827° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.74	10.83	9.66	8.97	8.03	7.1	5.45	4.11	3.16	11.85	11.75
8.77	10.82	9.63	8.91	8.01	7.03	5.42	4.13	3.16	11.82	11.7
8.77	10.78	9.64	8.93	8	7.06	5.42	4.11	3.16	11.81	11.71

07+45

Notes: CL of RR Tracks

Avg FWD1: 9.84667

Begin Testing Westminster Street Westbound Lane 1

Pvt Temp: 0° F

GPS: 33.75683° Lat, -118.04827° Lon

Limit ☐ NIS ☐

07+87

Notes: CL of 16th Street

Avg FWD1: 9.84667

Begin Testing Westminster Street Westbound Lane 1

Pvt Temp: 0° F

GPS: 33.75683° Lat, -118.04827° Lon

Limit ☐ NIS ☐

07+96 (test 103)

Notes: On Joint

Avg FWD1: 9.84667

Begin Testing Westminster Street Westbound Lane 1

Pvt Temp: 93.8° F

GPS: 33.75683° Lat, -118.04855° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
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13+02 (test 108)

Notes: On Joint

Avg FWD1: 11.89

Begin Testing Westminster Street Westbound Lane 1

Pvt Temp: 92.3° F

GPS: 33.75684° Lat, -118.05021° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.67	11.84	10.7	9.99	8.97	8.01	6.14	4.72	3.57	12.84	12.7
8.84	11.95	10.79	10.07	9.06	8.09	6.26	4.79	3.65	12.91	12.77
8.77	11.88	10.73	10.03	8.99	8.01	6.12	4.69	3.55	12.87	12.72

13+92 (test 109)

Notes: On Joint

Avg FWD1: 10.3067

Begin Testing Westminster Street Westbound Lane 1

Pvt Temp: 92.7° F

GPS: 33.75684° Lat, -118.05051° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.77	10.39	9.47	8.93	8.13	7.39	5.83	4.72	3.69	11.03	10.99
8.77	10.31	9.4	8.88	8.07	7.31	5.76	4.66	3.66	10.93	10.93
8.79	10.22	9.33	8.78	7.96	7.2	5.72	4.54	3.54	10.85	10.8

14+98 (test 110)

Notes: On Joint

Avg FWD1: 10.106

Begin Testing Westminster Street Westbound Lane 1

Pvt Temp: 92.3° F

GPS: 33.75685° Lat, -118.05086° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.64	10.07	9.28	8.76	7.65	7.32	6.09	5.07	4.22	10.75	10.73
8.74	9.98	9.14	8.66	7.37	7.25	5.94	4.91	4.06	10.63	10.63
8.77	10.13	9.27	8.75	7.51	7.29	6.04	5.04	4.16	10.8	10.77

15+63

Notes: CL of 14th Street

Avg FWD1: 9.12667

Begin Testing Westminster Street Westbound Lane 1

Pvt Temp: 0° F

GPS: 33.75685° Lat, -118.05086° Lon

Limit ☐ NIS ☐

15+98 (test 111)

Notes: On Joint

Avg FWD1: 8.90333

Begin Testing Westminster Street Westbound Lane 1

Pvt Temp: 92.7° F

GPS: 33.75685° Lat, -118.05118° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.62	8.81	8.09	7.6	6.98	6.27	5.16	4.18	3.44	9.05	9.31
8.67	9.06	8.27	7.79	7.16	6.5	5.35	4.42	3.62	9.27	9.53
8.69	8.84	8.03	7.59	6.92	6.25	5.14	4.13	3.38	9.05	9.31

17+03 (test 112)

Notes: On Joint

Avg FWD1: 9.12667

Begin Testing Westminster Street Westbound Lane 1

Pvt Temp: 91.9° F

GPS: 33.75685° Lat, -118.05153° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.84	9.19	8.6	8.25	7.68	7.16	6.16	5.33	4.59	9.31	9.49
8.79	9.13	8.53	8.17	7.65	7.09	6.2	5.09	4.62	9.28	9.4
8.79	9.06	8.48	8.12	7.59	7.05	6.11	5	4.54	9.23	9.33

17+95 (test 113)

Notes: On Joint

Avg FWD1: 9.12667

Begin Testing Westminster Street Westbound Lane 1

Pvt Temp: 92.3° F

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Begin Testing Westminster Street Westbound Lane 1
Pvt Temp: 88.3° F
GPS: 33.75662° Lat, -118.06232° Lon
Limit ☐ NIS ☒

Begin Testing Westminster Street Westbound Lane 1

Pvt Temp: 88.6° F
GPS: 33.75658° Lat, -118.06261° Lon

Begin Testing Westminster Street Westbound Lane 1

Pvt Temp: 86.8° F
GPS: 33.75654° Lat, -118.06295° Lon

Begin Testing Westminster Street Westbound Lane 1

Pvt Temp: 88.3° F
GPS: 33.75652° Lat, -118.06329° Lon

Begin Testing Westminster Street Westbound Lane 1

Pvt Temp: 86.8° F
GPS: 33.75651° Lat, -118.06359° Lon

Begin Testing Westminster Street Westbound Lane 1

Pvt Temp: 87.2° F
GPS: 33.75651° Lat, -118.06395° Lon

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Begin Testing Westminster Street Westbound Lane 1
Pvt Temp: 85.7° F
GPS: 33.75652° Lat, -118.06622° Lon
Limit ☐ NIS ☐

Begin Testing Westminster Street Westbound Lane 1

Pvt Temp: 84.2° F
GPS: 33.75652° Lat, -118.06652° Lon

Begin Testing Westminster Street Westbound Lane 1

Pvt Temp: 81.3° F
GPS: 33.75652° Lat, -118.06692° Lon

Begin Testing Westminster Street Westbound Lane 1

Pvt Temp: 85.7° F
GPS: 33.75652° Lat, -118.06722° Lon

Begin Testing Westminster Street Westbound Lane 1

Pvt Temp: 85° F
GPS: 33.75652° Lat, -118.06750° Lon

Begin Testing Westminster Street Westbound Lane 1

Pvt Temp: 87.5° F
GPS: 33.75652° Lat, -118.06781° Lon

32/74

Attachment I

www.labellemarvin.com/fwd/fwdlive/report.php 33/74

www.labellemarvin.com/fwd/fwdlive/report.php 34/74

www.labellemarvin.com/fwd/fwdlive/report.php 35/74

www.labellemarvin.com/fwd/fwdlive/report.php 36/74

7/6/22, 10:59 AM

LaBelle - Marvin: FWD Reports

88+06 (test 183)

Notes: On Joint

Avg FWD1: 10.5967

Begin Testing Westminster Street Westbound Lane 1

Pvt Temp: 94.1° F

GPS: 33.75655° Lat, -118.07468° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.97	11.13	10.32	9.81	8.96	8.16	6.55	5.3	4.2	11.45	11.45
8.86	9.94	9.24	8.79	8.06	7.33	5.95	4.82	3.84	10.3	10.28
9.5	10.72	9.95	9.4	8.62	7.83	6.32	5.12	4.07	11.02	11.01

89+01 (test 184)

Notes: On Joint

Avg FWD1: 10.133

Begin Testing Westminster Street Westbound Lane 1

Pvt Temp: 94.5° F

GPS: 33.75655° Lat, -118.07500° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.23	10.35	9.71	9.07	8.24	7.43	5.86	4.54	3.53	11.36	11.48
8.28	10.4	9.74	9.14	8.33	7.44	5.88	4.58	3.54	11.41	11.55
8.35	10.24	9.76	9.16	8.41	7.52	5.93	4.6	3.58	11.49	11.56

89+08

Notes: CL of 3rd Street

Begin Testing Westminster Street Westbound Lane 1

Pvt Temp: 0° F

GPS: 33.75655° Lat, -118.07500° Lon

Limit ☐ NIS ☐

90+04 (test 185)

Notes: On Joint

Avg FWD1: 12.71

Begin Testing Westminster Street Westbound Lane 1

Pvt Temp: 94.1° F

GPS: 33.75655° Lat, -118.07534° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.57	12.73	11.47	10.75	9.68	8.67	6.74	5.34	4.1	13.95	13.73
8.57	12.68	11.39	10.71	9.59	8.66	6.75	5.32	4.09	13.88	13.66
8.6	12.72	11.44	10.73	9.66	8.66	6.75	5.32	4.09	13.9	13.66

90+95 (test 186)

Notes: On Joint

Avg FWD1: 10.12

Begin Testing Westminster Street Westbound Lane 1

Pvt Temp: 94.5° F

GPS: 33.75655° Lat, -118.07563° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.82	10.06	9.14	8.6	7.82	7.07	5.68	4.65	3.89	10.81	10.71
8.84	9.98	9.08	8.53	7.77	7.02	5.66	4.66	3.84	10.69	10.65
9.16	10.32	9.4	8.85	8.03	7.25	5.83	4.81	3.95	11.04	11

92+29

Notes: CL of 2nd Street

Begin Testing Westminster Street Westbound Lane 1

Pvt Temp: 0° F

GPS: 33.75655° Lat, -118.07604° Lon

Limit ☐ NIS ☐

92+35 (test 187)

Notes: On Joint

Avg FWD1: 11.3867

Begin Testing Westminster Street Westbound Lane 1

Pvt Temp: 94.5° F

GPS: 33.75656° Lat, -118.07608° Lon

Limit ☐ NIS ☐

www.labellemarvin.com/fwd/fwdlive/report.php

37/74

7/6/22, 10:59 AM

LaBelle - Marvin: FWD Reports

GPS: 33.75656° Lat, -118.07667° Lon

Limit ☐ NIS ☐

00+53

Notes: CL of RR Tracks

Begin Testing Bolosa Avenue Eastbound Lane 1

Pvt Temp: 0° F

GPS: 33.75656° Lat, -118.07667° Lon

Limit ☐ NIS ☐

01+01 (test 190)

Notes:

Avg FWD1: 12.32

Begin Testing Bolosa Avenue Eastbound Lane 1

Pvt Temp: 94.5° F

GPS: 33.74499° Lat, -118.08520° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.57	12.09	9.06	7.67	6.03	4.68	2.85	2.09	1.97	8.75	10.39
8.91	12.38	9.3	7.9	6.23	4.84	3.01	2.19	1.98	8.92	10.51
9.08	12.49	9.44	8.06	6.37	4.94	3	2.31	2.07	9.01	10.6

02+02 (test 191)

Notes:

Avg FWD1: 8.70667

Begin Testing Bolosa Avenue Eastbound Lane 1

Pvt Temp: 90.5° F

GPS: 33.74499° Lat, -118.08487° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.01	8.78	6.81	6.04	4.99	4.15	2.82	1.96	0.63	6.81	7.77
9.01	8.71	6.77	6	4.98	4.13	2.84	1.95	0.79	6.76	7.67
9.04	8.63	6.72	5.98	4.94	4.11	2.8	1.86	0.83	6.71	7.63

03+06 (test 192)

Notes:

Avg FWD1: 9.31333

Begin Testing Bolosa Avenue Eastbound Lane 1

Pvt Temp: 87.9° F

GPS: 33.74499° Lat, -118.08453° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.91	9.35	7.52	6.52	5.57	4.81	3.72	2.32	2.93	7.25	8.32
9.11	9.38	7.54	6.7	5.62	4.89	3.7	3.13	3	7.38	8.34
8.96	9.21	7.44	6.6	5.58	4.77	3.72	2.95	2.92	7.14	8.13

04+05 (test 193)

Notes:

Avg FWD1: 10.45

Begin Testing Bolosa Avenue Eastbound Lane 1

Pvt Temp: 88.6° F

GPS: 33.74499° Lat, -118.08420° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.01	10.58	8.66	7.74	6.61	5.78	4.67	4.15	3.74	8.49	9.7
9.04	10.46	8.58	7.67	6.6	5.78	4.68	4.15	3.71	8.4	9.55
8.94	10.31	8.51	7.6	6.54	5.74	4.63	4.07	3.69	8.27	9.4

05+05 (test 194)

Notes:

Avg FWD1: 12.6733

Begin Testing Bolosa Avenue Eastbound Lane 1

Pvt Temp: 86.1° F

GPS: 33.74499° Lat, -118.08387° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.04	12.83	10.93	9.98	8.6	7.49	5.55	4.34	3.59	11.09	12.09
9.01	12.66	10.82	9.87	8.51	7.37	5.5	4.32	3.61	10.92	11.88

www.labellemarvin.com/fwd/fwdlive/report.php

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IFB 4-2069

Attachment I

7/6/22, 10:59 AM

LaBelle - Marvin: FWD Reports

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.13	10.95	9.78	9.09	8.19	7.32	5.74	4.67	3.93	11.78	11.97
8.62	11.79	10.51	9.78	8.85	7.88	6.25	5.16	4.37	12.57	12.76
8.47	11.42	10.2	9.5	8.58	7.63	6.05	4.94	4.17	12.17	12.42

93+12 (test 188)

Notes: On Joint

Avg FWD1: 9.95333

Begin Testing Westminster Street Westbound Lane 1

Pvt Temp: 95.6° F

GPS: 33.75656° Lat, -118.07633° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.01	9.93	9.16	8.71	8.02	7.4	6.05	4.98	4.05	10.26	10.26
8.89	9.87	9.13	8.67	7.98	7.35	6.03	4.97	4	10.24	10.22
9.21	10.06	9.3	8.82	8.11	7.5	6.09	5.06	4.09	10.4	10.38

94+16 (test 189)

Notes: On Joint

Avg FWD1: 10.8733

Begin Testing Westminster Street Westbound Lane 1

Pvt Temp: 96.3° F

GPS: 33.75656° Lat, -118.07667° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.67	10.94	9.87	9.29	8.15	7.65	6.12	4.94	3.9	11.91	11.79
8.6	10.74	9.67	9.1	8.11	7.47	6	4.81	3.79	11.7	11.55
8.77	10.94	9.87	9.28	8.02	7.62	6.13	4.95	3.91	11.86	11.76

94+36

Notes: CL of 1st Street

Begin Testing Westminster Street Westbound Lane 1

Pvt Temp: 0° F

GPS: 33.75656° Lat, -118.07667° Lon

Limit ☐ NIS ☐

94+78

Notes: CL of RR Tracks

Begin Testing Westminster Street Westbound Lane 1

Pvt Temp: 0° F

GPS: 33.75656° Lat, -118.07667° Lon

Limit ☐ NIS ☐

95+25

Notes: CL of Kitts Highway

Begin Testing Westminster Street Westbound Lane 1

Pvt Temp: 0° F

GPS: 33.75656° Lat, -118.07667° Lon

Limit ☐ NIS ☐



www.labellemarvin.com/fwd/fwdlive/report.php

38/74

7/6/22, 10:59 AM

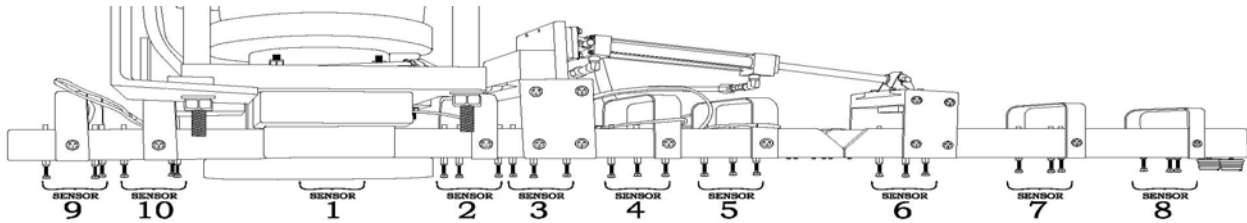


APPENDIX F

GLOSSARY OF TERMS

Glossary of Terms

Deflection Testing, CA Test Method 356, is a structural analysis of measured deflection values obtained during our field testing operations, utilizing our non-destructive JILS Falling Weight Deflectometer equipment. Data accumulated on the deflection values, thickness of AC pavement with aggregate base, subjected to various traffic loadings along with the tolerable deflection criteria, provides the basis of needed overlay and/or structural reinforcement. The Falling Weight Deflectometer, F.W.D., provides a tabulation of all test data, distance measurements DMI, field observations, in-situ pavement temperatures, global position GPS data, and permanent landmarks such as cross streets, patches, utility trenches, etc. taken in the field. The Individual deflection test data, provided with this report, was reviewed and grouped according to data trends and engineering judgment.



Sensors:	FWD 1, FWD 2, FWD 3, FWD 4, FWD 5, FWD 6, FWD 7, FWD 8, FWD 9, FWD 10. These are the 10 separate deflection readings in 10^{-3} inches. FWD 1 represents the deflection directly beneath the load input.
Force:	Standard Dynamic Loading measured.
GPR:	Ground Penetrating Radar of in-situ pavement thicknesses. (optional)
GPS:	The North American Datum (NAD 83).
NIS:	Not included in sums.
Limits	The station limits represent areas of like deflection determined during the engineering review of deflection data and field conditions. Limits are represented by local stationing gathered in the field per street, and is taken in each direction and lane.
FWD_{80th}	The 80 th percentile deflection value representing the strength under loading of the section/group being evaluated, reported in inches times 10^{-3} .
TD_{80th}	The 80 th percentile deflection value converted to an equivalent Traveling Deflectometer unit, reported in inches times 10^{-3} .
T	The represented thickness (T) of existing pavement structure. This value is taken from our pavement coring data obtained in the field.
T.I.	The Traffic Index (TI) used for the evaluation of the specific test loading. The traffic index represents the anticipated accumulation of equivalent axle loads with design period.
TDallow	The maximum permissible deflection value where no reinforcement is necessary based upon asphalt concrete thickness and traffic index by Caltrans Test Method 356.
%Red.	The percent reduction in measured deflection to match tolerable or allowable deflection levels, based upon Traveling Deflectometer conversions.
GE	The equivalent thickness, in feet, of rock base required to effect the specified deflection reduction.
AC	The equivalent thickness, in feet, of asphalt concrete thickness required to effect the specified deflection reduction.
NSL	LaBelle Marvin, Inc.'s calculated Nominal Service Life of the existing pavement.

SECTION VII: LIST OF DRAWINGS - EXHIBIT C

LIST OF DRAWINGS

By this reference, the following drawings are incorporated in this Invitation For Bids.

<u>Sheet Identification</u>	<u>Number of Sheets</u>
1 – Title Sheet	1
2 – Typical Sections	1
3 – Westminster Street Improvement Plan (Kitts Way to Minor RD)	1
4 – Westminster Street Improvement Plan (Minor RD to Westminster Dr)	1
5 – Westminster Street Improvement Plan (Westminster DR to 14th Street)	1
6 – Westminster Street Improvement Plan (14th Street to 18th Street)	1
7 – Magazines 824 & 825	1
8 – Magazines 826 & 827	1

FILE NAME: C:\Users\WILL102324\Documents\PROJECTS\Naval Pavement Rehab\References\NAVFAC_STWD_D_Imperial.dwg LAYOUT NAME: Model PLOTTED: Friday, March 03, 2023 - 2:07pm USER: WILL102324

INDEX OF PLANS

SHEET NO.	DRAWING NO.	DESCRIPTION
1	18375468	Title Sheet
2	18375469	Typical Sections
3	18375470	Westminster Street Improvement Plan (Kitts Way to Minor Rd)
4	18375471	Westminster Street Improvement Plan (Minor Rd to Westminster Dr)
5	18375472	Westminster Street Improvement Plan (Westminster dr to 14th St)
6	18375473	Westminster Street Improvement Plan (14th St to 18th St)
7	18375474	Magazine 824 & 825 Street Improvement Plan
8	18375475	Magazine 826 & 827 Street Improvement Plan

Construction Notes:

- ① Grind 1/4" Concrete
- ② Cold Plane 1/4" AC - spall and crack repair
- ③ Construct 5" HMA-A over 12 1/2" Class II Aggregate Base
- ④ Construct 4" HMA-A over 2 1/2" Class II Aggregate Base over 6" Pulverised
- ⑤ Seal joints
- ⑥ Construct HMA Dike Type A per Caltrans Standard Plan A87B
- ⑦ Construct Detail 21 per Caltrans Standard Plan A20A
- ⑧ Saw cut
- ⑩ Remove railroad tracks and ballast
- ⑪ Pull Box. Adjust to Grade
- ⑫ Light Pole. Protect in Place
- ⑬ Concrete by Mudjacking

LEGEND:

- Existing Building

Concrete Pavement

Dirt Road

Bunker

Laydown Area
- Main Road AC

Minor Road AC

Proposed Work

Mudjacking

- Exist. Electrical Line

Exist. Gas Line

Exist. Underground High Voltage Electrical Line

Exist. Water Line

Exist. Sanitary Sewer Line

Exist. Overhead Power Line

ABBREVIATIONS:

- AC Asphalt Concrete
- BC Beginning of Curve Radius
- Blvd. Boulevard
- Bldg Building
- DR Drive
- EC Edge of Concrete
- ECR End of Curve Radius
- EP Edge of Pavement
- EXIST Existing
- EG Existing Ground
- FG Finished Ground
- HP Hinge Point
- HWY Highway
- HMA-A Hot Mix Asphalt (Type A)
- MH Manhole
- OH Overhead
- St Street
- S/C Sawcut
- Rd Road
- RR Rail Road
- (XX,XX) Existing Elevation
- XX-XX Proposed Elevation
- PH Pumphouse
- P Poles
- Typ Typical

- XX Construction Notes
- XX Coordinates
- XX Curve Data

DRAFT FOR REVIEW & COMMENT	11/09/23	XXXXXX							DATE
100% SUBMITTAL FOR REVIEW & COMMENT									
1									SYM DESCRIPTION



PREPARED BY:
 ORANGE COUNTY TRANSPORTATION AUTHORITY
550 SOUTH MAIN STREET
ORANGE, CA 92663

DESIGN CONSULTANT:
M MOTT MACDONALD
550 SOUTH MAIN STREET
ORANGE, CA 92668

APPROVED

FOR COMMANDER NAVFAC
ACTIVITY

SATISFACTORY TO DATE 12/22/23

DIES - DRW - CHK

PM/DM -

BRANCH MANAGER -

CHIEF ENG/ARCH -

FIRE PROTECTION N/A

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND
PAVEMENT REHABILITATION
NWS SEAL BEACH
SAN DIEGO, CALIFORNIA
SEAL BEACH, CALIFORNIA
PAVEMENT REHABILITATION AT THE
NAVAL WEAPONS STATION SEAL BEACH
TITLE SHEET

SCALE: AS NOTED

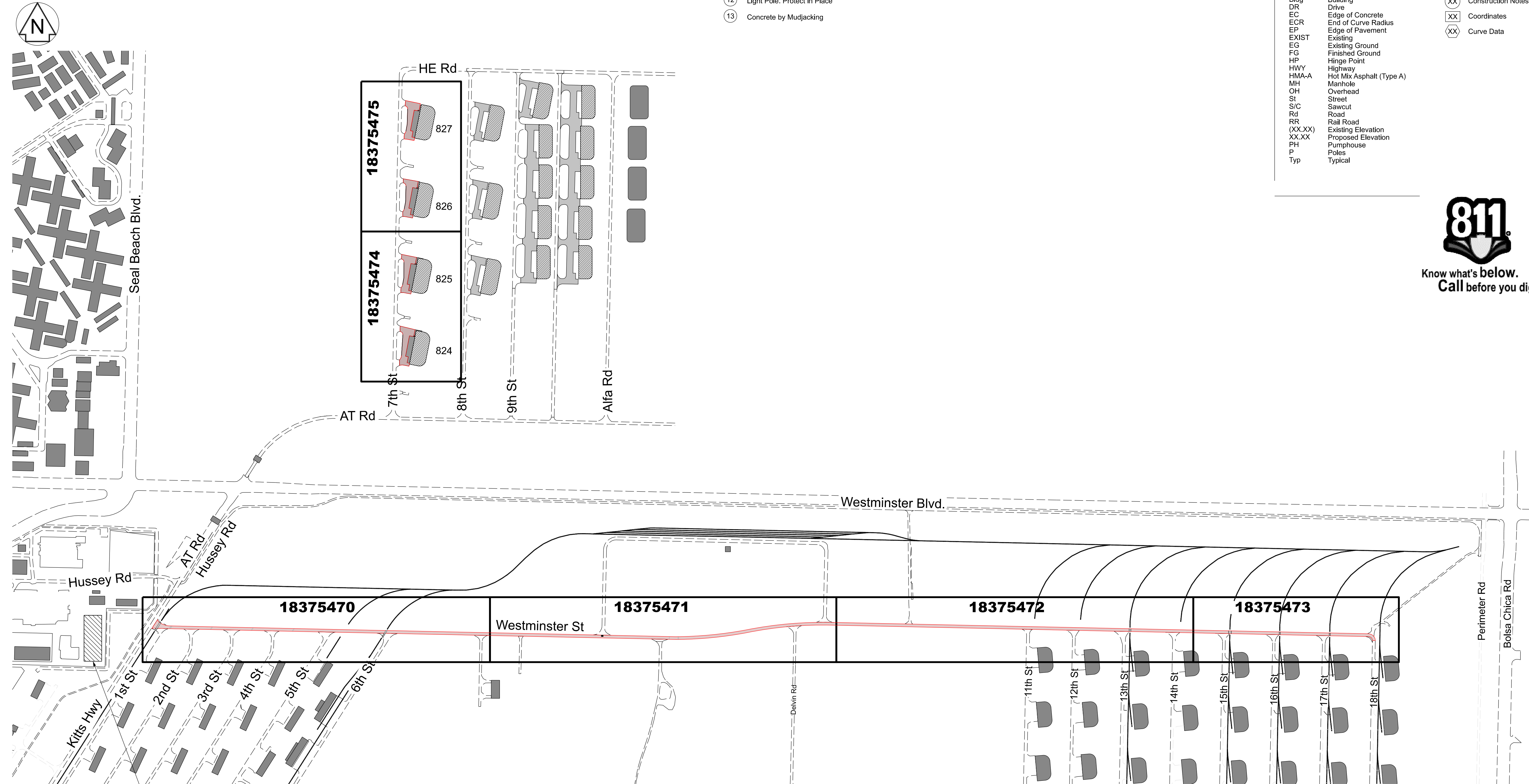
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CONSTR. CONTR. NO. -

NAVFAC DRAWING NO. 18375468

SHEET 1 OF 8

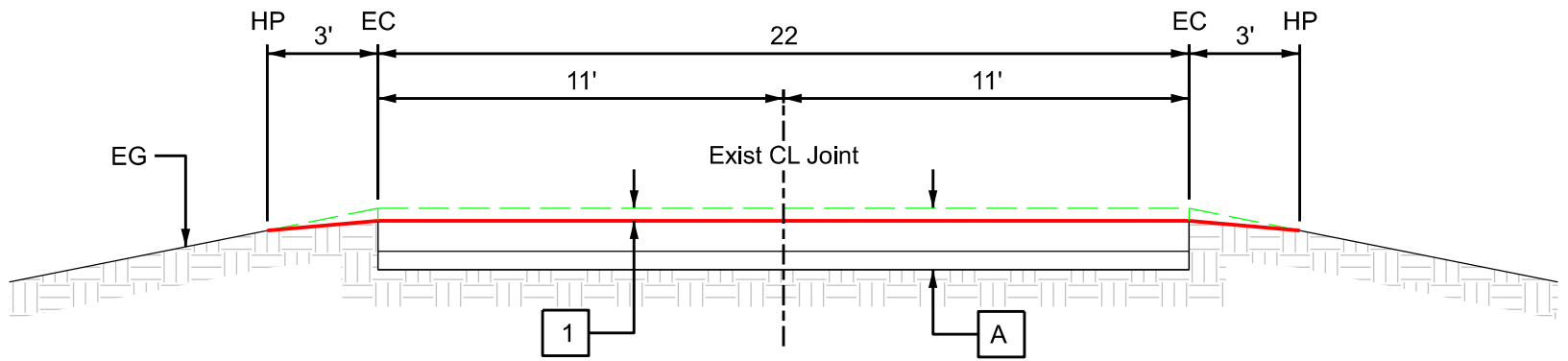
DRAWFORM REVISION: 31 JANUARY 2017



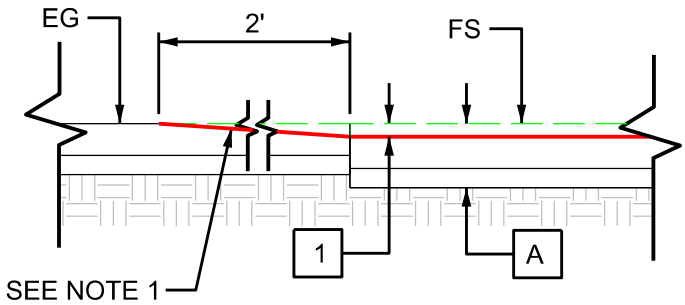
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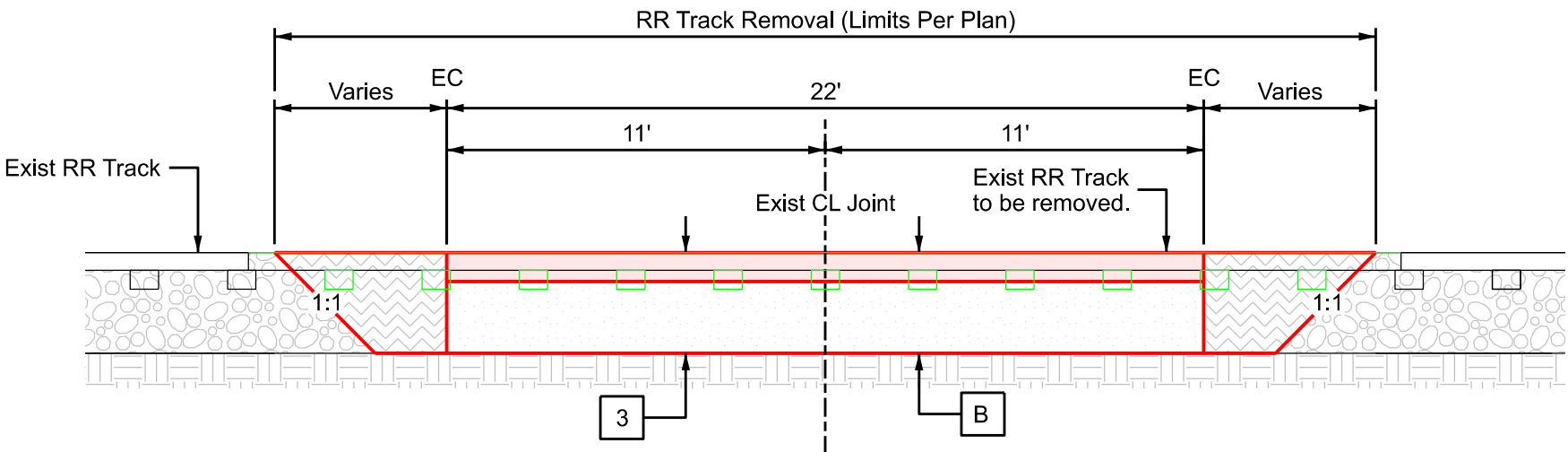
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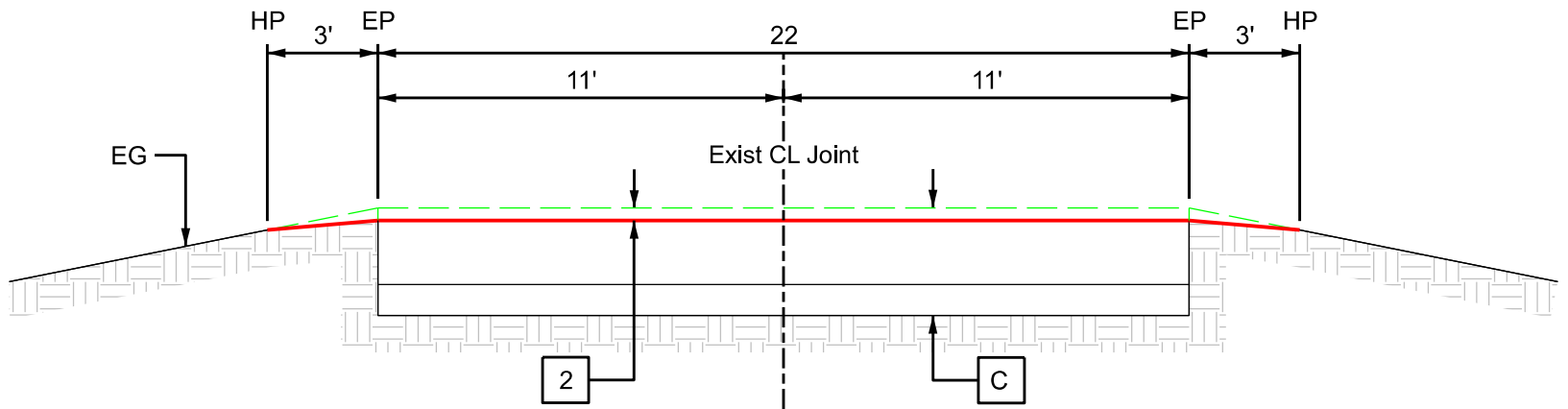
WESTMINSTER STREET A
NOT TO SCALE XS-1



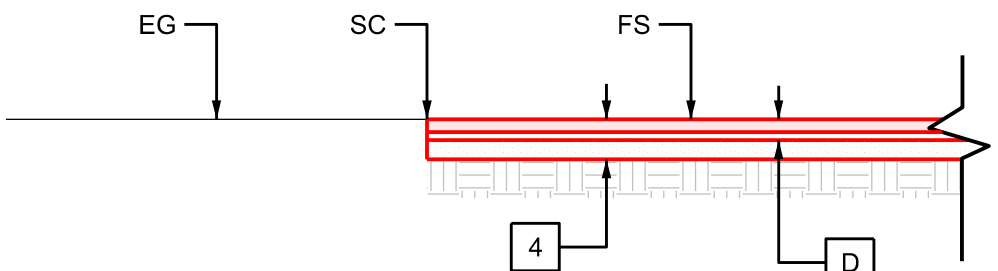
WESTMINSTER STREET AT SIDE STREETS B
NOT TO SCALE XS-1



WESTMINSTER STREET C
NOT TO SCALE XS-1



WESTMINSTER STREET D
NOT TO SCALE XS-1

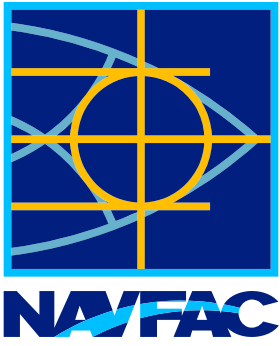


MAGAZINE BUILDINGS E
NOT TO SCALE XS-1

Typical Pavement
Structure Sections

- | | | | |
|---|--|---|---|
| 1 | GRIND 1/4" CONCRETE
SEE NOTE 2 | A | Existing
7" PCC
3" Aggregate Base |
| 2 | GRIND 1/4" AC | B | Existing
17 1/2" Track, Ties, and Ballast |
| 3 | 5" Hot Mix Asphalt (Type A)
12 1/2" Class II Aggregate Base | C | Existing
5" Hot Mix Asphalt (Type A)
12 1/2" Aggregate Base |
| 4 | 4" Hot Mix Asphalt (Type A)
2 1/2" Class II Aggregate Base
6" Pulverized AC and Aggregate Base | D | Existing
6" AC and Aggregate Base |

- NOTES:
1. TIE-IN OF CONC PAVEMENT TO EXISTING A PVMT AT SIDE STREETS.
 2. CRACK REPAIR, MUD JACKING, AND SPALL REPAIR TO BE COMPLETED BEFORE GRINDING CONCRETE.



PREPARED BY:
 ORANGE COUNTY
TRANSPORTATION AUTHORITY
550 SOUTH MAIN STREET
ORANGE, CA 92663

DESIGN CONSULTANT:
 MOTT MACDONALD
550 SOUTH MAIN STREET
ORANGE, CA 92668

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE 12/22/23
DES - DRW - CHK
PM/DM -
BRANCH MANAGER -
CHIEF ENG/ARCH -
FIRE PROTECTION N/A

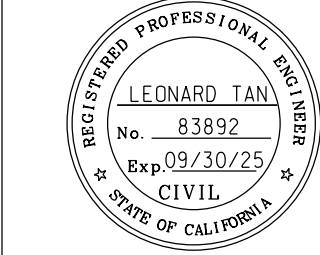
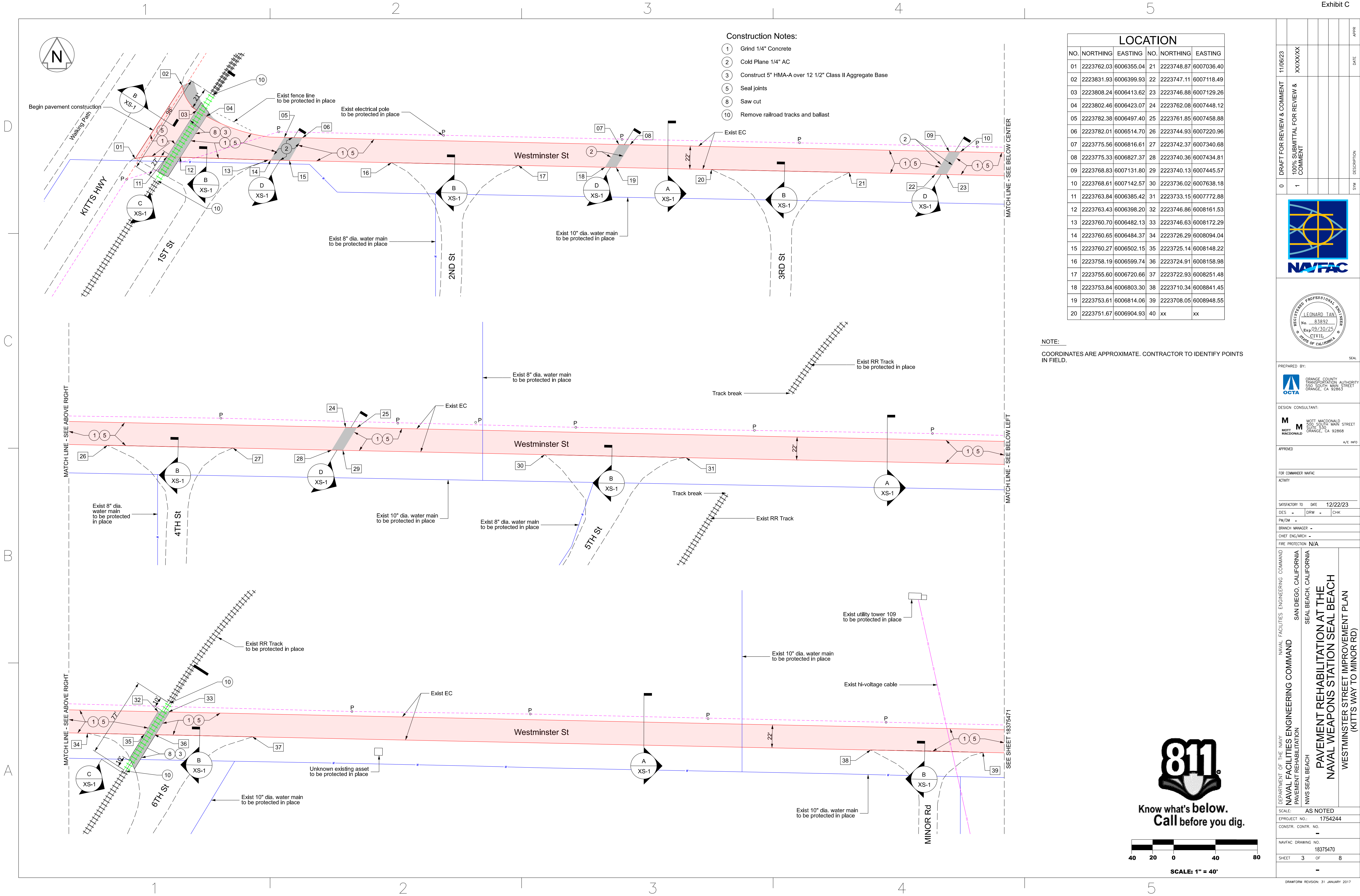
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND
PAVEMENT REHABILITATION
SAN DIEGO, CALIFORNIA
SEAL BEACH, CALIFORNIA
NWS SEAL BEACH
PAVEMENT REHABILITATION AT THE
NAVAL WEAPONS STATION SEAL BEACH
TYPICAL SECTIONS

SCALE: AS NOTED
EPROJECT NO.: 1754244
CONSTR. CONTR. NO. -
NAVFAC DRAWING NO. 18375469
SHEET 2 OF 8



Know what's below.
Call before you dig.

FILE NAME: C:\Users\WILL102324\Documents\PROJECTS\Naval Pavement Rehab\References\NAVFAC_STND_D_Imperial.dwg LAYOUT NAME: Model PLOTTED: Friday, March 03, 2023 - 2:07pm USER: WILL102324



PREPARED BY:
OCTA ORANGE COUNTY TRANSPORTATION AUTHORITY
550 SOUTH MAIN STREET
ORANGE, CA 92663

DESIGN CONSULTANT:
M MOTT MACDONALD MOTT MACDONALD
500 SOUTH MAIN STREET
ORANGE, CA 92668

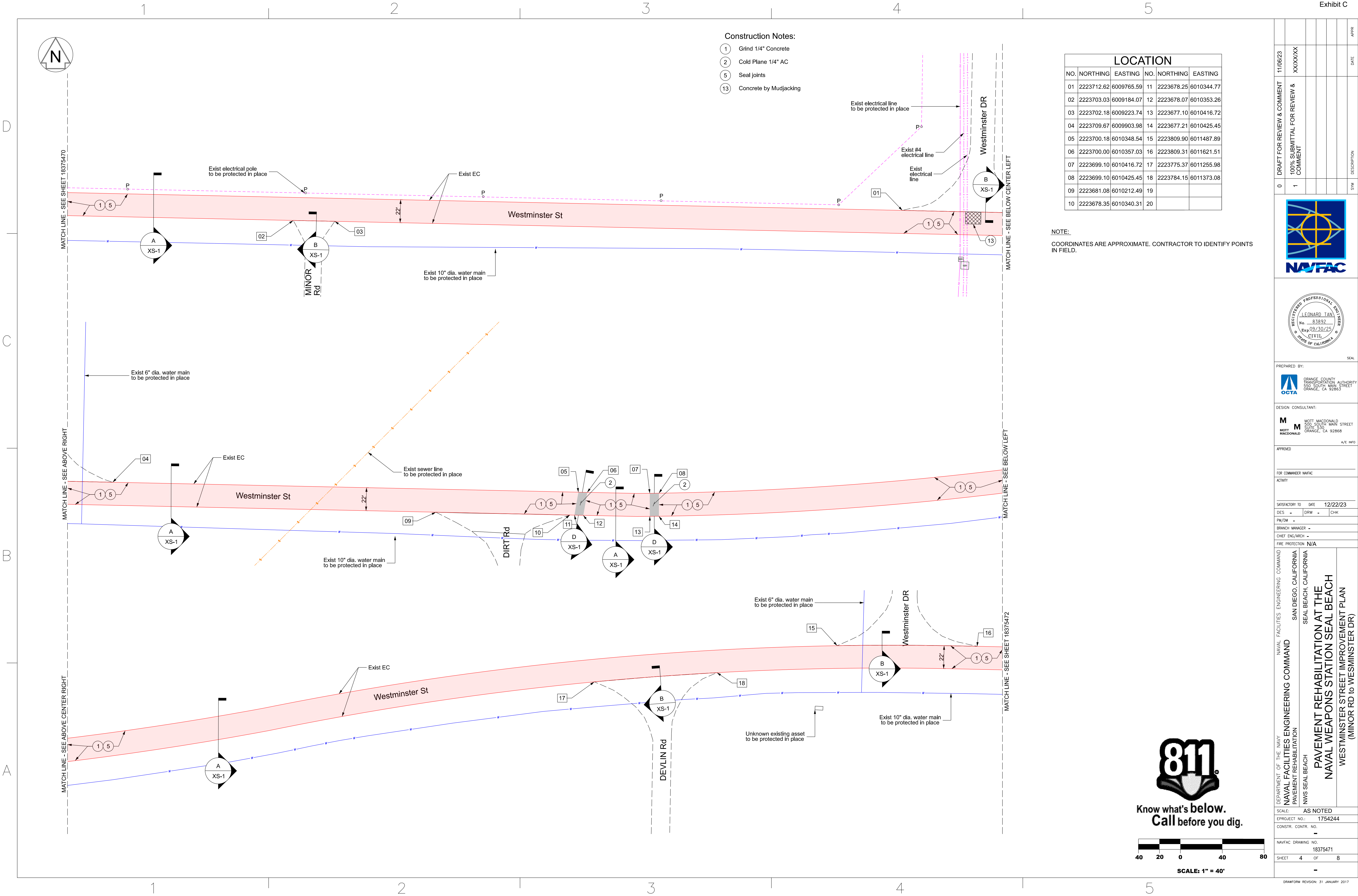
APPROVED BY:
FOR COMMANDER NAVFAC
ACTIVITY

SATISFACTORY TO DATE 12/22/23
DES - DRW - CHK
PA/DM -
BRANCH MANAGER -
CHIEF ENG/ARCH -
FIRE PROTECTION N/A

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING
PAVEMENT REHABILITATION
NWS SEAL BEACH
SAN DIEGO, CALIFORNIA
SEAL BEACH, CALIFORNIA
**PAVEMENT REHABILITATION AT THE
NAVAL WEAPONS STATION SEAL BEACH
WESTMINSTER STREET IMPROVEMENT PLAN
(KITTS WAY TO MINOR RD)**

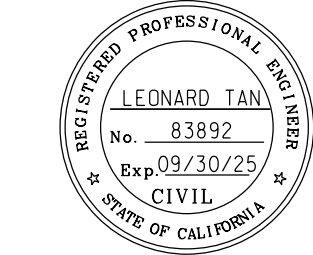
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NAVFAC DRAWING NO. 18375470
SHEET 3 OF 8

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LOCATION					
NO.	NORTHING	EASTING	NO.	NORTHING	EASTING
01	2223712.62	6009765.59	11	2223678.25	6010344.77
02	2223703.03	6009184.07	12	2223678.07	6010353.26
03	2223702.18	6009223.74	13	2223677.10	6010416.72
04	2223709.67	6009903.98	14	2223677.21	6010425.45
05	2223700.18	6010348.54	15	2223809.90	6011487.89
06	2223700.00	6010357.03	16	2223809.31	6011621.51
07	2223699.10	6010416.72	17	2223775.37	6011255.98
08	2223699.10	6010425.45	18	2223784.15	6011373.08
09	2223681.08	6010212.49	19		
10	2223678.35	6010340.31	20		

NOTE:
COORDINATES ARE APPROXIMATE. CONTRACTOR TO IDENTIFY POINTS IN FIELD.



PREPARED BY:
OCTA ORANGE COUNTY TRANSPORTATION AUTHORITY
550 SOUTH MAIN STREET
ORANGE, CA 92663

DESIGN CONSULTANT:
M MOTT MACDONALD
550 SOUTH MAIN STREET
ORANGE, CA 92668

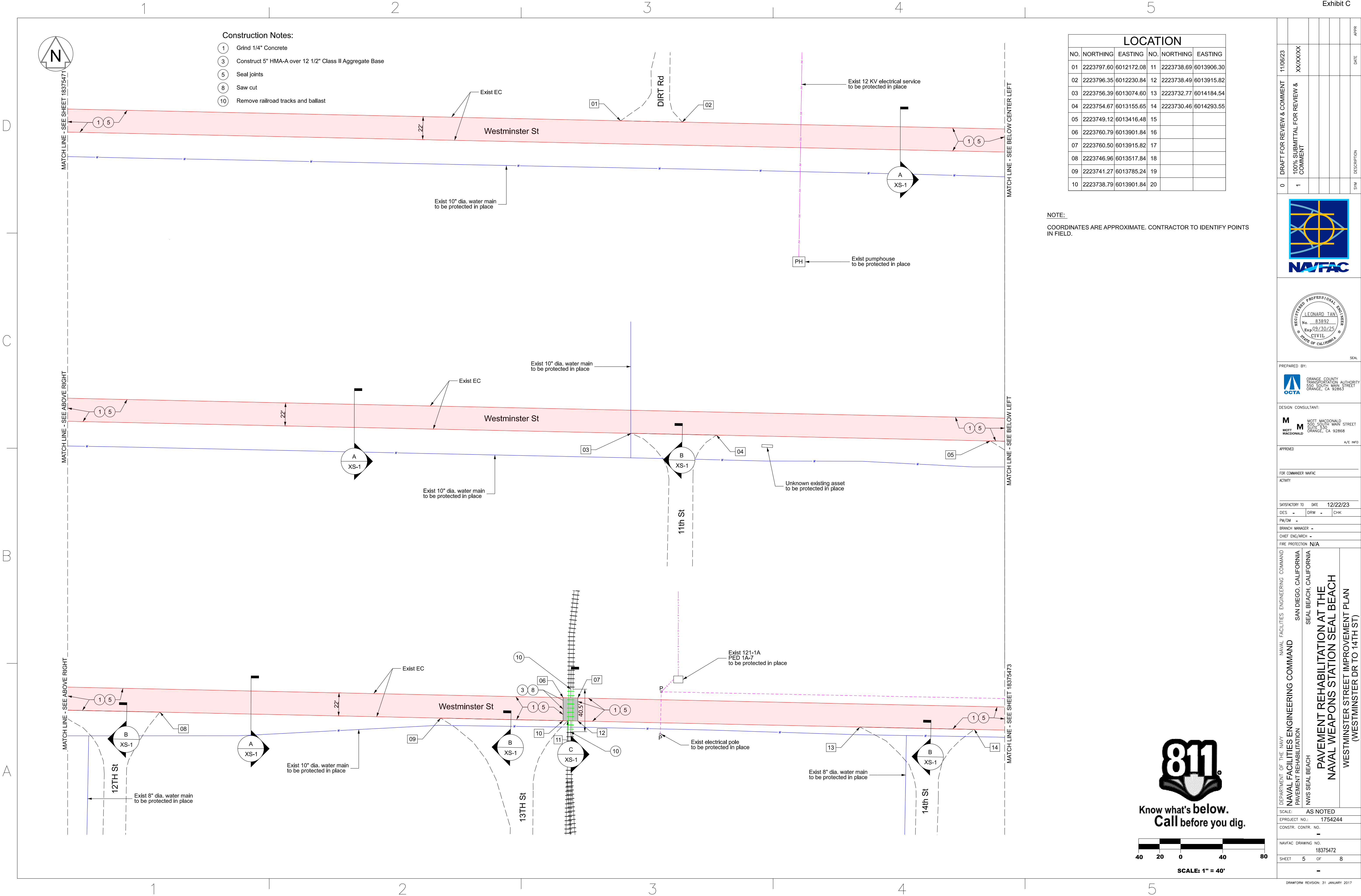
APPROVED
FOR COMMANDER NAVFAC
ACTIVITY

SATISFACTORY TO: DATE: 12/22/23
DES - DRW - CHK
PM/DM -
BRANCH MANAGER -
CHIEF ENG/ARCH -

FIRE PROTECTION: N/A
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING
PAVEMENT REHABILITATION
NWS SEAL BEACH
SAN DIEGO, CALIFORNIA
SEAL BEACH, CALIFORNIA
PAVEMENT REHABILITATION AT THE
NAVAL WEAPONS STATION SEAL BEACH
WESTMINSTER STREET IMPROVEMENT PLAN
(MINOR RD TO WESTMINSTER DR)

SCALE: AS NOTED
EPROJECT NO.: 1754244
CONSTR. CONTR. NO.:
NAVFAC DRAWING NO.: 18375471
SHEET 4 OF 8
DRAWN/REV: 31 JANUARY 2017

FILE NAME: C:\Users\WILL102324\Documents\PROJECTS\Naval Pavement Rehab\References\NAVFAC_STND_D_Imperial.dwg LAYOUT NAME: Model PLOTTED: Friday, March 03, 2023 - 2:07pm USER: WILL102324



LOCATION					
NO.	NORTHING	EASTING	NO.	NORTHING	EASTING
01	2223797.60	6012172.08	11	2223738.69	6013906.30
02	2223796.35	6012230.84	12	2223738.49	6013915.82
03	2223756.39	6013074.60	13	2223732.77	6014184.54
04	2223754.67	6013155.65	14	2223730.46	6014293.55
05	2223749.12	6013416.48	15		
06	2223760.79	6013901.84	16		
07	2223760.50	6013915.82	17		
08	2223746.96	6013517.84	18		
09	2223741.27	6013785.24	19		
10	2223738.79	6013901.84	20		

NOTE:
COORDINATES ARE APPROXIMATE. CONTRACTOR TO IDENTIFY POINTS IN FIELD.



SCALE: 1" = 40'

11/09/23
DRAFT FOR REVIEW & COMMENT
100% SUBMITTAL FOR REVIEW & COMMENT
0
1

XXXXXX
DATE
DESCRIPTION
SYN

ASPR

PREPARED BY:

ORANGE COUNTY TRANSPORTATION AUTHORITY
550 SOUTH MAIN STREET
ORANGE, CA 92663

DESIGN CONSULTANT:

MOTT MACDONALD
550 SOUTH MAIN STREET
ORANGE, CA 92668

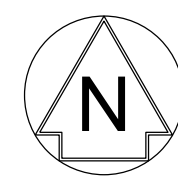
APPROVED
FOR COMMANDER NAVFAC
ACTIVITY

SATISFACTORY TO DATE 12/22/23
DES - DRW - CHK
PM/DM -
BRANCH MANAGER -
CHIEF ENG/ARCH -
FIRE PROTECTION N/A

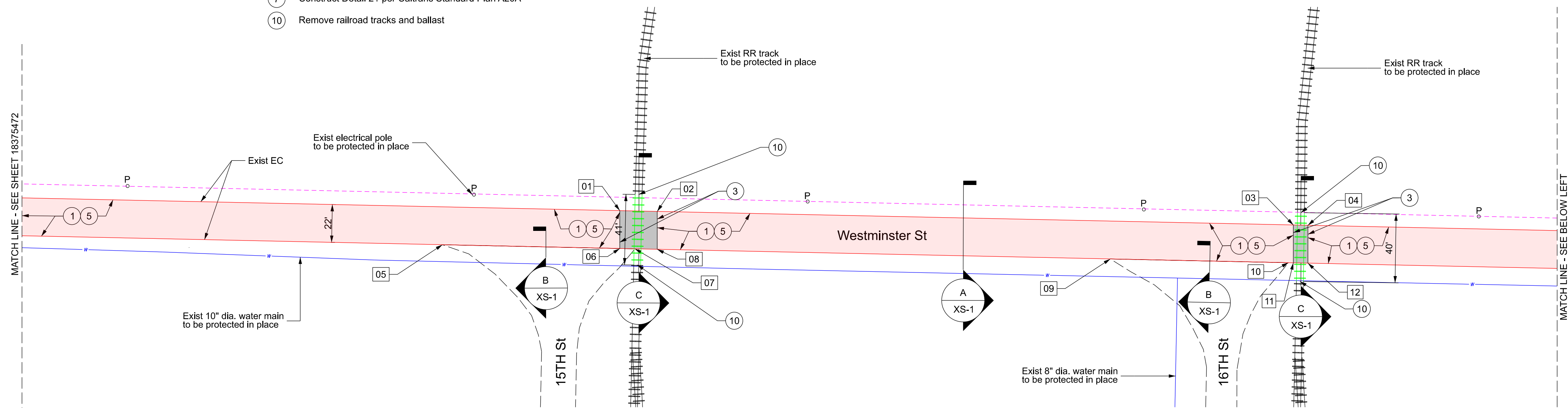
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING
PAVEMENT REHABILITATION
NWS SEAL BEACH
SAN DIEGO, CALIFORNIA
SEAL BEACH, CALIFORNIA
PAVEMENT REHABILITATION AT THE
NAVAL WEAPONS STATION SEAL BEACH
WESTMINSTER STREET IMPROVEMENT PLAN
(WESTMINSTER DR TO 14TH ST)

SCALE: AS NOTED
EPROJECT NO.: 1754244
CONSTR. CONTR. NO. -
NAVFAC DRAWING NO. 18375472
SHEET 5 OF 8

DRAWFORM REVISION: 31 JANUARY 2017



- ### Construction Notes:
- 1 Grind 1/4" Concrete
 - 3 Construct 5" HMA-A over 12 1/2" Class II Aggregate Base
 - 5 Seal joints
 - 7 Construct Detail 21 per Caltrans Standard Plan A20A
 - 10 Remove railroad tracks and ballast

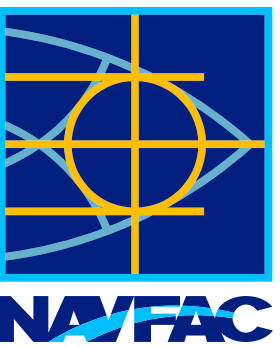


CURVE DATA TABLE				
NO.	R	Δ	T	L
01	43.24'	90.10°	43.32'	68.00'


LOCATION						
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01	2223744.46	6014669.69	13	2223727.90	6015447.73	
02	2223743.99	6014691.46	14	2223727.72	6015456.19	
03	2223736.12	6015061.34	15	2223721.50	6015748.47	BCR
04	2223735.94	6015069.80	16	2223668.17	6015803.72	ECR
05	2223724.65	6014566.58	17	2223708.07	6015345.39	
06	2223722.45	6014669.69	18	2223705.90	6015447.73	
07	2223722.26	6014678.51	19	2223705.72	6015456.19	
08	2223721.99	6014691.46	20	2223699.50	6015748.71	BCR
09	2223716.38	6014954.90	21	2223668.17	6015781.66	ECR
10	2223714.18	6015058.48	22	2223712.73	6015643.49	
11	2223714.12	6015061.34	23	2223710.50	6015748.46	
12	2223713.94	6015069.80	24	2223668.17	6015792.66	

NOTE:

COORDINATES ARE APPROXIMATE. CONTRACTOR TO IDENTIFY POINTS IN FIELD.



PREPARED BY:

 ORANGE COUNTY
TRANSPORTATION AUTHORITY
550 SOUTH MAIN STREET
ORANGE, CA 92863

DESIGN CONSULTANT:

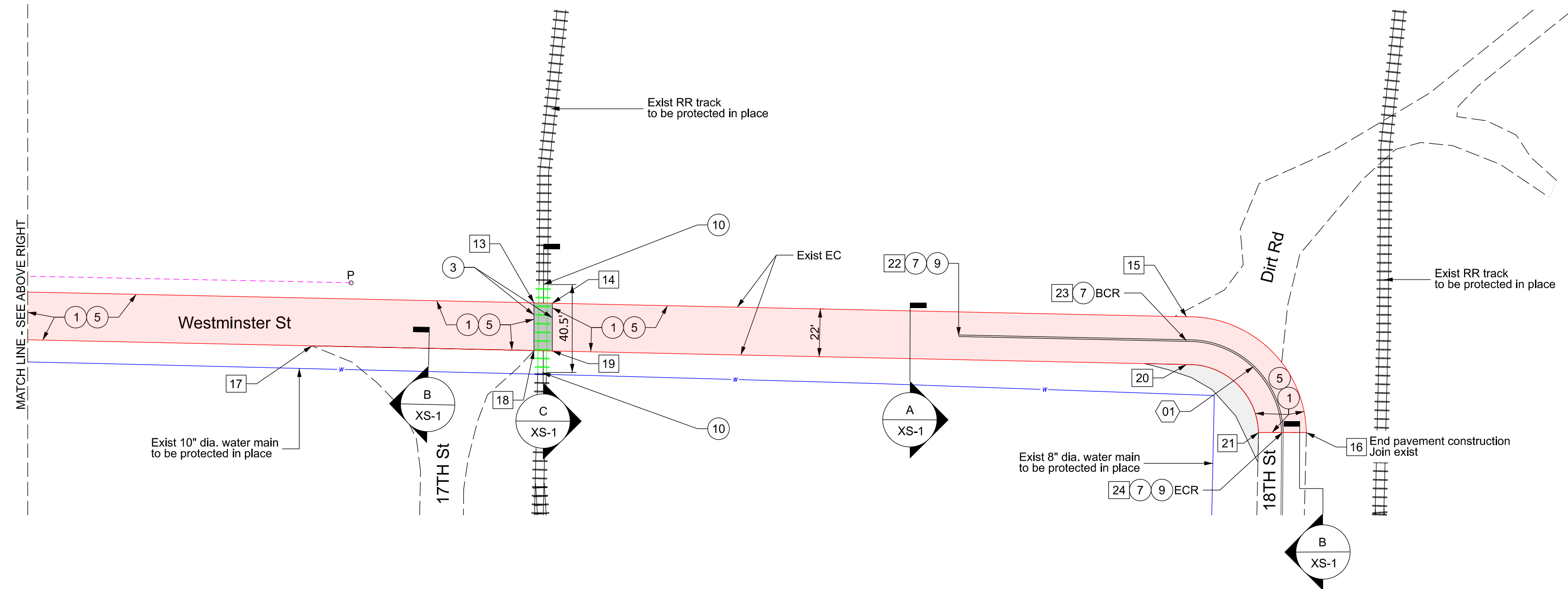
M M
MOTT MACDONALD
500 SOUTH MAIN STREET
SUITE 530
ORANGE, CA 92868

APPROVED			A/E INFO		
FOR COMMANDER NAVFAC					
ACTIVITY					
SATISFACTORY TO			DATE 12/22/23		
DES	-	DRW	-	CHK	
PM/OM -					
BRANCH MANAGER -					
CHIEF ENG/ARCH -					
FIRE PROTECTION N/A					

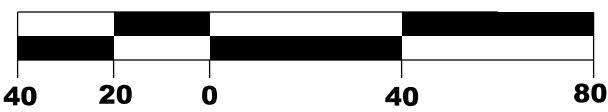
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
PAVEMENT REHABILITATION
NWS SEAL BEACH
SEAL BEACH, CALIFORNIA
SEAL BEACH, CALIFORNIA
PAVEMENT REHABILITATION AT THE
NAVAL WEAPONS STATION SEAL BEACH
WESTMINSTER STREET IMPROVEMENT PLAN
(14TH ST TO 18TH ST)

SCALE:	AS NOTED		
EPROJECT NO.:	1754244		
CONSTR. CONTR. NO.	-		
NAVFAC DRAWING NO.	18375473		
SHEET	6	OF	8
	-		

DRAWFORM REVISION: 31 JANUARY 2017



Know what's below.
Call before you dig.



SCALE: 1" = 40'

FILE NAME: C:\Users\WILL102324\Documents\PROJECTS\Naval Pavement Rehab\References\NAVFAC_STND_ID_Imperial.dwg LAYOUT NAME: Model PLOTTED: Friday, March 03, 2023 - 2:07pm USER: WILL102324

D

C

B

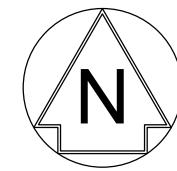
A

D

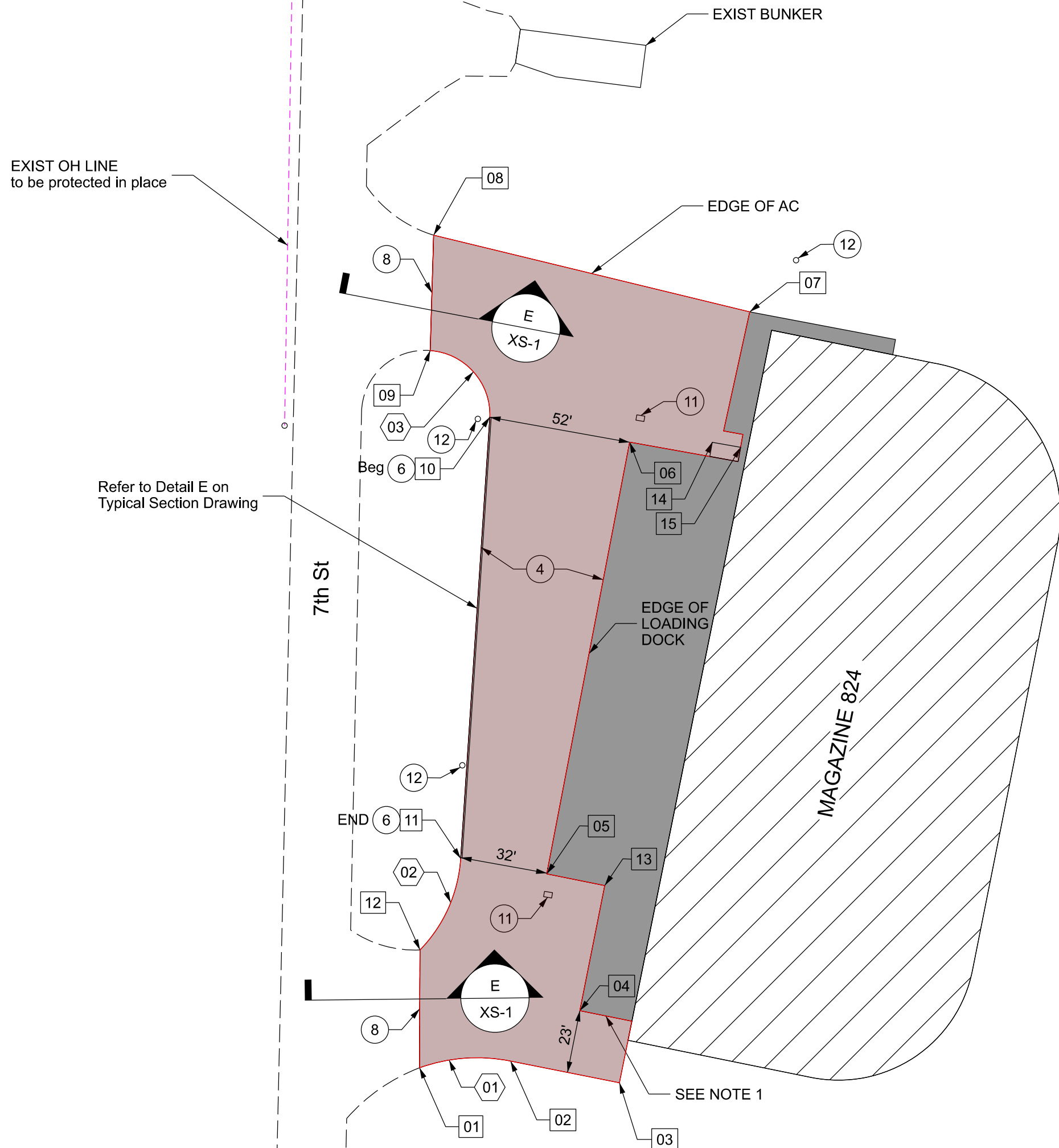
C

B

A



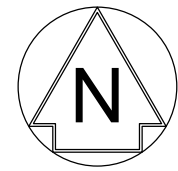
MATCH LINE - SEE BELOW RIGHT



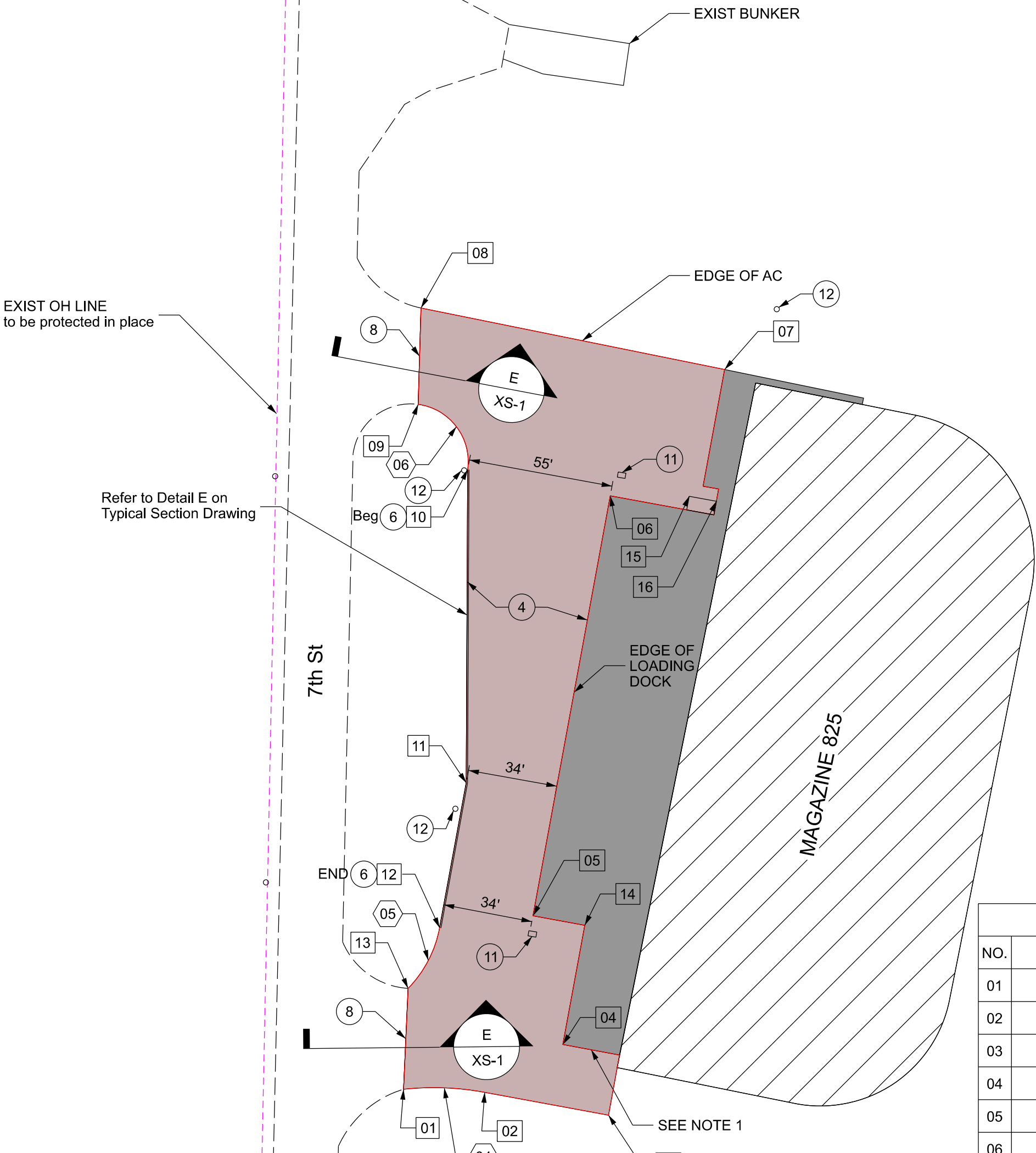
PLAN - MAGAZINE 824

1" = 40'

LOCATION 824					
NO.	NORTHING	EASTING	DESCRIPTION	DOCK HEIGHT	BOTTOM STEP HEIGHT
01	2225793.95	6008267.51	BCR		
02	2225796.40	6008300.85	ECR		
03	2225788.41	6008340.65			
04	2225814.81	6008326.17			
05	2225864.86	6008314.07		42.25"	
06	2226022.83	6008344.42		43.25"	
07	2226070.49	6008388.36			
08	2226098.57	6008272.68			
09	2226056.31	6008271.42	BCR		
10	2226032.01	6008293.23	ECR		
11	2225870.51	6008282.57	BCR		
12	2225837.04	6008267.66	ECR		
13	2225860.63	6008335.30		39.25"	
14	2226022.79	6008374.64			5.75"
15	2226020.93	6008384.99			5.75"



MATCH LINE - SEE SHEET L-6



PLAN - MAGAZINE 825

1" = 40'

CURVE DATA TABLE				
NO.	R	Δ	T	L
01	62.59'	30.98°	17.34'	33.84'
02	52.97'	40.47°	19.52'	37.41'
03	23.48'	88.10°	22.72'	36.11'
04	107.34'	16.52°	15.58'	30.95'
05	44.09'	34.20°	13.56'	26.31'
06	21.96'	90.10°	22.00'	34.54'

NOTES:

- NEW PAVEMENT TO JOIN EXISTING BOTTOM OF DOCK RAMP
- COORDINATES ARE APPROXIMATE. CONTRACTOR TO IDENTIFY POINTS IN FIELD.

Construction Notes:

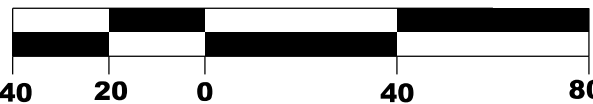
- Construct 4" HMA-A over 2 1/2" Class II Aggregate Base over 6" Pulverized
- Construct HMA Dike Type A per Caltrans Standard Plan A87B
- Saw cut
- Pull Box. Adjust to Grade
- Light Pole. Protect in Place

LOCATION 825

NO.	NORTHING	EASTING	DESCRIPTION	DOCK HEIGHT	BOTTOM STEP HEIGHT
01	2226356.11	6008277.36	BCR		
02	2226354.94	6008308.18	ECR		
03	2226346.29	6008355.13			
04	2226373.08	6008337.80			
05	2226421.95	6008326.47		42"	
06	2226581.27	6008355.80		42.75"	
07	2226629.22	6008399.20			
08	2226652.53	6008283.99			
09	2226615.98	6008282.90	BCR		
10	2226591.23	6008301.71	ECR		
11	2226472.36	6008301.18			
12	2226417.38	6008291.05	BCR		
13	2226394.39	6008279.07	ECR		
14	2226418.32	6008346.14		42.25"	
15	2226581.13	6008385.75			5.25"
16	2226579.22	6008396.10			5"

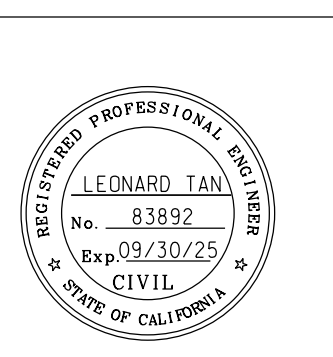


Know what's below.
Call before you dig.



SCALE: 1" = 40'

NO.	DATE	SYN	DESCRIPTION	ASPR
0	11/08/23			
1	XX/XX/XX			



PREPARED BY:
ORANGE COUNTY
TRANSPORTATION AUTHORITY
550 SOUTH MAIN STREET
ORANGE, CA 92663

DESIGN CONSULTANT:
M MOTT MACDONALD
550 SOUTH MAIN STREET
ORANGE, CA 92668

A/E INFO

APPROVED

FOR COMMANDER NAVFAC
ACTIVITY

SATISFACTORY TO: DATE 12/22/23
DES - DRW - CHK

PA/DM -

BRANCH MANAGER -

CHIEF ENG/ARCH -

FIRE PROTECTION N/A

NAVAL FACILITIES ENGINEERING COMMAND

NAVAL FACILITIES ENGINEERING COMMAND

NAVAL FACILITIES ENGINEERING COMMAND

NAVAL FACILITIES ENGINEERING COMMAND

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NAVAL FACILITIES ENGINEERING COMMAND

NAVAL FACILITIES ENGINEERING COMMAND



**SECTION VIII: LEVEL 3 HEALTH, SAFETY AND ENVIRONMENTAL
SPECIFICATIONS – EXHIBIT H**

SECTION VII

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.

7. Contractor shall provide a copy of Company's Injury Illness Prevention Program in accordance with CCR Title 8, Section 3203.
8. Contractor shall provide a copy of their Company HSE Policy/Procedure Manual, in compliance with CCR Title 8 Standards for awarded scope.
9. Contractor shall provide a copy of their Policy or Substance Abuse Prevention Program.
10. 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.
11. 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.

12.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

- G. 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.
- H. 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.
- I. 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.

- J. 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.
- K. 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.
- L. 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

- 2.0 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.

- L. A Comprehensive Project Specific Health, Safety, and Environmental (HSE) Work Plan.
 - c. 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.

- d. 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.
- M. Contractor shall provide a copy of their Company HSE Policy/Procedure Manual, in compliance with CCR Title 8 Standards for awarded scope.
- N. Contractor shall provide a copy of Company's Injury Illness Prevention Program in accordance with CCR Title 8, Section 3203.
- O. Contractor shall provide a copy of their Policy or Substance Abuse Prevention Program that complies with the 1988 Drug Free Workplace Act.
- P. 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.
- Q. 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.

- R. A copy of Contractor weekly site safety inspection report with status of corrections, upon request, within 72 hours.
- S. Contractor shall provide a copy of the Contractors and subcontractors competent person list (submit to Authority Project Manager, upon Authority request, within 72 hours).

- T. 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).
- U. 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.

V. 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)

- C. 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.
- D. 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

- F. 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.
- G. 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.
- H. 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.
- I. 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.
- J. 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

D. The Authority shall be promptly notified of any of the following types of incidents:

4. Damage to Authority property (or incidents involving third party property damage);
5. Reportable and/or recordable injuries (as defined by the U. S. Occupational Safety and Health Administration);
6. Incidents impacting the environment, i.e. spills or releases on Authority property.

E. 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.

F. 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.

5. Serious Injury: 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.
6. Serious Incident: 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.
7. OSHA Recordable Injury / Illness: includes an 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.
8. Significant Near Miss Incident: 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

- C. 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.
- D. 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 ENVIRONMENTAL REQUIREMENTS

- G. 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 pre-wetting areas to be paved, as required; no payment will be made by OCTA for this water.
- H. 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.
- I. 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.
 - J. 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.
 - K. 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.
 - L. 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

- E. 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.
- F. 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
- G. The Contractor shall comply with California Department of Transportation safety requirements and special provisions when working on highway projects.
- H. 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.

- I. 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.
- J. EYE PROTECTION – The Authority requires eye protection on construction projects and work areas that meet ANSI Z-87.1 Standards.
- K. 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.

- L. 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.
- M. 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.
- N. 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.
- O. CLOTHING/SHIRTS: minimum or waist length shirts with sleeves (4" minimum).
- P. 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.

- B. 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

- F. 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.
10. Cranes require a submittal of the annual certification, and copy of the cranes most recent quarterly inspection.
 11. 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.
 12. 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.
 13. Contractor shall provide the name and qualifications of each "Qualified Rigger" as defined by OSHA.
 14. Rigging scope activity shall comply with 29 CFR Subparts 1926.250, 1929.753 and CCR Title 8 Standards.
 15. All rigging equipment shall be free from defects, in good operating condition and maintained in a safe condition.
 16. 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.
 17. 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.
 18. Contractor shall prepare a documented daily crane inspection report.
- G. Pick and carry with rubber tired cranes is forbidden on Authority projects.

H. Engineered Critical Lifts

A critical lift is established where any one of the following conditions are created:

10. 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.
11. A gross weight equal to, or greater than 10 tons.
12. Lifts over buildings, equipment, public roadways, structures, or power lines.

13. A single lift where two or more cranes are used, including tandem lifts and tailing cranes.
14. Lifts made in close proximity of power lines, as defined by CCR Title 8 voltage clearance specifications.
15. Lifts involving helicopters, and specialized or unique and complex rigging equipment.
16. Hoisting of suspended work platforms.
17. Static tower crane erection and dismantlement.
18. 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.

I. 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:

14. Crane manufacturer, capacity, and all specifications for the configuration to be used for the lift.
15. 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.
16. Engineering data shall be provided on the hook assembly (manufacturer'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.
17. 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:
 - F. Locations of all components to be lifted prior, during and after the lift is completed.
 - G. Radius points.
 - H. Swing patterns.

- I. In the event that the lift must be aborted, positions where the load may be safely landed.
 - J. Areas where any personnel, public, and vehicles must be evacuated during the lift.
18. Potential ground loading for each point of contact by the crane in selected locations in which the crane will perform the critical lift.
19. 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.*
20. An engineer shall use the data provided in #5 and #6 above to verify and confirm the following:
- C. That the soil and subsurface conditions are capable of supporting all loads imposed during the critical lift.
 - D. That the designs of cribbing and other supports used under the crane load points are appropriate to safely transfer such loads.
21. 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.
22. Operator qualifications.
23. Method by which communication will be provided to the crane operator. (Designated signal person, two-way radio, hard wire phone system, etc.).
24. 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.
25. Emergency action plan.
26. 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.

J. 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.

- F. 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.
- G. 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.
- H. 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.
- I. 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.
- J. 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:

- F. A copy of the Contractor's Excavation Permit.
- G. 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.
- H. 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.
- I. 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.
- J. 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.

- C. Fall protection is required for workers exposed to falls in excess of six (6) feet.
- D. 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:

- B. 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 Manager 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:

- B. 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.

- B. Electrical Certification of Training: 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.

- B. 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.

- F. All scaffolds on Authority project shall be inspected by a competent person qualified for scaffolds in accordance with CCR Title 8 Standards.

- G. 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.
- H. 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).
- I. 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.
- J. 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.

- F. 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.
- G. 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.
- H. 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.
- I. A qualified rigger shall inspect the rigging prior to each shift and each lift.

- J. Multiple lift rigging (Christmas Treeing) lifts are forbidden on Authority property and controlled projects.

2.23 AUDITS

- C. 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.
- D. 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

- H. CCR Title 8 Standards (Cal/OSHA)
- I. CFR Including 1910 and 1926 Standards
- J. NFPA, NEC, ANSI, NIOSH Standards
- K. USACE Construction Quality Management Manuel (EM-385-1-1)
- L. Construction Industry Institute (CII)
- M. OCTA Construction Management Procedures Manual
- N. OCTA Yard Safety Rules

END OF DOCUMENT



**CONTRACT
CHANGE
ORDER**

**IFB 4-2069
EXHIBIT I
DATE:**

PROJECT	OCTA NO	CONTRACT NO.	SUPPL NO.	CHANGE REQUESTED BY:
			N/A	<input type="checkbox"/> OWNER <input type="checkbox"/> CONTRACTOR
TO:		ACCOUNT CODE		OTHER ID
TITLE:				

You are hereby directed to make the herein described changes from the plans and specifications or do the following work not included in the plans and specifications on this contract. NOTE: This change order is not effective until approved by the Orange County Transportation Authority's Manager of Contracts Administration and Materials Management or in the case of change orders in excess of \$210,000.00 the Orange County Transportation Authority's Chief Executive Officer. Describe work to be performed, estimate of quantities, and prices to be paid. Segregate between additional work at contract price, agreed price, and force account. Unless otherwise stated, rates for rental equipment cover only such time as equipment is actually used and no allowance will be made for idle time.

Change Work Description:

MODIFICATIONS DUE TO THIS CHANGE ORDER:

TIME: 0 CALENDER DAYS

PRICE: \$0.00

☐ INCREASE ☐ DECREASE

APPROVAL RECOMMENDED BY:	RESIDENT ENGINEER	DATE
APPROVAL RECOMMENDED BY:	PROJECT MANAGER	DATE
APPROVAL RECOMMENDED BY:	DIRECTOR OF RAIL PROGRAMS	DATE
APPROVAL RECOMMENDED BY:	EXECUTIVE DIRECTOR OF CAPITAL PROGRAMS	DATE
APPROVAL RECOMMENDED BY:	GENERAL COUNSEL	DATE
APPROVED BY:	CONTRACTS ADMINISTRATION AND MATERIALS MANAGEMENT	DATE
APPROVED BY:	CHIEF EXECUTIVE OFFICER	DATE

We, the Undersigned Contractor, have given careful consideration to the change and hereby agree that we will provide all equipment, furnish all materials, except as may otherwise be noted above, and perform all services necessary for the work above specified, and will therefore accept as full payment the prices shown above. Additionally, we agreed that the compensation (time and cost) set forth in this Change Order comprises the total compensation due the Contractor, and all the Subcontractors and all Suppliers, for the work or change defined in this Change Order, including all impact on any unchanged work. By signing this Change Order, the Contractor acknowledges and agrees, on behalf of themselves, all Subcontractors and all Suppliers, that the stipulated compensation includes payment for all work contained in this Change Order, plus all payments for interruption of schedules, extended overhead costs, delay, and all impact, ripple effect or cumulative impact on all other work under the Contract. The signing of this Change Order shall indicate that the Change Order constitutes the total equitable adjustment owed to the Contractor, all Subcontractors and all Suppliers, and the Contractor agrees to waive all rights, without exception or reservation of any kind whatsoever, to file any further claim or request for equitable adjustment of any type, for any reasonably foreseeable cause that shall arise out of or as a result of this Change Order or the impact of this Change Order on the remainder of the work under this Contract.

ACCEPTED BY:	CONTRACTOR	DATE
	NAME	TITLE

If the Contractor does not sign acceptance of this order, their attention is directed to the requirements of the specifications as to proceeding with the ordered work and filing a written protest within the time therein specified.

**BID BOOKLET INVITATION FOR BID (IFB) 4-2069
BOOK 2 OF 2**

**PAVEMENT REHABILITATION AT
THE NAVAL WEAPONS STATION
SEAL BEACH**



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

Key IFB Dates

Issue Date:	September 9, 2024
Pre-Bid Conference:	September 17, 2024
Security Clearance Due:	October 2, 2024
Site Walk:	October 3, 2024
Questions/Approved Equal Submittal:	October 7, 2024
Responses to Bidders Due:	October 22, 2024
Bid Submittal Date:	October 31, 2024

BID DOCUMENT SUBMISSION CHECKLIST

IFB NO. _____

PROJECT TITLE: _____

The Orange County Transportation Authority has prepared this checklist as a reminder of the documents required to be submitted with the bid. These documents must be complete, fully executed, notarized where appropriate as required in the bid documents in order to render the bid responsive.

THE FOLLOWING CHECKED DOCUMENTS MUST BE SUBMITTED WITH THE BID:**General IFB Forms:**

	Bid Form – include all pages 1 through 7. <i>All addenda must be acknowledged, signed, dated, corporate seal</i>
	Bid Security Form: <u>Bid Bond</u> or <u>Check</u> (circle one) <i>Correct bid number, signed, dated, notarized (bid bond)</i>
	Information Required of Bidder <i>Provide all information, signed</i>
	Bidders Certificate of Compliance Regarding Workers Compensation Insurance <i>Signed and dated</i>
	Bidders Certificate of Compliance Regarding State of California Business and Professions Code Section 7028.15 <i>Signed, dated, notarized</i>
	List of Subcontractors (Exhibit D) <i>License Number- address/ name should match that associated with License # on CSLB website, DIR Registration Number, Description of work (one subcontractor for each portion), Dollar amount and Bidders name at bottom of form</i>
	Status of Past and Present Contracts Form <i>Signed, dated</i>
	Non-Collusion Declaration Form <i>Signed, dated</i>
	Iran Contracting Act Certification Applicable (Bids over \$1,000,000 only) <i>Signed, dated, (select one option only)</i>

Signature on this Bid Document Submission Checklist is affirmation that items marked above are hereby submitted with the bid. I understand that failure to complete and/or submit any of the required documents may deem my bid non-responsive.

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 4-2069, "PAVEMENT REHABILITATION AT THE NAVAL WEAPONS STATION SEAL BEACH"**, 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 Bid Price <u>Base plus Optional Work</u> (Total from Bid Schedule)
---------------------------	---

\$

A cashier's check/certified check/bid bond (circle applicable term) properly made payable to Orange County Transportation Authority, hereinafter designated as the Owner, for the sum of _____ Dollars

(\$ _____)

which amount is not less than ten percent (10%) of the total amount of this bid, is attached hereto and is given as a guarantee that the undersigned will execute the Agreement and furnish the required bonds, "Guaranty" and "Certificate of Insurance", if awarded the contract, and in case of failure to do so within the time provided, (a) the proceeds of said check shall be forfeited to the Authority; or (b) surety's liability to the Authority for forfeiture of the face amount of the bond shall be considered as established [circle (a) or (b)].

The undersigned hereby represents that:

BID FORM, PAGE 2

1. 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 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) 4-2069, "PAVEMENT REHABILITATION AT THE NAVAL WEAPONS STATION SEAL BEACH"**, 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.

Dated _____, 202_ Bidder _____

The above bid includes Signature _____

Addenda Nos. _____ Name _____

Title _____

Bidder's Authorized Representative _____

Title _____

Telephone # _____

Fax # _____

Email Address _____

Bidders post office address _____

Corporation organized under the laws of the State of _____

Contractor's License No. _____

Expiration Date of License _____

Surety or sureties _____

(CORPORATE SEAL)

BID FORM, PAGE 5**Contractor's Name:** _____**SCHEDULE OF QUANTITIES and PRICES**

BASE WORK ITEMS					
BID ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	ITEM TOTAL
1	Mobilization (shall not exceed 10% of the TOTAL BID PRICE)	LS	1		
2	Grinding existing concrete (Westminster St)	SQFT	206,250		
3	Grinding new asphalt (Westminster St)	SQFT	21,280		
4	Hot mix asphalt (Type A) (Westminster St)	TON	77		
5	Clean and seal existing joints in concrete (Westminster St)	LF	21,780		
6	Yellow traffic stripe (Westminster St)	LF	180		
7	Remove stripe (Westminster St)	LF	180		
8	Mud jacking (Westminster St)	SQFT	170		
9	Crack Treatment (Westminster St)	LF	22,700		
10	Spall Repair	SQFT	65		

BID FORM, PAGE 6

BID ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	ITEM TOTAL
11	Sawcut (Westminster St)	LF	593		
12	Temporary traffic control (Westminster St)	LS	1		
13	Remove railroad track (Westminster St)	LS	337		
14	Class 2 Aggregate Base (Westminster St.)	CY	98		
15	Imported Backfill (Westminster St.)	CY	51		
SUBTOTAL PRICE FOR BASE WORK ITEMS:					
Optional Items					
16	Magazine 824	LS	1		
17	Magazine 825	LS	1		
18	Magazine 826	LS	1		
19	Magazine 827	LS	1		
SUBTOTAL PRICE FOR OPTIONAL ITEMS:					
TOTAL BID PRICE (BASE PLUS OPTIONAL ITEMS):					

TOTAL BID PRICE (IN WORDS) _____

The total bid price shall be comprised of the subtotal price for base work items plus the subtotal price for optional items, for the purpose of determining the lowest bid price.

Definitions of column abbreviations:

CY	Cubic Yards
LF	Linear Foot
LS	Lump Sum
SF	Square Foot

BID FORM, PAGE 7

In the case of an error in the mathematical extension of the bid item in the ITEM TOTAL column, or an error in the sum of the individual ITEM TOTAL figures entered by the Bidder on the TOTAL BID PRICE, the figures shall be corrected by the AUTHORITY and that corrected extension and corrected sum shall be the TOTAL BID PRICE for purposes of bid evaluation.

Where there is a discrepancy between UNIT PRICE and the ITEM TOTAL, the UNIT PRICE prevails, except:

- If the UNIT PRICE is illegible, omitted, or the same as the ITEM TOTAL, then ITEM TOTAL prevails, and the UNIT PRICE is the quotient of the ITEM TOTAL and the quantity.
- If a decimal error is apparent in the product of the UNIT PRICE and the quantity, the AUTHORITY will use either UNIT PRICE or ITEM TOTAL based on the closest by percentage to the UNIT PRICE or ITEM TOTAL to the AUTHORITY's project estimate.

If the UNIT PRICE, ITEM TOTAL or lump sum ITEM TOTAL price are illegible or are omitted, the bid may be determined to be nonresponsive.

If the UNIT PRICE for lump sum item is entered and it differs from the ITEM TOTAL, the ITEM TOTAL will prevail.

The AUTHORITY will correct these discrepancies accordingly, and the corrected TOTAL BID PRICE determined by the AUTHORITY shall be final.

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 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 4-2069, "PAVEMENT REHABILITATION AT THE NAVAL WEAPONS STATION SEAL BEACH"**, 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 4-2069, "PAVEMENT REHABILITATION AT THE NAVAL WEAPONS STATION SEAL BEACH"**. 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.: _____ Class _____ Years 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, 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

Bidder hereby certifies that it:

_____ is a certified Disadvantaged Business Enterprise as defined herein.

_____ is not a Disadvantaged Business Enterprise as defined herein.

NOTE: If requested by the Authority, bidder shall furnish a certified financial statement, financial data, or other information and references sufficiently comprehensive to permit an appraisal of its current financial condition.

I hereby certify the above is true and correct to the best of my belief.

Signature

Name

Title

Company Name

Telephone Number

Fax Number

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 work force 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 excess of one-half of one percent (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	Type	Dollar Amount
						\$
						\$
						\$
						\$
						\$
						\$
TOTAL VALUE OF SUBCONTRACTED WORK						\$

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:
Project Award Date:	Original Contract Value:
Term of Contract:	
(1) Litigation, claims, settlements, arbitrations, or investigations associated 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 affirming that all of the information provided is true and accurate.

Name

Signature

Title

Date

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: _____

IRAN CONTRACTING ACT CERTIFICATION

(California Public Contract Code Sections 2200, *et seq.*)

The Iran Contracting Act of 2010 (PCC Sections 2200-2208), prohibits bidders who are engaged in investment activities in the energy sector of Iran from bidding on, submitting proposals for, or entering into or renewing contracts with public entities for goods or services of one million dollars (\$1,000,000) or more. At the time of submitting a bid, each bidder must certify that the bidder is not identified on the Department of General Services list of ineligible persons pursuant to PCC Section 2203(b). Each bidder is also required to certify that the bidder is not engaged in investment activities in violation of the Iran Contracting Act of 2010.

A bidder who is engaged in investment activities in the energy sector of Iran is defined as:

3. A person providing goods or services of twenty million dollars (\$20,000,000) or more in the energy sector of Iran, including a person that provides oil or liquefied natural gas tankers, or products used to construct or maintain pipelines used to transport oil or liquefied natural gas, for the energy sector of Iran; or
4. A person that is a financial institution that extends twenty million dollars (\$20,000,000) or more in credit to another person, for 45 days or more, if that person will use the credit to provide goods or services in the energy sector in Iran and is identified on a list created pursuant to PCC Section 2203(b).

A bidder is not required to certify that it is engaged in investment activities in the energy sector of Iran if the bidder is exempt from the certification under PCC Section 2203(c) or (d). If the bidder is exempt from the certification requirement, the bidder will be required to provide documentation demonstrating the exemption.

To comply with the Iran Contracting Act of 2010, the bidder shall complete **one** of the options below. Please note: under PCC Section 2205, false certification of this form may result in civil penalties of \$250,000 or twice the amount of the contract for which false certification was made, termination of the contract, and/or ineligibility to bid on contracts for a period of three years.

Option No. 1: Certification

I, the official named below, certify I am duly authorized to execute this certification on behalf of the vendor/financial institution identified below, and the vendor/financial institution identified below, and any subcontractor who will perform work or labor or render services to the vendor identified below, is not on the current Department of General Services list identifying persons engaged in investment activities in the energy sector of Iran, and is not a financial institution extending twenty million dollars (\$20,000,000) or more in credit to another person/vendor, for 45 days or more, if that other person/vendor will use the credit to provide goods or services in the energy sector in Iran and is identified on the current Department of General Services list identifying persons engaged in investment activities in the energy sector of Iran.

Vendor/Financial Institution: _____

Signature: _____

Name and Title: _____

Date: _____

Option No. 2: Exemption

Pursuant to PCC Section 2203(c) and (d), a public entity may permit a bidder or financial institution engaged in investment activities in Iran, on a case-by-case basis, to be eligible for, or to bid on, submit proposals for, or enter into or renew a contract with a public entity for goods or services of one million dollars (\$1,000,000) or more. If the bidder, financial institution, or any subcontractor who will perform work or labor or render services to the bidder has obtained an exemption from the certification requirement, please complete and sign below and attach the documentation demonstrating the exemption approval.

Vendor/Financial Institution: _____

Signature: _____

Name and Title: _____

Date: _____

Option No. 3: Non-Applicability

Pursuant to PCC Section 2203(b), a bidder or financial institution engaged in investment activities in Iran may not be eligible for, or to bid on, submit proposals for, or enter into or renew a contract with a public entity for goods or services of one million dollars (\$1,000,000) or more. If the contract is not for goods or services of one million dollars (\$1,000,000) or more, please sign below indicating that the contract is not for goods or services of one million dollars (\$1,000,000) or more and thus bidder is not required to certify and does not meet the exemption.

Vendor/Financial Institution: _____

Signature: _____

Name and Title: _____

Date: _____